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Investigating the Effect of Increasing Positive Teacher-Student Interactions on Adolescent Behavior and Teacher-Student Relationships

Jennifer Joyce Gallucci, Ph.D.

University of Connecticut, 2014

Research suggests that positive interactions between teachers and students are linked to a myriad of positive academic and behavioral student outcomes (Connor, Son, Hindman, & Morrison, 2005; Curby, Rimm-Kaufman, & Ponitz, 2009; Mashburn et al., 2008; Merritt, Wanless, Rimm-Kaufman, Comeron & Peugh, 2012). However, interactions between teachers and students with learning or behavioral difficulties are often characterized by fewer positive interactions (Cook & Cameron, 2008). Available interventions to increase positivity between teachers and students reveal major limitations. To address this issue, feasible and effective interventions to increase positive interactions between teachers and students are needed. As such, the objective of the current study was to test the efficacy of using a consultative approach to increase teachers' use of positive interactions with students in schools. The effect of increasing positive teacher-student interactions on various outcomes (e.g., academic skills, problem behaviors, teacher-student relationship) was also investigated. Results provide preliminary evidence that the intervention increased positivity between dyads, especially with regards to the ratio of positive statements to negative statements. The consultation resulted in positive student outcomes (i.e., decreased off-task and noncompliance), and some initial but limited evidence of improved relationships was observed. Further, the teacher participants deemed the intervention to be feasible and acceptable.

Investigating the Effect of Increasing Positive Teacher-Student Interactions on Adolescent Behavior and Teacher-Student Relationships

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B.A., Boston College, 2009

M.A., University of Connecticut, 2011

A Dissertation

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APPROVAL PAGE

Doctor of Philosophy Dissertation

Investigating the Effect of Increasing Positive Teacher-Student Interactions on Adolescent Behavior and Teacher-Student Relationships

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Statement of the Problem

According to Vygotsky (1978), learning occurs through interactions with the environment and people in that environment. Because students spend a significant portion of time in classrooms interacting with their teachers, teacher-student (T-S) interactions are a primary medium through which learning occurs. Thus, the quality of teacher-student (T-S) interactions and the related T-S relationships are crucial to the learning process. Available research suggests that both positive T-S interactions and relationships are linked to a myriad of positive academic and behavioral student outcomes, such as stronger vocabulary (Connor, Son, Hindman, & Morrison, 2005), growth in phonological awareness and word reading (Curby, Rimm-Kaufman, & Ponitz, 2009), greater social competence, and lower disruptive and noncompliant behaviors (Mashburn et al., 2008; Merritt, Wanless, Rimm-Kaufman, Comeron & Peugh, 2012). Unfortunately, research also suggests that interactions between teachers and students with learning or behavioral difficulties are often characterized by fewer positive interactions (e.g., more redirecting behavior, fewer instructional interactions; Cook & Cameron, 2008) and less positive relationships (e.g., greater student-reported distrust and dissatisfaction with teacher; Murray, 2009). Given the strong correlation between teacher positivity and student gains, this appears to be an important area for research, though knowledge on mechanisms through which to support teachers in increasing positive behavior is nascent.

A "second generation" of research aims to evaluate theoretically-informed interventions designed to enhance T-S interactions (Hughes, 2012). However, a review of current interventions for increasing positivity in the classroom reveals major limitations. Namely, current interventions are time and resource intensive, mostly focused on class-wide

interactions, and aimed at young elementary classrooms (Allen, et al., 2011; Hamre, et al., 2012; Reinke, et al., 2012). As such, Hughes (2012) suggests a consultative approach to support teachers' facilitation of positive interactions with students. In order to support behavior change in teachers, three aspects of consultation are needed: (a) explicit teaching of specific behaviors, (b) supporting teachers in self-reflection of those behaviors, and (c) providing individualized feedback (Hughes, 2012).

Purpose of the Study

The primary purpose of the current study was to test the efficacy of a potentially more feasible intervention (i.e., less time and resource intensive) to increase teachers' use of positive interactions with students in schools. To achieve this aim, specific observable behaviors associated with positive T-S interactions were extracted from the literature and explicitly taught to teachers through consultation, with implementation supports of self-reflection and individualized feedback though consultation.

A secondary aim of the current study was to determine whether increasing positive interactions between teachers and their students results in improved student outcomes, such as decreasing problem behaviors and increasing academic skills. In addition, the effect of increasing positive interactions on T-S relationships was investigated.

Chapter II: Review of the Literature

To provide a broader context for T-S interactions and relationships, the following areas are reviewed (a) definitions of T-S interactions and relationships, (b) the link between positive T-S interactions and student outcomes, (c) the link between positive T-S relationships and student outcomes, (d) the importance of investigating interactions/relationships throughout development, (e) the link between T-S interactions and T-S relationships, (f) current approaches to increasing positive interactions, and (g) behaviors associated with positive interactions.

Definitions of T-S Interactions and Relationships

A consistently used definition of T-S interactions is not currently present in the literature. Often, the particular measure used to assess T-S interactions defines the features of a positive or negative T-S interaction in each study. For instance, in studies that use the Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2004), positive T-S interactions are defined by the quality of teacher and student verbalizations. Specifically, positive T-S interactions, as defined by the CLASS, include emotional support (i.e., respect and enjoyment shared by teachers and students, teacher sensitivity to student's academic and emotional concerns, and teachers' regard for student perspective), classroom organization (i.e., managing behavior appropriately, being productive, and using instructional learning formats that engage students), instructional support (i.e., facilitating higher order thinking, providing quality feedback), and student engagement (i.e., high degrees of focus and participation from students). This is a very broad definition, so some researchers focus on more behaviorally based definitions of T-S interactions, such as those defined by the Teacher-Pupil Observation Tool (T-POT; Martin et al., 2010), including praise, acknowledgement, and encouragement (Hutchings, Martin-Forbes, Daley, & Williams, 2013).

Similarly, there is no clear consensus concerning the definition of positive or negative T-S relationships. Definitions differ based on the conceptual model of relationships employed. Some use attachment theory to delineate features of T-S relationships (i.e., secure versus detached relationships; Howes & Hamilton, 1992), whereas others base their definitions on the quality of T-S interactions, such as those defined by the CLASS. For instance, Pianta (2002) defines a positive T-S relationship in terms of closeness and a negative T-S relationship in terms of conflict. Close T-S relationships include warm and affectionate interactions, open communication, and a sense that the teacher is an effective source of support and the student effectively uses the teacher as a resource. Conflict in T-S relationships refers to the degree to which the relationship is characterized by negativity. T-S relationships that are high in conflict indicate that the teacher struggles with the student, feels emotionally drained, or believes he/she is ineffective with the student.

The Link between Positive T-S Interactions and Student Outcomes

Teachers' behaviors and their interactions with students hold the potential to enhance (or diminish) student achievement and social-emotional outcomes (Rimm-Kaufman & Hamre, 2010). Specifically, when teachers have positive interaction styles (i.e., interact with their students with warmth, responsivity, and/or emotional support), their students tend to (a) demonstrate positive academic outcomes, such as stronger vocabulary (Connor, Son, Hindman, & Morrison, 2005); (b) have greater growth in phonological awareness and word reading (Curby, Rimm-Kaufman, & Ponitz, 2009); (c) acquire more math skills; and (d) have a more positive perception of their academic abilities (Perry, Donohue, & Weinstein, 2007).

The way in which teachers interact with their students also affects student behavioral outcomes. Mashburn and colleagues (2008) found that Pre-K students with highly emotionally supportive teachers had more social competence (i.e., participated in

discussions, completed work, were well-liked by their peers), and fewer problem behaviors (i.e., had fewer disruptive and noncompliant behaviors). Further, in elementary classrooms where teachers were observed to offer emotional support (i.e., attending to students' interest and initiative, providing appropriately challenging learning opportunities, and creating positive social relationships), children made more behavioral gains (Perry, Donohue, & Weinstein, 2007), were less aggressive, and had higher behavioral self-control, regardless of socio-demographic risk factors (Merritt et al., 2012).

Fewer studies focus on negative interactions, but those that do suggest the link between negative T-S interactions and negative student outcomes, including negative school reputations and escalation of antisocial problems of students (Webster-Stratton, Reinke, Herman, & Newcomer, 2011). In addition, Sava (2002) found a strong positive correlation between negative T-S interactions and lower student motivation, negative attitudes towards the particular subject taught by the teacher, and psychosomatic complaints. In fact, conflict-inducing attitudes of teachers accounted for almost half of the total explained variance of student educational and psychosomatic outcomes.

The Link between Positive T-S Relationships and Student Outcomes

Certain aspects of T-S relationships are associated with changes in student behavior, psychosocial adjustment, and academic skill improvement over time. Specifically, T-S relationship quality moderates contributions to predicting social and academic skills in first grade (Pianta & Stuhlman, 2004). T-S closeness (i.e., the degree of warmth and open communication present in a relationship) is associated with increases in prosocial behavior (Birch and Ladd, 1998), as well as decreases in externalizing behavior, even for students with high levels of externalizing behavior upon school entry (Silver, Measelle, Armstrong, &

Essex, 2005). Further, positive T-S relationships are also linked to social competence with peers in first grade (Howes, 2009).

Conflict in T-S relationships (i.e., relationships characterized by antagonistic and disharmonious interactions), on the other hand, are associated with negative student outcomes, such as lower achievement scores, an increase in student externalizing behavior, an increase in student internalizing problems, and lower social competence ratings (Pianta & Stuhlman, 2004). In addition, Birch and Ladd (1998) found that conflict in Kindergarten students' T-S relationship was associated with a decline in prosocial behavior over time and an increase in peer-perceived aggressive behavior over time.

Importance of T-S Interactions/Relationships throughout Development

A majority of research on T-S interactions and relationships has been conducted with younger elementary students. Research on the importance of T-S interactions and relationships is needed throughout development, however, as there is evidence that T-S relationships weaken as students get older (Hughes, 2012). These results are particularly concerning in light of the fact that early adolescence (i.e., ages 10-14; McLaughlin & Clarke, 2001) is a crucial transition time in development that can determine whether or not a student stays engaged with school (Kennedy, 2011). As students in early adolescence start developing new ideas about the world and themselves, experiencing physical and emotional changes, and as school typically becomes larger and less nurturing, many students experience a disconnect between the support they receive and the support they need. Results of available research on interactions and relationships between teachers and older students make clear that the need for positive T-S interactions and relationships does not diminish as students get older (Hughes, 2012).

More specifically, positive interactions between teachers and fourth, fifth, and sixth grade students are associated with students' positive interactions with their peers and higher teacher ratings of prosocial student behavior in public school (Luckner & Pianta, 2011) and alternative settings (Kennedy, 2011). Yeung and Leadbeater (2009) analyzed interactions between teachers and adolescent students who had experienced high levels of peer rejection. They found that students whose teachers provided higher levels of emotional support had lower levels of emotional and behavioral problems. Further, T-S relationship quality was a significant predictor of student-reported engagement, grades in language arts, grades in mathematics, and mathematical achievement (Murray, 2009). Not only can positive T-S relationships protect against depression and misconduct in adolescents, positive T-S relationships moderated the negative influences of adolescents' poor effort and conflictive parent-adolescent relationships (Wang, Brinkwork, & Eccles, 2012).

In addition, adolescent students themselves report that their interactions and relationships with their teachers are critical to their success (Allen et al., 2011). When adolescents perceive their teachers to be accepting of them, they are more likely to have positive academic achievement, self-concept, school attitude, psychosocial adjustment, and positive school conduct; these results have been found in Turkey, Bangladesh, Kuwait, Estonia, India, and the United States (Ahmed, Rohner, & Carrasco, 2012; Erkman, Caner, Sart, Borkan, & Sahan, 2010; Khan, Haynes, Armstrong, & Rohner, 2010; Kourkoutas & Parmar, 2009; Parmar & Rohner, 2010; Rohner, Parmar, & Ibrahim, 2010; Tulviste & Rohner, 2010).

Link between T-S Interactions and T-S Relationships

As described above, there is clear and convincing evidence that positive T-S interactions and relationships are individually associated with positive student outcomes, but

what are the theoretical mechanisms underlying positive interactions and relationships in schools and what is the relation between T-S interactions and relationships?

Conroy and Sutherland (2012) conceptualized the relation between T-S interactions and relationships through Bronfenbrenner's (2005) bioecological model, which describes human development as a set of nested systems with which an individual interacts, including biological factors, family processes, and socio-economic status. Through this model, we can think about T-S interactions, which are made up of both teacher and student behaviors, as being embedded in T-S relationships. The more positive interactions that occur between students and teachers, the stronger the relationship is, and both "nests" affect child development.

Over time, T-S interaction patterns may become *transactional*; that is, student behaviors lead to certain teacher behaviors and vice versa, as described by transactional theory (Sameroff, 1995). According to transactional theory, child development is an ongoing series of reciprocal relations, with the child influencing the environment and the environment influencing the child. For example, when a student engages in a behavior that a teacher finds aversive, the teacher is likely to engage in responses to escape or terminate the aversive behavior (Gunter, 1994). Over time, the teacher may learn to engage in behaviors to avoid the interactions all together. If these teacher behaviors are aversive to the student, the potential for escalation increases, and a pattern for negative interactions is developed, leading to an avoidant or tumultuous relationship.

A study by Doumen (2008) supports the transactional model by examining the conflict between teachers and kindergarten students. Student participant's aggressive behavior at the beginning of kindergarten led to increases in T-S conflict midyear, which in

turn led to an increase in aggressive behavior at the end of the year, supporting the idea that T-S interactions are bidirectional and transactional.

Another theoretical model, by Wubbels (2005), indicates a causal link between positive interactions and positive relationships through a communicative systems approach, in which every behavior we display in the presence of another is communication. Each instance of communication has content (i.e., the message of the interaction), and a relational aspect, where perceptions of the relationship are formed. For instance, if a teacher says, "I want to help you learn" to a Jane with a smile, Jane's perception might be that the teacher likes her. If a teacher says, "I want to help you learn" to a Jane with a frown, Jane might perceive this to mean the teacher thinks she is not smart. When teachers and students interact consistently over the year, their perceptions about their relationship are confirmed and reconfirmed, forming a basis for reactions.

Although multiple theoretical approaches exist that support the idea that positive interactions lead to positive relationships between a T-S dyad, there have been few causal studies investigating this claim. Sabol and Pianta (2012) did a review of trends in research on T-S relationships and came to the conclusion that the quality of T-S relationships is contingent upon teachers' characteristics that can be changed (i.e., specific, observable behaviors), conceptualizing the role of the teacher as an agent of change to improve relationships. With this in mind, they advocated for training teachers in specific behaviors that will improve their interactions with students, in order to improve relationships. However, the authors did not cite any specific interventions that improved T-S relationships by increasing positive T-S interactions.

Interventions that Increase Positive T-S Interactions/Relationships

As noted above, most of the research on positivity between students and teachers is correlational (Connor, Son, Hindman, & Morrison, 2005; Luckner & Pianta, 2011; Pianta & Stuhlman, 2004; Rimm-Kaufman & Hamre, 2010). Thus, there are data to support that positive T-S interactions and relationships are associated with positive student outcomes, but there are limited causal studies looking at the effect of increased positive T-S interactions in the classroom. Hughes (2012) discusses the need for a "second generation" of research on T-S interactions and relationships that focuses on interventions to increase positivity between students and teachers. Below is a review of current interventions for increasing positivity between teachers and students.

Interventions to increase T-S interactions. Three interventions with preliminary evidence for increasing T-S interactions are described below.

First, a course entitled Support of Language and Literacy Development in Preschool Classrooms Through Effective Teacher-Child Interactions and Relationships (Hamre et al., 2012) was evaluated. Preschool teachers participated in a 14-week course on increasing positive T-S interactions in the classroom. The course met once a week for three hours, and was organized based on three domains outlined by the Classroom Assessment Scoring System (CLASS), including emotional support, classroom organization, and instructional support. Data suggest that the course successfully increased positive T-S interactions in the classroom, however no student outcome data were provided.

Second, the Incredible Years Teacher Classroom Management Program was evaluated (Webster-Stratton et al., 2011). There is a large research base for the effect of the Incredible Years Teacher Classroom Management (IY TCM) Program on teachers' use of positive classroom management strategies for students three through eight years of age (Reinke, et al., 2012). This intensive program involves video vignettes to model effective

teacher interactions, role play and practice, small group break-out sessions, and weekly coach visits. The training involves teaching empathy, attention and involvement, play, problem solving, listening, talking, praise, encouragement, and celebration. To be trained, teachers attend six full-day monthly teacher workshops, meet with teacher coaches, and complete assignments. However, teaching positive teacher interactions is only a subsection of this intensive training. Outcomes suggest increases in the use of positive teacher behaviors and the reduction of negative teacher behaviors post training, as well as the reduction of conduct problems in students (Hutchings et al., 2013; Reinke, et al., 2012; Webster-Stratton et al., 2011).

Last, a web-mediated consultative approach to improving T-S interactions was evaluated (Allen, et al., 2011; Pianta, Mashburn, Downer, Hamre, & Justice, 2008). In this intervention, teachers attend a workshop-based training, during which they are given multiple field-based examples of objectively defined high-quality practice. Then, teachers video tape their interactions with students and share the footage with a consultant through web-based technology. Teachers receive feedback two times a month for 18 months about the extent to which their classroom interactions promote learning. This approach was tested in Pre-K classrooms and secondary classrooms, and was associated with an increase in positive T-S interactions, as well as an increase in achievement test scores. However, this approach is time and resource intensive.

Interventions to improve T-S relationships. Two interventions with preliminary evidence for improving T-S relationships are described below.

First, banking time (Driscoll, Wang, Mashburn, & Pianta, 2011) is an intervention that targets the quality of T-S relationships by having teachers engage in scheduled nondirective sessions with children to give regular opportunity to interact positively. The

sessions are led by the student as the teacher listens, observes while narrating the student's activity, labels emotions, and develops relationship themes (e.g., trust, reliability, dependability). Banking time has only been established to be effective with preschool children.

Second, emotion-focused therapy (EFT; Lander, 2009) has been studied to reduce conflict in T-S relationships. EFT involves 10 weekly sessions, during which a therapist, student, and teacher meet to create/maintain a therapeutic alliance, access emotions of both the student and teacher, and restructure interactions. Outcomes have only been investigated through one case study.

Limitations of current interventions. Although the interventions above show preliminary success, there are some major limitations. First, the interventions were either resource intensive (i.e., costly) or time intensive (i.e., involving multiple full-day trainings and/or a commitment that spans months), highlighting the need for an intervention feasible for use in schools. Second, most of the interventions focused on class-wide interactions, and not the interactions between a T-S dyad. Intervention research on a dyadic level is needed to be able to provide teachers with the ability to enhance a particular relationship in need of improvement, as problematic T-S interactions may exist in classrooms with generally positive climates (Hughes, 2012). Last, the majority of interventions targeted interactions with preschoolers or early elementary students. More information is needed to understand effective interactions between teachers and young adolescent students.

To address the limitations of current interventions, a consultative approach is suggested by Hughes (2012), who notes the success of consultative approaches to support changes in teacher behavior. Specifically, he describes three hypothesized active ingredients in consultation with teachers: (a) explicitly teaching specific behaviors, (b) supporting

teachers in reflecting upon their current practices, and (c) providing individualized feedback to teachers in the environment in which they need support.

Teacher Behaviors Associated with Positive T-S Interactions

Throughout the T-S interaction literature, there appear to be three aspects of positive T-S interactions associated with student gains: frequency of positive T-S interactions, quality of positive T-S interactions, and the ratio between positive and negative interactions. Most of the studies cited above investigated the link between the frequency or quality of positive interactions and student academic and behavioral outcomes (Connor, Son, Hindman, & Morrison, 2005; Curby, Rimm-Kaufman, & Ponitz, 2009; Merritt et al., 2012). In other words, when teachers interact positively with students more and in better ways, students excel. There is also preliminary evidence of the effectiveness of increasing the ratio of positive to negative interactions on positive outcomes, such as feelings of well-being (Fredrickson & Losada, 2005) and less disruptive behavior (Pisacreta, Tincani, Connell, & Axelrod, 2011). No study to date has investigated the effect of all three aspects together.

To increase frequency of positive T-S interactions, one strategy includes increasing non-contingent positive attention (Webster-Stratton et al., 2011), which allows the opportunity for teachers and students to interact positively in a way that is independent from the child's behavior. Specific ways to increase non-contingent positive attention may include setting an alarm to a predetermined interval as a reminder to engage the student positively, self-monitoring (i.e., the teacher tallies the number of positive interactions with the student), and having a menu of possible non-contingent positive interactions readily available as a cue and reminder. Other strategies to increase the frequency of positive interactions include designating a certain amount of check-ins throughout the day, during which the teacher can provide praise or see how the student is doing, providing

individualized support during a subject that is particularly challenging for the student, and providing frequent reassurance during times the student struggles (Pianta et al.,2008). Token economies (i.e., providing students the opportunity to earn tokens contingent upon desired behavior that can be cashed in for a back-up reinforcer) and behavioral contracts (i.e., a written document that specifies a contingency and defines expectations) can also increase the number of positive interactions between teachers and students, as they systematize praise and reinforcement.

To improve the quality of T-S interactions, one strategy includes increasing the specificity of praise (Henderlong & Lepper, 2002; Simonsen et al., 2008). Praise that labels behavior (e.g., "I like the way you walked into the room and quietly sat down") allows the student to receive specific feedback about desired behaviors and increases the likelihood that the student will engage in that behavior again (Bani, 2011). Although providing general praise (e.g., "great job") is a positive interaction, it is not as effective in increasing desired behavior as specific praise (Simonsen et al., 2008). Command training (Webster-Stratton et al., 2011) is another strategy that can increase the quality of interactions between teachers and students. When commands are vague, unclear, or indirect, students are less likely to comply, increasing the likelihood that a negative interaction will occur. Training teachers on effective commands increases the quality of commands, and therefore the quality of interactions. Linking praise and feedback to positively stated expectations provides students with guidelines about behavior in a positive framework (Simonsen, et al., 2008) and facilitates the use of talking about student behavior in a positive way.

Last, many of the strategies to increase frequency of positive interactions will also increase the ratio of positive to negative interactions, but strategies to decrease reprimands (i.e., ignore problem behaviors, reinforce peers, using nonverbal redirects; Webster-Stratton

et al., 2011) and strategies to increase teacher awareness of the ratio (e.g., setting an alarm or tracking positive and negative statements; Dewhirst & Davis, 2011) are also effective.

Purpose

The purpose of the current study was to test the efficacy of using a consultative approach to increase positive interactions between teachers and students. There was one primary research question and three secondary research questions.

Primary Research Question:

1.) Will a combination of explicit training of behaviors associated with positive interactions paired with weekly performance feedback increase teacher-initiated positive interactions with students, as measured by the T-POT?

1a. Will a combination of explicit training of behaviors associated with positive interactions paired with weekly performance feedback increase *frequency* of teacher-initiated positive interactions with students, as measured by the T-POT? It is hypothesized that frequency of teacher-initiated positive interactions will increase post-training and will be maintained or continue to increase as weekly feedback is provided.

1b. Will a combination of explicit training of behaviors associated with positive interactions paired with weekly performance feedback improve the *quality* of teacher-initiated positive interactions with students, as measured by the T-POT? It is hypothesized that quality of teacher-initiated positive interactions will improve post-training and will be maintained or continue to increase as weekly feedback is provided.

1c. Will a combination of explicit training of behaviors associated with positive interactions paired with weekly performance feedback increase the *ratio* of teacher-initiated positive to negative interactions with students, as measured by the T-POT? It is hypothesized that the ratio of teacher-initiated positive to negative interactions will increase post-training and will be maintained or continue to increase as weekly feedback is provided.

Secondary Research Questions:

1.) Will increasing teacher- initiated positive interactions between a T-S dyad decrease student problem behaviors as measured by the four negative student categories (i.e., off-task, deviance, noncompliance, student negative to teacher) on the T-POT?

1a. Will increasing *frequency* of teacher- initiated positive interactions between a T-S dyad decrease student problem behaviors as measured by the four negative student categories (i.e., off-task, deviance, noncompliance, student negative to teacher) on the T-POT? It is hypothesized that problem behaviors will decrease after a consistent increase in frequency of teacher-initiated positive interactions.

1b. Will improving the *quality* of teacher- initiated positive interactions between a T-S dyad decrease student problem behaviors as measured by the four negative student categories (i.e., off-task, deviance, noncompliance, student negative to teacher) on the T-POT? It is hypothesized that problem behaviors will decrease after a consistent improvement in the quality of teacher-initiated positive interactions.

1c. Will increasing the *ratio* of teacher- initiated positive to negative interactions between a T-S dyad decrease student problem behaviors as measured by the four negative student categories (i.e., off-task, deviance, noncompliance, student negative to teacher) on the T-POT? It is hypothesized that problem behaviors will decrease after a consistent increase in the ratio of teacher-initiated positive to negative.

2.) Will increasing teacher- initiated positive interactions between a T-S dyad increase academic skills and behaviors as measured by the Academic Competence Evaluation Scales (ACES; DiPerna & Elliott, 2000)?

2a. Will increasing *frequency* of teacher- initiated positive interactions between a T-S dyad increase academic skills and behaviors as measured by the ACES? It is hypothesized that academic skills and behaviors will increase after a consistent increase in frequency of teacher-initiated positive interactions.

2b. Will improving the *quality* of teacher- initiated positive interactions between a T-S dyad increase academic skills and behaviors as measured by the ACES? It is hypothesized that academic skills and behaviors will increase after a consistent increase in frequency of teacher-initiated positive interactions.

2c. Will increasing the *ratio* of teacher- initiated positive to negative interactions between a T-S dyad increase academic skills and behaviors as measured by the ACES? It is hypothesized that academic skills and behaviors will increase after a consistent increase in frequency of teacher-initiated positive interactions.

3.) Will increasing teacher-initiated positive interactions between a T-S dyad improve the relationship between the dyad, as measured by the Student-Teacher Relationship Scale (STRS; Pianta, 2001)?

3a. Will increasing *frequency* of teacher-initiated positive interactions between a T-S dyad improve the relationship between the dyad, as measured by the STRS. It is hypothesized that scores on the Closeness scale will increase and scores on the Conflict scale will decrease after a consistent increase in frequency of teacher-initiated positive interactions.

3b. Will improving the *quality* of teacher-initiated positive interactions between a T-S dyad improve the relationship between the dyad, as measured by the STRS. It is hypothesized that scores on the Closeness scale will increase and scores on the Conflict scale will decrease after a consistent improvement in quality of teacher-initiated positive interactions.

3c. Will increasing the *ratio* of teacher-initiated positive to negative interactions between a T-S dyad improve the relationship between the dyad, as measured by the STRS. It is hypothesized that scores on the Closeness scale will increase and scores on the Conflict scale will decrease after a consistent increase in the ratio of teacher-initiated positive to negative interactions.

Chapter III: Method

Participants and Setting

Participants included three T-S dyads from a public school in the Northeast. The school housed students in fourth through eighth grade. All teachers were Caucasian females, certified in general education, and had Master's degrees in education. Teacher A taught one fifth-grade class all academic subjects and had 9 years of teaching experience (8 years at the current school). Teacher B taught sixth-grade language arts, with 10 years of teaching experience, all of which were at the current school. The third teacher, Teacher C, taught sixth-grade math, and had 4 years of teaching experience, all of which were at the current school. Each teacher nominated one student in their classroom based on the existence of problem behaviors and a relationship with the participating teacher that was in need of improvement.

All students were male, spoke English as their first language, and were not receiving special education services at the time of the study. Student A was 10-years old at the start of the study, and demonstrated inappropriate interactions with adults and peers (e.g., rude comments, arguing, noncompliance). Student A had been home-schooled from Kindergarten until fourth grade, and his teacher reported that he was very academically capable. Student B was 11-years old at the start of the study, and had difficulties paying attention and following directions. Student C was 11-years old. His teacher reported having difficulty establishing rapport with him, along with attention issues. T-S dyads were observed in general education classroom settings.

One 26-year old female school psychology doctoral graduate student served as a consultant to the teachers, as well as the primary observer for observations. In addition, one 25-year old female graduate student in school psychology received training in data collection

procedures and served as the secondary observer for the purpose of obtaining inter-observer agreement (IOA).

Measures

Repeated measures. Two times a week, the primary observer collected data on teacher and student behaviors, as well as treatment integrity data during the intervention phase. In addition, every day during the intervention phase, the teacher self-recorded treatment integrity data, as a form of self-reflection.

Teacher-Pupil Observation Tool (T-POT; Martin et al., 2010). For 15 minutes two times a week, a trained observer used the T-POT to obtain frequency counts for a variety of teacher and student behaviors. All coded behaviors group into eight composite categories: teacher positives (includes acknowledgement, problem solving, unlabeled and labeled praise, and positives), teacher negatives (consists of one category: teacher negatives), student off-task (consists of off-task only), student deviance (includes all behaviors from negatives to teacher, negative responses, verbal aggression to peer and physical aggression to peer), student compliance (includes child compliance to direct and indirect commands), student non-compliance (includes non-compliance to direct and indirect commands, behaviors eliciting a time-out warning and non-compliance to time-out), student negative to teacher (includes aggression to teacher, destructive, disruptive, negative response to teacher negative and negative response to teacher positive), and student pro-social behavior (includes child positives-non-specific recipient, and positive response to peer initiation). Authors report good inter-rater reliability (α =.78), good internal consistency, and good discriminant and concurrent validity (Martin et al., 2010). See Appendix A for the T-POT manual with specific definitions of each teacher and student behavior tallied, and Appendix B to view the measure.

A second observer completed the T-POT for IOA purposes for 23.5% of the observations. IOA was determined by dividing the smaller count by the larger count and multiplying that number by 100 for each category. Percent IOA was averaged across categories to calculate the overall IOA percentage.

Self-report rating forms. To collect treatment integrity data across the entire day and so that teachers self-reflect upon their own implementation of strategies, each teacher completed self-report ratings daily during the intervention phase. The self-report form consisted of observable behaviors/strategies that the teacher was asked to increase and a 3-point Likert scale (1= *not implemented today*, 2= *partially implemented*, 3= *fully implemented*) to rate the extent to which each behavior/strategy was implemented that day. The observer completed the same form during each observation in order to provide further feedback on the extent to which strategies were being implemented. See Appendices C-F for the Self-Report Rating Form template and Self-Report Rating Forms for Teacher A, Teacher B, and Teacher C, respectively.

Pre-post measures. Before the consultation process began and at the end of the study, teachers completed two measures.

Academic Competence Evaluation Scales (ACES; DiPerna & Elliott, 2000). Pre- and post- consultation process, teachers completed the Teacher Rating Form of the ACES in relation to the nominated student. The ACES is a standardized, norm-referenced measure that assesses academic skills and academic enabling behaviors for students K-12 or college. The ACES includes 33 items regarding academic skills in three domains: Reading/Language Arts, Mathematics, and Critical Thinking, and 40 items regarding academic enablers in four domains: Interpersonal Skills, Engagement, Motivation, and Study Skills. All items were rated on a five-point scale to compare student performance to grade-level expectations (*Far*

Below to *Far Above*) and a three-point scale for how important the skills are for academic success in the teacher's classroom (*Not Important* to *Critical*). Authors report moderate to good reliability and validity.

Student-Teacher Relationship Scale (STRS; Pianta, 2001). Pre- and post-consultation process, teachers rated their perceptions of their relationships with the nominated student using the short form of the STRS. The STRS is a self-report measure composed of 15 items rated on a five-point scale (*definitely does not apply* to *definitely applies*) relating to two scales: Conflict and Closeness. The Conflict scale is composed of 8 items that assess the extent to which a teacher feels a relationship with a student is negative, whereas the Closeness scale is composed of 7 items that assess the extent to which a teacher feels a relationship with a student is characterized by warmth, affection, and open communication. Reliability, predictive validity, and concurrent validity of the STRS have been demonstrated repeatedly (Birch & Ladd, 1998; Hamre & Pianta, 2001). See Appendix G to view the measure.

Social validity. At the end of the study, teachers independently completed the four scales of the Usage Rating Profile-Intervention Revised (URP-IR; i.e., acceptability, understanding, feasibility, system climate; Chafouleas, Briesch, Neugebauer, & Riley-Tillman, 2011) most applicable to the intervention. Teachers rated 23 items on a 6-point Likert scale (1 = *strongly disagree* to 6 = *strongly agree*). The included four scales have demonstrated acceptable internal consistency reliability in an exploratory factor analysis (α = .79-.95) and confirmatory factor analysis (α = .80-.95). See Appendix H to view the measure.

Procedural integrity. To ensure the consultant provided consultation as intended, Consultation Treatment Integrity Checklists (adapted from Bergan & Kratochwill, 1990) were completed by the consultant immediately following each consultation meeting (e.g.,

Initial Interview, Interaction Training Interview, and Treatment Evaluation Interview; described below). For each step of the consultation meeting, the consultant rated the step as an "Occurrence" or a "Non-occurrence". At the end of the study, a second rater listened to the three audio-taped consultation meetings to rate the procedural integrity of the consultation process. See Appendix I to view Consultation Treatment Integrity Checklists for all consultation meetings.

Dependent Variables

Primary dependent variable. The T-POT was used to measure changes in the three dimensions of T-S interactions (i.e, frequency, quality, and ratio). *Frequency* refers to the number of times a T-S dyad engaged in a positive interaction, which was measured using the total tally from the teacher positives category on T-POT. Q*uality* refers to qualitative aspects of each positive interaction (e.g., specificity of praise and request statements). Depending on which quality aspect was in need of intervention, quality was measured using a tally of specific praise statements, a ratio of specific to general praise statements, and/or a tally of demands that result in no opportunity to comply, as defined by the T-POT. *Ratio of positive to negative interactions* refers to the extent to which positive interactions exceed negative interactions, and was measured by calculating the ratio of all teacher positives used to all teacher negatives, as defined by the T-POT.

Secondary dependent variables. The T-POT was used to measure changes in the four student problem behaviors (e.g., off-task, deviance, noncompliance, negative to teacher). The ACES was used to measure changes in academic skills and enablers, and the STRS was used to measure changes in the relationship between each teacher-student dyad.

Observer Trainings

The primary author of the T-POT was contacted via e-mail and asked to outline the steps for becoming trained in the measure, which included (a) reading the T-POT manual (Appendix A); (b) watching a short clip of a teacher interacting with students in a classroom setting; (c) writing the time codes of each behavior observed; and (d) sending it to the primary author to review, provide feedback, and approve. The primary observer followed these steps using a 10-minute clip of a teacher giving a science lesson to twelve upper-elementary students. Once the primary author approved the time codes, the secondary observer completed steps a-c using the same clip. The student researcher reviewed the time-codes in relation to the codes approved by the author of the T-POT and provided feedback. The IOA between the primary and secondary researcher during training was 94.4%.

Experimental Design and Procedure

A randomized multiple baseline across T-S dyads was used to evaluate the effect of training on teacher-initiated T-S interactions, student behavioral outcomes, and T-S relationships (Kratochwill & Levin, 2010). Dyads were randomly assigned to baseline order after completion of the Initial Interaction Interview. To meet What Works Clearinghouse standards (Kratochwill et al., 2010), five observations occurred between each phase change, to allow for vertical analysis of the data. In order for teachers to move to the intervention phase, their frequency, quality, and ratio data as indicated by the T-POT were assessed to evaluate whether or not there was a need for intervention (criteria for intervention is explained below). Further, at least three data points post intervention needed to show either an increasing trend or level in order for the next dyad to be eligible to move on to the intervention phase. A behavioral consultation process as outlined in Kratochwill and Bergan (1990) was adapted for the purposes of this study, including an Initial Interview, Interaction Training Interview, and Treatment Evaluation Interview (see Appendix J for the consultation guide).

Recruitment. Once district permission was obtained, an e-mail was sent out to all fourth-, fifth-, and sixth-grade teachers with general study information and instructions on how to contact the student researcher for more information. The student researcher met with all interested teachers to provide more detailed information and give the informed consent document to teachers who wanted to volunteer for the study. After signed teacher consent was received, each teacher nominated a student with whom she would like to improve her relationship and who demonstrated problem behaviors in the classroom.

Screening. After parental consent was obtained from each nominated student's guardian, the teacher completed the STRS. Scores on the STRS were screened to assure a need for relationship improvement. These cut-off scores were chosen by the student researcher to ensure that there is room for improvement between pre and post completion. Ideal cut-off scores were below a 21 (i.e., average rating of 3 out of 5 on the 7 items) on the Closeness scale and/or above a 24 (i.e., an average rating of 3 out of 5 on the 8 items) on the Conflict scale. A second set of cut-off scores was identified a priori in the case that enough participants who meet criteria could not be recruited; namely, scores below a 28 (i.e., an average rating of 4 out of 5 on the 7 items) on the Closeness scale and/or above a 16 (i.e., an average rating of 2 out of 5 on the 8 items) on the Conflict scale were allowed to participate. For Teacher A and Teacher C, STRS scores met screening criteria. Teacher B's STRS scores did not meet ideal screening criteria, although the scores met the second cut-off criteria. As such, Teacher B was provided with the option of nominating another student or waiting to see if no other teachers volunteered to participate in the study, in which case the STRS scores would be accepted. The teacher chose to wait, and no other T-S dyads that met ideal cut-off scores could be recruited, so Teacher B was accepted to participate. After all teachers had been through the screening process, an Initial Interaction Interview was scheduled at a time most convenient for each teacher.

Pre-implementation phase. During an Initial Interview, each teacher was interviewed about interactions with the target student, how the teacher defines negative and positive interactions, as well as classroom practices. Observation times were chosen during this first interview. As Teacher B and Teacher C spent one class period per day with the target student, observations occurred during that period. Teacher A noted that the most problematic time of day for Student A was writing class, so observations occurred during writing.

After all three teachers were interviewed, the dyads were observed at least six times using the T-POT. The resulting data were compared to specific criteria (see Appendix K) relating to each dimension of T-S interactions to determine intervention need. As there are no clear standards for effective levels of positive T-S interactions, criteria were determined a priori based on post-intervention results from a program established to increase positive interactions and decrease student behavior (IY TCM program; Hutchings, Martin-Forbes, Daley, and Williams, 2013). In other words, average interaction frequencies (e.g., total positive statements, specific praise, teacher negatives) from those teachers who successfully completed the IY TCM program were used as ideal results. Any T-POT results from the participating dyads that were not "ideal" were described as in need of intervention.

Once a need for intervention was established in one or more of the interaction dimensions, the Results to Strategies Table (Appendix K) and specific decision rules (Appendix L) were used to create a list of possible appropriate interventions. Using information obtained from the interview and narrative notes taken while in the classroom, one to three strategies were chosen from that list based on goodness of fit. See Appendix N for specifics on how strategies for each case were chosen.

Teacher A had been randomly assigned to receive training first, so after six observations, the T-POT data were evaluated for intervention need. Teacher A met criteria for needing support in frequency of positive interactions, quality (i.e., ratio of specific to general praise and frequency of specific praise), and ratio of positive to negative statements. It was determined that training in the following three strategies would be most appropriate for Teacher A: token economy used to acknowledge positive student behaviors, specific praise for each token provided, and consistent ignoring of student arguing. The token economy was set up so that the student earned a tally mark on a point sheet each time he exhibited a pre-determined positive behavior (e.g., saying something nice to a friend, starting an assignment after the first time asked, agreeing with a friend when working in a group, and following directions). The student could cash in points for rewards that involved getting positive attention (e.g., positive letter home to parents, showing a project to the principal, being a class tutor). See Appendix D for the Self-Report Form for Teacher A, which includes specifics on full implementation of strategies.

T-POT data for Teacher B, who was assigned to receive training next, were analyzed to determine intervention need. Teacher B met criteria for ratio of specific to general praise, frequency of specific praise, and frequency of no opportunity to respond. Using decision rules, it was determined to be most appropriate for Teacher B to be trained in providing specific praise to Student B, as well as praise for accurate self-ratings of on-task behavior that were already occurring. Specifically, Teacher B was given the goal of providing the target student four specific praise statements per daily class period, with one of the praise statements regarding accurate student self-ratings. Teacher B was also asked to record the number of specific praise statements given after each class. See Appendix E for more specifics.

T-POT data for Teacher C were analyzed next to determine intervention need. Teacher C met criteria for ratio of specific to general praise and frequency of specific praise. As such, a behavior contract was put in place with the guidelines of providing specific praise for the behaviors outlined in the contract. See Appendix F for details and Appendix M for a copy of the contract.

Intervention phase. The intervention aligned with the active ingredients of consultation proposed by Hughes (2012): (a) direct teaching of behaviors, (b) self-reflection, and (c) context embedded support.

Direct teaching of behaviors. During an Interaction Training Interview, assessment results were discussed in relation to positive interactions with students. After receiving specific and individualized feedback informed by baseline data, the strategies to increase positive T-S interactions were discussed, which included planning logistics and direct training. Direct training included explicit teaching, modeling, and role playing with feedback.

Self-reflection. At the Interaction Training Interview, the teacher was provided with the self-report rating form that included a list of the teacher strategies on which the teacher was trained and a three-point scale to rate the extent to which the strategy/behavior was implemented. The rating form was filled out daily by the teacher and all completed forms were given to the consultant during each weekly meeting (see context-embedded support). The purpose of the rating form was to facilitate the teachers' reflection on and awareness of her positive interactions, as well as to provide daily data on implementation.

Context-embedded support. All teachers continued to be observed in the classroom two times a week using the T-POT. In addition, the primary observer completed the same implementation rating form as the teacher, which facilitated feedback on the strategies that

were applicable during the observations. A 5-10 minute check-in meeting occurred in the classroom once a week. During the meeting, the teacher was given brief performance feedback based on observations and results from the self-report checklist. The meeting included a quick review of the relevant T-POT data (i.e., frequency of teacher-positives, frequency of teacher-negatives, ratio of positive to negatives, student disruptive, etc.), as well as percentages of treatment integrity as rated by the teacher and researcher. Then, the teacher was given the opportunity to problem-solve challenges with the researcher and ask questions about the strategies.

After 5 observations of Teacher C were completed in the intervention phase, a Treatment Evaluation Interview was conducted with each teacher to determine whether goals were met. Reports that summarized data across the study were provided to teachers. All teachers then completed post-assessments (i.e., the ACES, STRS, and URP-IR), which were picked up one week later.

Data Analysis

Visual analysis was used to evaluate the effects of the training on teacher-initiated positive interactions and the relevant student behaviors, as measured by the T-POT. Specifically, changes in level, trend, variability, immediacy of effect, and overlap of teacher positive frequency, specific praise frequency, ratio of positives to negatives, and negative student behavior categories on the T-POT were assessed from baseline to post-intervention. In addition, descriptive statistics for all teacher and student behavior categories (e.g., means, standard deviations, and standardized mean differences) were calculated.

The Wilcoxon signed-rank test (Wilcoxon, 1945), a nonparametric equivalent to a paired t-test, was used to assess changes in the STRS by testing whether we can reject the hypothesis that the differences between pre and post average scores on the Closeness and

Conflict scales of the STRS is equal to zero. In addition, the Wilcoxon signed-rank test was used to assess changes in ACES scores pre and post intervention. Descriptive data (e.g., means, standard deviations, effect sizes) were also calculated and reported.

Chapter IV: Results

Results for positive T-S interactions, student behavior and academic outcomes, and T-S relationships are presented below. In addition, adherence, IOA, and social validity results are presented.

Positive Teacher Interactions (Frequency, Quality, Ratio)

All three teachers met criteria for at least one of the three positive interaction dimensions (i.e., frequency, quality, ratio; see Table 1).

Frequency. Teacher A and Teacher B met criteria for needing support in increasing their frequency of positive interactions. Although Teacher C was providing positive statements at a rate that did not meet criteria for intervention, the strategies in which she was trained had the potential to result in an increase in positive statements. Frequency of positive statements increased for all teachers following intervention (see Table 2 and Figure 1).

Teacher A. During baseline, Teacher A's average frequency of positive statements was 3.67 an observation (SD = 2.94; range = 0-8), and there was a slightly upward trend toward goal. During the intervention phase, the average frequency of positive statements increased to 6.00 (SD = 2.72; range = 3-12); ES = 0.79. There was an increase of 3.33 praise statements from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. The trend was slightly downward in the intervention phase, and percent of non-overlapping data (PND) was 9.09%. Although there was a slight change in level from baseline to intervention, given the variability, high degree of overlap, and decreasing trend in the intervention phase, results do not suggest that there was a basic effect of the training on frequency of positive interactions for Teacher A.

Teacher B. During baseline, Teacher B's average frequency of positive statements was 3.56 an observation (SD = 2.01, range = 1-8), and there was a slightly downward trend. During the intervention phase, the average frequency of positive statements increased to 6.25

(SD = 3.50; range = 3-13); ES = 1.34. There was an increase of 5.33 praise statements from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. The trend was slightly downward in the intervention phase, and PND was 25.0%. Given the change in level and immediacy of effect, results suggest that there is evidence of a basic effect of the training on frequency of positive interactions for Teacher B.

Teacher C. During baseline, Teacher C's average frequency of positive statements was 6.08 an observation (SD = 2.91, range = 3-13), and there was a slightly downward trend. During the intervention phase, the average frequency of positive statements increased to 6.60 (SD = 1.67; range = 4-8); ES = 0.18. There was an increase of 1.67 praise statements from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. The trend was upward in the intervention phase, and PND was 0.0%. Given the change in trend and decrease in variability, results suggest that there is evidence of a basic effect of the training on frequency of positive interactions for Teacher C.

Quality. All three teachers met criteria for needing support in improving the quality of their positive interactions; in particular, the specificity of their praise statements. In addition, Teacher B met criteria for the "no opportunity to comply" category. Frequency of specific praise statements increased for all teachers (see Table 2 and Figure 2). All other data related to quality is presented in Table 3 and Appendix N.

Teacher A. During baseline, Teacher A's average frequency of specific praise was 0.67 an observation (SD = 0.82; range = 0-2), and there was a slightly upward trend. During the intervention phase, the average frequency of specific praise statements increased to 2.91 (SD = 1.64; range = 1-6); ES = 2.75. There was an increase of 1.67 specific praise statements from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was a steep upward trend during the intervention

phase, and PND was 63.6%. Given the change in level and trend, results suggest that there is evidence of a basic effect of the training on frequency of specific praise for Teacher A. In addition, during baseline, Teacher A was providing an average of 0.67 specific praise statements for every one general praise statement (SD=0.82), and during the intervention phase, this mean increased to 2.59 (SD=1.36; see Table 3).

Teacher B. During baseline, Teacher B's average frequency of specific praise was 0.33 an observation (SD = 0.71, range = 0-2), and there was a slightly upward trend. During the intervention phase, the average frequency of specific positive statements increased to 1.00 (SD = 0.93; range = 0-2); ES = 0.94. There was an increase of 0.33 specific praise statements from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was a slight upward trend during the intervention phase, and the PND was 0.00%. Although there was a change in level of specific praise statements, visual analysis results show a lack of a basic effect. In addition, during baseline, Teacher B was providing an average of 0.06 specific praise statements for every one general praise statement (SD=0.17), and during the intervention phase, this mean increased to 0.49 (SD=0.66; see Table 3).

Teacher B also met criteria for needing support in the "No Opportunity to Comply" category, which assesses the frequency of times a student was not given ample time to comply with a direction. During baseline, Teacher B provided a command without giving ample time for the student to comply an average of 1.33 (SD = 1.50; range = 0-4) times an observation. No opportunity to comply decreased to 0.75 (SD = 1.17, range = 0-3) times an observation during intervention.

Teacher C. During baseline, Teacher C's average frequency of specific praise was 0.50 an observation (SD = 0.52, Range = 0-1), and there was a slightly downward trend.

During the intervention phase, the average frequency of specific positive statements increased to 3.00 (SD = 0.71; Range =2-4); ES = 4.79. There was an increase of 2.33 specific praise statements from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was an upward trend during the intervention phase, and the PND was 100.00%. Given the change in level and trend, and the percent of non-overlapping data points, results suggest a basic effect of the training on specific praise statements for Teacher C. In addition, during baseline, Teacher C was providing an average of 0.36 specific praise statements for every general praise statement (SD=0.43), and during the intervention phase, this mean increased to 1.63 (SD=0.92; see Table 3).

Ratio. Only Teacher A met criteria for needing support in increasing the ratio of positive to negative statements, although Teacher B and Teacher C were trained in strategies that had the potential to improve the ratio. The ratio of positive to negative statements improved for all teachers (see Table 2 and Figure 3).

Teacher A. During baseline, Teacher A's average ratio was 1.10 positive statements for every one negative statement an observation (SD = .79; range = 0-2), and there was a slightly downward trend. During the intervention phase, the average ratio increased to a mean of 2.73 positives for every negative (SD = 1.63; range = 0.75-6); ES = 4.79. There was an increase of 3.13 positives for every negative from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was slight downward trend during the intervention phase, and the PND was 54.6%. Given the change in trend and immediacy of effect, results suggest a basic effect of the training on the ratio of positive to negatives for Teacher A.

Teacher B. During baseline, Teacher B's average ratio was 1.40 positive statements for every one negative statement an observation (SD = 0.99, range = 0.3-3), and there was no

observed trend. During the intervention phase, the average ratio increased to a mean of 6.25 positives for every negative (SD = 3.49; range = 3-13); ES = 4.91. There was an increase of 6.90 positives for every negative from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was slightly downward trend during the intervention phase, and the PND was 75.0%. Given change in level and percent of non-overlapping data points, results suggest that there is evidence of a basic effect of the training on the ratio of positive to negatives for Teacher B, even though she did not initially meet criteria for needing support.

Teacher C. During baseline, Teacher C's average ratio was 3.97 positive statements for every one negative statement an observation (SD = 3.45, range = 1-13), and there was a downward trend. During the intervention phase, the average ratio increased to a mean of 4.57 positives for every negative (SD = 2.54; range = 1.3-8); ES = 0.17. There was an increase of 2.03 positives for every negative from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was slightly upward trend during the intervention phase, and the PND was 0.0%. Given the immediacy of effect, the decrease in variability, and the change in trend, results suggest that there is evidence of a basic effect of the training on Teacher C's ratio of positive to negatives per observation.

Student Behavior Outcomes

Below is a summary of student behavior in the areas of off-task, deviance, noncompliance, and negative to teacher (see Table 4). See Appendix A for operational definitions of each category. Data were collected on four student behaviors of the T-POT that were not included in the four positive teacher interaction categories above. See Table 5 for descriptive data on said behaviors.

Off-task. All three students decreased in the average frequency of off-task behaviors per observation (see Table 4, Figure 4).

***Student A*.** During baseline, Student A's average frequency of off-task behaviors was 3.00 per observation (SD = 3.52; range = 0-8), and there was an upward trend. During the intervention phase, the average frequency decreased to 2.18 off-task behaviors (SD = 1.99; range = 1-7); ES = 0.23. There was a decrease of 3.00 off-task behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was slightly upward trend during the intervention phase, and the PND was 0.0%. Given the change in level and variability, and the immediacy of effect, results from visual analysis suggest a basic effect of the intervention on Student A's off-task behaviors.

***Student B*.** During baseline (N=9), Student B's average frequency of off-task behaviors was 3.00 per observation (SD = 2.18, range = 0-8), and there was an upward trend. During the intervention phase, the average frequency decreased to 0.88 off-task behaviors (SD = 0.64; range = 0-2); ES = 0.98. There was a decrease of 4.00 off-task behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was slightly upward trend during the intervention phase, and the PND was 0.0%. Given the change in level and variability, and the immediacy of effect, results from visual analysis suggest a basic effect of the intervention on Student B's off-task behaviors.

***Student C*.** During baseline, Student C 's average frequency of off-task behaviors was 2.42 per observation (SD = 1.16, range = 1-4), and there was a slightly upward trend. During the intervention phase, the average frequency decreased to 0.80 off-task behaviors (SD = 0.84; range = 0-2); ES = 1.39. There was a decrease of 2.33 off-task behaviors from the average of the last three data points of the baseline to the average of the first three data

points in the intervention phase. There was slightly downward trend during the intervention phase, and the PND was 40.0%. Given the change in level and trend, and the immediacy of effect, results from visual analysis suggest a basic effect of the intervention on Student C's off-task behaviors.

Deviance. All three students decreased in the frequency of behaviors in the "deviance" category (see Table 4, Figure 5).

***Student A*.** During baseline, Student A's average frequency of deviant behaviors was 9.50 an observation (SD = 8.34; range = 3-25), and there was an upward trend. During the intervention phase, the average frequency decreased to 3.27 deviant behaviors (SD = 1.56; range = 0-5); ES = 0.75. There was a decrease of 11.0 deviant behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was slightly upward trend during the intervention phase, and the PND was 27.3%. Given the change in level and variability, and the immediacy of effect, results from visual analysis suggest a basic effect of the intervention on Student A's deviant behaviors.

Student B. During baseline, Student B's average frequency of deviant behaviors was 1.44 an observation (SD = 1.33, range = 0-4), and there was a slightly downward trend. During the intervention phase, the average frequency decreased to 0.00 deviant behaviors (SD = 0.0; range = 0-0); ES = 1.08. There was a decrease of 0.67 deviant behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was no trend observed during the intervention phase, and the PND was 0.00%. Given the change in level and variability, results from visual analysis suggest a basic effect of the intervention on Student B's deviant behaviors.

Student C. During baseline, Student C's average frequency of deviant behaviors was 8.00 an observation (SD = 3.13, range = 4-14), and there was a slightly downward trend. During the intervention phase, the average frequency decreased to 3.60 deviant behaviors (SD = 0.89; range = 3-5); ES = 1.40. There was a decrease of 2.33 deviant behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was a slightly downward trend during the intervention phase, and the PND was 60.0%. Given the downward trend in both baseline and intervention phases, we cannot conclude that there was a basic effect of the training on Student C's deviant behaviors.

Noncompliance. All three students decreased in the frequency of noncompliant behaviors (see Table 4, Figure 6).

***Student A*.** During baseline, Student A's average frequency of noncompliant behaviors was 1.00 an observation (SD = 1.55; range = 0-3), and there was an upward trend. During the intervention phase, the average frequency decreased to 0.27 noncompliant behaviors (SD = 0.47; range = 0-1); ES = 0.47. There was a decrease of 1.67 noncompliant behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was a slightly downward trend during the intervention phase, and the PND was 0.00%. Given the change in level, decrease in variability, and change in the trend, visual analysis results suggest a basic effect of the intervention on Student A's noncompliant behavior.

Student B. During baseline, Student B's average frequency of noncompliant behaviors was 0.67 an observation (SD = 1.00, range = 0-3), and there was a slightly upward trend. During the intervention phase, the average frequency decreased to 0.00 noncompliant behaviors (SD = 0.0; range = 0-0); ES = 0.67. There was a decrease of 0.67 noncompliant behaviors from the average of the last three data points of the baseline to the average of the

first three data points in the intervention phase. There was no trend during the intervention phase, and the PND was 0.00%. Given the change in level and variability, visual analysis results suggest a basic effect of the intervention on Student B's noncompliant behavior.

Student C. During baseline, Student C's average frequency of noncompliant behaviors was 0.50 an observation (SD = 0.52, range = 0-1), and there was a slightly downward trend. During the intervention phase, the average frequency decreased to 0.00 noncompliant behaviors (SD = 0.0; range = 0-0); ES = 0.67. There was a decrease of 0.33 noncompliant behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was no trend during the intervention phase, and the PND was 0.00%. Given the change in level and variability, visual analysis results suggest a basic effect of the intervention on Student C's noncompliant behavior.

Negative to teacher. All three students decreased in the frequency of behaviors that fall in the "negative to teacher" category (see Table 4, Figure 7).

Student A. During baseline, Student A's average frequency of negative to teacher behaviors was 8.33 an observation (SD = 6.98; range =2-21), and there was an upward trend. During the intervention phase, the average frequency decreased to 3.27 negative to teacher behaviors (SD = 1.56; range = 0-5); ES = 0.73. There was a decrease of 9.00 negative to teacher behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was a slightly upward trend during the intervention phase, and the PND was 9.09%. Given the change in level and variability, and the immediacy of effect, visual analysis suggests a basic effect of the intervention on Student A's negative to teacher behaviors.

Student B. During baseline, Student B's average frequency of negative to teacher behaviors was 1.44 an observation (SD = 1.33, range = 0-4), and there was a slightly

downward trend. During the intervention phase, the average frequency decreased to 0.00 negative to teacher behaviors (SD = 0.0; range = 0-0); ES = 1.08. There was a decrease of 0.67 negative to teacher behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was no trend during the intervention phase, and the PND was 0.00%. Given the change in level and variability, visual analysis suggests a basic effect of the intervention on Student B's negative to teacher behaviors.

Student C. During baseline, Student C's average frequency of negative to teacher behaviors was 8.00 an observation (SD = 3.13, range = 4-14), and there was a downward trend. During the intervention phase, the average frequency decreased to 3.60 negative to teacher behaviors (SD = 0.89; range = 3-5); ES = 1.40. There was a decrease of 2.33 negative to teacher behaviors from the average of the last three data points of the baseline to the average of the first three data points in the intervention phase. There was a downward trend during the intervention phase, and the PND was 60.0%. Given the downward trend in both baseline and intervention phases, results do not suggest that there was a basic effect of the training on Student C's negative to teacher behaviors.

Student Academic Outcomes

At the start and end of the study, teachers completed the two subscales of the ACES; academic skills and academic enablers. Each subscale has several domains. Overall, there was a significant increase in ACES scores across cases ($Z = 2.64$; $p = 0.01$; see Table 6). Although there was no significant increase across cases in academic skills, ratings from Teacher B indicated a significant increase in academic skills for Student B ($Z = 2.00$; $p = 0.05$).

There was a significant increase in academic enablers across cases by the end of the study ($Z = 2.63$; $p = 0.01$), particularly for Student B ($Z = 2.46$; $p = 0.01$) and Student C ($Z =$

5.27; $p<0.01$). Student B showed a significant increase in engagement ($Z = 2.07$; $p = 0.04$) and study skills ($Z = 2.07$; $p = 0.04$). Student C showed a significant increase all domains: interpersonal skills ($Z = 2.64$; $p = 0.01$), engagement ($Z = 2.46$; $p = 0.01$), motivation ($Z = 2.23$; $p = 0.03$), and study skills ($Z = 3.42$; $p < 0.01$). The only academic enablers domain that showed significant increases overall was motivation ($Z = 2.56$; $p = 0.01$).

Student-Teacher Relationship

At the start and end of the study, teachers completed two subscales of the STRS; closeness and conflict. Overall scores indicate a significant increase in closeness ratings at the end of the study ($Z = 2.73$; $p<0.01$; see Table 7). Taken individually, only scores from Teacher C indicate a significant increase in closeness ratings ($Z = 2.23$; $p = 0.02$). No scores on the conflict subscale indicate a significant decrease in conflict ratings, overall or individually.

Adherence

Teacher adherence to intervention strategies. Overall, teachers adhered to 88.5% of intervention strategies (see Table 8). All teachers implemented at an average adherence of over 80.0% (Teacher A = 85.5%; Teacher B = 87.2%; Teacher C = 92.7%). Ratings from the observer tended to be slightly higher than the self-rating forms, presumably due to the fact that the observer rating was based on a 15-minute observation, while the self-ratings were based on the entire class/day.

Procedural integrity. The consultant adhered to 100.0% of the steps of the protocol for all meetings (i.e., Initial Interaction Interview, Interaction Training Interview, Treatment Evaluation Interview, and Performance Feedback Sessions), based on self-ratings. The second rater agreed with 100.0% of the adherence rating for all consultation meetings/sessions.

Inter-observer Agreement

The secondary observer accompanied the primary observer for 4 of the 17 observations (23.5%). Overall, IOA was an average of 96.3% (Range: 89.6%-100.0%). See Table 9 for a summary of IOA data by teacher and phase.

Social Validity

Teachers completed four subscales of the URP-IR, on a 6-point scale (1= strongly disagree, 6=strongly agree). Overall, teachers rated the intervention strategies positively (M = 5.00; SD = 0.36). Across cases, teachers rated the intervention highly acceptable (M = 4.96; SD = 0.31), highly understandable (M = 5.44; SD = 0.38), highly feasible (M = 4.89; SD = 0.34), and highly compatible with their system climate (M = 4.93; SD = 0.15). The lowest score was Teacher B's rating of feasibility (M = 4.33; SD = 0.52). Teacher reported that this was due to the fact that providing points to Student B as close to a positive behavior as possible was difficult during busy class periods. See Table 10 for a summary of URP-IR data.

Chapter V: Discussion

Teaching is an interactive process involving exchanges of social behaviors between teachers and students (Gunter, et al., 1994). As such, the quality of teacher-student (T-S) interactions and the related T-S relationships are crucial to the learning process. Available research suggests that both positive T-S interactions and relationships are linked to a myriad of positive academic and behavioral student outcomes (Connor, Son, Hindman, & Morrison, 2005; Curby, Rimm-Kaufman, & Ponitz, 2009; Mashburn et al., 2008; Merritt, Wanless, Rimm-Kaufman, Comeron & Peugh, 2012). However, current interventions for increasing positivity in the classroom reveal major limitations. Namely, current interventions are time and resource intensive, focused on class-wide interactions, and aimed at young elementary classrooms (Hamre, et al., 2012; Reinke, et al., 2012; Allen, et al., 2011). In the current study, a consultative approach was taken to increase the frequency and quality of positive interactions between teachers and students, as well as the ratio of positive statements to negative statements in the classroom. The purpose was to determine whether this potentially more feasible intervention would increase the three dimensions of positive interactions, and if increasing positivity would result in decreased student problem behaviors, increase student academic skills/enablers, and improve the T-S relationship. Results will be discussed in relation to the primary and secondary research questions.

Primary Research Question

The primary research question for this study was to evaluate whether the intervention increased teacher-initiated positive interactions (i.e., frequency, quality, ratio) with the nominated students, as measured by the T-POT. At the end of baseline, all teachers met criteria for needing intervention in at least one of the three dimensions of positive interactions. By the end of the study, all teachers were interacting with their nominated

students in a way that did not meet criteria for intervention. In addition, results show initial evidence that the intervention was effective in improving the ratio of positive to negative statements in all three teacher participants.

With respect to *frequency*, all three teachers increased the average number of positive statements towards the nominated student per observation, though results from visual analysis suggested a basic effect for only Teacher B and Teacher C. Because there were only two demonstrations of effect, we cannot conclude that there is a functional relationship between the training and the frequency of positives for teachers in this study.

With respect to *quality*, all three teachers increased the average number of specific praise statements towards the nominated student per observation, as well as the ratio of specific to general praise statements. Results from visual analysis suggested a basic effect for only Teacher A and Teacher C. Because there were only two demonstrations of effect, we cannot conclude that there is a functional relationship between the training and frequency of specific praise for teachers in this study. However, Teacher B also met criteria needing support in the category "no opportunity to comply", a category in the quality dimension of positive T-S interactions. Descriptive statistics show a decrease in the number of times Teacher B provided a direction without ample time for Student B to comply.

With respect to *ratio*, all three teachers increased the ratio with which they were providing positive to negative statements, and visual analysis results showed a basic effect for all teachers. As such, we can conclude that there was a functional relationship between the intervention and the ratio which with teachers were providing positive to negative statements to the nominated students.

No other study to date has looked at this kind of consultative approach to increasing positive interactions between a T-S dyad. Replication studies are needed to further test the efficacy of this approach to increasing positive T-S interactions.

Secondary Research Question #1

A secondary research question was: Will increasing teacher- initiated positive interactions between a T-S dyad decrease student problem behaviors as measured by the four negative student categories (i.e., off-task, deviance, noncompliance, student negative to teacher) on the T-POT?

All three students decreased the average frequency of off-task, deviance, noncompliance, and negative to teacher behaviors. For the behaviors of *deviance* and *negative to teacher*, visual analysis suggested a basic effect for only Student A and Student B, respectively. As there were only two basic effects shown, we cannot conclude that there was a functional relationship between increasing positivity and decreasing deviance and negative to teacher. That said, results from Student C displayed a drastic decrease in the average frequency of deviance and negative to teacher from baseline to the intervention phase. However, during baseline, there was a downward trend in these behaviors. Although the downward trend continued during the intervention phase, we cannot conclude that it was the intervention that caused the decrease in the averages.

There were three basic effects shown for decreases in off-task and noncompliant behaviors, suggesting a functional relationship between the intervention and these behaviors. These results align with previous correlational research in which high levels of positive T-S interactions related to low levels of negative student behaviors in early childhood (Mashburn et al., 2008; Sava, 2002; Webster-Stratton et al., 2011) and early adolescence (Yeung & Leadbeater, 2009).

It should be mentioned that the strategies used to increase positive interactions have also been shown to be effective at reducing problem behaviors, so it could be that the reduction in problem behaviors was due to the strategies chosen, and not the positive interactions. For example, Student A could earn reinforcers through the token economy. All of the reinforcers involved positive interactions with an adult or peer (e.g., positive letter home, showing a project to the principal, being a class tutor), but the change in behavior could have occurred because of the rewards for positive behavior. Although this is possible, most of the teachers were using some sort of behavior modification intervention during baseline. For example, Student A was on a behavior contract, through which he could earn reinforcers. The behavior contract had clear expectations for the student to follow, and the major difference between this system and the system put in place for the study was the rate and specificity of praise presented to the student. Further, Student B already had a self-monitoring system in place. What was put in place as part of the intervention was specific praise related to the self-monitoring. For Student C, the behavior contract was not related to any outside reinforcers other than praise and frequent check-ins. The strategies were not chosen based on the function of student behavior or even general universal preventative principals for behavior. Strategies for positive interactions were chosen based on individual teacher need with regards to the three dimensions of positive interactions. The main purpose of each strategy was to provide the teacher with a language and system with which to provide praise and positivity.

Secondary Research Question #2.

Another secondary research questions was: Will increasing teacher- initiated positive interactions between a T-S dyad increase academic skills and behaviors as measured by the ACES?

As measured by the ACES, the only student who increased academic skills was Student B. Academic enablers increased for both Student B and Student C. Specifically, from the beginning of the study until the end, Student B improved in engagement and study skills, while Student C improved in interpersonal skills, engagement, motivation, and study skills. There were no significant changes in academic skills or enablers for Student A. As such, we cannot conclude that there was a functional relationship between the intervention and academic skills/behaviors. As the duration of implementation was between 3 weeks and 10 weeks, depending on the order to which dyads were assigned, there may not have been enough time for academic skills to increase enough for the ACES to show significant changes.

Correlation studies suggest that teachers who use more positivity in early elementary classrooms see more academic gains (Connor et al., 2005; Curby, Rimm-Kaufman, & Ponitz, 2009). Improvements in academics related to more classroom positivity for early adolescent students is less understood, though Murray (2009) found that relationship quality was a good predictor of student grades. Future research is needed in the area of academic student gains in relation to increase positive T-S interactions in early adolescence.

Secondary Research Question #3

The final secondary research question was: Will increasing teacher-initiated positive interactions between a T-S dyad improve the relationship between the dyad, as measured by the Student-Teacher Relationship Scale (STRS; Pianta, 2001)?

Results suggest an overall increase in closeness ratings across cases, though individually, only Teacher C rated closeness scores significantly higher than baseline. Interestingly, no teacher showed a decrease in their perception of conflict with the student, even though there were clear decreases in student problem behaviors. Again, there is the

possibility of a duration issue. In other words, for a relationship to improve enough to show a significant change, the positive outcomes may have needed to be present for longer.

Though theory supports the idea that increasing positive interactions between teachers and students will improve T-S relationships (Conroy & Sutherland, 2012; Gunter, 1995; Sameroff, 1995), no study to data has tested this claim. Future research is needed to understand the strategies to improve T-S relationships, as well as the duration, or dosage, needed to see significant improvements in these relationships.

Addressing the Limitations of Current Research

Three limitations to current interventions on increasing positivity between teachers and students were discussed in the literature review: (a) feasibility and resources needed, (b) a focus on classroom interactions instead of dyadic interactions, and (c) a focus on early elementary instead of adolescence. Embedded in the purpose of the current study was to test an intervention that addressed those limitations. To ensure that the intervention was feasible, a social validity scale was completed by all three teachers. Results were positive and indicated that the intervention was highly acceptable, understandable, feasible, and compatible with the school. Further, all teachers implemented with an adequate amount of treatment integrity (88.5% across cases).

In terms of feasibility for the consultant, each teacher required three interviews (all under 30 minutes), 15-minute observations twice weekly and 10-minute check-ins weekly. Compared to many packaged programs for increasing positive T-S interactions, such as the IY TCM program (Webster-Stratton et al., 2011) or the 14-week course, entitled Support of Language and Literacy Development in Preschool Classrooms Through Effective Teacher-Child Interactions and Relationships (Hamre et al., 2012), the feasibility for the consultant is relatively more time- and resource-efficient. This intervention was also one of the few

interventions to focus on dyadic interactions, and interactions with students in early adolescence.

Future research is needed to determine whether all three active ingredients of consultation used (i.e., teaching of specific behaviors, supporting self-reflection, and providing weekly individual feedback) is necessary for outcomes. If all three ingredients are not necessary, there is the potential to increase feasibility for both the consultant and consultee.

Limitations

There are some limitations to consider when interpreting the results of this study. Limitations to the design include threats to internal validity due to the fact that selection of participants was not random. Teachers who volunteered might have been more receptive to training and willing to change teaching strategies. Further, there were only three T-S dyads, limiting the generalizability of results, and the ability to establish a functional relationship with three basic effects.

There are methodological limitations to consider as well. First, experimental control may have been violated due to the fact that the primary observer was not blind to research questions and purpose of the study. Second, there was only one measure of T-S interactions in this study, and it involved only one data collection method (i.e., frequency counts). Further, all student problem behaviors were measured using this one measure, so it may be beneficial for future studies to investigate the effectiveness of this intervention using other measures of T-S interactions. Another methodological limitation involves an inconsistent entrance criteria for participants. In order to recruit enough participants, secondary screening criteria were used for the STRS scores for Dyad B, instead of the ideal screening criteria

used for Dyad A and Dyad C. As such, STRS scores for Dyad B did not have the same potential for improvement as Dyad A and Dyad C.

It is important to note that participating teachers had different levels of need when assessed at baseline. For example, Teacher A met criteria for needing intervention in all three dimensions of T-S interactions, Teacher B met criteria for two dimensions, and Teacher C met criteria for only one dimension. There was a large amount of variability in terms of how frequently the teachers were already facilitating high quality and frequent positive interactions when they entered the study, and how often they were engaging in negative interactions. Although this variability in need did not seem to affect whether training had a basic effect on interactions (i.e., for all teachers, there was a basic effect on two of the three dimensions of interactions), this could have affected relationship ratings, because the effort needed for Teacher A to improve her interactions was much greater than Teacher C. Anecdotally, Teacher A reported that she felt all of her effort and time was not being appreciated by the student, which could have affected her perceptions of their relationship.

As mentioned above, the duration of the study might have been too brief to be able to establish a change in academic growth and T-S relationships. It is not known how long is needed to perceive a change in a relationship. Further, T-S relationships were only measured from the perspective of the teachers; no data was collected regarding student perspectives of T-S relationships changes. Further research is needed to determine the intervention's effect on the student perspective. Another limitation was the lack of clear guidelines that exist for ideal levels of positive interactions. It is not clear throughout the literature the amount of positivity needed to see positive student outcomes and to improve T-S relationships. Criteria were based on one study, not strongly researched guidelines.

Conclusions

The goal of the current study was to determine whether a consultative approach would increase positive interactions, and as a result decrease student problem behavior, increase student academic skills, and improve T-S relationships. Results provide preliminary evidence that the intervention did increase positivity between dyads, specifically for the ratio dimension. As hypothesized, the consultation resulted in positive student outcomes (i.e., decreased off-task and noncompliance). Some initial evidence of improved T-S relationships was observed, though this was only established for the closeness scale completed by Teacher C. Further, the teacher participants deemed the intervention to be feasible and acceptable.

Despite limitations, results from this study have several implications for research. As discussed by Hughes (2012), there is a need for feasible, resource/time efficient, effective interventions for increasing positivity in the classroom. The approach described in this study can be used in schools as a preventative method for students who are not connecting with their teachers. Although functional behavior assessments are an effective, evidence-based approach to creating comprehensive interventions for students, there needs to exist more time-effective ways of supporting teachers in a preventative manner and that focus on interactions and/or relationships. In addition, this approache aligns with the framework of using positive evidence-based practices for improving academic outcomes.

Assessing frequency, quality, and ratio dimensions of positive interactions is a new way of thinking about data collection for teacher behaviors. It can be used in schools as a quick way to provide feedback on interactions teachers are having with particular students, as well as classroom management. More research is needed on the implications of breaking down positive interactions in this manner.

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TABLES

Table 1.

Dimension of Positive Interactions in Need of Intervention at Baseline and Post-Intervention

	Teacher A		Teacher B		Teacher C	
	Baseline	Post	Baseline	Post	Baseline	Post
Frequency	X		X			
Quality	X		X		X	
Ratio	X					

Note. A blank cell means that the teacher was not in need of intervention for that particular dimension.

Table 2.

Means and Standard Deviations of Teacher Positives by Phase

	Baseline		Intervention		Effect Size
	Mean	SD	Mean	SD	
Frequency					
Teacher A	3.67	(2.94)	6.00	(2.72)	0.79
Teacher B	3.56	(2.01)	6.25	(3.50)	1.34
Teacher C	6.08	(2.91)	6.60	(1.67)	0.18
Quality[a]					
Teacher A	0.67	(0.82)	2.91	(1.64)	2.75
Teacher B	0.33	(0.71)	1.00	(0.93)	0.94
Teacher C	0.50	(0.52)	3.00	(0.71)	4.79
Ratio[b]					
Teacher A	1.10:1	(0.79)	2.73:1	(1.63)	2.24
Teacher B	1.40:1	(0.99)	6.25:1	(3.49)	4.91
Teacher C	3.97:1	(3.45)	4.57:1	(2.54)	0.17

Note.

[a] Quality here refers to frequency of specific praise.

[b] Ratio refer to the ratio of positive statements to every one negative statement.

Table 3.

Means and Standard Deviations of Extra Quality Indicators by Phase

	Baseline		Intervention	
	Mean	SD	Mean	SD
Teacher A				
Specific to 1 General Praise	0.67	(0.82)	2.59	(1.36)
Direct Command	3.33	(2.16)	2.82	(1.40)
Indirect Command	0.00	(0.00)	0.00	(0.00)
No Opportunity to Comply	0.00	(0.00)	0.00	(0.00)
Teacher B				
Specific to 1 General Praise	0.06	(0.17)	0.49	(0.66)
Direct Command	5.33	(3.39)	3.88	(0.75)
Indirect Command	0.00	(0.00)	0.00	(0.00)
No Opportunity to Comply	1.33	(1.50)	0.75	(1.17)
Teacher C				
Specific to 1 General Praise	0.36	(0.43)	1.63	(0.92)
Direct Command	1.75	(1.14)	1.80	(0.84)
Indirect Command	0.17	(0.39)	0.20	(0.45)
No Opportunity to Comply	0.08	(0.29)	0.00	(0.00)

Table 4.

Means and Standard Deviations of Student Outcomes by Phase

	Baseline		Intervention		Effect Size
	Mean	SD	Mean	SD	
Off-task					
Student A	3.00	(3.52)	2.18	(1.99)	0.23
Student B	3.00	(2.18)	1.51	(0.64)	0.98
Student C	2.42	(1.16)	0.80	(0.84)	1.39
Deviance					
Student A	9.50	(8.34)	3.27	(1.56)	0.75
Student B	1.44	(1.33)	0.00	(0.00)	1.08
Student C	8.00	(3.13)	3.13	(0.89)	1.40
Noncompliance					
Student A	1.00	(1.55)	0.27	(0.47)	0.47
Student B	0.67	(1.00)	0.00	(0.00)	0.67
Student C	0.50	(0.52)	0.00	(0.00)	0.96
Neg to Teacher					
Student A	8.33	(6.98)	3.27	(1.56)	0.73
Student B	1.44	(1.33)	0.00	(0.00)	1.08
Student C	8.00	(3.13)	3.60	(0.89)	1.40

Note. Neg to Teacher = Negative to Teacher.

Table 5.

Means and Standard Deviations of Extra Student Behaviors by Phase

	Baseline		Intervention	
	Mean	SD	Mean	SD
Student A				
Initiations with Peers	4.67	(1.86)	3.82	(1.66)
Pos. Response: Peers	3.17	(1.60)	1.28	(1.84)
Neg. Response: Peers	1.50	(0.55)	1.09	(0.94)
Student Positives	1.17	(0.98)	0.91	(1.04)
Student B				
Initiations with Peers	1.44	(1.01)	1.38	(1.41)
Pos. Response: Peers	1.44	(1.01)	1.38	(1.41)
Neg. Response: Peers	0.00	(0.00)	0.00	(0.00)
Student Positives	0.11	(0.33)	0.13	(0.35)
Student C				
Initiations with Peers	3.08	(2.02)	2.80	(2.17)
Pos. Response: Peers	1.92	(1.24)	2.40	(2.30)
Neg. Response: Peers	0.67	(0.78)	0.40	(0.55)
Student Positives	0.42	(0.79)	0.40	(0.55)

Note. Pos. Response: Peers = positive response from peer. Neg. Response: Peers = negative response from peer.

Table 6.

Academic Skills and Enablers at Baseline and Post-Intervention

	Baseline Mdn	Intervention Mdn	*Z* statistic[a]	*P* value[a]
Academic Skills				
Student A	3.00	3.00	0.45	0.66
Student B	3.00	3.00	2.00	0.05*
Student C	3.00	3.00	0.63	0.53
Reading/Math				
Student A	4.00	4.00	0.78	0.44
Student B	3.00	3.00	1.73	0.08
Student C	3.50	4.00	1.41	0.16
Critical Thinking				
Student A	3.00	3.00	0.45	0.66
Student B	3.00	3.00	1.00	0.32
Student C	3.00	3.00	1.41	0.16
Academic Enablers				
Student A	3.00	3.00	0.02	0.98
Student B	3.00	3.00	2.46	0.01*
Student C	3.00	3.00	5.27	<0.01*
Interpersonal				
Student A	3.00	3.00	1.00	0.32
Student B	3.50	4.00	0.58	0.56
Student C	2.50	4.00	2.64	0.01*
Engagement				
Student A	2.50	3.00	1.51	0.13
Student B	5.00	3.00	2.07	0.04*
Student C	2.5	3.5	2.46	0.01*
Motivation				
Student A	2.00	2.00	0.00	1.00
Student B	2.00	3.00	0.71	0.48
Student C	2.00	3.00	2.23	0.03*
Study Skills				
Student A	3.00	3.00	0.58	0.56
Student B	3.00	3.00	2.07	0.04*
Student C	3.00	4.00	3.42	<0.01*

Note. * indicates significance at the 0.05 level. [a]Wilcoxon Signed Ranks Test.

Table 7.

Student-Teacher Relationship Ratings at Baseline and Post-Intervention

	Baseline Mdn	Intervention Mdn	*Z* statistic[a]	*P* value[a]
Closeness				
Teacher A	3.00	4.00	1.86	.063
Teacher B	3.00	4.00	0.33	0.74
Teacher C	2.00	4.00	2.23	0.02*
Overall	3.00	4.00	2.73	<0.01*
Conflict				
Teacher A	4.0	5.0	0.82	0.41
Teacher B	1.5	2.0	1.41	0.16
Teacher C	3.5	3.0	-0.58	0.56
Overall	3.5	3.5	-1.21	0.23

Note. * indicates significance at the 0.05 level. [a] Wilcoxon Signed Ranks Test

Table 8.

Average % Adherence to Intervention Strategies

	Self-Rating (Range)	Observation (Range)
Teacher A	84.4% (66.7-100.0)	86.7 (66.7-100.0)
Teacher B	86.9 (66.7-100.0)	87.5 (50.0-100.0)
Teacher C	85.4 (66.7-100.0)	100.0 (100.0-100.0)
Overall	85.6 (66.7-100.0)	91.4 (50.0-100.0)

Table 9.

Percent Inter-observer Agreement on T-POT per Phase

	Baseline	Intervention	Overall
Teacher A	98.0	96.9	97.2
Teacher B	100.0	93.5	96.8
Teacher C	93.6	96.5	95.0
Overall	97.2	95.6	96.3

Table 10.

Mean Usage Rating Profile- Intervention Revised[1] *Scores*

	Acceptability		Understanding		Feasibility		System Climate		Overall	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Teacher A	5.00	0.00	5.00	0.00	5.00	0.00	5.00	0.00	5.00	0.00
Teacher B	4.67	0.50	5.67	0.58	4.33	0.52	4.80	0.44	4.74	0.62
Teacher C	5.22	0.44	5.67	0.58	5.33	0.52	5.00	0.00	5.26	0.45
Overall	4.96	0.31	5.44	0.38	4.89	0.34	4.93	0.15	5.00	0.36

Note. [1]Chafouleas, Briesch, Neugebauer, and Riley-Tillman (2011)

FIGURES

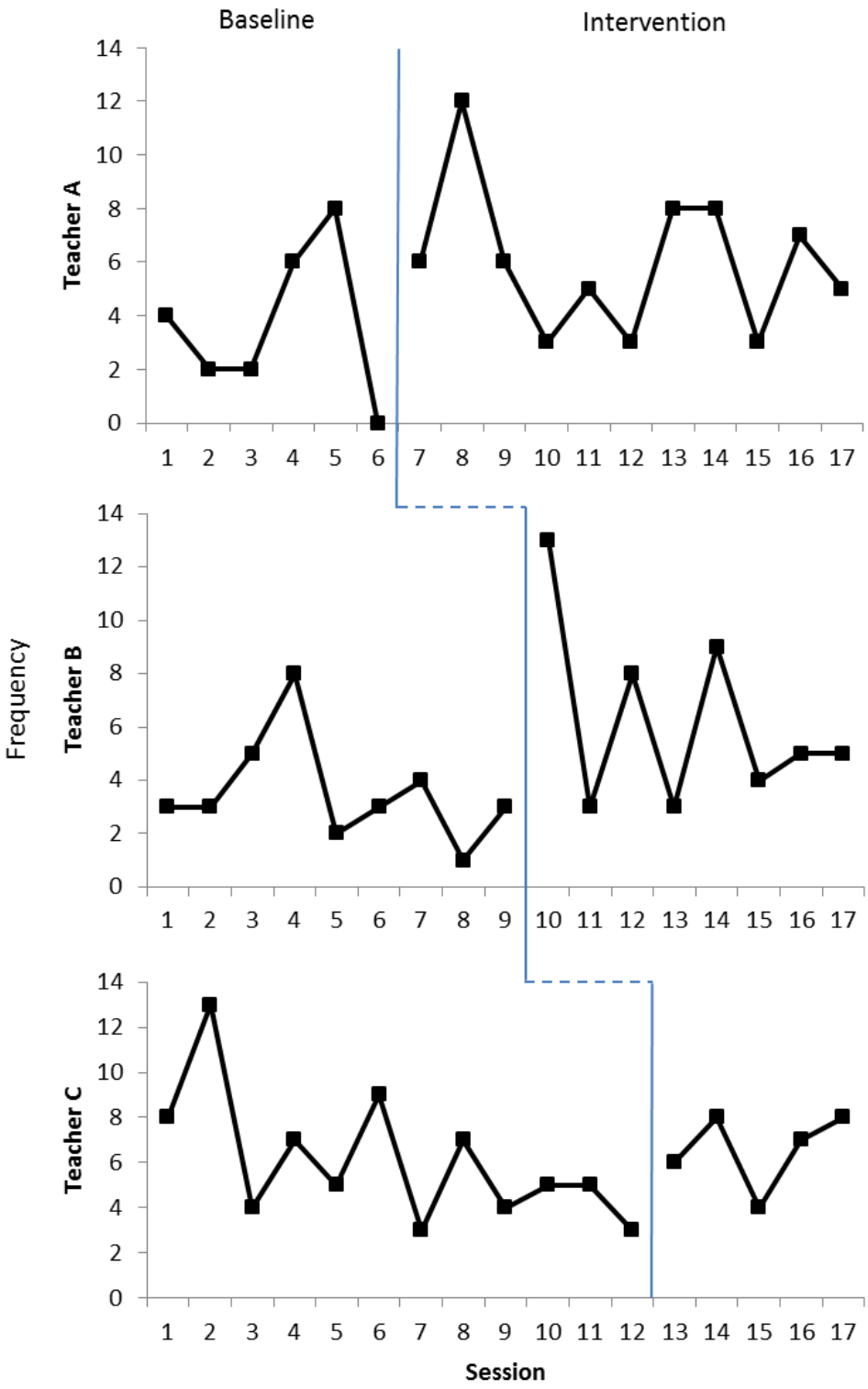

Figure 1. Frequency of positive teacher statements across sessions. Positive teacher statements include acknowledgements, problem solving statements, general and specific praise, and other teacher positives.

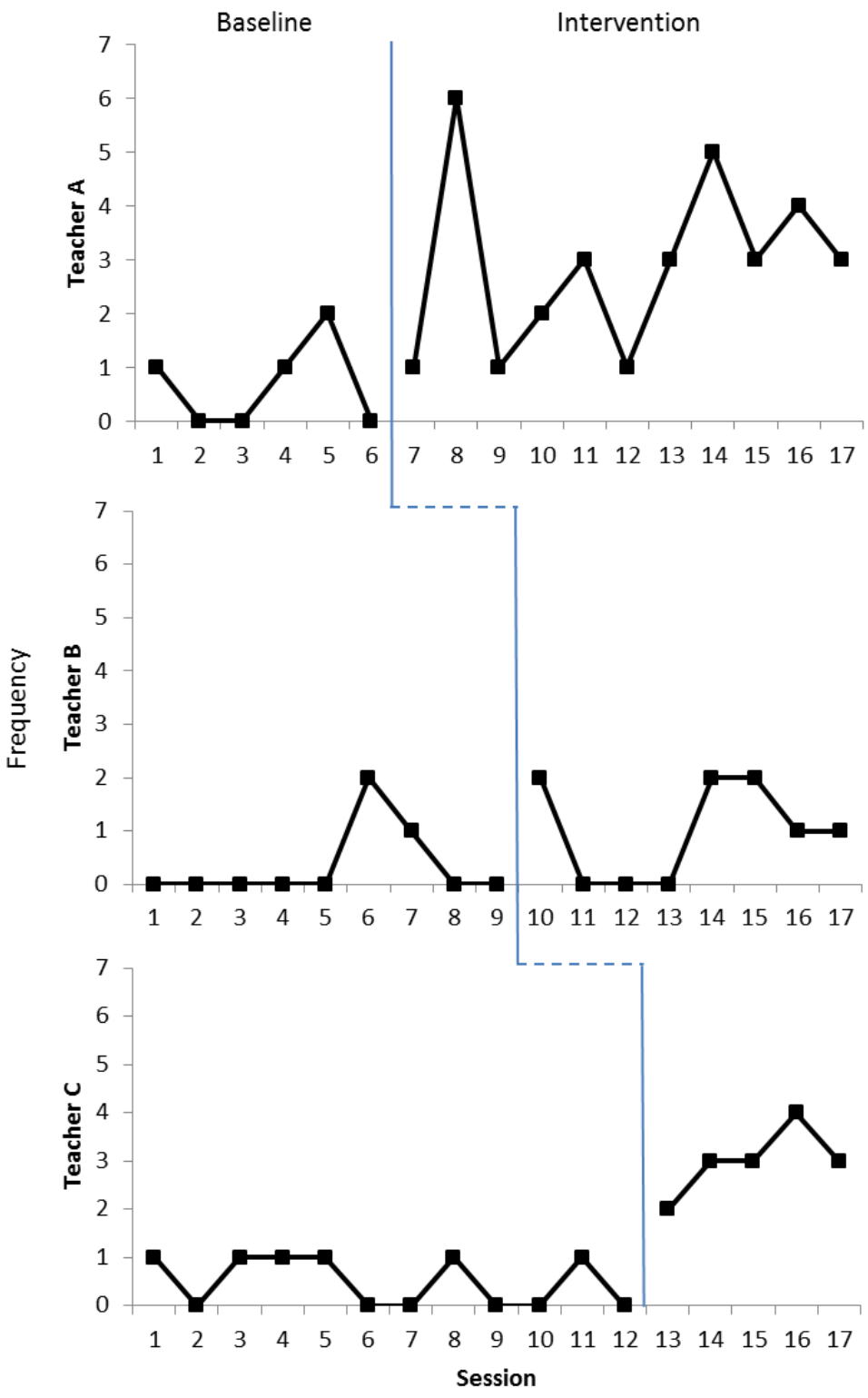

Figure 2. Frequency of specific praise statements across sessions. Specific praise is defined as labelled praise that is a specific positive verbalization.

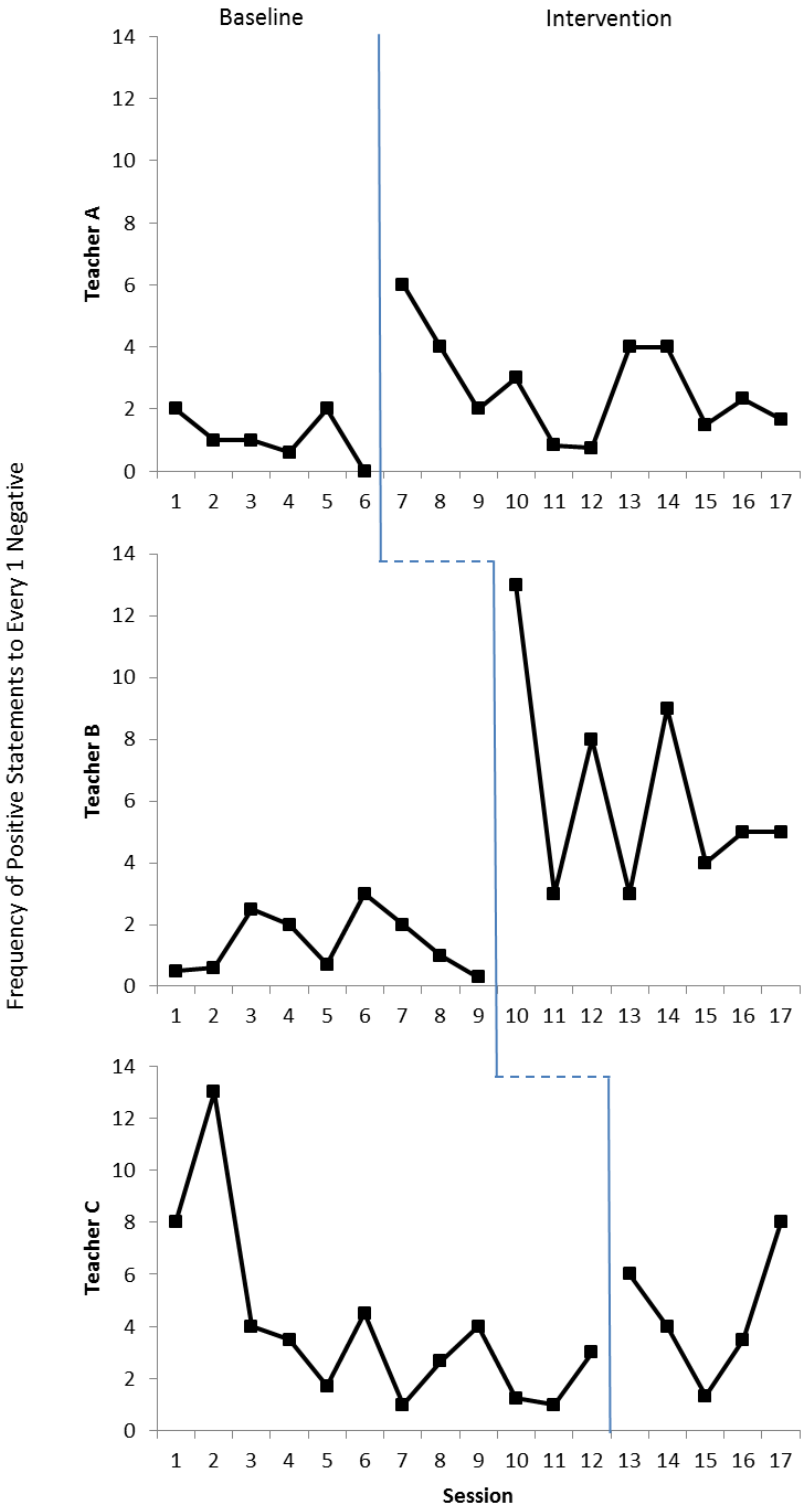

Figure 3. Ratio of teacher positive statements to reprimands across sessions.

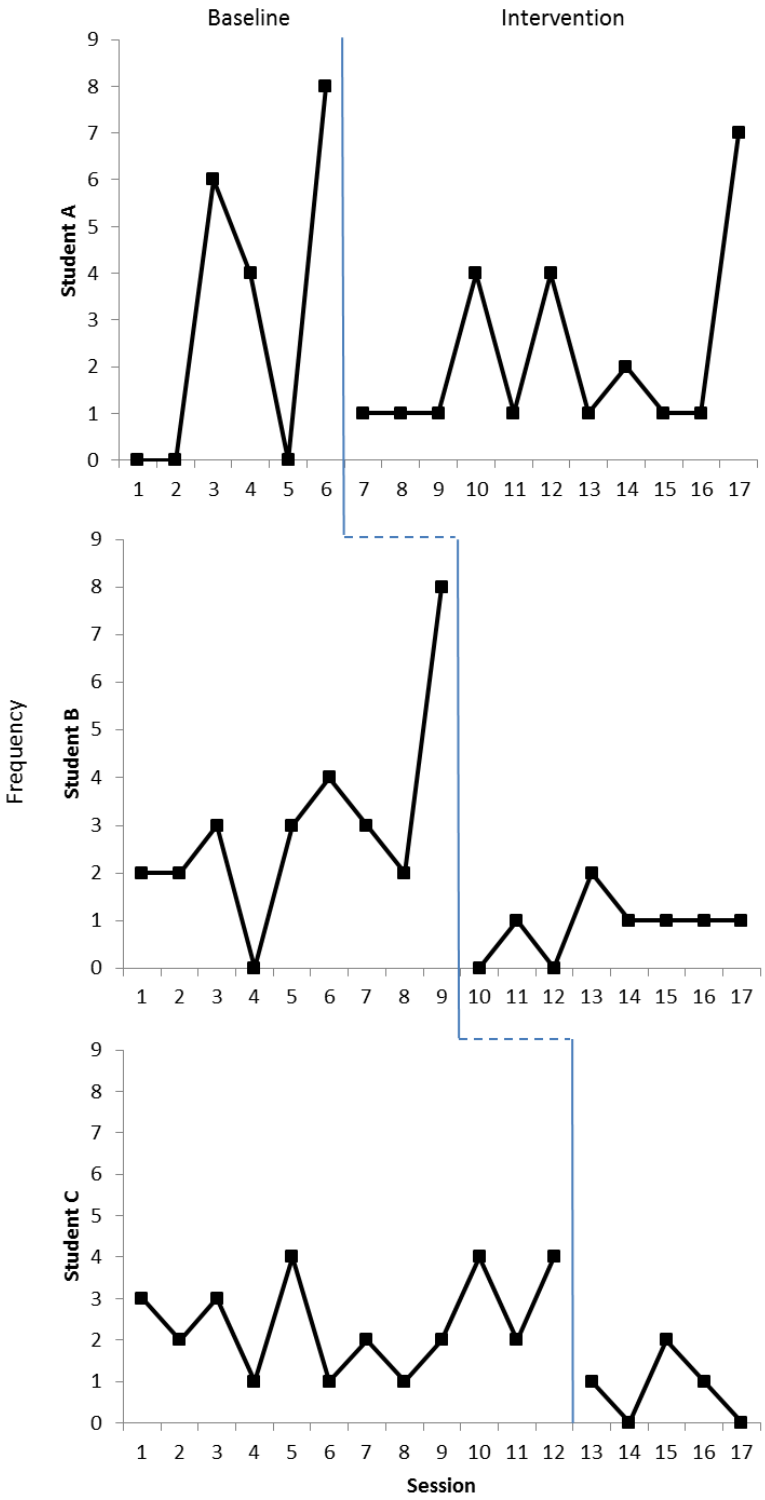

Figure 4. Frequency of off-task student behaviors across sessions. Off-task is defined as the student not participating in an activity that has been set or participating in an appropriate activity.

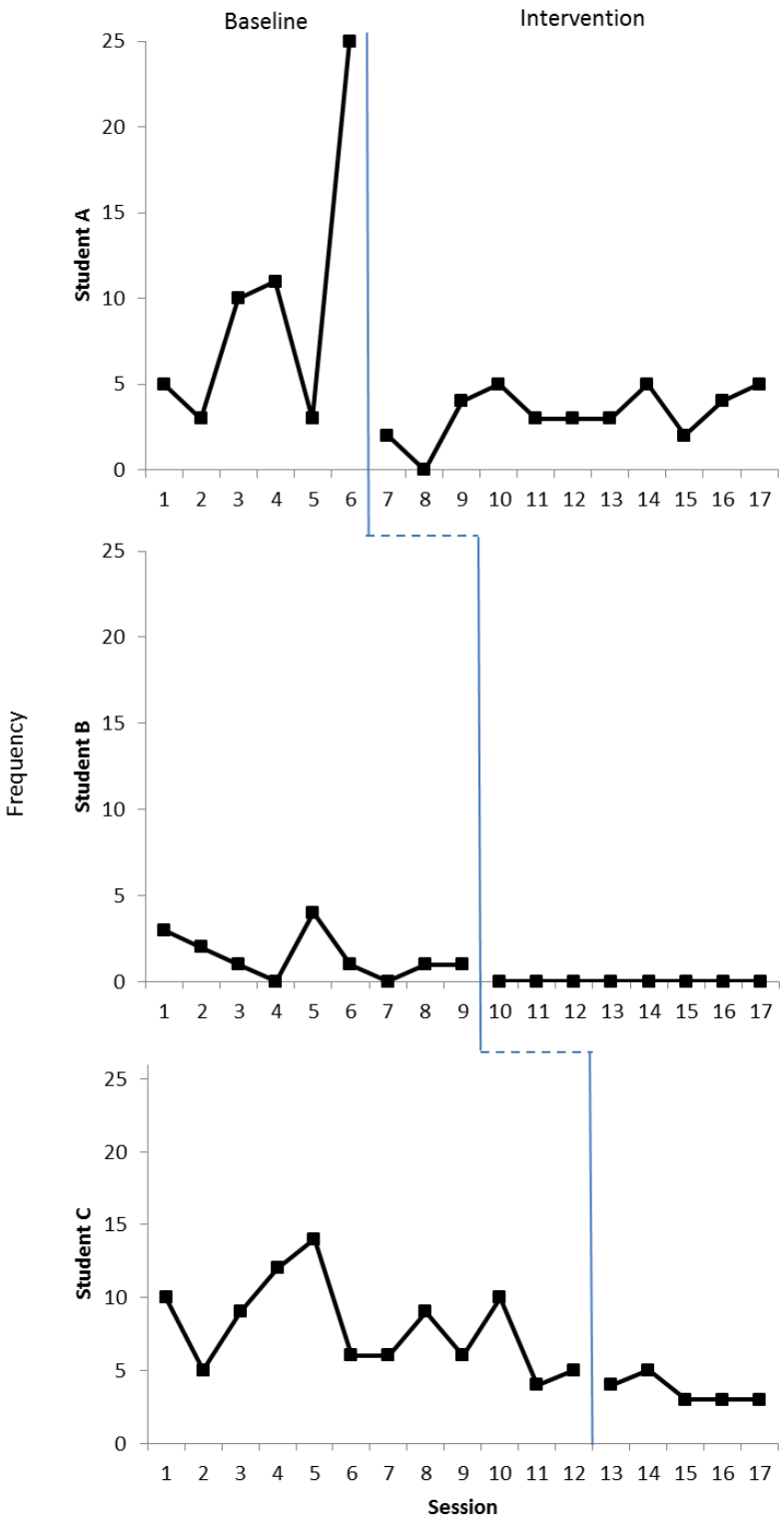

Figure 5. Frequency of student "deviance" instances across sessions. Deviance includes all of the behaviors included in the "negative to teacher" category, with the additions of negative responses to peers and verbal and physical aggression to peers.

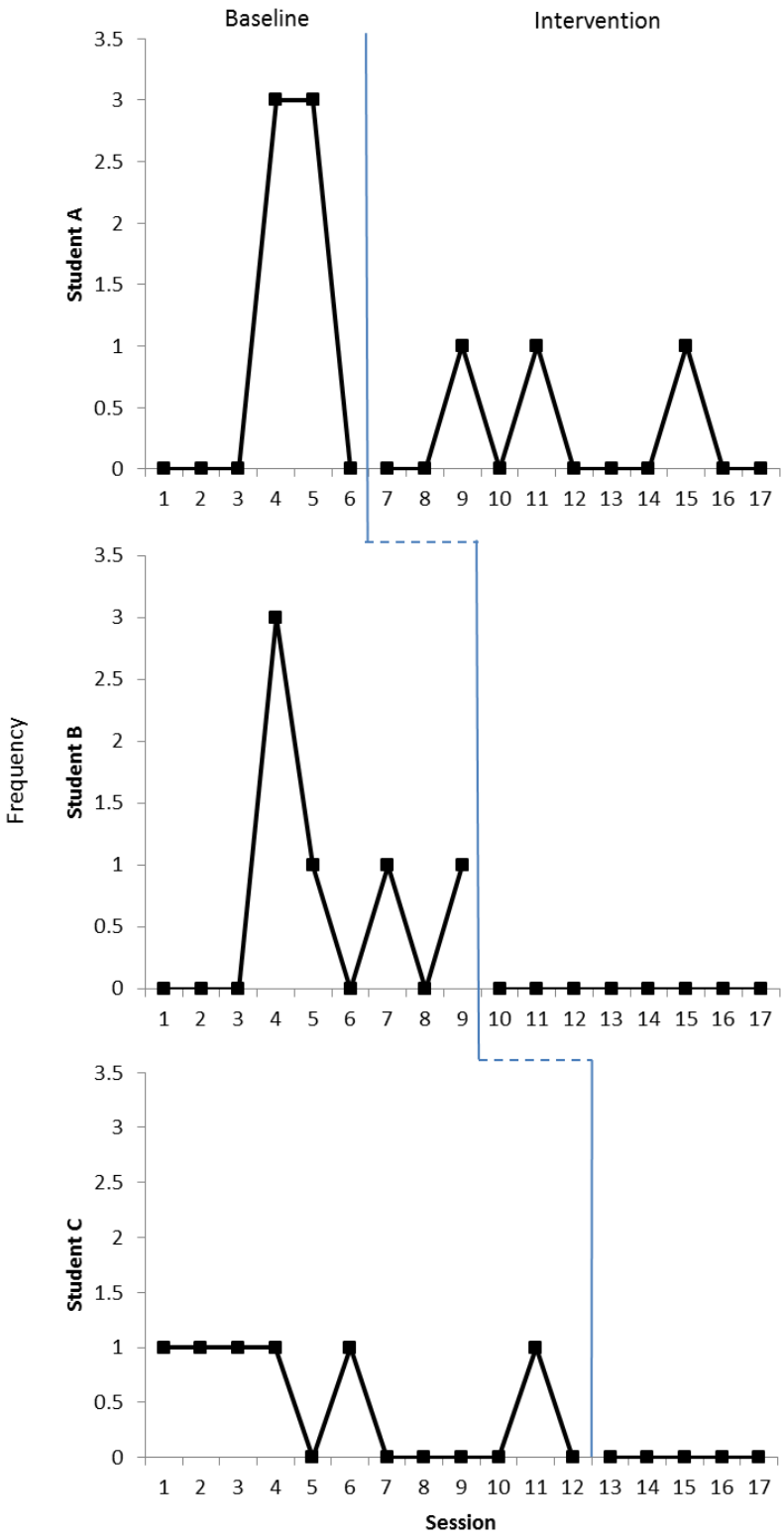

Figure 6. Frequency of instances of student noncompliance across sessions. Noncompliance is defined when a student does not comply with a demand within 5 seconds.

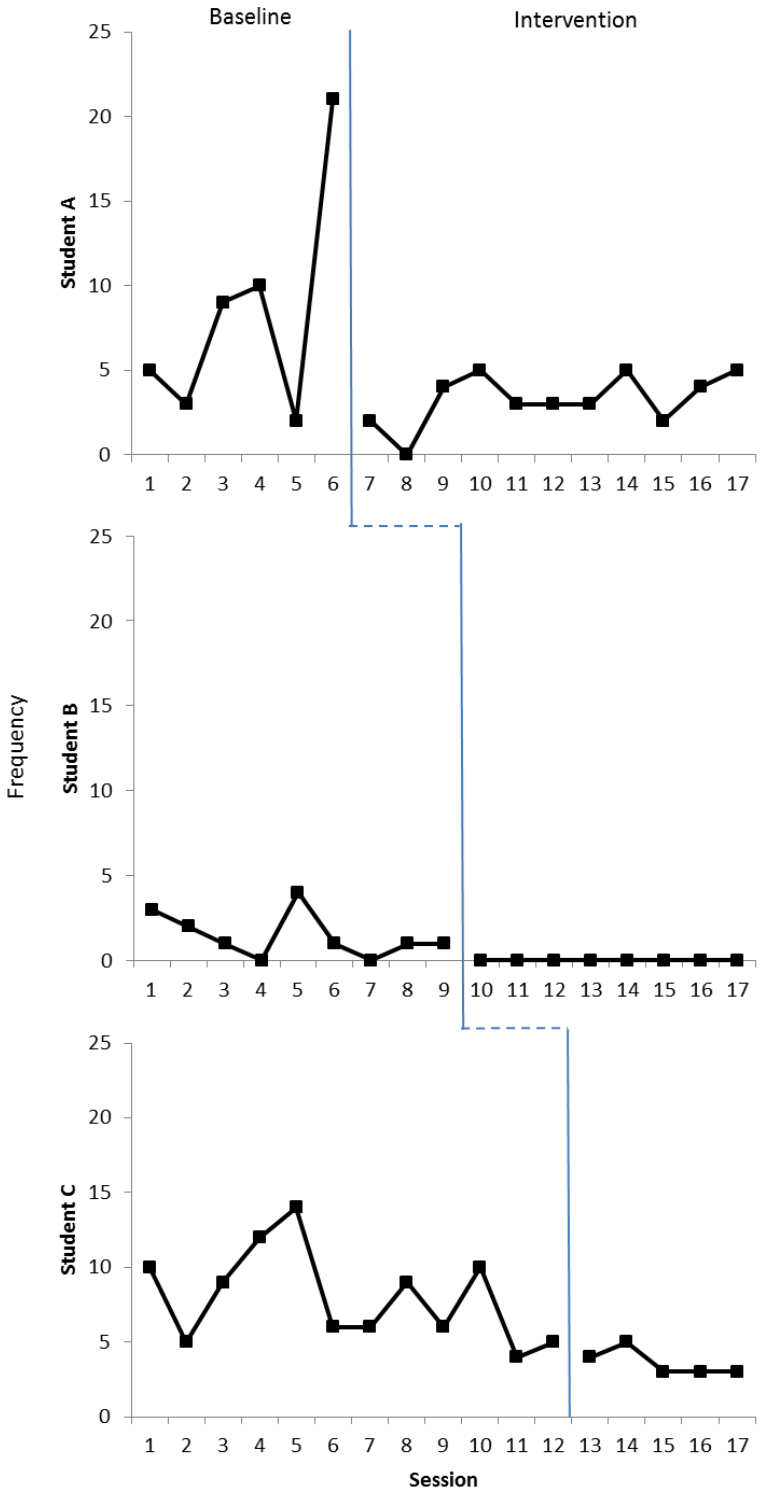

Figure 7. Frequency of student "negative to teacher" instances across sessions. Student negative to teacher includes aggression to teacher, destructive behaviors (e.g., behavior that causes or could cause damage to an object), disruptive behaviors, and all negative responses to the teacher.

APPENDICES

Appendix A: The Teacher-Pupil Observation Tool (T-POT) Coding Manual

The Teacher-Pupil Observation Tool (T-POT)

Coding Manual

Developed by

Dr Pam Martin-Forbes

Adapted from the Dyadic Parent-Child Interaction Coding System (DPICS; Robinson & Eyberg, 1981), and the Multiple Option Observation System for Experimental Studies (MOOSES; Tapp, Wehby, & Ellis, 2000).

Welcome! If you're reading this manual, chances are you are about to carry out classroom observations, be they with teachers, classrooms, individual pupils or a combination of the three. This manual will give you grounding in the Teacher-Pupil Observation Tool (T-POT); a classroom observation measure you can utilise and tailor to your own needs.

Once you have mastered the T-POT, it is advisable that you have a top-up session every week (an hour would suffice), observing a classroom 'live' or observing recordings of classroom sessions with your fellow observers. This will keep the category definitions clear in your mind and ensure good inter-rater reliability (agreement between observers) and good implementation fidelity (sticking to the categories' 'prescribed' descriptions).

First of all, here are some ways in which you may want to use this measure:

a) You may be interested in observing the teacher with the whole classroom - you will be using the TPOT as a general classroom measure – and do not intend to observe a specific child. In this case, you will only need to put a frequency count under the columns marked 'General' and 'Peer' in both the TEACHER and CHILD BEHAVIOUR sections.

b) You may want to observe the teacher with a particular pupil – we will refer to the latter as the 'Index' child - you may not be interested in the classroom in general. If this is the case, you will only note a frequency count of the behaviours you observe in the columns marked 'Index' in both the TEACHER and INDEX behaviour sections (you will not need to use the 'general' nor 'peer' sections).

c) You may want to observe the teacher, and have specific child/specific children in mind that you want to observe, but you also want a picture of what is going on in the classroom as a whole. If this is the case, you will be using the whole measure – the TEACHER, INDEX/PEER behaviour sections - and noting the frequency of behaviours in both the General/Peer column, and the Index column.

d) The teacher's behaviour may not be your focus of interest; instead you may intend to record children's interactions with each other in the classroom. The section on the right hand side of the measure, headed CHILD BEHAVIOUR (marked Index if you are observing one child in particular, Peer when you are observing their classmates or the whole classroom) is the only section of the measure you will need to utilise.

There are more possibilities regarding utilising this measure, for example you may want to record teacher behaviour without recording pupil responses (use 'teacher' measures only); you may want to measure one child's behaviour without responses (use Index column only), or you may want to observe one child with the teacher, but also their reactions to other specific pupils. In each case it is possible to tailor the measure according to your needs. The main thing is that you keep to the category definitions so as to ensure reliability and validity of your observations.

CODING:

Requests we need to make of the teacher:

- If you are observing, for example one child in particular with either the teacher, other pupils, or both the teacher and other pupils, ask the teacher to ensure that your observation takes place during a time when they/other pupils interact with that child; thirty minutes of one child quietly painting or writing will give you precious little insight into that child's behaviour.

- Classroom activities should be structured if possible; lessons dealing with numbers, letters or similar are more 'codeable' than for example, a 'gym' session: the latter will invariably result in a host of commands and compliance and again will give you little insight into classroom behaviour.

- When observing, the session you observe needs to be as natural as possible, so 'circle time' followed by activities, or a structured session followed by work then marking or clearing up will give you a good snapshot of teacher and pupil behaviour. Make sure that the teacher is aware of the fact that you want them to 'carry on as normal' so you can fade into the background, where possible.

- Observing the children with a classroom assistant or another teacher should be avoided, unless you are not coding teacher behaviour or the assistant/other teacher are also the focus of your observation (for example if you are observing all teaching staff in that classroom).

Things we need to remember:

Stopwatch

Pens

Supply of observation sheets

Good solid board to rest the measure on.

Scribble anything you're unsure about in the notes section to look up later. If there are situations cropping up regularly that you find difficult to code, please contact the author of the T-POT.

Length of observation

Each sheet = 5 minutes

Minimum coding session for observing an index child = 15 minutes

Minimum for teacher and classroom observation = 30 minutes

OBSERVATION NOTE:

We cannot possibly record every single behaviour.

It is physically impossible to see everything that's going on within the classroom as a whole. The purpose of this measure is not to capture every single behaviour (we would

like to think that we can record 30 pupils' individual behaviours at once but unfortunately even we aren't that good!); the purpose of this measure is to record a snapshot of classroom behaviour using a consistent, reliable method.

We can't record everything that's happening in the classroom so we need to be focussed. This is the 'price we have to pay' in order to obtain a measure of classroom behaviour and ensures that all coders are directed on the same person/people/area. Therefore, when making a note of classroom behaviour, if the teacher/index (depending on your focus) *do not* attend to behaviour in other parts of the classroom, *do not code*. Any behaviour that is not interacted with, commented upon, responded to etc, by the teacher/Index (depending on your focus), *is not coded*.

Maintaining this focus throughout your observations will ensure a constant measure of classroom behaviours that are comparable and focussed.

TEACHER BEHAVIOUR

ACKNOWLEDGEMENT

Definition

This category consists of three different behaviours and ensures the pupil is aware that the teacher values their contribution.

- A brief acknowledgment
- Reflective statements and questions
- Descriptive comments.

1. An **acknowledgement** can consist of a very brief verbal response to pupil behaviour which is little more than a simple response to a question, or that recognises an achievement or behaviour.

Examples:

Yes	Uh-huh
Ok then	Well!
Really?	There!
I see	Oh
Hmm?	Right-oh/all right

2. A **reflective statement or question** does just that: it reflects all or part of a preceding verbalisation from the pupil. It may exactly mirror the verbalisation or contain some words, but the message is the same.

Examples:

Pupil: I can't get this car to move!

Teacher: You can't get the car to move?

Pupil: I don't like maths.

Teacher: You really don't like maths.

Pupil: My mum took me to the zoo at the weekend.

Teacher: You went to the zoo?

Pupil: My mum, my dad, my sister and my two brothers are going to Cornwall on holiday next week.

Teacher: You're all going away on holiday?

Pupil: Cow moo

Teacher: The cow says moo.

Pupil: I can't get these sums right.

Teacher: You're struggling with these sums.

Pupil: Can I have that book?

Teacher: You want this book?

3. A comment or question that **describes the pupil's actions.** They are almost as if the teacher is giving a running commentary. This behaviour must be

relevant to the pupil's actions there and then, and not concerning past or future activities.

Examples:

Teacher: You're writing up the story.

Teacher: Now you're putting the letters in the right place.

Teacher: You've lined everything up.

Teacher: You're all sitting in a circle.

TEACHER NEGATIVE

Definition

This category contains multiple negative teacher behaviours.

- Criticism
- Negative command
- Negative physical behaviour
- Physical intrusion
- Warning
- "Shush" or "Ssht"

1. **Criticism** includes sarcasm, blame statements, finding fault with the child, the child's attributes, or something they have said or done. Generally criticism makes the pupil feel inferior or is hurtful to the child.

Examples:

No (except when in answer to a question)

You're nasty

I'm getting fed up of you now

You're just being silly

You're putting it in the wrong place

You can't read that properly

What on earth is that?! (in a sarcastic tone, pointing at the child's work)

You're awful today

How much more clumsy can you be?

That's not the right way to do it.

I don't like it when you do that

Well, thanks a LOT!

Because I said so.

You're seeing him at his worst today (to coder)

2. A **negative command** is a more specific kind of criticism that tells the child not to do something.

Examples:

Stop that now

Absolutely not

Forget it

Don't do that

Not yet!

That's enough!

Leave it alone.

You can't do X

I don't want any biros left on the floor

3. **Negative physical behaviour** includes restraining, inflicting pain, forcing or pulling a child.

Examples:

Teacher holds the child's shoulder or arms to prevent them leaving the room

Teacher touches the child's hand as they intrusively take their toy away

Teacher says "no" and pushes child's hand away

Teacher holds child at arm's length to prevent being hit

Teacher affectionately ruffles child's hair and child says, "Stop it"

4. A teacher that behaves **intrusively** will interfere with ongoing pupil activity or will **obtrude** into a child's space. This behaviour would include taking over the child's activity, blocking access, physical interruption.

Examples:

Teacher snatches away something out of the child's reach when the child was playing with the object.

Teacher leans over the child's work and stops them from continuing their activity.

5. **Warnings** are statements that include a command with a negative consequence.

If you don't do these sums you're not going to play

Get back to your chair or I'll take your game away

Either you do that now or you stay after school

If you don't keep your pens we'll all have to stay here while everyone else goes on the school trip.

6. Using **"Shht"** to command silence is a negative teacher behaviour as it does not utilise a positively phrased command and implies impatience with the pupil.

If teacher says "Shht shht shht shht" without pause, code 1 negative, with pause, code 4 (code each discrete occurrence)

CHILD POSITIVE RESPONSE TO TEACHER POSITIVE/NEGATIVE

Definition

A positive response can include a relatively neutral behaviour such as continuing the activity the teacher has originally asked the pupil to partake in, or responding in an outright positive fashion (see Child Positives category).

Examples:

Child smiles at teacher

Child gives teacher compliment

Child leans against teacher

Child holds teacher's hand

CHILD NEGATIVE RESPONSE TO TEACHER POSITIVE/NEGATIVE

Definition

Negative responses are never neutral behaviours. These are behaviours that are clearly negative in nature, and are disrespectful to the teacher.

Negative responses include:

Talking back/backchat (double code Aggressive to Teacher)

Shouting or yelling (double code Aggressive to Teacher)

Behaving in a physically aggressive fashion towards the teacher (double code Aggressive to Teacher).

Turning away from the teacher or frowning constitutes a negative response but is not double coded.

TEACHER PRAISE – UNLABELLED

Definition

Unlabelled praise is a **non-specific positive verbalisation** that expresses satisfaction or enjoyment with the pupil's activity or a pupil attribute.

Examples:

Great!

Excellent.

You're right on top of things.

Nice!

Terrific!

Fabulous!

That's right.

You're right.

Marvellous!

Wonderful.

Thank you very much

Perfect.

Correct.

Thank you!

Good going/job!

Congratulations!

So far, so good!

That's better!

Cool

Thanks!

I appreciate that.

Awesome!

Brilliant!

You're creative.

Clever thinking.

You're playing nicely.

You're so funny.

I'm proud of you.

You're so thoughtful!

TEACHER PRAISE – LABELLED

Definition

Labelled praise is a **specific positive verbalisation** that expresses satisfaction or enjoyment with the pupil's activity or a pupil attribute.

Examples:

That's a terrific story you wrote.

You did a great job of painting that picture.

I like the way you drew that.

Your picture is very pretty.

You have a beautiful smile.

You have a wonderful imagination.

That's an excellent way to figure out the solution.

You're considerate to share your crisps with me.

Isn't that a lovely design you made!

Did you write that wonderful poem?

What pretty hair you have!

You're my little helper for tidying up the table.

Thanks for putting that back on the shelf.

I really appreciate it when you clear up after yourselves.

TEACHER POSITIVE

Definition

This behaviour includes the following multiple teacher behaviours:

- Positive affect
- Physical positive behaviour
- When/Then or Grandma's rule
- Encouragement

1. **Positive affect** is a non-verbal expression of enjoyment, warmth or enthusiasm, directed at the pupil.

Examples:

Smile

Laughter

Wink

2. **Physical positive** is a neutral or positive touch between teacher and pupil.

Examples:

Hug

Ruffling hair

Petting arm

Rubbing shoulder

Brushes past pupil

Touches pupil's nose

Nudges pupil playfully

3. A **when/then or grandma's rule** is a form of command that specifies a positive consequence of pupil compliance.

Examples:

If you finish writing then you can go out to look for the leaves from the trees we've been talking about.

Pupil: I want to read that book

Teacher: Not until you clear the table

When you hang up your coats we can watch the safety video before we go out on our trip today.

You can go and play football as soon as you've given me the answer to the question.

4. **Encouragement** is a statement that shows appreciation, approval, positive judgement towards something the child has done, is attempting to do, or pupil or classroom attributes. It is a borderline praise but is not as specific.

Examples:

Wow!

Hurray!

Nicely done.

You're doing well.

You got it right

There you go

You're really quick

You're helping

You did it

That looks like fun!

You're so strong

Woohoo!

You walked in so quietly I didn't hear you!

You're thinking hard

Aren't you proud of yourself?

You're really cheerful aren't you?

PROBLEM SOLVING

Definition

A **statement, command, or question**, that attempts to encourage the pupil or classroom to resolve a problem. It attempts to get the child planning, organising and thinking about consequences. Problem solving is DOUBLE CODED.

Examples:

Can you think of a way you can both play the video game? (problem solving and indirect command)

If he started teasing you again how would you react? (problem solving and question)

I've got a problem that I'm having a bit of trouble with; can you help me? (problem solving and question)

Think of a way. (indirect command, comply and problem solving)

Tell me your plan (problem solving and direct command)

I can see you're pretty upset, what happened? (problem solving and question)

If you did that what do you think would happen? (problem solving and question)Key words that signify problem solving include:

Problem solution

Consequences

Ideas

Let's suppose

Brainstorm

What if

What else

What could he do?

How would you feel?

How would they feel?

What would happen if…..?

TEACHER IGNORE

Definition

Ignoring in this context refers to ignoring mildly deviant or inappropriate pupil behaviour by remaining silent, turning away from the child, and keeping a neutral facial expression. This behaviour must last five seconds at least to be coded as an Ignore, and is an attempt by the teacher not to give attention to mildly inappropriate behaviour in order to cause that behaviour to dissipate.

Examples:

Pupil: [Sobbing and whining] (disruptive)

Teacher: [makes no verbal or physical response] (ignore)

Pupil: [kicks table] (destructive)

Teacher: [looks intently and silently at books on table] (ignore)

Pupil: You're horrible (aggressive to teacher)

Teacher: [continues to read] (ignore)

Pupil: [Flings workbook from table onto floor] (destructive)

Teacher: [carries on writing on board] (ignore)

QUESTION

Definition

Questions include using the child's name as a form of command in order to gain an answer to a previous question. Questions can also be aimed at the classroom. They may follow pupil or classroom activity or give an account of objects or activities in question form.

Examples:

How many ninety-degree angles do you see in the picture? [looks towards pupil with hand up] Ashley? (2 x Questions)

What colours do you see?

Hmm, I'm in a fix…… (not coded), can anyone help me work out this sum (question)?

We've got lots of different sizes on this board (not coded), are they in order? Paul? (2 x Questions)

<u>COMPLIANCE TO QUESTION</u>

Definition

If a pupil is asked to answer the question and attempts to answer, code compliance even if their answer is incorrect.

Examples:

Teacher: Is that the right answer to the sum? (Question)

Child: No (Compliance to question)

Teacher: What's the right answer? (Question)

Child: [writes down an answer on the board] (Compliance to question)

Teacher: Are all of these colours the same? (Question)

Classroom: [over half of the children reply] (Compliance to question)

Teacher: Is that the biggest? (Question)

Child: [Nods] (Compliance to question)

NON-COMPLIANCE TO QUESTION

Definition

If a pupil is asked directly to answer a question and obviously refuses to answer, code non-compliance. This does not apply if the pupil is obviously trying to think of an answer but failing. This category is double-coded when the non-compliance is of a negative enough nature.

Examples:

Teacher: How many are there? (Question)

Child: [ignores teacher] (Non-Compliance to question)

Teacher: Do these go together? (Question)

Child: [shouts] Don't want to do this! (Non-compliance and Aggressive to teacher)

Teacher: Which one of these is the odd one out? (Question)

Class: [most children talking among themselves] (Non-compliance)

Teacher: What does that do? (Question)

Child: [thinking hard but struggling for an answer] (Compliance to question)

Teacher: How does that fit? (Question)

Child: [tries but fits piece wrongly] (Compliance to question)

INDIRECT COMMAND

Definition

An order, direction or demand for a particular behavioural response that is nonspecific, implied or in question form (except for when the teacher is asking for a verbal response in answer to a question).

Examples:

Put it here OK?

Come on

Will you please do what I ask?

Josie!

Guess what I've got

Let's make some circles

See those containers?

Watch

Have a go

What about giving me one of them?

Be careful

Settle down

We should copy these

Write this up, ok?

Can you open the door please?

Shouldn't you be over there?

It would be good if you could tidy that

You will do what I say

Look

Watch your feet

Be nice

Calm down

Remember to leave that there

It's time to go

Can we all start putting things away now?

Get on with it now

How about we all do one sum each?

DIRECT COMMAND

Definition

A specific clear order, demand or direction, so the child is in no doubt as to what is being requested of them.

Examples:

Come here

Let me take your book

Put your workbooks on the bench

Do this one (pointing)

See (with a point)

Tell me

Listen to me please

Sit down now

Make one like this

Spit that out

Give me the scissors

Look at me

Clean up the table now

Bring the red box here please

I want you all to clear up now

Spell "nightmare"

Sing "The little red tractor"

Let me help you

Leave that there

Tell me what sound a pig makes

Go and ask Mrs Davies if we can have the big red pen

I expect you all to have finished by the time I come back

Pretend it's really cold

COMPLIANCE TO INDIRECT OR DIRECT COMMAND

Definition

If the pupil begins to comply, tries to comply, or succeeds in complying with the command, code compliance.

Examples:

Teacher: Give me the book

Pupil: [gives teacher the book] (compliance)

Teacher: Write me a story about when you visited Newborough forest

Pupil: [begins writing] (compliance)

Teacher: Find me the odd one out

Pupil: [points to the board] (compliance, even if the answer is wrong)

Teacher: Tell me what time the lady went to the party

Pupil: [puts hand up] (compliance)

Teacher: Finish your book

Pupil: [picks up book] (compliance)

Teacher: Put that away now

Pupil: [throws item into desk drawer] (compliance + destructive)

Teacher: Do as I tell you

Pupil: Fine! (compliance and aggressive to teacher)

NON-COMPLIANCE TO INDIRECT OR DIRECT COMMAND

Definition

When pupils disobey a command given by the teacher, or does not comply within 5 seconds, code non-compliance.

Examples:

Ignoring teacher

Making an excuse

Refusing to obey

Arguing

Engaging in incompatible behaviour

Engaging in a debate

Counter-commanding

Feigning deafness

NO OPPORTUNITY TO COMPLY WITH INDIRECT OR DIRECT COMMAND

Definition

No opportunity is when the child is not given ample time to comply with a command.

Examples:

Command is vague

Behaviour requested is not within the child's competence

Teacher quickly repeats the command (within 5 seconds)

Teacher quickly issues another command (within 5 seconds)

Teacher gives a command while pupil is already doing the requested action

Command is given after pupil has already completed the requested action

Teacher does the requested behaviour for the pupil

TIME-OUT WARNING

Definition

When a teacher gives a time-out command this will usually take the form of moving the child away from their peers and into a neutral space, possibly a chair or another part of the classroom or building. This should always be in response to misbehaviour.

Examples:

If you keep behaving like that you're going to the quiet room

If you don't sit down you'll be going to Time-out

Do you want to sit in the naughty chair?

I'm going to put you to sit in the corner if you keep that up.

CHILD BEHAVIOUR

VERBAL AGGRESSION TO PEER

Definition

This category includes verbal or gestural statements with an aggressive consequence towards a fellow pupil and includes a number of behaviours:

- Verbal aggression
- Teasing
- Tongue pulling

1. Being **verbally aggressive** is designed to insult or hurt another child, whether it be hurting the child's feelings or a threat of actual physical punishment.

Examples:

You're stupid.

I hate you.

You idiot!

No! (following any request by another child)

Hey, pig face.

So what!

Why should I?

It's not fair!

Oh God! (except when given as an acknowledgement)

Sticking out tongue - even without speech.

Growling

Raspberries

Being 'in a child's face' whilst shouting

2. **Teasing** a child by name calling or gesturing with e.g. a fist should be coded verbal aggression to peer.

PHYSICAL AGGRESSION TO PEER

Definition

Snatching another child's possession, causing physical harm to another child or stealing from a child is physical aggression.

Examples:

Hitting

Pinching

Pulling hair

Spitting at anyone

Slapping

Twisting finger

Standing on someone's toe

Biting

Kicking

Throwing something at a fellow pupil

Grabbing a pen from a fellow pupil

Pushing someone

AGGRESSIVE TO TEACHER

Definition

Verbal or physical aggression (such as illustrated in verbal and physical aggression to peer) directed towards the teacher.

DESTRUCTIVE

Definition

Destructive behaviour is usually directed at an object rather than a person, the only exception being self-harming behaviour. Behaviour that causes damage to an object or has intention to destroy or deface is coded as destructive behaviour.

Examples:

Child attempts to remove a non-removable part from a table

Child throws blocks at the wall.

Child throws toys into the toy box from more than 2 feet away.

Child beats book on table.

Child kicks school-bag.

Child tears pages up.

Child bangs head against wall.

Child spits at an object.

Child throws him/herself onto the floor.

DISRUPTIVE

Definition

Inappropriate non-directed behaviour is coded as disruptive behaviour. These behaviours are only disruptive during structured teaching time and are not considered disruptive at playtime.

Examples:

Crying loudly, fake crying, whimpering

Whining in a slurring, nasal, high-pitched voice.

Yelling, screeching, screaming or loud crying

Laughing loudly while teacher is talking to the classroom

Trying to distract other pupils from the task at hand to stop them from completing something the teacher has asked them to do.

INITIATION TO PEER

Definition

An initiation to peer is a verbal interaction of a relatively neutral nature, with a peer. The initiator may be the Index child (in which case the I-P category would be coded); it may be a peer initiating an interaction with the Index (code P-I) or two children, neither of who is the Index child (code P-P).

Examples:

Can I have a pencil?

What do we need to do?

Which one is it?

It's the purple book

It's raining

This is easy!

Can you pass me the glue?

How many have you done?

POSITIVE RESPONSE

Definition

A positive response can be a fairly neutral verbal response; a definite positive verbal response or it can be a physical response (in both latter cases double code as Child Positive). The response has a positive, complimentary or neutral tone.

Child 1: Can I have the blue pencil?

Child 2: [passes blue pencil]

Child 1: How many have you done?

Child 2: I've done ten (Positive Response)

Child 1: This is difficult

Child 2: [nods]

Child 1: Your picture's pretty (Initiation and Child Positive, double code)

Child 2: Smiles (Positive response and Child Positive)

Chid 1: I don't understand this bit

Child 2: You add the two sums up then divide them

Child 1: [leans towards other child's work to look at it]

Child 2: [hugs child 1] (Positive response and Child positive)

NEGATIVE RESPONSE

Definition

Negative responses are uncomplimentary or involve ignoring the initiator (no response within five seconds of initiation).

Child 1: Can I have the workbook?

Child 2: [moves workbook away from Child 1]

Child 1: I've finished mine

Child 2: That's rubbish

Child 1: It's almost lunchtime

Child 2: [ignores]

Child 1: Which one are we supposed to be doing?

Child 2: [whiney voice directed at teacher] Miss Roberts, Jonathon is cheating.

Child 1: My mum bought me this dress yesterday.

Child 2: Eurgh, it's ugly!

CHILD POSITIVES

Definition

Positive child behaviour consists of multiple behaviours:

- Positive verbal behaviour
- Positive affect
- Physical warmth

Positive verbal behaviour is behaviour that makes the child him/herself feel good, or another child feel good.

Examples:

I did a good job!	That's ok [in response to thanks]
I'm getting much better at this	I really like your picture
Yey!	Your story is really good
I'm a winner!	I wish I could do math like you can
I like you	You look pretty
Thank you	You're really good at football
I really enjoyed that story	Woohooo!

Positive affect involves facial or physical gestures that imply gratitude, appreciation or affection

Examples:

Smiling

Laughing

Winking

Positive physical behaviour involves touch. These gestures are given in order to show affection.

Examples:

Hugging

Kiss

Patting another child's/teacher's hand or back

Head to head

Pleasant touch

Hand shake (congratulations)

Stroking hai

OFF TASK

Definition

Off-task behaviour involves not participating in an activity that has been set or participating in an inappropriate activity such as out of seat behaviour, walking around, or behaviour that consists of not doing what the child is supposed to be doing. Begin counting once behaviour has lasted for 30 seconds

Teacher: I want you all to get your books out (Direct Command)

Index: [looking out of window for 50 seconds]

Child: [rest of classroom are completing their work, child gets up to play with a puzzle]

Teacher: [telling a story]

Child: [engrossed in fiddling with their shoe and taking no notice for 1 minute] (2 counts of Off-Task)

Child: [having been set a task, is walking around the room, out of seat for 3 minutes] (6 counts of Off-Task)

Appendix B: The Teacher-Pupil Observation Tool (T-POT)

School/Teacher: Child: Session/date: Coder: P / S

TEACHER	INDEX	GENERAL
Acknowledgement: *(inc reflectives & descriptives)*		
T Negative: *(neg command, phys neg, crit, intrusion, warning)*		
Positive *(incl continuing activity)*		
Negative		
T Praise Unlabelled *(not specific/vague)*		
T Praise Labelled *(specific as to why pupil praised)*		
T Positive: *(Pos affect, when/then, phys pos, encouragement)*		
Pos Response *(incl continuing activity)*		
Neg Response		
Problem Solving		
T Ignore *(inappropriate beh)*		
Question: *(Command that requires a verbal response)*		
Compliance *(even if answer is incorrect)*		
Noncompliance		
Indirect Command:		
No Opp		
Compliance		
Noncompliance		
Direct Command:		
No Opp		
Compliance		
Noncompliance		

	INDEX	GENERAL
Time Out Warning:		
No Opp		
Compliance		
Noncompliance		

CHILD BEHAVIOUR

	INDEX	GENERAL
Aggression to Peer: **Verbal** *(incl smart talk, teasing, tongue pulling)*		
Physical *(incl grab, hit, throw at, steal, snatching, pulling)*		
Aggressive to T *(verb & phys)*		
Destructive *(incl destroying, damage, self harm)*		
Disruptive *(crying, whining, yelling, non-directed inappropriate behaviour)*		

	I – P	P - I	P - P
Initiation to Peer *(any neutral/positive approach, request)*			
Pos Response			
Neg Response *(incl ignoring)*			

Positives: *(incl pos affect verbal and non-verb and physical warmth)*		
Off Task *(1 count initially, then 1 per 30 seconds if off-task behaviour persists)*		

NOTES:

Agree = *Disagree =* *Total =* *Reliability =*

Appendix C: Teacher Self-Report Rating Form Template

TEACHER ID: _____DATE:_____

- ☐ Student absent today
- ☐ Teacher absent today

Interaction Strategy	**Implemented**			**NOTES.** Please feel free to add a comment about any step that you believe is helpful information for us to have about your ratings.
	Yes, fully	Yes, partially	No, not able	
	3	2	1	
	3	2	1	
	3	2	1	

Fully Implemented for Strategy 1 means all of the following were implemented:

- ☐ [answer will change depending on strategy]

Partially Implemented for Strategy 1 means some of the steps above were implemented.

Fully Implemented for Strategy 2 means all of the following were implemented:

- ☐ [answer will change depending on strategy]

Partially Implemented for Strategy 2 means some of the steps above were implemented.

Fully Implemented for Strategy 3 means all of the following were implemented:

- ☐ [answer will change depending on strategy]

Partially Implemented for Strategy 3 means some of the steps above were implemented.

Appendix D: Self-Report Rating Form for Teacher A

TEACHER ID: _____DATE:_____

- ☐ Student absent today
- ☐ Teacher absent today

Interaction Strategy	**Implemented**			**NOTES.** Please feel free to add a comment about any step that you believe is helpful information for us to have about your ratings.
	Yes, fully	Yes, partially	No, not able	
1.) Used token economy	3	2	1	
2.) Gave specific praise with each token	3	2	1	
3.) Ignored arguing	3	2	1	

Fully Implemented for **Strategy 1** means all of the following were implemented:

- ☐ Provided tokens for each designated positive student behaviors.
- ☐ Provided tokens as close to the behavior occurring as possible.
- ☐ Allowed time at the end of the day for student to cash in tokens

*Partially Implemented for **Strategy 1** means some of the steps above were implemented.

Fully Implemented for **Strategy 2** means all of the following were implemented:

- ☐ Each token was given with praise that mentioned the specific behavior that earned the token (e.g., Thank you for saying something nice to a peer!).

*Partially Implemented for **Strategy 2** means specific praise was provided some of the time.

Fully Implemented for **Strategy 3** means all of the following were implemented:

- ☐ Ignored or used nonverbal reminders when arguing occurred (e.g., pointing to point sheet)

*Partially Implemented for Strategy 3 means the steps above was implemented some of the time.

Appendix E: Self-Report Rating Form for Teacher B

TEACHER ID: _____DATE:_____

- ☐ Student absent today
- ☐ Teacher absent today

Interaction Strategy	**Implemented**			**NOTES.** Please feel free to add a comment about any step that you believe is helpful information for us to have about your ratings.
	Yes, fully	Yes, partially	No, not able	
1.) Specific praise	3	2	1	
2.) Praise for ratings	3		1	

Fully Implemented for **Strategy 1** means all of the following were implemented:

- ☐ Provided specific praise at least 4 times per class.

*Partially Implemented for **Strategy 1** means specific praise was provided between 1 and 3 times per class.

Fully Implemented for **Strategy 2** means all of the following were implemented:

- ☐ Provided specific praise for accurate ratings.

Appendix F: Self-Report Rating Form for Teacher C

TEACHER ID: _____DATE:_____

- ☐ Student absent today
- ☐ Teacher absent today

Interaction Strategy	**Implemented**			**NOTES.** Please feel free to add a comment about any step that you believe is helpful information for us to have about your ratings.
	Yes, fully	Yes, partially	No, not able	
1.) Reminders of behavior contract	3	2	1	
2.) Specific praise when expectations followed	3	2	1	

Fully Implemented for **Strategy 1** means all of the following were implemented:

- ☐ Reminded student of behavior expectations near the beginning of class.

*Partially Implemented for **Strategy 1** means reminders were provided at some point during class.

Fully Implemented for **Strategy 2** means all of the following were implemented:

- ☐ Provided at least 4 specific praise statements per class.

*Partially Implemented for **Strategy 2** means 1-3 specific praise statements were provided.

Appendix G: STUDENT-TEACHER RELATIONSHIP SCALE – SHORT FORM

Robert C. Pianta

Child: _____ Teacher:_____
Grade:_____

Please reflect on the degree to which each of the following statements currently applies to your relationship with this child. Using the scale below, circle the appropriate number for each item.

Definitely does not apply 1	Not really 2	Neutral, not sure 3	Applies somewhat 4	Definitely applies 5

1.	I share an affectionate, warm relationship with this child.	1	2	3	4	5
2.	This child and I always seem to be struggling with each other.	1	2	3	4	5
3.	If upset, this child will seek comfort from me.	1	2	3	4	5
4.	This child is uncomfortable with physical affection or touch from me.	1	2	3	4	5
5.	This child values his/her relationship with me.	1	2	3	4	5
6.	When I praise this child, he/she beams with pride.	1	2	3	4	5
7.	This child spontaneously shares information about himself/herself.	1	2	3	4	5
8.	This child easily becomes angry with me.	1	2	3	4	5
9.	It is easy to be in tune with what this child is feeling.	1	2	3	4	5
10.	This child remains angry or is resistant after being disciplined.	1	2	3	4	5
11.	Dealing with this child drains my energy	1	2	3	4	5
12.	When this child is in a bad mood, I know we're in for a long and difficult day.	1	2	3	4	5
13.	This child's feelings toward me can be unpredictable or can change suddenly.	1	2	3	4	5
14.	This child is sneaky or manipulative with me.	1	2	3	4	5
15.	This child openly shares his/her feelings and experiences with me.	1	2	3	4	5

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Appendix H: Usage Rating Profile-Intervention Revised (URP-IR)

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1.	This intervention is an effective choice for addressing a variety of problems.	1	2	3	4	5	6
3.	I would be able to allocate my time to implement this intervention.	1	2	3	4	5	6
4.	I understand how to use this intervention.	1	2	3	4	5	6
6.	I am knowledgeable about the intervention procedures.	1	2	3	4	5	6
7.	The intervention is a fair way to handle the child's behavior problem.	1	2	3	4	5	6
8.	The total time required to implement the intervention procedures would be manageable.	1	2	3	4	5	6
9.	I would not be interested in implementing this intervention.	1	2	3	4	5	6
10.	My administrator would be supportive of my use of this intervention.	1	2	3	4	5	6
11.	I would have positive attitudes about implementing this intervention.	1	2	3	4	5	6
12.	This intervention is a good way to handle the child's behavior problem.	1	2	3	4	5	6
13.	Preparation of materials needed for this intervention would be minimal.	1	2	3	4	5	6
14.	Use of this intervention would be consistent with the mission of my school.	1	2	3	4	5	6

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
16.	Implementation of this intervention is well matched to what is expected in my job.	1	2	3	4	5	6
17.	Material resources needed for this intervention are reasonable.	1	2	3	4	5	6
18.	I would implement this intervention with a good deal of enthusiasm.	1	2	3	4	5	6
19.	This intervention is too complex to carry out accurately.	1	2	3	4	5	6
20.	These intervention procedures are consistent with the way things are done in my system.	1	2	3	4	5	6
21.	This intervention would not be disruptive to other students.	1	2	3	4	5	6
22.	I would be committed to carrying out this intervention.	1	2	3	4	5	6
23.	The intervention procedures easily fit in with my current practices.	1	2	3	4	5	6
25.	I understand the procedures of this intervention.	1	2	3	4	5	6
26.	My work environment is conducive to implementation of an intervention like this one.	1	2	3	4	5	6
27.	The amount of time required for record keeping would be reasonable.	1	2	3	4	5	6

URP- I SCORING GUIDE

Factor I: ACCEPTABILITY
Items - 1, 7, 9*, 11, 12, 18, 21, 22, 23

Factor II: UNDERSTANDING
Items – 4, 6, 25

Factor IV: FEASIBILITY
Items – 3, 8, 13, 17, 19*, 27

Factor V: SYSTEM CLIMATE
Items – 10, 14, 16, 20, 26

* REVERSE CODE THESE ITEMS WHEN SCORING

Note: Use care when interpreting individual factors and in combination. For example, a LOW score for system support reflects greater ability to independently implement the intervention. Thus, if aggregating across all factors to find an overall mean indicative of more favorable responses, consider reverse coding all items in this factor.

Citation for the measure:
Chafouleas, S.M., Briesch, A.M., Neugebauer, S. R., & Riley-Tillman, T. C. (2011). *Usage Rating Profile – Intervention (Revised)*. Storrs, CT: University of Connecticut.

Suggested citation for the associated publication is as follows:
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Appendix I: Consultation Treatment Integrity Checklists

Adapted from (Bergan & Kratochwill, 1990)

Initial Interview Checklist

Adapted from (Bergan & Kratochwill, 1990)

Date:_____ Consultant:_____

Consultee:_____

Interview objective	**Occurrence**	**Non-occurrence**
1. Opening salutation	_____	_____
2. General statement	_____	_____
3. Interaction specification		
a) Specify examples	_____	_____
b) Specify priorities	_____	_____
4. Identify antecedents	_____	_____
5. Identify consequences	_____	_____
6. Summarize and validate	_____	_____
7. Behavior strength		
a) Frequency	_____	_____
b) Duration	_____	_____
8. Summarize and validate	_____	_____
9. Tentative definition of goal	_____	_____
10. Assets question	_____	_____
11. Approach to teaching/Existing procedures	_____	_____
12. Summarize and validate	_____	_____
13. Directional statement about data recording	_____	_____
14. Review data collection procedures	_____	_____
15. Validate recording procedures	_____	_____
16. Establish dates for data collection	_____	_____
17. Establish date of next appt. (tentative)	_____	_____
18. Closing salutation	_____	_____

Interaction Training Interview Checklist

Adapted from (Bergan & Kratochwill, 1990)

Date:_____ Consultant:_____

Consultee:_____

Interview objective	**Occurrence**	**Non-occurrence**
1. Opening salutation	_____	_____
2. Summary of assessments		
a) Summarized interaction data	_____	_____
b) Summarized student data	_____	_____
3. Review interaction plan	_____	_____
4. Summarize and validate the interaction plan	_____	_____
5. Train teacher	_____	_____
6. Summarize and validate	_____	_____
7. Continuing data collection	_____	_____
8. Establish date of next apt. (tentative)	_____	_____
9. Closing salutation	_____	_____

Treatment Evaluation Interview Checklist

Adapted from (Bergan & Kratochwill, 1990)

Date:_____ Consultant:_____

Consultee:_____

Interview objective	**Occurrence**	**Non-occurrence**
1. Opening salutation	_____	_____
2. Evaluate goal attainment	_____	_____
3. Goal attainment questions	_____	_____
4. Evaluate plan effectiveness	_____	_____
5. External validity	_____	_____
6. Post-implementation planning	_____	_____
7. Plan modification	_____	_____
8. Design generalization and maintenance procedures	_____	_____
9. Data-collection procedures	_____	_____
10. Closing salutation	_____	_____

Appendix J: Consultation Guide for T-S Interactions

Adapted from Bergan and Kratochwill (1990)

INITIAL INTERVIEW

Student's ID:_____

Consultant:_____

Teacher:_____

	Year	Month	Day
Date:	_____	_____	_____
Birth Date:	_____	_____	_____

Age: _____

Start Time: _____

End Time: _____

Duration: _____

Notes:

_____

_____

_____

_____

_____

Initial Interview

Consultant Note: The purposes of the Initial Interview are to:

- Define the interaction style between teacher and student in behavioral terms.
- Provide information on typical classroom practices.
- Define goals for interactions
- Establish a procedure for collection of data.

The consultant should question and/or comment in the following areas:

OPENING SALUTATION

GENERAL STATEMENT TO INTRODUCE DISCUSSION

"I'd like spend this time getting to know you better, as well as getting a sense of your student and typical interactions between the two of you."

- *Can you tell me generally about interactions between you and your student?*

Record responses: _____

_____

_____

_____

INTERACTION SPECIFICATION

Important: Ask for as many examples of the problem as possible.

- *What exactly does it look like when you and [student's name] engage in a typical interaction?*
- *Can you provide me with some examples of interactions with your student that have been negative?*
- *Can you provide me with some examples of interactions you've had with your student that have been positive?*

Specify examples: _____

_____

_____

_____

Important: After eliciting all the examples the teacher can give, ask how severe of a problem the interactions are.

- *How problematic are the negative interactions you've described?*
- *On a scale of 0 to 10 (where 0=no problem; 10=severe problem), how severe are the interactions?"*

Specify priorities: _____

_____

_____

_____

IDENTIFY SETTING

- *Are there any settings where negative interactions are more common?*
  - Obtain time/setting (e.g., during math independent seatwork, which is from 10:20-11:15 daily).

Specify settings: _____

_____

_____

_____

Important: After eliciting all the settings the teacher can give, ask which settings are causing the most difficulty and establish a priority.

- *Of the settings you have described, which is the most problematic?*
- To help prioritize settings, you can ask *"On a scale of 0 to 10 (where 0=no problem; 10=severe problem), how problematic is _____ setting?"*

Specify priorities: _____

_____

_____

_____

IDENTIFY ANTECEDENTS

- *What happens right before the negative interactions occurs?*
  - *Given work?--what type of work(e.g., paper & pencil, group work, independent seat work), academic area (e.g., reading, math, etc.), difficulty level (e.g., easy, hard)*
  - *Lack of or decreased attention? –peer attention, adult attention, etc.*
  - *Are negative interactions usually teacher initiated or student initiated?*

- *Are positive interaction usually teacher initiated or student initiated?*

Record responses: _____

_____

_____

_____

IDENTIFY CONSEQUENCES

- *Walk me through what typically happens after the negative interaction has occurred.*

Record responses: _____

_____

_____

_____

SUMMARIZE AND VALIDATE INTERACTIONS

- *E.g., You've said typical interactions between you and the student typically involve_____, which tend to occur more when _____. Is that correct? Then you do _____ and the students do _____. Then _____ occurs. Is that how it typically goes?*

Record responses: _____

_____

_____

_____

STRENGTH

- ♦ Frequency: How often are interactions between you and the student negative?
- ♦ *How often are interactions between you and the student positive?*

Record responses: _____

_____

_____

_____

- Duration: How long do negative interactions typically occur?
- *How long do positive interactions typically occur?*

Record responses: _____

_____

_____

_____

SUMMARIZE AND VALIDATE

1. *E.g., You've said that negative interactions occur [frequency] and each instance occurs for [duration]. Also, positive interactions occur [frequency] and each instance occurs for [duration]. Is that correct?*

Record responses: _____

_____

_____

_____

TENTATIVE DEFINITION OF GOAL-QUESTIONS

- *I understand the student demonstrates some challenging behavior. Can you tell me about some of the most challenging behaviors displayed by [student]?*
- *How frequently could [student] demonstrate this behavior without causing problems?*

Record responses: _____

_____

_____

_____

ASSETS QUESTION

- Determine what the student is good at.
- *Is there something [student] does well?*

Record responses: _____

_____

_____

_____

APPROACH TO TEACHING / EXISTING PROCEDURES

- *I'd like to get to know your classroom a little better. Can you tell me about your most effective classroom procedures/practices?*
- *How do you typically manage behaviors for the rest of the class? Does it look the same for [student]?*

Record responses: _____

_____

_____

_____

SUMMARIZATION STATEMENT AND VALIDATION

- *E.g., "Let's see, you've said…"*

Record responses: _____

_____

_____

_____

DIRECTIONAL STATEMENT TO PROVIDE RATIONAL FOR ASSESSMENT

- *We need to collect some more information about interactions with the student, as well as student behaviors. This information will help give us some clues as to how we can support [student] and improve upon his interactions with you. Also, the information will help us decide whether any plan we initiate has been effective.*

Record responses: _____

_____

_____

_____

DISCUSS DATA COLLECTION PROCEDURES

We will need to collect quite a bit of information that will (a) inform development of an interaction plan that will be most effective for your interactions with[student], and (b) provide some baseline data.

1. ***Consultant completed data collection:***
    a. *I will need to conduct 2 15-minute observations a week during times when negative interactions typically occur*.
2. ***Teacher completed data collection:***

a. *To get a broader sense of [student's] behavior, we'd like you to complete a rating scale of his/her academic skills and behaviors (hand out ACES). I will collect these during one of my observations.*

Observations scheduled for: _____

_____

Record responses/ questions about data collection: _____

_____

_____

SUMMARIZE AND VALIDATE RECORDING PROCEDURES

- *We have agreed that to gather more information, I will observe during [activity] on [date] at [time] and during [activity] on [date]. You will complete the _____ by [date]. Is that okay with you?*

Record responses: _____

_____

_____

_____

ESTABLISH DATE(S) TO BEGIN DATA COLLECTION

Provide teacher with copies of any additional assessments (ACES).

Observations scheduled for: _____

_____

ESTABLISH DATE OF NEXT APPOINTMENTS

Observations:

SESSION 1 (day & time)**:** _____

SESSION 2 (day & time)**:** _____

Once all the data collection is complete, I will draft an interaction plan and we will meet again to discuss the plan and make any adjustments that may be necessary.

Training meeting: DATE: _____

TIME: _____

PLACE: _____

CLOSING SALUTATION

INTERACTION TRAINING INTERVIEW

Student's ID:_____

Consultant:_____

Teacher:_____

	Year	Month	Day
Date:	_____	_____	_____

Start Time: _____

End Time: _____

Duration: _____

Notes:

_____
_____
_____
_____
_____
_____

Interaction Training Interview

Consultant Note: The purposes of the Interaction Training Interview are to:

- Evaluate and obtain agreement on the sufficiency and the adequacy of the baseline data.
- Design a plan for specific behaviors that will improve interactions between teacher and student.
- Reaffirm the record-keeping procedure

The consultant should question and/or comment in the following areas:

OPENING SALUTATION

ORAL SUMMARY OF ASSESSMENT RESULTS & BEHAVIORS

Important: Provide an oral summary of the assessment data. Answer any questions that the teacher may have regarding data.

- *E.g., The data we collected indicate that:*
  - ☐ Summarize interaction data *(e.g., positive interactions occurred an average of __ times per observation, while negative interactions occurred an average of __ times per observation).*
  - ☐ Summarize student behavior briefly *(e.g., student was noncompliant an average of ___ times per observation).*
  - ☐ Summarize any additional assessment data *briefly (e.g., [student] was in the "at-risk" range for ___, ___, and the average range for _____).*
  - ☐ Review data table with teacher.

Record responses: _____

_____

_____

_____

REVIEW PLAN

- ***Describe interaction plan.***
- ***Go over reasoning for each part of the plan with the teacher (****e.g., "In our initial meeting, you mentioned that negative interactions tend to be student initiated, so the first part of the plan involves increasing teacher-initiated interactions with specific praise")* **.**

Record responses: _____

_____

_____

_____

SUMMARIZE AND VALIDATE THE INTERVENTION PLAN

- *We'll try this…[briefly summarize plan].*

Record responses: _____

_____

_____

_____

PROVIDE <u>DIRECT TRAINING</u> ON THE PLAN OR SCHEDULE TIME FOR TRAINING

- *Let's go over how you'll implement this plan…(didactic instruction, modeling, role play)*

Record responses: _____

_____

_____

_____

SUMMARIZE AND VALIDATE THE TRAINING

- *Ok, so we will try this plan…do you have any additional questions?*

Record responses: _____

_____

_____

_____

DISCUSS DATA COLLECTION PROCEDURES

- ***Consultant completed data collection:***

- *Just as I did over this past week or so, I will need to conduct 2 15-minute observations a week during the same times. About every other week, someone else will come with me and collect data at the same time, to make sure I am collecting data accurately.*

- ***Teacher completed data collection:***
    - *So that I can get a sense of how the plan is going during the week, I will ask you to fill out a rating form for each part of the plan each day.*
    - *Let's go over how you would complete the form.*

Record responses: _____

_____

_____

_____

ESTABLISH DATE OF NEXT APPOINTMENT(S)

We will meet briefly –shouldn't take more than 10 minutes- each week so that I can collect completed data forms and so we can talk about how implementation went during the week. When would be the best time for us to meet?

DATE: _____

TIME: _____

PLACE: _____

BE SURE YOU PROVIDED TEACHER WITH A COPY OF THE PLAN!

CLOSING SALUTATION

TREATMENT EVALUATION INTERVIEW *(TEI)*

Student's ID:_____

Consultant:_____

Teacher:_____

	Year	Month	Day
Date:	_____	_____	_____

Start Time: _____

End Time: _____

Duration: _____

Notes:

_____
_____
_____
_____
_____
_____

Treatment Evaluation Interview (TEI)

Consultant Note: The purposes of the TEI are to:

- Determine if the goals of consultation have been obtained.
- Evaluate the effectiveness of the treatment plan.
- Discuss strategies and tactics regarding the continuation, modification, or termination of the treatment plan.
- Terminate consultation.

The consultant should question and/or comment in the following areas:

OPENING SALUTATION

EVALUATE GOAL ATTAINMENT

- *You implemented the plan for __ weeks. How are things going?*

Record responses: _____

_____

_____

_____

QUESTIONS ABOUT GOAL ATTAINMENT

- *Are interactions better during [list target activities] now?*
- *Can we say that the goal of decreasing [student's] problem behavior(s) has been attained now?*

Record responses: _____

_____

_____

EVALUATE PLAN EFFECTIVENESS

- *Would you say that the intervention was responsible for improving interactions?*

Record responses: _____

EVALUATE EXTERNAL VALIDITY OF PLAN

- *Do you think this plan would have worked with another student?*

Record responses: _____

CONDUCT POSTIMPLEMENTATION PLANNING/ PLAN CONTINUATION

- *Do you want to leave the plan in effect for another week to see if progress continues?*

Record responses: _____

QUESTIONS/STATEMENTS ABOUT PLAN MODIFICATION

- *You are saying you want to discontinue parts of the plan because it has worked so well.*
- *How could we change the procedure to make our plan more effective?*

Record responses: _____

DESIGN PROCEDURES TO FACILITATE GENERALIZATION AND MAINTENANCE

- *What procedures can be implemented to be sure that positive interactions continue?*

Record responses: _____

DISCUSS DATA COLLECTION PROCEDURES

- ***Provide teacher with the social validity scales and rating scales***
  - *There are several measures we'd like you to complete so that you can give us feedback on different parts of this project. Let's go through them briefly…*
    - ***Usage Rating Profile—Intervention****- This form is designed for you to let us know what you thought about the interaction plan.*
  - *In addition, we'd like you to complete the social skills and behavior rating scale regarding [student] again, so we can see what improvements s/he has made, as well as the Student-Teacher Relationship Scale.*
    - *Hand out ACES.*
    - *Hand out STRS*

Record responses: _____

Date/time to collect social validity and rating scales if not completed during TEI*:* _____

CLOSING SALUTATION

Appendix K: Assessment Results to Strategies Table

Assessment	Assessment Result	Dimension Target	Possible Strategies
T-POT	Average Frequency of Teacher Positive < 5	Frequency	Increasing non-contingent positive attention by (Webster-Stratton et al., 2011): • Using a Motivator or alarm • Self-monitoring (e.g., tallies on a post-it, checklist, etc.) • Menu of possible non-contingent positive interactions Token economy Behavioral contract Frequent check-ins/individualized support (Pianta et al., 2008) Increase reassurance (Pianta et al., 2008)
	Average Frequency of Teacher Unlabeled Praise > Teacher Labeled Praise Average Frequency of Teacher labeled praise <1	Quality	Increase specific praise (Simonsen et al., 2008) by: • Praise training (Henderlong & Lepper, 2002) • Self-monitoring Token economy
	Average Frequency of No Opportunity > 1	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Non Compliance > Average Frequency of Compliance	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Average Frequency of Teacher Demand (indirect) > Average Frequency of Teacher Demand (direct)	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Average Frequency of Teacher negative > Average Frequency of Teacher Positive	Ratio	When a problem behavior occurs (Webster-Stratton et al., 2011): • Reinforce Peers • Ignore problem behaviors • Use redirects • Use Nonverbal cues Increase awareness of ratio of positive to negative teacher-initiated interactions (Dewhirst & Davis, 2011)

			• Paper Clip Strategy • Motivator/alarm
Interview*	Problem Behaviors frequently an antecedent to negative interactions, as reported by teacher	Frequency/ratio/or quality	Token economy Behavioral contract
	Academic difficulties of the child frequently an antecedent to negative interactions, as reported by teacher	Frequency/ratio/or quality	Frequent check-ins/individualized support (Pianta et al., 2008) Reassurance (Pianta et al., 2008)
	No positively stated Expectations	Quality	Establish positively stated expectations (Simonsen et al., 2008)

*Note. The interview will be used to determine which strategies would fit best with the dyad and will help aid in the decision of which aspects of T-S to target.

Appendix L: Decision Rules Regarding Strategies

Indicators:

1. Frequency
2. Quality- specific praise
3. Quality- no opportunity for compliance
4. Quality- student noncompliance
5. Quality- direct demands versus indirect
6. Ratio

If the following indicators warrant strategies:	**Then choose the following strategies:**
One indicator (1-6)	Choose one strategy appropriate to the indicator, as designated by the Assessment Results to Strategies Table.
Two indicators (1-6)	Choose two strategies appropriate to the indicator, as designated by the Assessment Results to Strategies Table.
Three indicators (1-6)	Choose three strategies appropriate to the indicator, as designated by the Assessment Results to Strategies Table.
Indicators: 1, 3, 4, 5, 6 Indicators: 1, 3, 5, 6 Indicators: 1, 3, 4, 6 Indicators: 1, 4, 5, 6	• 1 Frequency strategy • 1 Quality strategy: choose between command training and creating positive expectations • 1 Ratio Strategy

Indicators: 1 or 6, 2, 3, 4, 5
Indicators: 1 or 6, 2, 3, 5
Indicators: 1 or 6, 2, 3, 4
Indicators: 1 or 6, 2, 4, 5
	• 1 Frequency or Ratio strategy
	• 2 Quality strategies
	  ○ Specific praise strategy
	  ○ Command training or creating positive expectations

Indicators: 1 or 6, 3, 4, 5	• 1 Frequency or Ratio strategy
	• 2 Quality
	  ○ Command training
	  ○ Creating positive expectations

All 6 indicators warrant strategies Indicators: 1, 2, 3, 4, 6 Indicators: 1, 2, 3, 5, 6 Indicators: 1, 2, 4, 5, 6	• Choose 1 strategy that spans frequency and specific praise indicators (e.g., self-monitoring, token economy) • 1 Quality strategy: Choose Command training or creating positive expectations • 1 Ratio strategy

Appendix M: Behavior Contract for Teacher C

Math Behavior Contract

I, _____, am committed to working towards being a better student and a positive leader in the classroom. I will do this by:

- **Following the routine** that is posted on the board. If I'm not sure what I should be doing, I will look to my classmates for a positive example.
- **Listening with my hands**. I will do this by keeping my hands and body quiet during class, so my classmates can listen without distractions.

My goal is to: *Follow these expectations throughout class with only <u>three</u> reminders from my teacher.*

_____

(Signature of Student) Date

I, _____, am committed to supporting this student in following the expectations. I will do this by:

- **Giving reminders** for the expectations that will make him a better student.
- **Acknowledging** him when expectations are met.

_____

(Signature of Teacher) Date

Appendix N: Data to Strategies for All Teachers

Teacher A

Assessment	Assessment Criteria	Baseline Data	Dimension Target	Possible Strategies
T-POT	Average Frequency of Teacher Positive < 5	**4** **Meets criteria**	Frequency	Increasing non-contingent positive attention by (Webster-Stratton et al., 2011): • Using a Motivator or alarm • Self-monitoring (e.g., tallies on a post-it, checklist, etc.) • Menu of possible non-contingent positive interactions **Token economy** Behavioral contract Frequent check-ins/individualized support (Pianta et al., 2008) Increase reassurance (Pianta et al., 2008)
	Average Frequency of Teacher Unlabeled Praise > Teacher Labeled Praise Average Frequency of Teacher labeled praise <1	**General>specific** **Frequency: 0.8** **Meets criteria**	Quality	**Increase specific praise** (Simonsen et al., 2008) by: • Praise training (Henderlong & Lepper, 2002) • Self-monitoring **Token economy**
	Average Frequency of No Opportunity > 1	0 does not meet	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Non Compliance > Average Frequency of Compliance	Does not meet	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Average Frequency of Teacher	Does not meet	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated

	Demand (indirect) > Average Frequency of Teacher Demand (direct)			expectations (Simonsen et al., 2008)
	Average Frequency of Teacher negative > Average Frequency of Teacher Positive	**26 negatives to 22 positives Meets criteria**	Ratio	When a problem behavior occurs (Webster-Stratton et al., 2011): • Reinforce Peers • **Ignore problem behaviors** • Use redirects • Use Nonverbal cues Increase awareness of ratio of positive to negative teacher-initiated interactions (Dewhirst & Davis, 2011) • Paper Clip Strategy • Motivator/alarm
Interview*	Problem Behaviors frequently an antecedent to negative interactions, as reported by teacher	**Yes, rude behavior**	Frequency/ratio/or quality	**Token economy** Behavioral contract
	Academic difficulties of the child frequently an antecedent to negative interactions, as reported by teacher	No	Frequency/ratio/or quality	Frequent check-ins/individualized support (Pianta et al., 2008) Reassurance (Pianta et al., 2008)
	No positively stated Expectations	No	Quality	Establish positively stated expectations (Simonsen et al., 2008)

*Note. The interview will be used to determine which strategies would fit best with the dyad and will help aid in the decision of which aspects of T-S to target.

1.) Token Economy

2.) Increase specific Praise

3.) Ignore arguing

Teacher B

Assessment	Assessment Criteria	Baseline Data	Dimension Target	Possible Strategies
T-POT	Average Frequency of Teacher Positive < 5	**3.5 Meets criteria**	Frequency	Increasing non-contingent positive attention by (Webster-Stratton et al., 2011): • Using a Motivator or alarm • Self-monitoring (e.g., tallies on a post-it, checklist, etc.) • Menu of possible non-contingent positive interactions Token economy Behavioral contract Frequent check-ins/individualized support (Pianta et al., 2008) **Increase reassurance (Pianta et al., 2008)**
	Average Frequency of Teacher Unlabeled Praise > Teacher Labeled Praise Average Frequency of Teacher labeled praise <1	**General>specific** **Frequency: 0.3** **Meets criteria**	Quality	**Increase specific praise** (Simonsen et al., 2008) by: • Praise training (Henderlong & Lepper, 2002) • Self-monitoring Token economy
	Average Frequency of No Opportunity > 1	**1.3 Meets Criteria**	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Non Compliance > Average Frequency of Compliance	Does not meet	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Average Frequency of Teacher Demand (indirect) >	Does not meet	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)

	Average Frequency of Teacher Demand (direct)			
	Average Frequency of Teacher negative > Average Frequency of Teacher Positive	1.4 positives for every negative Does not meet	Ratio	When a problem behavior occurs (Webster-Stratton et al., 2011): • Reinforce Peers • Ignore problem behaviors • Use redirects • Use Nonverbal cues Increase awareness of ratio of positive to negative teacher-initiated interactions (Dewhirst & Davis, 2011) • Paper Clip Strategy • Motivator/alarm
Interview*	Problem Behaviors frequently an antecedent to negative interactions, as reported by teacher	No	Frequency/ratio/or quality	Token economy Behavioral contract
	Academic difficulties of the child frequently an antecedent to negative interactions, as reported by teacher	Possibly	Frequency/ratio/or quality	Frequent check-ins/individualized support (Pianta et al., 2008) **Reassurance (Pianta et al., 2008)**
	No positively stated Expectations	No	Quality	Establish positively stated expectations (Simonsen et al., 2008)

*Note. The interview will be used to determine which strategies would fit best with the dyad and will help aid in the decision of which aspects of T-S to target.

1.) Increase specific Praise

2.) Praise for accurate self-ratings

Teacher C

Assessment	Assessment Criteria	Baseline Data	Dimension Target	Possible Strategies
T-POT	Average Frequency of Teacher Positive < 5	6.1 Does not meet	Frequency	Increasing non-contingent positive attention by (Webster-Stratton et al., 2011): • Using a Motivator or alarm • Self-monitoring (e.g., tallies on a post-it, checklist, etc.) • Menu of possible non-contingent positive interactions Token economy Behavioral contract Frequent check-ins/individualized support (Pianta et al., 2008) Increase reassurance (Pianta et al., 2008)
	Average Frequency of Teacher Unlabeled Praise > Teacher Labeled Praise Average Frequency of Teacher labeled praise <1	**General>specific** **Frequency: 0.5** **Meets criteria**	Quality	**Increase specific praise** (Simonsen et al., 2008) by: • Praise training (Henderlong & Lepper, 2002) • Self-monitoring Token economy
	Average Frequency of No Opportunity > 1	0.8 Does not meet	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Non Compliance > Average Frequency of Compliance	Does not meet	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)
	Average Frequency of Teacher Demand (indirect) >	Does not meet	Quality	Command training (Webster-Stratton et al., 2011) Establish positively stated expectations (Simonsen et al., 2008)

	Average Frequency of Teacher Demand (direct)			
	Average Frequency of Teacher negative > Average Frequency of Teacher Positive	**4.0 positives for every negative Does not meet**	Ratio	When a problem behavior occurs (Webster-Stratton et al., 2011): • Reinforce Peers • Ignore problem behaviors • Use redirects • Use Nonverbal cues Increase awareness of ratio of positive to negative teacher-initiated interactions (Dewhirst & Davis, 2011) • Paper Clip Strategy • Motivator/alarm
Interview*	Problem Behaviors frequently an antecedent to negative interactions, as reported by teacher	**Yes**	Frequency/ratio/or quality	Token economy **Behavioral contract**
	Academic difficulties of the child frequently an antecedent to negative interactions, as reported by teacher	No	Frequency/ratio/or quality	Frequent check-ins/individualized support (Pianta et al., 2008) Reassurance (Pianta et al., 2008)
	No positively stated Expectations	No	Quality	Establish positively stated expectations (Simonsen et al., 2008)

*Note. The interview will be used to determine which strategies would fit best with the dyad and will help aid in the decision of which aspects of T-S to target.

1.) Increase specific praise

2.) Behavior Contract