Educating Minority Boys:
Examining the Differences in Children’s Classroom Experiences
As a Result of Teacher-Child Relationships and a Professional Development Intervention

Erin Brown Mason

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Approved by:
Kathleen Gallagher, Ph.D.
Sharon Ritchie, Ed.D.
Sharon Palsha, Ph.D.
ABSTRACT

Erin B. Mason
Examining the Differences in Children’s Classroom Experiences
As a Result of Teacher-Child Relationships and a Professional Development Intervention
(Under the direction of Kathleen Gallagher, Sharon Ritchie, and Sharon Palsha)

This study examined differences in classroom experiences for minority boys as a result of their teacher-child relationships and a professional development intervention. The Student Teacher Relationship Scale was used to categorize boys in 23 prekindergarten through 3rd grade classrooms to relationships high in conflict or high in closeness. A time-sampling observation measure was used to observe the two boys with the highest conflictual and two boys with the highest in closeness relationships pre and post a professional development intervention. Independent samples t-tests and analysis of covariance tests were conducted to examine the differences in classroom experiences. Results indicate minority boys with conflictual relationships are less attentive than those with high in closeness relationships. Minority boys in the intervention group received more oral language development and scaffolding post intervention than those in the control group. The results have implications for school staff interested in bettering early school experiences for minority boys.
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CHAPTER 1
BACKGROUND

Less than 1/3 of America’s fourth graders are at or above grade level in literacy, indicating many students are leaving the fourth-grade without the skills necessary to succeed in subsequent schooling (Lee, Grigg, & Donahue, 2007). The difference between the average score on standardized tests for Black students, Hispanic students, and White students is known as the national achievement gap. Though the gap has decreased in some areas during the last 30 years, specifically in both math and science at the fourth grade level, minority students are still underperforming across the board compared to their White peers (Lee, et al.). White and Black students together comprised three-fourths of the nation’s public school students at fourth and eighth grade in 2007. However, Hispanic students have an increasing presence in the U.S. school system which makes the fact that the academic performance of Hispanic males is more similar to that of Black male students than to White male students even more of a concern. In 2007, White fourth-grade students had average scores in reading at least 26 points higher than their Hispanic peers and 28 points higher than Black students. Forty three percent of White students tested at or above “proficient” in reading while only 14% of Black students and 17% of Hispanic students met the “proficient” threshold (Lee, et al.).

In addition to performing lower on literacy tests, Black students were suspended from public elementary and secondary schools at a rate nearly triple that of White students in
2006, males were suspended at a rate nearly double that of female students (Vanneman, Hamilton, Anderson, & Rahman, 2009). Students who are suspended from school are more at risk for dropping out than students who are not suspended (Baker et al., 2001).

Gender also plays a role in the achievement gap. In 2007, Black females in the fourth grade made greater gains in mathematics over a 17 year time period than White female students, thus narrowing the gap. There was no significant change in the gap for Black male students during the same time frame (Vanneman, et al., 2009). Overall, 35% of female fourth-grade students were at or above “proficient” in reading while only 29% of males reached the same level (Lee, et al., 2007).

As state and federal policies continue to fund and provide early education settings to children as young as three years of age, systems of accountability are being established to ensure that a high-quality early education is provided to all children. Evidence suggests the quality of instruction in many schools serving low-income students, who tend to also be minority students, is not as high as in those schools serving higher-income students. The disparity may be due to the lack of high-quality instruction and well-prepared teachers in the lower performing schools (Good & Nichols, 2001). Evidence suggests that educational professionals are not well prepared to teach diverse families (Gay & Howard, 2000; Hyun, 1996). Furthermore, research and census reports show that educational services are being provided by professionals that do not proportionally represent the diversity found in society: the vast majority of teachers are White women (Saluja, Early, & Clifford, 2002). In 2004, minority children made up 42% of public school children grades PreK-2nd grade (KewalRamani, Gilberson, Fox, & Provasnik, 2007). During the same year, only 18% of public school elementary teachers were non-White (Planyt et al., 2007).
Among the concerns regarding ill prepared professionals is that many Caucasian teachers may unintentionally accept and/or promote forms of discrimination (Smith, Moallem, and Sherrill, 1997) which could result in providing environments that are not culturally responsive. Teachers often fear “saying the wrong thing” or discussing the often taboo topic of racism, and as a result, take on an attitude of “colorblindness” which devalues the individual students’ contributions to the classroom environment. Teachers may not engage in important dialogue with children regarding race and thus never establish a safe community for children to reflect, learn, and appreciate racial differences (Howard & Denning del Rosario, 2000). Additionally, colorblindness can affect teachers’ attitudes and expectations which in turn, affect the students’ academic outcomes (Barnes, 2006, Howard & Denning del Rosario). This too is concerning because children’s academic trajectories become more stable during their early school years and negative perceptions of competence and attitudes become stronger and harder to reverse as children progress through school (Veleski & Stipek, 2001).

Research suggests that teachers should, in fact, be engaged in the exact opposite of “colorblindness” by providing culturally responsive learning environments that recognize, promote and support the differences between their students (Barnes, 2006). Culturally responsive teaching not only includes multicultural content, but using multicultural teaching strategies as well (Gay, 2002). Teachers should make school more interesting and stimulating for children (Gay) and construct positive relationships with children that include individualized responses to children through warm and sensitive interactions (Howes & Ritchie, 2002). One possible way to address the achievement gap is by providing teachers guidance and support as they construct culturally sensitive classroom environments.
Fortunately, teacher behavior can be influenced by professional development and training (Ackerman, 2007; Mashburn, et al., 2008; Pianta, 2006). Professional development for early education teachers may provide the bridge for connecting classroom practice to research based standards of quality.

The current study is a secondary analysis of an existing data set from the Ready to Promote Academic Success for Boys of Color study. This one year study was funded through Drop Out Prevention Funds from the N.C. Department of Public Instruction. The purpose of the original study was to help prepare preschool and elementary teachers to improve the early school experiences of and optimize the learning opportunities for minority boys. The study provided a professional development intervention that was based on data collected during classroom observations. The purpose of the current research is to examine the classroom experiences of minority boys as a result of their relationship with their teachers and to examine the efficacy of a professional development intervention designed to improve the quality of relationships teachers have with minority boys. Since classroom experiences influence children’s academic and social outcomes, it is important to identify positive classroom experiences that facilitate teacher-child relationships and to provide professional development to teachers that will support the formation of such relationships.
CHAPTER 2
THEORETICAL FOUNDATIONS AND CONCEPTUAL MODELS

As young children enter school, they are faced with expectations that they will be able to navigate peer interactions, adapt to teacher and classroom demands, become autonomous and develop identities of their own (McIntyre, Blacher, & Baker, 2006). They begin to take on the formal role of student; a role that is unfamiliar to most children (McIntyre, Eckert, Fiese, DiGennareo, & Wildenger, 2007). As part of their new student role, children interact with adults outside of their home on a regular basis. Children form attachments to their important adult caregivers, including teachers, and as a result, they begin to develop important relationships outside of the home (Howes & Ritchie, 2002).

Positive teacher-child relationships are formed in classrooms where both learning and social relationships are valued (Howes & Ritchie, 2002). The classroom becomes a place where children develop by being part of a community (Rogoff, 1994). Children and adults together structure shared activities and learning experiences. Because communities are continuously changing, children change their participation in the activities of their community (Rogoff, 2003). Therefore both children and caregivers structure the situations within the classroom by providing settings that facilitate conversations, recount narratives, and promote engagement in routines and play (Rogoff, 2003). It is within the classroom environment, established by teachers, children, communities, and cultural beliefs (Rogoff, 2003) where children begin to internalize language and use language to structure their thinking (Vygotsky, 1978). The way in which teacher-child relationships develop within the
classroom is rooted in two theoretical perspectives: attachment theory and sociocultural theory.

Attachment Theory

Attachment theory was first conceptualized as a way to describe the deep bond between a mother and a child (Bowlby, 1982). Today the fundamental concepts described in Bowlby’s early work are used to describe teacher-child relationships as well (Howes & Ritchie, 2002). Children develop deep early bonds with caregivers that shape developmental trajectories throughout their lives (Bowlby). Through interactions, children develop “internal working models” of relationships. Overtime, the internal working models function as “cognitive maps” in the brain and shape the way children understand and explore their world (Bowlby). Bowlby’s emphasis on internal working models helped conceptualize attachment in terms of control systems that are constructed through experiences and play a role in organization of behavior and emotion in relationships beyond childhood (Waters & Cummings, 2000). In fact, with the onset of social learning in early childhood, children’s attachment-related information expands greatly.

Essential to attachment theory and the development of positive teacher-child relationships is a child’s ability to use a caregiver as a secure base (Ainsworth, 1978; Bowlby, 1982; Howes & Ritchie, 2002). Children who have developed internal working models resulting from interactions with dependable, responsive caregivers will be competent explorers in their environment and will seek comfort from caregivers in time of need (Ainsworth; Howes & Ritchie). As children develop new relationships and incorporate new information into their internal working models, their expectations are either reaffirmed or contradicted (Howes, 1999). The behavior children exhibit as part of attachment
relationships is adaptive, meaning, if a child had a history of caregivers who were unresponsive, he probably would not see a new caregiver as someone who could provide support and comfort. He may, in fact, avoid seeking help from a new caregiver (Ainsworth). Children tend to act towards new adults in ways that are consistent with their prior relationship history (Howes & Ritchie).

Mary Ainsworth (1978) expanded upon Bowlby’s work to further understand and classify the behaviors associated with attachment relationships. She categorized attachment into three styles: secure, ambivalent-insecure, and avoidant-insecure. The desired attachment category is secure. These attachment categories are used to describe mother-child as well as teacher-child relationships. Children with secure attachments trust adults who care for them and are able to use adults as secure bases (Ainsworth). Ambivalent-insecure attachments manifest in children who tend to be dependent and hard to comfort (Howes & Ritchie, 2002) and are characterized by a lack of trust between teachers and children (Ainsworth). Children with avoidant-insecure attachments tend to avoid caregivers due to their past experience with neglectful or insensitive adults (Ainsworth; Howes & Ritchie).

**Sociocultural Theory**

Sociocultural theory highlights the idea that human development occurs in cultural and social contexts; learning can create development; and language is central to mental development (Bodrova & Leong, 2007; Harland, 2003; Vygotsky, 1978). Essentially, cognitive development is dependent upon the guidance of others. Students do not reach their full potential alone, but rather through collaboration with adults or more capable peers in their environment (Vygotsky, 1978). These systems work together to create optimal pockets of learning for students. However, since systems are interrelated and do not exist alone, it is
vital to recognize the various influences regarding student’s mental, social, and academic development.

Teacher-child interactions are a fundamental aspect of sociocultural theory. Children are active participants in their acquisition of knowledge, but only with the support of others. Vygotsky believed a child’s actions on objects were beneficial for development, but only when included in a social context and supported by communication with others (Bordrova & Leong, 2007). Additionally, Vygotsky believed one of the most advantageous social contexts was formal schooling. Vygotsky recognized that humans construct mental tools or “tools of the mind” that change the way they think and remember (Bordrova & Leong). Through language, teachers guide children’s development of these tools and encourage them to use the tools creatively and independently, and eventually, develop tools on their own (Bordrova & Leong).

A final foundation of sociocultural theory is the idea that learning is not added to existing knowledge, but that learning modifies and builds upon prior knowledge (Bordrova & Leong, 2007). Teachers who teach to emerging skills rather than existing skills facilitate dialogue that guides children to build new meanings and concepts. This pocket of optimal learning where children teeter between what they can do on their own and what they can achieve with guidance is known as the “zone of proximal development” (Vygotsky, 1978). This zone identifies the level of “potential development” that is determined through adult guidance or collaboration (Bordrova & Leong). And it is within this zone of proximal development that close, positive teacher-child relationships become increasingly important.

Though aspects of teacher-child relationships are described separately in attachment theory and sociocultural theory, the influence teacher-child relationships have on children’s
academic and social development is best understood when the theories intertwine.

According to sociocultural theory, children learn through social interaction and collaboration with their teachers (Vygotsky, 1978). However, if children do not experience a secure attachment with their teachers, they will be less likely to seek out their teacher for interaction and support (Ainsworth, 1978), thus limiting the chances of having a meaningful interaction within the “zone of proximal development”.

**Conceptual Model**

This paper presents two conceptual models designed to address the achievement gap among minority boys. The first model addresses teacher-child relationships and the second model addresses professional development. To explore the various classroom experiences young children have in school, it is important to develop a model that defines the teacher-child relationships, teacher-child interactions, and child academic engagement that influence classroom experiences for minority boys (Figure 2.1). Research suggests teacher-child relationships may be associated with children’s academic (Burchinal, et al., 2002; Hamre & Pianta, 2001; Pianta, et al., 1997; Pianta & Howes, 2002; Pianta & Stuhlman, 2004) and social development (Birch, & Ladd, 1997; Ladd, Birch, & Buhs, 1999; Peisner-Fineberg, et al., 1999; Peisner-Fineberg, et al., 2001). It is possible that children who see teachers as supportive are more likely to pursue goals valued by teachers, such as engagement in academic activities (Hamre & Pianta, 2005) and children who trust and like teachers may be more motivated to succeed (Cicchetti & Lynch, 1993). This research suggests classroom experiences for minority boys differ depending on the type of teacher-child relationship.

This research proposes a second model identifying a difference in classroom experiences for minority boys before and after a professional development intervention
The intervention was aimed at improving conflictual teacher-child relationships by educating teachers about the impact of race and class on learning. An improved understanding of these relationships will allow education programs to provide teachers the professional development necessary to form and establish teacher-child relationships that result in more positive early classroom experiences for minority boys.

![Figure 2.1. Conceptual Model: The Relationship between Teacher-child Relationships and Classroom Experiences for Minority Boys.](image1)

![Figure 2.2. Conceptual Model: The Relationship between a Professional Development Intervention and Classroom Experiences for Minority Boys.](image2)

**Explanation of Model 1**

Model 1 (Figure 2.1) suggests that the relationships between minority boys and their teachers influence their experiences in the classroom, and the classroom experiences also influence the relationships. As defined by the student teacher relationship scale measure (Appendix P), the categorizations for teacher-child relationships are either high in conflict or high in closeness. The classroom experiences are categorized as *teacher-child interaction*.
and academic engagement. Teacher-child interactions reflect the manner in which teachers interact with children and are measured by the amount of oral language development and scaffolds the children experienced during the observation. In this model, academic engagement includes the most basic level of behavioral engagement and is measured as attentive in the current study. Such behavior is related to student conduct and on-task behaviors (Fredericks, Blumenfeld, & Paris, 2004) such as active involvement (i.e. talking, doing), attention (i.e. listening, watching), and non-engagement (i.e. wandering, staring) (Powell, Burchinal, File, & Kontos, 2008; McWilliams, Scarborough, & Kim, 2003). Therefore, this study examines the classroom experiences of minority boys related to teacher-interactions by measuring the boys’ amount of oral language development and scaffolds. This study examines the classroom experiences of minority boys related to academic engagement by measuring the boys’ amount of attentive.

Explanation of Model 2

Model 2 (Figure 2.2) suggests that the professional development intervention influences the classroom experiences of minority boys and that the classroom experiences of minority boys influences the professional development intervention. The professional development intervention was measured by using pre and post intervention data in control and intervention sites. The professional development intervention was implemented using the data collected in the classrooms to provoke dialog about the experiences of the minority boys. The classroom experiences are categorized as teacher-child interaction and academic engagement. Teacher-child interactions reflect the manner in which teachers interact with children and are measured by the amount of oral language development and scaffolds the children experienced during the observation. In this model, academic engagement includes
the most basic level of behavioral engagement and is measured as *attentive* in the current study. Such behavior is related to student conduct and on-task behaviors (Fredericks, Blumeneld, & Paris, 2004) such as active involvement (i.e. talking, doing), attention (i.e. listening, watching), and non-engagement (i.e. wandering, staring) (Powell, Burchinal, File, & Kontos, 2008; McWilliams, Scarborough, & Kim, 2003). Therefore, this study examines the classroom experiences of minority boys related to teacher-interactions by measuring the boys’ amount of oral language development and scaffolds. This study examines the classroom experiences of minority boys related to academic engagement by measuring the boys’ amount of attentive.

*Research Questions and Hypotheses*

Classroom experiences such as oral language development, scaffolded learning, and attentiveness may be linked to children’s academic and social outcomes. Additionally, research suggests that the type of relationship children have with their teachers may influence how children explore their classroom, interact with their teachers, and form positive foundations for academic achievement (e.g. Birch & Ladd, 1997; Hamre & Pianta, 2001; Howes & Ritchie, 2002) As such, it is important to identify classroom experiences that facilitate positive teacher-child relationships and to provide professional development to teachers that will support the formation of such relationships. The purpose of this research is to examine differences in minority boy’s classroom experiences and to examine the efficacy a professional development intervention designed to improve the quality of relationships teachers have with minority boys. The research questions and hypotheses are as follows:
1. Is there a difference in teacher interaction and child engagement for the high in conflict relationship and the high in closeness relationship?

   **Hypothesis 1a:** Oral Language Development scores will be higher for the high in closeness relationship than the high in conflict relationship, pre-intervention.

   **Hypothesis 1b:** Scaffolds scores will be higher for the high in closeness relationship than the high in conflict relationship, pre-intervention.

   **Hypothesis 1c:** Attentive scores will be higher for high the in closeness relationship than the high in conflict relationship, pre-intervention.

2. Do the teacher interaction and child engagement scores for the high in conflict relationship differ for teachers in the control group and teachers in the intervention group, assuming no prior differences in teacher interaction and child engagement scores among the two groups?

   **Hypothesis 2a:** For the high in conflict relationship, teachers in the intervention schools will have higher Oral Language Development scores than teachers in the control schools.

   **Hypothesis 2b:** For the high in conflict relationship, teachers in intervention schools have higher Scaffolds scores than teachers in the control schools.

   **Hypothesis 2c:** For the high in conflict relationship, teachers in intervention schools will have higher Attentive scores in the intervention schools than the control schools.

3. Do the teacher interaction and child engagement scores differ for teachers in the control group and teachers in the intervention group, assuming no prior differences in teacher interaction and child engagement scores among the two groups?

   **Hypothesis 3a:** Teachers in the intervention schools will have higher Oral Language Development scores than teachers in the control schools.

   **Hypothesis 3b:** Teachers in the intervention schools will have higher Scaffolds scores than teachers in the control schools.

   **Hypothesis 3c:** Teachers in the intervention schools will have higher Attentive scores than teachers in the control schools.

4. A final hypothesis will be tested if the results indicate that there is a difference in teacher interaction and child engagement scores by relationship and by intervention status for the high in conflict relationship.

   **Hypothesis 4a:** The difference in teacher interaction and child engagement for the high in conflict and high in closeness relationships will decrease more for the intervention schools than the control schools.
CHAPTER 3
LITERATURE REVIEW

Considerable research highlights the influence of positive teacher-child relationships on young children’s academic and social development (Birch & Ladd, 1997; Burchinal, et al., 2002; Cicchetti & Lynch, 1993; Hamre & Pianta, 2001; Hamre & Pianta, 2005; Ladd, et al., 1999; Peisner-Fineberg, et al., 1999; Pianta, et al., 1997; Pianta & Stuhlman, 2004). As children interact with teachers, they continually modify or solidify their internal working models of adult relationships. Positive relationships characterized by warm, sensitive, responsive interactions can disconfirm a previous difficult working model and thus enable children to develop modified, trusting, working models of adult relationships (Howes & Ritchie, 2002). Establishing secure teacher-child relationships that allow children to explore classrooms and actively engage in learning opportunities is especially important during the early school years when significant achievement growth occurs. Pianta, Belsky, Vandergrift, Houts, and Morrison (2008) found that most of the change in children’s reading and math scores occurred by the first grade, with virtually no change after third grade.

Academic Engagement

Academic engagement from early school years to high school is widely researched as an important contributor to children’s academic and school success. Numerous studies have linked levels of engagement to grades, achievement test scores, school attendance, retention, graduation and dropout rates, and academic resilience (for a review, see Fredericks et al., 2004). Finn (1989) regarded low academic engagement as being the key to school dropout.
Additionally, dropout prevention programs and other interventions frequently use the term “engagement” as an important component of their programs (Finn & Rock, 1997). Although there is substantial research into children’s academic engagement, it is often difficult to compare links among studies due to the lack of consistency in the definition of engagement (Hughes, Luo, Oi-Man, & Loyd, 2008).

In an extensive review of school engagement research, Frederick, et al. (2004) divided school engagement into three categories: behavioral, emotional, and cognitive. The authors characterized behavioral engagement as participation and involvement in academic and social or extracurricular activities and considered this form of engagement crucial to achieving positive academic outcomes and preventing school dropout. Specifically, participation can include attending school and class, paying attention to the teacher, taking part in extracurricular activities, and responding appropriately to directions, questions, and assignments (Alexander, Entwisle, & Horsey 1997; Finn & Voelkl, 1993). Finn (1989) also categorized participation into different levels. At the most basic level-one, participation includes young children attending, being prepared, and responding to directions or questions initiated by the teacher (Alexander, et al., 1997; Finn). Most research on young and elementary aged children tends to focus on this latter and most basic level of behavioral engagement (Hughes, et al., 2008) and is related to student conduct and on-task behaviors (Fredericks, et al). These behaviors have been measured by identifying active involvement (i.e. talking, doing), attention (i.e. listening, watching), and non-engagement (i.e. wandering, staring) (Powell, Burchinal, File, & Kontos, 2008; McWilliams, Scarborough, & Kim, 2003). Research suggests positive school performance in the elementary grades is related to both attentiveness and responding to teachers’ directions (Finn & Rock, 1997). Young children
who do well in school tend to use their time effectively, have talent-interest in the subject matter, have a sufficient attention span, and are active participants in the academic routine (Alexander, Entwisle, & Dauber, 1993). Not surprisingly, students who are interested and involved in the classroom spend more time on task (Alexander, et al., 1993).

Young children who show signs of disaffection with school not only perform lower academically during the school year than their more engaged peers, but may become increasingly at risk for school failure with additional years in school (Hughes et al., 2008), suggesting early intervention may be key to later school success. In a longitudinal study of inner-city children, Spivack and Cianci (1987) found significant relationships between behavior ratings in kindergarten through third grade and classroom misconduct at ages 14 and 15, as well as school disciplinary measures and police contacts by age 17 (as cited in Finn, 1989). Specifically, behavior ratings during early school years including “classroom disturbances”, “impatience”, “disrespect-defiance”, “irrelevant responsiveness” and “inattentive-withdrawn” were related to more problematic behavior as teenagers (Finn). As Finn and Voelkl (1993) and Finn and Rock (1997) suggest, level of classroom engagement may explain why some high risk students succeed in school while others do not. Since levels of classroom engagement can be changed and improved, it is important for educators to encourage active engagement during the early school years while young children are forming their school trajectories.

Children form academic trajectories early in their school careers that tend to be stable and difficult to change over the course of their schooling (Alexander & Entwisle, 1993) and research suggests children’s patterns of engagement and achievement formed during the first three years of school may impact these academic trajectories (Hamre & Pianta, 2001).
Academic trajectories seem to be formed along a linear path that begins with a child’s clean slate quickly filling with self and teacher assigned labels. Alexander et al. (1997) found that once students’ performance patterns and conduct habits are established, the students ideas about school and self take shape subsequently fueling others to make judgments on their competence and character and leading them to be assigned to “niches” in the system. It is far more difficult for a student to become re-engaged in school when his early school experiences included remedial courses, discipline and labeling. (Alexander et al., 1997).

Many students are labeled as a result of their engagement or, more significantly, lack of engagement in classroom settings. One of the most consistent findings in classroom engagement research is that non-participation has a strong impact on academic achievement and when students are non-participants during early school years they are at an increased risk for a number of adverse consequences, including dropping out of school (Finn, 1989; Fredericks et al., 2004). However, research suggests that types of non-participation may impact academic performance differently. Finn, Pannozzo, and Voelkl (1995) conducted a study in which non-participant students were categorized into inattentive, disruptive, or both inattentive and disruptive groups. Their findings show that students classified as inattentive were significantly impaired academically and scored below compliant students and disruptive students on norm-referenced tests. Additionally, students categorized as both inattentive and disruptive performed most similarly to students categorized as just inattentive suggesting inattentiveness may be more detrimental than disruptiveness. Inattentive students may become withdrawn from the classroom and have less access to the curriculum (Finn & Voelkl, 1993). Similarly, kindergarten and 1st grade children who displayed positive approaches to learning (e.g., persisted at tasks, paid attention, were eager to learn) had higher
reading skills than children who displayed such approaches less often (Denton & West, 2002).

Teacher-child relationships and classroom participation.

Academic engagement not only influences the labels children receive, academic trajectories, and long term risk behaviors, but may also influence and be influenced by teacher-child relationships. Children are not secure or insecure; rather their relationships with teachers can be secure or insecure. As a result, children may not have the same types of relationships with each individual teacher; teachers are not interchangeable (Howes & Ritchie, 2002). Children experience feelings associated with teacher-child relationships. For example, children may experience anxiety and fear in an insecure relationship. These feelings may transpire into classroom behaviors, such as aggression and/or disengagement (Birch & Ladd, 1997) and how teachers respond to such behaviors either promotes or mitigates conflictual relationships.

Ladd et al. (1999) examined how children’s behaviors influence social and academic development and found classroom participation to be an important prerequisite for achievement during kindergarten. They found that the types of relationships children form, both with teachers and peers, influence classroom participation. Children with prosocial behavior styles tended to develop a large number of mutual friends, have higher levels of acceptance among classmates, and have close teacher relationships. Children with antisocial behaviors tended to have fewer friends, lower levels of peer acceptance, and more negative teacher relationships. The children with more positive relationships developed more adaptive styles of classroom participation than did students with more negative relationships. This result indicated that close teacher relationships were directly associated with classroom
participation. Furthermore, classroom participation was the strongest direct path to achievement (Ladd et al.). The findings from this study emphasize the importance of children establishing teacher-child relationships that encourage children to use teachers as secure bases from which to explore their classrooms (Ainsworth, 1978; Bowlby, 1982; Howes & Ritchie, 2002).

As revealed by Ladd et al. (1999), children’s classroom participation includes how children interact socially with peers and teachers in their classrooms. Burchinal and colleagues (2002) found similar outcomes addressing social competence and academic achievement. They studied 511 children beginning in the second-to-last year of child care and continuing to the third year of elementary school. Children rated by their preschool teachers as more outgoing and friendly tended to have higher scores on academic achievement tests and acquired reading and math skills more rapidly in elementary school than their less outgoing classmates. In addition, a close teacher-child relationship appeared to serve as an alternative pathway to competence for children who had academic risk factors. The teachers’ perceptions of a close relationship with an individual child predicted better reading skills for children whose parents promoted authoritarian beliefs and enhanced language skills for minority children. This finding is consistent with Hamre and Pianta (2001) suggesting that teacher-child relationships may serve as protective factors that can buffer the unfavorable effects of risk factors for some children.

Though misbehavior and conflictual teacher-child relationships often go hand-in-hand, it is not always the case. A longitudinal study of kindergarten-eighth grade students found children’s behavior problems did impact social and academic outcomes, but did so differently based on the type of teacher-child relationship (Hamre & Pianta, 2001).
Specifically, the study found teacher-child relationships to be a stronger predictor of behavior than academic outcomes; and conflict was a better predictor of academic and disciplinary problems than were teachers’ ratings of students’ problem behaviors. Such findings indicate children who were able to form more positive relationships with their teachers, despite behavior problems, were able to avoid future behavioral difficulties than their peers who developed more conflictual teacher-child relationships.

Essentially, the close relationships buffered future behavior problems and those children demonstrated higher academic achievement, fewer disciplinary infractions, and fewer school suspensions through 8th grade (Hamre & Pianta, 2001). The authors suggested behavior problems alone do not predict school success, but the teacher-child relationships and specifically the levels of conflict within the relationships predict later school success. Pianta and Steinberg (1992), found a similar outcome while studying children who were retained by their teachers. They compared children who had referrals for retention but were promoted to the next grade level to children who had referrals for retention and were retained. They found that children were differentially promoted based on the closeness of the teacher-child relationships, such that children who were promoted had closer teacher-child relationships than children who were retained (Pianta & Steinberg).

Hamre, Pianta, Downer, and Mashburn (2008) also attempted to distinguish between conflict and problem behaviors by studying teacher reports of 4 year olds. They found 53% of the variance in teacher reports of conflict in relationships was explained by teacher judgments of problem behaviors (Hamre et al.). Problem behaviors were the most significant predictor of teacher reported conflict in relationships; however, 47% of conflict in teacher-child relationships was left unexplained. In fact, a number of students viewed by their
teachers as having significant behavior problems did not have high conflict with teachers. This finding is similar to the previous findings of Hamre and Pianta (2001) suggesting some teachers are able to form positive relationships with children, despite high levels of problem behaviors. Hamre et al. found the opposite to be true as well. Some students had relatively high levels of conflict despite low levels of teacher-reported problem behaviors, possibly because they “get on teachers’ nerves” but do not have behavior problems.

Finally, findings from the Cost, Quality and Outcome study (Peisner-Fineberg et al., 1999; Peisner-Fineberg et al., 2001) address associations between children’s problem behaviors, teacher’s ratings of closeness, and children’s social development. Ratings of teacher-child relationships related to both academic and social skills, had a stronger impact on social skills. Children’s behavior seemed to affect teacher’s ratings of closeness. Teachers from preschool-2nd grade had closer relationships with children they rated as lower in problem behaviors. Additionally, these children were rated by their teachers as having better sociability through kindergarten. The authors concluded that “early relationships with caregivers were the strongest longitudinal predictors of children’s classroom behavior and social skills” (Peisner-Fineberg et al., 2001 p. 42).

*Teacher-child Interactions*

By interacting with children in responsive, warm, and individualized manners, teachers can establish classroom environments that support children’s social and academic development. In such environments, children can establish close teacher relationships and feel safe while exploring classroom learning opportunities by using teachers as secure bases. Oral language development and scaffolding are two ways in which teachers’ individualized
and sensitive interactions with children manifest.

**Oral language development.**

Oral language development is fundamental to children’s literacy development which includes listening, speaking, reading, and writing (Kirkland & Patterson, 2005). Developing oral language skills affords children a natural transition to reading and writing, as well as improved language fluency and confidence. Though oral language skills influence reading and writing development and mastery, oral language often refers specifically to the listening and speaking portion of language (Kirkland & Patterson). Vygotsky believed language was the actual mechanism for thinking, a mental tool (Bodrova & Leong, 2007). Furthermore, Vygotsky believed that language made thinking more abstract, flexible, and independent (Bodrova & Leong) making oral language development a keystone for academic and social achievement.

It is important for children to develop oral language skills at an early age. Oral language development influences vocabularies in young children and research shows vocabulary differences in prekindergarten children are relatively stable over time (Snow, 2007 as cited in Blewit, Rump, Shealy, & Cook, 2009) suggesting discrepancies in young children’s vocabularies in prekindergarten may remain throughout their schooling. Additionally, vocabulary proficiency is a predictor of academic achievement beginning as early as the third grade (Storch & Whitehurst, 2002). Children who have home environments rich in oral language opportunities are at an advantage when they enter school as they have larger vocabularies and more developed conceptual background (Wells, 1986 as cited in Hadaway, Vardell, & Young, 2001).
However, certain classroom conditions may be favorable to the development of oral language skills. Hall (1987 as cited in Kirkand & Patterson, 2005) identified conditions in which oral language emerges in children: “(a) children construct language, (b) parents, teachers, and caregivers serve as facilitators, not transmitters, of language development; (c) language is embedded in the context of the daily life of a child; (d) children construct language in their pursuit of meaning and comprehension related to their world and print; (e) the conditions for developing language are identical to those for learning about the world; (f) social interaction is foundational to language development; (g) children understand the functions of language as they use it to clarify information about themselves and others; and (h) language is learned in a child-initiated, holistic manner” (Kirkand & Patterson, p. 391-392). By facilitating the language development process, as opposed to transmitting or giving children language, teachers can provide children with authentic learning opportunities. Facilitation opportunities can occur in the classroom through the environment, connections to literature, developmentally appropriate oral language activities, and engaging curricula (Kirkland & Patterson).

Though children develop oral language through these authentic mechanisms that create environments rich in language building opportunities, many classrooms have reduced oral language opportunities in order to focus class time on test items and academic content (Kirkland & Patterson, 2005). Powell et al. (2008) used a time-sampling observation method to examine teacher behaviors that co-occurred with children’s active engagement in preschool classrooms. They found that teachers rarely asked questions to children in any type of grouping. In fact, teachers provided direction during more than one-half of the child-
teacher observational intervals. Such findings suggest teachers are not capitalizing on any grouping structure to elicit expressive language from children.

**Scaffolding.**

Effective learning experiences are those that build on what children already know and encourage children to stretch towards new skills (Copple & Bredekamp, 2009). Providing such learning experiences requires teachers to assess children’s knowledge and skills, and to use that information to determine how to challenge children to accomplish next steps (Bodrova & Leong, 2007). The support that moves children from mastered skills to potential skills occurs through social interactions, and, as such, is most likely to occur during sensitive and responsive interactions (Bodrova & Leong) and is central to Vygotsky’s “zone of proximal development”. Wood, Brunner, and Ross (1976) metaphorically identified this type of instruction in which an expert helps a novice perform at a higher level as “scaffolding”. Aptly named, scaffolding is an intentional support that helps children accomplish tasks that they could not accomplish on their own and as the child takes more responsibility in completing the task, the level of help gradually decreases (Wood, Brunner, and Ross). Thus scaffolding offers a nature of guidance and the zone of proximal development identifies when the guidance should occur in order for optimal learning to take place.

The boundaries of the “zone of proximal development” are formed at two levels: independent performance and assisted performance (Bodrova & Leong). Assisted performance is the highest level a child can reach with help. Assisted performance is a social concept in that it occurs through interaction with another person. This support from another may include “giving hints or clues, rephrasing questions, asking children to restate what has been said, asking a child what he understands, or demonstrating a task or portion of it.”
(Bodrova & Leong, p. 40). Support can also be indirect, including organizing an environment to facilitate the practice of a certain skill set. By taking part in such interactions, teachers utilize Vygotsky’s approach that focuses on the child “to be” rather than on the “present child” (Bodrova & Leong).

Research with both school aged children (Hamre & Pianta, 2001; Pianta, LaParo, Payne, Cox, & Bradley, 2002; Pianta, Belsky, Houts, Morrison, & NICHD, 2007) and prekindergarten children (Burchinal et al., 2008) reveal that children demonstrate greater academic gains when teachers build from the children’s skill levels, enhance those skills, and provide positive, explicit feedback. Additionally, Burchinal et al. (2008) found that academic gains were not only related to teachers’ positive interactions with children, but also to the extent teachers promoted the use of language, provided scaffolding, provided coherent instruction, and provided contingent informative feedback, indicating the importance of both positive interaction and instructional quality. Burchinal et al. (2008) also found that enriching interactions between children and teachers that encouraged children to communicate and use language tended to occur when teachers interacted individually or with small groups of children. This finding echoes similar research suggesting an association between children’s language and literacy gains and responsive and sensitive interactions with teachers (Early et al, 2005; Howes et al, 2008).

*Teacher-child relationships and classroom emotional climate.*

When children engage in episodes of disruptive behavior, teachers can respond by escalating or deescalating the behaviors (Howes & Ritchie, 2002). The emotional climate of classrooms resulting, in part, by how teachers respond to such situations can moderate the risks for early school failure (Hamre & Pianta, 2005; Pianta, Belsky et al., 2008; Howes et
al., 2008). Children tend to perform better academically in classrooms that offer emotional support and include teachers who are responsive to individual needs, offer proactive behavior management, and create positive classroom environments (Hamre & Pianta, 2005). Hamre and Pianta (2005) identified children in kindergarten as being at risk for developing conflictual teacher-child relationships, but found that the risk was moderated by the emotional support provided by the teachers. Not surprisingly, at risk children who were placed in classrooms with low emotional support were particularly vulnerable for developing conflictual teacher-child relationships (Hamre & Pianta, 2005).

Birch and Ladd (1997) suggest a possible explanation of why children differentially experience classroom activities. Children who experience positive teacher-child relationships feel supported and safe in the classroom and may benefit from subsequent participation in learning activities that those children with less positive teacher-child relationships may be missing (Birch & Ladd). While studying kindergarten children’s adjustment to the school environment, Birch and Ladd specifically examined how teacher ratings of closeness, dependency, and conflict related to children’s school adjustment. Findings suggest dependency and conflict in teacher-child relationships negatively impacted school adjustment. Children who experienced dependent and conflictual relationships had poorer academic performance, negative school attitudes, less positive engagement with the school environment, lacked self-directedness and cooperative participation in the classroom, and avoided school (Birch & Ladd). The degree of closeness in teacher-child relationships was significantly correlated with children’s academic performance, school attitude, and engagement in the school environment.
In 2008, a non-experimental, longitudinal field study examined associations between patterns of exposure to quality and quantity of learning opportunities and academic trajectories throughout elementary school years (Pianta, Belsky et al., 2008). The study focused on reading and math achievement from 54 months to fifth grade. Similar to the findings of Hamre and Pianta (2005), emotional quality of the classroom, including warmth of adult-child interactions and adults’ ability to respond to children in a sensitive and individualized manner, was a consistent predictor of both reading and math skills (Pianta, Belsky et al.). Once again, these findings highlight the importance of children feeling emotionally comfortable and supported in their classrooms, possibly by having emotionally secure relationships with their teachers.

One final study addressing academic and social gains in prekindergarten children found that gains were largely a function of the classroom processes directly experienced by children, particularly the instructional climate of the classroom and teacher-child relationship quality (Howes et al., 2008). Gains in literacy, math, and social skills were primarily associated with classroom climate and secondarily to teacher-child relationship quality as well as the amount of exposure to certain areas of instruction. Specifically, children showed the largest gains in social skills and largest decreases in behavior problems when the teachers reported warmer relationships with children (Howes et al.). Again, these teachers provided responsive, individualized interactions with children and promoted a classroom atmosphere that was respectful and encouraging.

Professional Development

Young children’s competencies are somewhat unstable (La Paro & Pianta, 2000) and are largely dependent upon the quality of their experiences in educational settings (Pianta,
Following this logic, accountability systems for early education settings measure quality of classrooms and promote accountability standards for classrooms (La Paro, Pianta, & Stuhlman, 2004). However, simply presenting accountability standards does not necessarily increase quality. Professional development for early education teachers can provide the bridge for connecting classroom practice to research based standards of quality. Professional development is undergoing a transformation from a coursework/generic approach to a teacher-focused approach (Pianta, 2006) which is embedded within the classroom context, is collaborative, and is part of the school culture (Mashburn et al., 2008). This shift is in line with the National Association for the Education of Young Children’s (NAEYC) position statement for professional development which indicates “professional development experiences are most successful when they respond to an individual’s background, experiences, and the current context of their role” (National Association for the Education of Young Children [NAEYC], 1993, p. 7).

For the purpose of this study, the notion of “engaged models” are those that use data collected in classrooms/programs to promote positive changes in teacher behavior and classroom/program environments. The presented models support quality standards and intentional teaching. Ideally, intentional teaching leads to increased classroom quality which could result in meeting higher-quality standards. The presented engaged models of professional development promote intentional teaching by providing reflection and/or consultation as part of professional development and two models will be presented that link intentional teaching to promoting high standards. The professional development intervention used in the current study is also an engaged model in that teachers were presented with the
data collected within their own classrooms to promote dialogue and change regarding the classroom experiences of minority boys.

*US Military.*

Recognizing that merely participating in professional development does not necessarily lead to program quality improvement, the US Military designed and provides an in-depth and comprehensive professional development program for caregivers working at their child development centers (CDC). Professional development is offered in four phases: standardized orientation, modules, annual training, and non-standardized, as-needed professional development. The final “as-needed” step encourages caregivers to be reflective (Ackerman, 2007).

Ackerman interviewed CDC caregivers at six military sites and found that the aspect of the CDC professional development training that participants found most helpful were those focused on classroom issues, addressed in the final “as needed” step. Caregivers are provided ongoing opportunities to discuss any issues that arise in their classrooms. As a result, they are provided additional support through trainings, consultations and/or professional feedback (Ackerman). The caregiver observes her classroom, keeps notes and collects data about potential issues or problems. She recognizes and identifies areas of needed support within her classroom. There is not a prescribed observation or checklist that teachers use to collect such data, the data is obtained during non-standardized observations, interactions, conversations, children’s work, etc. The training resulting from caregivers informally collecting data within their classrooms leads to intentional teaching. Caregivers request support, have conversations, or obtain training with the intention of bettering some classroom situation.
The Classroom Assessment Scoring System (CLASS) (La Paro, Pianta, Hamre, & Stuhlman, 2002) is a tool that can be used to provide feedback to improve emotional climates and instructional interactions that have been shown to promote children’s development (Mashburn et al., 2008). The CLASS is a relatively new observational tool, and is used for professional development in an innovative fashion. Pianta proposes a model that links policy and professional development with child and teacher outcomes (Pianta, 2006). The model suggests using a standardized metric to evaluate classroom environments. The results can be used on a systematic basis to evaluate the extent to which changes in policy or professional development result in changes in classroom processes (Pianta, 2006). MTP is a professional development approach designed to support “effective teacher-child interactions through a collaborative, web-mediated consultation process and web-based videos exemplars of effective practices” (Pianta, Mashburn, Downer, Hamre, & Justice, 2008, p. 432). As with the other engaged models of professional development, MTP is rooted in actual classroom experiences and, as a result, the support teachers receive is a direct result of the behaviors and practices of the teachers within their own classrooms.

MTP utilizes the CLASS as the standardized framework for defining and observing classroom interactions. The two components of MTP include access to video exemplars of high-quality teacher-child interactions that are tied to specific aspects of the CLASS and a consultation process with regular, mult-modal, ongoing, targeting feedback to prekindergarten teachers (Pianta, Mashburn, et al., 2008). In addition to using the CLASS for self-evaluation, MTP provides teachers with evaluation results, regular newsletters, and web-links (FPG, 2005). A study examining the effects of MTP (Pianta, Mashburn, et al.)
found that teachers who received both the continuous observation and feedback related to their interactions with students as well as the access to video exemplars of “best practices” showed greater gains in aspects of interactions rated with the CLASS than did teachers who only received the access to “best practices” videos (Pianta, Mashburn, et al.). Additionally, greater improvements were shown in those teachers receiving all components of the MTP model than teachers who did not participate in consultation toward improving classroom interactions (Pianta, Mashburn, et al.). The MTP promotes intentional teaching aimed at meeting best practice standards by providing teachers examples of best practices that they should strive to meet, providing assessment results indicating areas of improvement within their own classrooms, and providing on-going professional development targeting specific classroom practices.

*Self study and program quality improvement through NAEYC.*

Arguably the most in-depth, comprehensive self-evaluation of early education programs is the Self Study and Program Quality Improvement process promoted by the NAEYC Early Childhood Program Accreditation (NAEYC, 2005). The self study process is designed for all programs interested in improving program quality. The process includes four steps towards quality improvement: 1. Enrollment in self-study; 2. Becoming an applicant; 3. Becoming a candidate for NAEYC Accreditation; 4. Meeting the program standards (Willer, & Ritchie, 2005). Each step is designed to build upon the previous step resulting in a fluid, thorough evaluation process. The process begins with early education programs conducting program self-evaluations through the self-study process. NAEYC provides tools and resources for programs to use as guides for recognizing, documenting, and evaluating program practices that lead to high-quality programs. Programs use the same type
of tools used during the actual NAEYC accreditation process to study all aspects of their program. Programs begin to collect evidence of their performance, considering all criteria within each standard (Willer, & Ritchie). The self-study process is designed to promote collaboration among all program staff and will facilitate “real and lasting” improvements. (Willer, & Ritchie).

After programs evaluate the results of the self-study programs may decide to continue with the process and try to obtain NAEYC Accreditation or remain engaged in self-study. As programs pursue NAEYC Accreditation, the self-evaluation process becomes more systematic and comprehensive (Willer, & Ritchie, 2005). Unlike the self-study process when programs collect data about their policies and processes and then use the data to make necessary changes and improvements, the subsequent steps are designed to collect and document program evidence that describes how the program functions. The collected evidence is then assessed as part of the formal NAEYC Accreditation visit by an NAEYC Assessor during Step 4. The NAEYC Early Childhood Program Accreditation process starts with programs collecting data and using the results to engage in program improvement and ends with an outside evaluator using tools similar to those used during the self-study process to evaluate program quality. Using a process of reflection and development enables programs to sustain and improve quality over time (Willer, & Ritchie, 2005).
CHAPTER 4

METHODOLOGY

The current study examines three categorical independent variables and three continuous dependent variables. The dependent variables oral language development, scaffolds, and attentive are classroom experiences minority boys had when they were observed during the classroom observation and are described in detail in the “Measures” section below. It is important to note that this study is a correlational study and as such does not have true dependent variables. The dependent variables are observational variables that were examined in relation to teacher-child relationship and a professional development intervention. The independent variables are time (pre and post intervention), intervention status (control or intervention), and relationship status (high in conflict or high in closeness). Table 4.1 provides a summary of the study variables.

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Independent Variable (IV)</th>
<th>Dependent Variable (DV)</th>
</tr>
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<tbody>
<tr>
<td>1, 2, 3</td>
<td>Time</td>
<td>Oral Language Development</td>
</tr>
<tr>
<td></td>
<td>Intervention Status</td>
<td>Scaffolds</td>
</tr>
<tr>
<td></td>
<td>Relationship Status</td>
<td>Attentive</td>
</tr>
</tbody>
</table>

The research questions and hypotheses were as follows:

1. Is there a difference in teacher interaction and child engagement for the high in conflict relationship and the high in closeness relationship?

**Hypothesis 1a:** Oral Language Development scores will be higher for the high in closeness relationship than the high in conflict relationship, pre-intervention.

**Hypothesis 1b:** Scaffolds scores will be higher for the high in closeness relationship than the high in conflict relationship, pre-intervention.
Hypothesis 1c: Attentive scores will be higher for high the in closeness relationship than the high in conflict relationship, pre-intervention.

2. Do the teacher interaction and child engagement scores for the high in conflict relationship differ for teachers in the control group and teachers in the intervention group, assuming no prior differences in teacher interaction and child engagement scores among the two groups?

Hypothesis 2a: For the high in conflict relationship, teachers in the intervention schools will have higher Oral Language Development scores than teachers in the control schools.

Hypothesis 2b: For the high in conflict relationship, teachers in intervention schools have higher Scaffolds scores than teachers in the control schools.

Hypothesis 2c: For the high in conflict relationship, teachers in intervention schools will have higher Attentive scores in the intervention schools than the control schools.

3. Do the teacher interaction and child engagement scores differ for teachers in the control group and teachers in the intervention group, assuming no prior differences in teacher interaction and child engagement scores among the two groups?

Hypothesis 3a: Teachers in the intervention schools will have higher Oral Language Development scores than teachers in the control schools.

Hypothesis 3b: Teachers in the intervention schools will have higher Scaffolds scores than teachers in the control schools.

Hypothesis 3c: Teachers in the intervention schools will have higher Attentive scores than teachers in the control schools.

4. A final hypothesis will be tested if the results indicate that there is a difference in teacher interaction and child engagement scores by relationship and by intervention status for the high in conflict relationship.

Hypothesis 4a: The difference in teacher interaction and child engagement for the high in conflict and high in closeness relationships will decrease more for the intervention schools than the control schools.

Participants

The Ready to Promote Academic Success for Boys of Color study had two groups of participants, children and teachers. There were 23 public elementary teacher participants teaching prekindergarten through third grade and 174 child participants who were the focal
children for the classroom observations. 22 teachers were female and one male. The sample included 7 African American teachers and 16 Caucasian teachers. Table 4.2 provides a summary of the number of teacher and child participants by relationship status, intervention status, and time.

Table 4.2. Number of Child and Teacher Participants

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th></th>
<th>Intervention</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Teachers</td>
<td>10</td>
<td>10*</td>
<td>13</td>
<td>13*</td>
</tr>
<tr>
<td>Observed Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>Conflict</td>
<td>19</td>
<td>18</td>
<td>26</td>
<td>22</td>
</tr>
</tbody>
</table>

*The same 23 teachers participated Pre and Post intervention. The boys were not the same Pre and Post intervention.

Inclusion/Exclusion Criteria

The inclusion/exclusion criteria for this project occurred on four levels: 1) district, 2) school, 3) teacher and 4) child.

Districts.

Districts selected to participate were in North Carolina, had high minority populations, high percentage of free lunch, and low achievement scores based on third grade End of Grade (EOG) test scores.

Schools.

Schools selected to participate had high minority populations, high percentage of free lunch, and low achievement scores based on third grade End of Grade (EOG) test scores. Additionally, two schools in each district were identified, one as the intervention school and one as the control school. The two schools within each district had demographic similarity, administrators willing to allow their teachers to be invited to participate and a willingness to be accepted as either a control or intervention school.


*Teachers.*

Schools were assigned as either control or intervention prior to teacher selection. Teachers were identified by their principals as potential participants. Teachers willing to participate were teachers of children in PreK through third grade, who had at least four boys of color in their class, and were willing to be accepted as either part of either a control or intervention school.

*Children.*

Children in participating schools were in PreK through third grade classrooms. Parents of minority boys were given the opportunity to decide whether or not their child could be observed and were notified that children would be assigned research identification numbers and that data would not ever use their names or other identifying features. All children within each participating classroom with parents who did not object, and were present during the day of each classroom observation were part of the potential sample. Based on the scoring of the Student Teacher Relationship Scale, which was completed for all eligible boys by their teachers, the project staff selected four minority boys in each classroom: two who the teacher rated as the highest in closeness and two who the teacher rated as the highest in conflict.

*Recruitment and Consent*

Recruitment for the project also occurred on three levels: 1) district, 2) school, and 3) teacher.

*District.*

The Principal Investigator (PI) contacted districts via mailings (Appendix A) and telephone calls that met the inclusion/exclusion criteria and presented them with an overview
of the study. Three North Carolina districts indicated a willingness to participate. The PI then obtained permission from the appropriate district level representative in the three participating districts to contact recommended elementary school principals in their district about this study.

_Schools._

The PI contacted two principals in each participating district (Appendix B & C). Each contacted school had the End of Grade (EOG) scores for 3rd graders in the bottom quarter for their respective districts, and they had a minority population in the top half for that district. Originally, all six contacted schools showed willingness to participate in the study resulting in three intervention schools and three control schools, one of each in each district. However, the control school in one district dropped out of the study prior to data collection and was not replaced, resulting in one district having only an intervention school.

_Teachers._

Teachers who the principals identified as potential participants received a letter (Appendix D & E) and flyer (Appendix F & G) describing the study. The PI then held pre-study meetings for all interested PreK-3rd grade teachers at each participating school. During the pre-study meetings, the PI described the study and answered any questions. It was made clear that teachers were not obligated in any way to participate. At the end of the meeting, the flyers (Appendix F & G) were again distributed to teachers. The flyers instructed the teachers to contact project staff if they were interested in participating. Of the teachers who expressed interest in the study, project staff randomly selected one teacher per grade level from each school. Chosen teachers were given a packet that contained: 1) the teacher consent form (Appendix H & I), 2) the teacher questionnaire (Appendix J); 3) the
STRS forms with instructions (Appendix K) and the parent letters for all children in the classroom (Appendix L & M). An appointment for the classroom observation was made with participating teachers. All observations were scheduled at the teacher’s convenience.

Measures

Student-Teacher Relationship Scale (STRS)

The STRS (Pianta, 2001) is a 28-item self-report instrument with a Likert scale designed to measure a teacher’s perception of his or her relationship with a particular student and is appropriate for use in preschool through third grade. The STRS identifies four patterns in teacher-child relationships: conflict, closeness, dependency, and the overall quality of the relationship. The STRS offers teachers and researchers alike a variety of uses including researching classroom practices, identifying student-teacher relationships that need intervention and support, and evaluating improvements in the quality of student-teacher relationships (Appendix P).

Normed on over 1,500 students and 275 teachers, the STRS has shown to be psychometrically reliable and valid and is the only standardized and validated instrument available for assessing teacher’s perceptions of his or her relationships with specific students (Pianta, 2001). STRS reliability was determined through a subsample of the normative sample and included test-retest reliability, internal consistency, and item-level statistics. At a significant level of p < .05, the developers found test-retest correlations of: Closeness .88, Conflict .92, Dependency .76, and Total .89. Internal consistency reliability estimates were highest for Conflict (.92) and Closeness (.86) and relatively low for Dependency (.64). Total scale reliability for boys and girls was the same at .74. Reliability estimates for the scale and most subscales were lower for each race/ethnicity group compared to estimates using the
entire normative scale. Specifically, the Dependency subscale was lower for African Americans (.55) and Hispanic American (.56) than for Caucasian students (.67). As a result, the developers have recommended not using the Dependency subscale in isolation from other STRS scale and subscale scores. Due to this recommendation as well as the breadth of research identifying close and conflictual relationships as being influential to children’s school experiences, the current study used the Closeness and Conflict subscales to categorize teacher-child relationships and to identify children to observe.

Teacher Questionnaire

The information requested in this form focused on teacher demographics such as year born, education, and professional development. This form also focused on classroom demographics such as the number of girl, number of boys, number of minority boys and their ethnic backgrounds (Appendix J). The researchers used this information to obtain the number of minority boys in the classrooms which was necessary to ensure that the classroom had at least 4 minority boys and to ensure the teachers received the correct number of STRS forms to complete for each minority boy in their class.

Classroom Observations: The Emergent Academics’ Snapshot (EAS)

The EAS (Ritchie, Howes, Kraft-Sayre, & Weiser, 2001) is a 36-item time sampling observation instrument used to describe children’s experiences within their classrooms (Appendix N & O). The EAS is collected during naturalistic observation of each classroom. One child at a time is sampled for one-minute samples every four minutes throughout the school day. The EAS was designed to observe up to four children in succession in each classroom. Each EAS observation consists of a 30-second observation period, followed by a 30-second coding period. The first child is observed and coded, then the second, third and
fourth. When all four children are observed, the observer starts over with the first child. Each of the 36 items in the EAS are coded as present or not present during each 30-second observation. The EAS is divided into categories including the activity setting (whole group, free choice etc.); the activity or activities that the child is engaged in (math, science, gross motor etc.); the child’s behavior (attentive, distracted, etc.); the teacher’s behavior (negative); and the teacher’s style of interaction (didactic teaching, scaffolding, etc).

The EAS has been used in two large early childhood education studies: the Multi-State Study of Pre-Kindergarten and the Statewide Early Education Programs Study (SWEEP). One of the two observers for the current study was an observer for the SWEEP study as well. For all studies, observers were trained by one of the measure’s authors using videos and visits to classrooms. Prior to data collection for Multi-State and SWEEP, each data collector attained an overall kappa across all 28 codes of at least .60 with the correct codes from the video tapes or with one of the measure’s authors. The average kappa across the two studies’ 43 data collectors and 28 codes was .81 (SD = .07, range = .63 to .96) (Early et al., in press).

Data collectors also had to achieve a certain kappa for each section. The minimum was .55 for the Setting and Activities sections, and .50 for the Teaching Interactions section. Across Setting codes, the average median kappa was .88 (SD = .10, range = .55 to 1.00). Across Activity codes, the average median kappa was .81 (SD = .09, range .65 to 1.00). The average median kappa across Teaching Interaction codes and data collectors was .67 (SD=.12, range = .50 to .96) (Early et al., in press).

Though the Emergent Academics’ Snapshot (Ritchie et al., 2001) collects information on 36 items, the current study analyzed only three items: Oral Language Development,
Scaffolds, and Attentive. These three items were the dependent variables for the current study. Though, as previously mentioned, they were observational variables that were used as dependent variables for the purposes of running analysis and not true dependent variables because the current study is a correlational study. Each of the three variables was coded as present or not present for each child during the 30 second observation. Oral language development is in the “activity that the child is engaged in” category; attentive is in the “child behavior” category; and scaffolds is in the “teacher’s style of interaction” category. Though oral language development is categorized as an activity in which the child is engaged, a child cannot be engaged in oral language development without a teacher interaction. Therefore, in order for oral language development, as well as scaffolds, to be coded as present, the child was either interacting with a teacher individually or as part of a group. Coding oral language development and scaffolds only when a teacher-interaction occurred was consistent with both conceptual models for the current study which define teacher interactions as the amount of time children had oral language development and scaffolds. Also consistent with the conceptual models is how attentive was measured. In order for a child to be coded attentive, the child’s behavior during the 30 second observation had to include on-task behavior. The conceptual models defined academic engagement to be measured as the amount of time children were attentive.

*Operational Definitions for Dependent Variables.*

Oral Language Development was coded as present when a child was involved in an activity or an interaction where a teacher was taking action to draw communication from the children to build expressive language or was actively listening to children speak. The child may have been involved with a teacher individually or as part of a group in which oral
language development occurred. Examples of oral language development include teachers asking children open-ended questions, helping children expand their thoughts and ideas, and helping children learn and practice new vocabulary.

Scaffolds was coded as present when a child was involved in an interaction with a teacher either on an individual level or as part of a group in which the teacher showed an awareness of an individual child’s needs and responded in a manner that supported and expanded the child’s learning. Some examples of scaffolds include when a teacher asked open-ended questions, when a teacher motivated a child through personal engagement and worked to link classroom activities to the child’s life and experiences. Consistent with such a definition, oral language development and scaffolds are very similar. For example, if a teacher interaction included drawing expressive language from a child, the child was involved in both oral language development and scaffolds. Each time oral language development was coded, scaffolds was also coded. However, it was possible for scaffolds to be coded when oral language development was not coded (i.e. when a teacher engaged children through movements to a song).

Attentive was coded when the child was observed doing exactly what the teacher asked. Attentive, unlike oral language development and scaffolds, was coded specific to the child observed in the 30 seconds and was not coded when the child was part of a group as were oral language development and scaffolds. The child’s behavior was assessed to code attentive. A child was coded attentive if he was sitting quietly and paying attention to the teacher or his school work, working independently, and engaged in the classroom activities. In order for a child to be coded something other than attentive, he had to be non-attentive (i.e.
distracted, aggressive) for the entire 30 second observation. If the child was attentive at all during the 30 seconds, he was coded as attentive.

**Procedures**

The two schools in each of the three districts were paired by their similarity in demographics—one as an intervention school; the other as the control school. One district only had an intervention site as the control site dropped out of the study prior to data collection. Data was collected in each classroom during the Spring 2008 and Spring of 2009. Prior to the first observation, each teacher completed the teacher questionnaire and prior to both observations the teachers completed one STRS form for each boy of color in her or his classroom. The boys were identified only by a unique code that was generated by the researcher, and placed on the STRS form when they were given to the teacher. The teacher kept a list linking the boys' names and their codes. Project staff did not know the identity of any boy for whom this form was completed. Prior to the observations, project staff scored each STRS form and identified the two highest in closeness relationships and the 2 highest in conflict relationships as perceived by the teachers in each classroom.

**Classroom Observation**

For each of the full-day, whole classroom observations conducted in the Spring 2008 and Spring 2009, the observers focused on 4 minority boys. Since the choosing of the focal children took place prior to the observation day, upon arriving for the observation, the researchers indicated to the teacher that they wanted to focus observations on child B, D, G, and H, for example. The teacher then pointed out those children and the observers noted features of each child’s appearance (e.g., red-striped shirt =B), for data collection purposes. In some cases one or more of the previously selected children was absent so the researcher
selected the next child on the list identified as having either a high in closeness relationship or high in conflict respectively. Classroom routines were not disrupted by the observations. Staff did consult with the teacher during the scheduling process to help determine a convenient and “typical” day for the observation. Because the observer spent only 30 seconds at a time watching any particular child and was trained to avert her eyes when a child looks in her direction and to not interfere in the child’s activities, no children in the classroom were aware whether he/she was actually the target of observations. Observations started upon the children’s arrival to school and ended at departure with an average observation day of 6 hours.

Professional Development Intervention

The professional development intervention occurred in 5 stages and included: 5 training days using the Ready to PAS modules, classroom consultations, professional learning community meetings, data feedback, and a final project session.

Professional Development Promoting Academic Success for Boys of Color (PAS).

The PAS project was developed by Oscar Barbarin (2008) at the FPG Child Development Institute. He and his PAS team provided materials and guidance for this project. The teacher training modules are one part of a systematic approach to strengthen families, schools, and communities in order to promote character, moral, and ethical development in minority boys. In the current study, the teachers in intervention schools participated in five training days with the PI (one in April, two in July and one in September ’08) using refinements of the PAS modules. Topics covered included: Getting to Know Boys of Color; Building Relationships with Boys of Color; Partnering with Families to Promote Achievement; Classroom Environment -Engage, Support, Motivate ; Addressing Challenging
Behavior in the Classroom; and Promoting Positive Racial and Gender Identity in Boys of Color.

*Classroom consultation.*

The PI observed in each participating teacher’s classrooms as a follow-up to training (3 times-May, Sept, & Nov ‘08). Each observational visit lasted a minimum of 60 minutes and was followed by a 60 minute discussion with the teacher. The consultation was non-evaluative and designed to support teacher’s efforts to integrate ideas from the training in classroom practice.

*Professional learning community (PLC)*

The PI met with all participating teachers in each school in a follow-up to training (3 times-June, Oct ’08, & Jan ‘09). The purpose of the PLC was to share successes and challenges encountered when making efforts to integrate ideas from training into classroom practice.

*Data feedback.*

In July, 09, the PI presented to all intervention staff including the participating teachers aggregated data collected from the Spring ‘08 in a non-evaluative manner. In January, 09, each teacher was provided with the data particular to their own classroom. The data showed the amount of time the children spent in each EAS category (i.e. amount of time children spent in basic activities, such as hand washing and standing in line). Professional development techniques that present teachers with consistent, non-evaluative feedback about their interactions with children can potentially improve the quality of teacher-child interactions (Pianta, 2006). The purpose of the data feedback was to provide educational professionals the opportunity to view classroom practices through a research lens and to
propose possible changes in classroom practice based on the results. By presenting non-evaluative data, the PI allowed the teachers to interact with the data, reflect upon the findings, and promoted dialogue focused on the data. To stimulate the conversations, the PI asked questions such as “is it important to read to minority boys? If so, what types of books should be read?”; “what style of teaching best supports minority boys in your class?”; and “what are some explanations for the large range of experiences that children have in different schools?” (Ritchie, 2009) Additionally, the PI continually questioned the teachers about what other thoughts the data brought to mind, encouraging the teachers to explore the data in a meaningful way.

*Final project session for both intervention and control teachers.*

The PI will present aggregated data from Spring ‘08 and Spring 09 to all participants and other interested staff. Data is aggregated across schools and across grade levels to insure confidentiality. The purpose of the data feedback is again to provide education professionals the opportunity to view classrooms practices through a research lens to and to propose possible changes in classroom practice based on the results.
CHAPTER 5
RESULTS

In order to run descriptive statistics to describe the sample, initially the Student Teacher Relationship Scale (STRS) results and the Teacher Questionnaire results were entered into SPSS 15.0. While reviewing the STRS data prior to formal analysis, it was noticed that the STRS forms from two sites post intervention were not calculated correctly. The error in calculation resulted in the data collector misidentifying relationships and categorizing the lowest in conflict relationship as the highest in conflict relationship. Due to this error, the wrong children were observed during the observation and data from four child participants was not included in the analysis.

Prior to running any statistical analysis, the data for the observational variables (oral language development, scaffolds, and attentive) was manipulated twice. First, this data was changed into a unit of measurement that could be examined across participants. Originally, the data for each child participant included a total number of times each behavior was observed as present as well as the total number of minutes each participant was observed. To make proportions, the total number of times each behavior was observed for each participant was divided by the total number of minutes each participant was observed. These proportions were then multiplied by 100 to convert the proportions into percents. Data analysis reflects the percent of time during the observation each behavior was observed as present.
Second, the scores for oral language development, scaffolds, and attentive were collapsed two ways in order to examine the data on a teacher level. Analyzing the data on a teacher level was necessary due to the fact that the categorization of child participants by relationship (closeness or conflict) was a result of the teacher participant’s ratings of the STRS forms. Thus, the percent of time each behavior was observed was nested by teacher. Additionally, the professional development intervention was on a teacher level and as such, results should be examined on the teacher level as well. However, for the data to be examined on a teacher level, the data had to show that children with the same relationship status had similar classroom experiences within their classrooms as measured by oral language development, scaffolds, and attentive. To look at the data in such a manner, the average mean difference was calculated across teachers by relationship for oral language development, scaffolds, and attentive. For example, the difference in the two oral language development scores pre-intervention for the high in conflict child participants for “Teacher 1” was calculated. The same calculations were made for the same teacher for the high in closeness children. One teacher had only one high in conflict boy and two teachers had only one high in closeness boy; difference scores for these teachers were not calculated and these teachers were left out of the mean calculation. Once a difference score was obtained for each dependent variable for each teacher by relationship, the mean difference was calculated.

The purpose of such a calculation was to determine if child participants categorized as high in conflict had generally similar classroom experiences with one another and if child participants categorized as high in closeness similar classroom experiences to one another. The results are shown in Table 5.1 and suggest wide variability in attentive scores for both the closeness and conflict relationships. Table 5.1 shows scores from 21 teachers for
closeness and 22 for conflict. The max value reflects that for at least one teacher, the high in
closeness children had a difference of 28.26 in their percent of time being attentive.
However, the mean difference across all teachers for each behavior was about 5%. The
decision was made to collapse the data even though there were some differences in the
percent of time children spent in each behavior, especially for attentive. These differences
will be considered with other possible study design flaws, including the limited sample of
minority boys and the lack of variability in some of the teacher STRS ratings as possible
limitations for the results.

Table 5.1 Percent of Time Dependent Variables Were Present
Collapsed by Relationship

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Closeness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Language Development</td>
<td>21</td>
<td>0</td>
<td>9.74</td>
<td>3.20</td>
<td>2.60</td>
</tr>
<tr>
<td>Attentive</td>
<td>21</td>
<td>0.07</td>
<td>28.26</td>
<td>5.34</td>
<td>6.46</td>
</tr>
<tr>
<td>Scaffold</td>
<td>21</td>
<td>1.10</td>
<td>11.50</td>
<td>4.36</td>
<td>2.90</td>
</tr>
<tr>
<td><strong>Conflict</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Language Development</td>
<td>22</td>
<td>0</td>
<td>11.71</td>
<td>3.75</td>
<td>3.0</td>
</tr>
<tr>
<td>Attentive</td>
<td>22</td>
<td>0</td>
<td>15.05</td>
<td>7.25</td>
<td>4.45</td>
</tr>
<tr>
<td>Scaffold</td>
<td>22</td>
<td>0</td>
<td>13.77</td>
<td>4.74</td>
<td>4.11</td>
</tr>
</tbody>
</table>

As mentioned previously, the data was collapsed twice. First, teachers received two
scores for oral language development, scaffolds, and attentive at each time (pre and post): a
high in closeness score and a high in conflict score. In total, teachers received four scores for
each behavior: a high in conflict pre-intervention score, a high in conflict post-intervention
score, a high in closeness pre-intervention score; and a high in closeness post intervention
score. These scores were obtained by taking the average of the two scores for each
relationship. Averages were not calculated in the classrooms with only one child participant
categorized as high in conflict or high in closeness. In such cases, the actual child participant scores for each behavior were used for analysis. These averages by relationship will be used to examine research questions 1 and 2, and hypothesis 4a. Next, averages were calculated for each teacher for all child participants, regardless of relationship resulting in each teacher receiving two more scores for each dependent variable: a pre-intervention score and a post-intervention score. These averages of all child participants will be used to examine research question 3.

Data analysis of this research occurred in four stages:

1. Descriptive statistics
2. Research Question 1
3. Research Question 2
4. Research Question 3

The results are presented in line with these four stages of analysis.

Descriptive Statistics

Descriptive statistics analyzing the data in two areas are presented below: STRS results, and teacher questionnaire results. Descriptive statistics for independent and dependent variables are presented with the results of each research question.

Student Teacher Relationship Scale.

To analyze the descriptive statistics, the STRS scores for the constructs closeness and conflict were examined by relationship for the child participants (n=174). The minimum score possible for the conflict construct was 12 and maximum 60. The minimum score possible for the closeness construct was 11 and maximum 55. The univariate descriptive statistics showed that there were no missing values in the data file of 174 cases. In
examining the descriptive statistics, attention was paid to means, standard deviations, out of range values, outliers, and skewness and kurtosis. Table 5.2 indicates that for the boys whose teachers perceived their relationships to be high in conflict (n=85) had a mean score for the STRS construct conflict of 30.38 (SD=12.732) and a mean score for the STRS construct closeness of 39.52 (9.71). The boys whose teachers perceived their relationships to be high in closeness (n=89) had a mean score for the STRS construct conflict of 15.83 (SD=6.49) and a mean score for the STRS construct closeness of 47.80 (SD=6.56).

The data was scanned for outliers and shape and spread. In examining the boxplots of the data, the results suggest five possible outliers for participants whose teachers perceived their relationship as high in closeness on the conflict construct (cases #8, #21, #26, #66, #92) and six possible outliers on the closeness construct (cases #75, #90, #157, #166, #169, #171). These cases were also confirmed on the extreme values table. Such outliers suggest that some boys observed as having a high in closeness relationship were also rated high on the construct conflict. Table 5.2 indicates the data for the boys whose teachers perceived their relationships to be high in conflict was within an appropriate range for skewness and kurtosis. However, the data for the boys whose teachers perceived their relationships to be high in closeness was positively skewed for conflict and negatively skewed for closeness. Additionally, the large kurtosis values indicate the scores were more likely to be near the minimum and maximum values than the mean for both the conflict and closeness constructs. Such a thick-tailed result was expected because teachers who view a relationship with a child as high in closeness will generally report a low conflict score and a high closeness score on the STRS.
Table 5.2. STRS Results for Child Participants by Relationship

<table>
<thead>
<tr>
<th>Relationship and STRS Construct</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>High in Conflict Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conflict</td>
<td>85</td>
<td>12</td>
<td>53</td>
<td>30.38</td>
<td>12.73</td>
<td>.114</td>
<td>.261</td>
</tr>
<tr>
<td>Closeness</td>
<td>85</td>
<td>15</td>
<td>55</td>
<td>39.52</td>
<td>9.71</td>
<td>-.497</td>
<td>.261</td>
</tr>
<tr>
<td>High in Closeness Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conflict</td>
<td>89</td>
<td>12</td>
<td>59</td>
<td>15.83</td>
<td>6.49</td>
<td>3.944</td>
<td>.255</td>
</tr>
<tr>
<td>Closeness</td>
<td>89</td>
<td>25</td>
<td>55</td>
<td>47.80</td>
<td>6.56</td>
<td>2.656</td>
<td>.255</td>
</tr>
</tbody>
</table>

**Teacher Questionnaire.**

To analyze the descriptive statistics for the teacher questionnaire, eight questions were examined: teacher’s age, education, gender, ethnicity, number of hours per week an assistant is present in class, total number of boys in class, total number of girls in class, total number of minority boys in class represented by ethnicity. The teacher questionnaire results are provided in Tables 5.3 and 5.4. The mean hours per week in which an assistant was present in each classroom was about 22 hours (M= 22.12, SD=15.37) for the intervention group and 19 hours (M=19.45, SD=14.08) for the control group. More boys were enrolled in each classroom than girls in both the intervention sites (M=11.31, SD= 1.84) (M=9.23, SD=2.28) and control sites (M=10.40, SD=2.59) (9.10, SD=2.33). The mean enrollment of minority boys was 9.00 (SD=2.00) for the intervention group and 6.30 (SD=2.11) for the control group. The minority boys within the classrooms were mostly of African American (M=5.77, SD=2.13) in the intervention sites, but were about half African American (M=2.90, SD=2.33) and half Hispanic (M=2.10, SD=2.33) in the control groups. The “Other” category included ethnicities such as “mixed”, Indian, and Cambodian.
In addition to univariate descriptive statistics, frequency statistics were also used to describe the participants, specifically to describe the characteristics that had categorical values. Table 5.4 indicates the sample (n=23) was relatively young for both the intervention group and the control group; 7 teacher participants in the intervention group and 5 in the control group were between the ages of 25 and 35. The intervention group included 1 male teacher, the other teacher participants were female. There were 8 Caucasian teachers in both the intervention and control groups, 5 African American teachers in the intervention group and 2 African American teachers in the control group. The minimum education level was a bachelor’s degree and the maximum was a master’s degree. The majority of the participants in the intervention group (n=8) had a bachelor’s degree, and half of the participants (n=5) in the control group had a BA and the other half had either at least 1 year of schooling beyond a BA (n=1) or a MA (n=4).

Table 5.3. Univariate Descriptive Statistics for the Teacher Questionnaire

<table>
<thead>
<tr>
<th></th>
<th>INTERVENTION</th>
<th></th>
<th></th>
<th>Std. Dev.</th>
<th></th>
<th></th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours/week of assistant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>0</td>
<td>40</td>
<td>22.12</td>
<td>15.37</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Total girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>4</td>
<td>12</td>
<td>9.23</td>
<td>2.28</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Total boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>8</td>
<td>14</td>
<td>11.31</td>
<td>1.84</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Total minority boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>6</td>
<td>13</td>
<td>9.00</td>
<td>2.00</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>African American boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>1</td>
<td>9</td>
<td>5.77</td>
<td>2.13</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>0</td>
<td>5</td>
<td>2.77</td>
<td>1.48</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>0</td>
<td>1</td>
<td>.15</td>
<td>.38</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>0</td>
<td>2</td>
<td>.38</td>
<td>.65</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>
Research Question 1

The independent and three dependent variables examined in research question one are listed in Table 5.5 below.

Table 5.5. Independent and Dependent Variables for Research Question 1

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Independent Variable (IV)</th>
<th>Dependent Variable (DV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relationship</td>
<td>Oral Language Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scaffolds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attentive</td>
</tr>
</tbody>
</table>

Prior to running independent-samples t-tests to examine the mean differences between the groups, univariate descriptive statistics were conducted in order to determine normality of the data. In examining the descriptive statistics, attention was paid to means, standard deviations, out of range values, outliers, and skewness and kurtosis. The results in Table 5.6 indicate that the mean for each dependent variable is higher for the closeness scores than the conflict scores. The results for skewness are all within an acceptable range of +/- 2, however, the kurtosis value for the closeness relationship indicates that the scaffolding
scores may not be evenly distributed and instead may be concentrated towards one or both of
the ends of the distribution. Likewise, the oral language development kurtosis score for
conflict also indicates that the scores may be piled up on one or both ends. Such a finding
suggests the normality assumption for the dependent variables may be violated. However,
with a relatively small sample size for both closeness and conflict (n <30), only general
assumptions that the scores may be clustered towards an end of the distribution can be
drawn; and statistical analysis on the data will continue.

Next, the data was scanned for outliers. Extreme values seemed reasonable; however,
in examining the boxplots, four possible outliers were found. The closeness relationship had
a possible outlier for oral language development (case #45), and two possible outliers for
scaffolding (cases #36, 45). The conflict relationship had one possible outlier in attentive
(case #12). These cases were also confirmed in the extreme values tables, but will be
included in further analysis.

Table 5.6. Univariate Descriptive Statistics for Research Question 1

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Std. Skewness</th>
<th>Std. Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Closeness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Language Development</td>
<td>23</td>
<td>1.43</td>
<td>19.41</td>
<td>8.96</td>
<td>3.63</td>
<td>.668</td>
<td>2.297</td>
</tr>
<tr>
<td>Attentive</td>
<td>23</td>
<td>85.37</td>
<td>97.35</td>
<td>92.29</td>
<td>4.10</td>
<td>-.455</td>
<td>1.160</td>
</tr>
<tr>
<td>Scaffolds</td>
<td>23</td>
<td>6.83</td>
<td>33.37</td>
<td>14.49</td>
<td>5.86</td>
<td>1.835</td>
<td>4.162</td>
</tr>
<tr>
<td><strong>Conflict</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Language Development</td>
<td>23</td>
<td>3.73</td>
<td>16.73</td>
<td>8.12</td>
<td>3.84</td>
<td>.844</td>
<td>-.453</td>
</tr>
<tr>
<td>Attentive</td>
<td>23</td>
<td>68.66</td>
<td>96.53</td>
<td>86.36</td>
<td>7.85</td>
<td>-.762</td>
<td>.062</td>
</tr>
<tr>
<td>Scaffolds</td>
<td>23</td>
<td>5.66</td>
<td>28.15</td>
<td>13.86</td>
<td>6.51</td>
<td>.872</td>
<td>-.245</td>
</tr>
</tbody>
</table>

A one-tailed independent samples t-test was conducted at an alpha level of .05 to
examine each hypothesis. In order to obtain the one-tailed p-value, each p-value reported by
SPSS 15.0 was divided in half and reported in the results below. The three p-values were then considered as units in a family for a familywise comparison, false discovery rate (FDR), in order to decrease the Type I error rate for the question (Williams, Jones, & Tukey, 1999). The decision to accept or reject each hypothesis was made based on the results of the FDR comparison, as reflected in Table 5.10.

In order to use independent samples t-tests, this research assumed that the dependent variables were normally distributed in the population. The assumption of equality of variance was tested with each hypothesis. This research also assumed that the cases represented a random sample from the population and that the scores on the dependent variables were independent of each other. However, it should be noted that the cases represented a random sample in that the participants selected to participate were randomly selected on the classroom level, however, the categorization of relationships was based on the STRS results, thus relationship status was not randomly assigned.

Hypothesis 1a: Oral language development scores will be higher for the high in closeness relationship than the high in conflict relationship, pre-intervention.

An independent samples t-test was conducted in order to examine hypothesis 1a, that oral language development scores will be higher for the high in closeness relationship than the high in conflict relationship. The results of Levene’s test for homogeneity of variance (Table 5.7) indicate that the variances were similar and as such, the results for the standard t-test assuming equal variances were interpreted.

| Table 5.7. Levene’s Test for Equality of Variances: Oral Language Development |
|----------------|---------|-----|
| F              | df      | Sig.|
| .895           | 44      | .349|
The results of the independent-samples t-test were not significant $t(44) = .756, p = .227$ for the oral language development scores for closeness ($M=8.96, SD=3.63$) and conflict ($M=8.12, SD=3.84$). Such a finding means the oral language development scores for the closeness relationship were not higher than the scores for the conflict relationship, therefore we can reject hypothesis 1a.

Hypothesis 1b: Scaffolds scores will be higher for the high in closeness relationship than the high in conflict relationship, pre-intervention.

An independent samples t-test was conducted in order to examine hypothesis 1b, that scaffolds scores will be higher for the high in closeness relationship than the high in conflict relationship. The results of Levene’s test for homogeneity of variance (Table 5.8) indicate that the variances were similar and as such, the results for the standard t-test assuming equal variances were interpreted.

Table 5.8. Levene’s Test for Equality of Variances: Scaffold

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.303</td>
<td>44</td>
<td>.260</td>
</tr>
</tbody>
</table>

The results of the independent-samples t-test were not significant $t(44) = .347, p = .336$ for scaffolds scores for closeness ($M=14.49, SD=5.86$) and conflict ($M=13.86, SD=6.51$). Such a finding means the scaffolds scores for the closeness relationship were not higher than the scores for the conflict relationship, therefore we can reject hypothesis 1b.

Hypothesis 1c: Attentive scores will be higher for high the in closeness relationship than the high in conflict relationship, pre-intervention.
An independent samples t-test was conducted in order to examine hypothesis 1c, that attentive scores will be higher for the high in closeness relationship than the high in conflict relationship. The results of Levene’s test for homogeneity of variance (Table 5.9) were significant (p<.05) indicating the assumption of homogeneity may be violated. However, the sample sizes were equivalent, so violating the assumption of homogeneity of variance would produce small effects. As such, the equal variances assumed t value was interpreted.

Table 5.9. Levene’s Test for Equality of Variances: Attentive

<table>
<thead>
<tr>
<th>F</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.994</td>
<td>44</td>
<td>.018</td>
</tr>
</tbody>
</table>

The results of the independent-samples t-test were significant \( t(44) = 3.209, p = .001 \), with the attentive scores for closeness being higher (M=92.29, SD=4.10) than the attentive scores for conflict (M=86.36, SD=7.85). The 95% confidence interval for the difference in means was not wide, ranging from 2.20 to 9.65. The eta square index indicated that 19% of the variance of the attentive variable was accounted for by type of relationship. Such a finding means the attentive scores for the closeness relationship were higher than the scores for the conflict relationship, therefore we can fail to reject hypothesis 1c.

*False Discovery Rate for Research Question 1.*

Table 5.10. False Discovery Rate for Research Question 1

<table>
<thead>
<tr>
<th>P-values</th>
<th>1(.05/3)=.0167</th>
<th>2(.05/3)=.033</th>
<th>3(.05/3)=.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>.001*</td>
<td>.227</td>
<td>.336</td>
<td></td>
</tr>
</tbody>
</table>

Note: *significant p-value for Attentive, hypothesis 1c

*Research Question 2*

The independent and three dependent variables examined in research question two are listed in Table 5.11 below.

Table 5.11. Independent and Dependent Variables for Research Question 2
Prior to running analysis of covariance (ANCOVA) tests to examine whether the dependent variable means, adjusted for differences on pre-scores, differ across intervention status, univariate descriptive statistics were conducted in order to determine normality of the data. In examining the descriptive statistics, attention was paid to means, standard deviations, out of range values, outliers, and skewness and kurtosis. First, the results in Table 5.12 indicate that the sample sizes of the groups were not equal. This will be addressed later in the ANCOVA. The results indicate that the means and standard deviations are reasonable and the minimum and maximum values are within range. However, attention should be given to the means for POST Attentive for both the intervention and control groups. The POST Attentive mean for the control group (M=94.30, SD=4.57) is greater than the mean for the intervention group (M=91.49, SD=6.29). If the ANCOVA suggests a significant relationship between intervention status and Attentive, the relationship was in the opposite direction than predicted and the null hypothesis will not be rejected. The results for skewness are all within an acceptable range of +/- 2, however, the kurtosis value for the control group indicates that the Attentive PRE scores may not be evenly distributed and instead are concentrated towards the ends of the distribution. However, the sample size is small (n=9), and as such, kurtosis values should be interpreted with caution.

Next, the data was scanned for outliers. Extreme values seemed reasonable; however, in examining the boxplots, two possible outliers were found. The control group had a possible outlier for Attentive PRE (cases #10) and the intervention group had one possible
outlier in OLD Post (case #4). These cases were also confirmed in the extreme values tables, but will be included in further analysis.

Table 5.12. Univariate Descriptive Statistics for Research Question 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Error</td>
<td></td>
</tr>
<tr>
<td>PRE OLD</td>
<td>12</td>
<td>3.73</td>
<td>16.73</td>
<td>8.38</td>
<td>3.91</td>
<td>.820</td>
<td>.637</td>
</tr>
<tr>
<td>POST OLD</td>
<td>12</td>
<td>1.56</td>
<td>14.27</td>
<td>9.32</td>
<td>3.22</td>
<td>1.149</td>
<td>.637</td>
</tr>
<tr>
<td>PRE Attentive</td>
<td>12</td>
<td>68.66</td>
<td>96.53</td>
<td>83.88</td>
<td>7.95</td>
<td>-.275</td>
<td>.637</td>
</tr>
<tr>
<td>POST Attentive</td>
<td>12</td>
<td>79.83</td>
<td>100</td>
<td>91.49</td>
<td>6.29</td>
<td>-.583</td>
<td>.637</td>
</tr>
<tr>
<td>PRE Scaffold</td>
<td>12</td>
<td>7.14</td>
<td>28.15</td>
<td>15.15</td>
<td>7.20</td>
<td>.870</td>
<td>.637</td>
</tr>
<tr>
<td>POST Scaffold</td>
<td>12</td>
<td>8.55</td>
<td>27.21</td>
<td>17.14</td>
<td>7.01</td>
<td>.202</td>
<td>.637</td>
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<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRE OLD</td>
<td>9</td>
<td>4.53</td>
<td>15.00</td>
<td>8.48</td>
<td>4.09</td>
<td>.739</td>
<td>.717</td>
</tr>
<tr>
<td>POST OLD</td>
<td>9</td>
<td>3.84</td>
<td>9.57</td>
<td>6.26</td>
<td>2.12</td>
<td>.310</td>
<td>.717</td>
</tr>
<tr>
<td>PRE Attentive</td>
<td>9</td>
<td>71.16</td>
<td>96.43</td>
<td>89.47</td>
<td>7.58</td>
<td>2.009</td>
<td>.717</td>
</tr>
<tr>
<td>POST Attentive</td>
<td>9</td>
<td>87.32</td>
<td>100</td>
<td>94.30</td>
<td>4.73</td>
<td>-.020</td>
<td>.717</td>
</tr>
<tr>
<td>PRE Scaffold</td>
<td>9</td>
<td>5.66</td>
<td>22.49</td>
<td>12.80</td>
<td>6.19</td>
<td>.387</td>
<td>.717</td>
</tr>
<tr>
<td>POST Scaffold</td>
<td>9</td>
<td>3.84</td>
<td>18.93</td>
<td>10.66</td>
<td>4.88</td>
<td>.369</td>
<td>.717</td>
</tr>
</tbody>
</table>

A one-tailed, one way analysis of covariance (ANOVA) test was conducted at an alpha level of .05 to examine each hypothesis. In order to obtain the one-tailed p-value, each p-value reported by SPSS 15.0 was divided in half and reported in the results below. The three p-values were then considered as units in a family for a familywise comparison, false discovery rate (FDR), in order to decrease the Type I error rate for the question (Williams, Jones, & Tukey, 1999). The decision to accept or reject each hypothesis was made based on the results of the FDR comparison, as reflected in Table 5.13.

The research assumed the scores for the dependent variables were normally distributed in the population for any specific value of the covariate (Pre scores) and for both the intervention and control groups. As with the previous independent-samples t-tests, the research assumed the cases represented a random sample for the population and the scores on
the dependent variable were independent of each other. The homogeneity-of-slopes was tested for each hypothesis to ensure this assumption would be met. And finally the assumption that variances of the dependent variables for the intervention and control groups were equal may have been violated for each hypothesis given the unequal sample sizes. However, each ANCOVA was conducted using type III sum of squares which represents an estimation of treatment effects when cell means are weighted equally and is appropriate when sample sizes are considered to be independent of treatment conditions (Howell, 2007). Therefore, each ANCOVA described below assumes equal variance.

**Hypothesis 2a:** For the high in conflict relationship, teachers in the intervention schools will have higher oral language development scores than teachers in the control schools.

A one-way ANCOVA was used to examine the hypothesis that for the high in conflict relationship, teachers in the intervention schools will have higher oral language development scores than teachers in the control schools. The independent variable, intervention status, included two levels: control and intervention. The dependent variable was the post oral language development scores and the covariate was the pre oral language development scores. First, the homogeneity-of-slopes assumption was tested. This test evaluated the interaction between the PRE oral language development scores and the intervention status in the prediction of oral language development. The results suggest the interaction was not significant, $F(1,17) = .197$, $MSE = 8.73$, $p = .663$, partial $\eta^2 = .011$. The analysis proceeded with the ANCOVA assuming homogeneity of slopes, with a low partial $\eta^2$.

The ANCOVA was significant, $F(1,18) = 5.70$, $MSE = 8.34$, $p < .05$. The strength of the relationship between intervention status and oral language development scores, as
assessed by a partial $\eta^2$, suggest the intervention status accounted for 24% of the variance of the dependent variable, holding constant the pre oral language development scores. The adjusted means for the two groups were ordered as expected with the control group having a smaller mean ($M=6.29$) than the intervention group ($M=9.32$). Follow-up tests were not necessary because the factor only had two levels. In sum, teachers in the intervention group had higher oral language development scores than the control teachers, therefore, we can fail to reject hypothesis 1a.

*Hypothesis 2b: For the high in conflict relationship, teachers in intervention schools have higher scaffolds scores than teachers in the control schools.*

A one-way ANCOVA was used to examine the hypothesis that for the high in conflict relationship, teachers in the intervention schools will have higher scaffolding scores than teachers in the control schools. The independent variable, intervention status, included two levels: control and intervention. The dependent variable was the post scaffolding scores and the covariate was the pre scaffolding scores. First, the homogeneity-of-slopes assumption was tested. This test evaluated the interaction between the pre scaffolding scores and the intervention status in the prediction of scaffolding. The results suggest the interaction was not significant, $F(1,17) = .972, \text{MSE= 33.99, } p = .34$, partial $\eta^2 = .054$. The analysis proceeded with the ANCOVA assuming homogeneity of slopes, with a partial $\eta^2$ score approaching moderate in size.

The ANCOVA was significant, $F(1,18) = 4.63, \text{MSE = 33.94, } p < .05$. The strength of the relationship between intervention status and scaffolding scores was strong, as assessed by a partial $\eta^2$, with the intervention status accounting for 20.5% of the variance of the dependent variable, holding constant the pre scaffolding scores. The adjusted means for
the two groups were ordered as expected with the control group having a smaller mean (M = 11.15) than the intervention group (M = 16.77). Follow-up tests were not necessary because the factor only had two levels. Such a finding means the teachers in the intervention group had higher scaffolding scores than the control teachers, therefore, we can fail to reject hypothesis 1b.

_Hypothesis 2c: For the high in conflict relationship, teachers in intervention schools will have higher attentive scores in the intervention schools than the control schools._

A one-way ANCOVA was used to examine the hypothesis that for the high in conflict relationship, teachers in the intervention schools will have higher attentive scores than teachers in the control schools. The independent variable, intervention status, included two levels: control and intervention. The dependent variable was the post attentive scores and the covariate was the pre attentive scores. First, the homogeneity-of-slopes assumption was tested. This test evaluated the interaction between the pre attentive scores and the intervention status in the prediction of attentive. The results suggest the interaction was not significant, F(1,17) = 2.01, MSE = 30.51, p = .18, partial η² = .11. The analysis proceeded with the ANCOVA assuming homogeneity of slopes, however it was noted that the partial η² was moderate in size.

The ANCOVA was not significant, F(1,18) = .577, MSE = 32.21, p > .05. The strength of the relationship between intervention status and attentive scores was very weak, as assessed by a partial η², with the intervention status accounting for 3.1% of the variance of the dependent variable, holding constant the pre attentive scores. The adjusted means for the two groups were not ordered as expected with the control group having a larger mean (M = 93.85) than the intervention group (M = 91.82). Follow-up tests were not necessary because
the factor only had two levels. Such a finding means the teachers in the intervention group did not have significantly higher attentive scores than the control teachers. In fact, the intervention teachers had lower scores, though not significantly lower. Therefore, we can reject hypothesis 1c.

Hypothesis 4a was not tested because results were significant for only hypotheses 1c, 2a and 2b.

*False discovery rate for research question 2.*

<table>
<thead>
<tr>
<th>P-values</th>
<th>1(.05/3)=.0167</th>
<th>2(.05/3)=.033</th>
<th>3(.05/3)=.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (.05/3)</td>
<td>.014*</td>
<td>.023*</td>
<td>.230</td>
</tr>
</tbody>
</table>

Note. *significant p-values for oral language development and scaffolding, hypotheses 2a,2b

*Research Question 3*

The independent and three dependent variables examined in research question three are listed in Table 5.14 below.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Independent Variable (IV)</th>
<th>Dependent Variable (DV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Intervention Status</td>
<td>Oral Language Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scaffolds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attentive</td>
</tr>
</tbody>
</table>

Prior to running analysis of covariance (ANCOVA) tests to examine whether the dependent variable means, adjusted for differences on pre-scores, differ across intervention status, univariate descriptive statistics were conducted in order to determine normality of the data. In examining the descriptive statistics, attention was paid to means, standard deviations, out of range values, outliers, and skewness and kurtosis. First, the results in Table 5.15 indicate that the sample sizes of the groups were not equal. This will be addressed later in the ANCOVA. The results indicate that the means and standard deviations
are reasonable and the minimum and maximum values are within range. The results for skewness are all within an acceptable range of +/- 2, however, the kurtosis value for the intervention group indicates that the scores for oral language development pre intervention may not be evenly distributed and instead are concentrated towards the ends of the distribution. However, the sample size is small (n=13), and as such, kurtosis values should be interpreted with caution.

Next, the data was scanned for outliers. Extreme values seemed reasonable; however, in examining the boxplots, four possible outliers were found. The control group had one possible outlier for PRE Attentive (cases #10) and the intervention group had three possible outliers in PRE Scaffold (case #1, #13, #22) and one possible outlier in PRE OLD (case# 22). These cases were also confirmed in the extreme values tables, but will be included in further analysis.

Table 5.15. Univariate Descriptive Statistics for Research Question 3

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Skewness</th>
<th>Std. Error</th>
<th>Kurtosis</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRE OLD</td>
<td>13</td>
<td>5.82</td>
<td>18.07</td>
<td>8.89</td>
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<td>1.590</td>
<td>.616</td>
<td>3.050</td>
<td>1.191</td>
</tr>
<tr>
<td>POST OLD</td>
<td>13</td>
<td>2.05</td>
<td>14.98</td>
<td>9.54</td>
<td>4.07</td>
<td>-.493</td>
<td>.616</td>
<td>-.310</td>
<td>1.191</td>
</tr>
<tr>
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<td>95.77</td>
<td>87.43</td>
<td>5.35</td>
<td>-.418</td>
<td>.616</td>
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<td>1.191</td>
</tr>
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<td>POST Attentive</td>
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<td>99.05</td>
<td>93.92</td>
<td>4.01</td>
<td>-.274</td>
<td>.616</td>
<td>1.419</td>
<td>1.191</td>
</tr>
<tr>
<td>PRE Scaffold</td>
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<td>8.19</td>
<td>29.91</td>
<td>15.31</td>
<td>6.84</td>
<td>1.216</td>
<td>.616</td>
<td>.307</td>
<td>1.191</td>
</tr>
<tr>
<td>POST Scaffold</td>
<td>13</td>
<td>9.66</td>
<td>27.90</td>
<td>17.22</td>
<td>6.59</td>
<td>.510</td>
<td>.616</td>
<td>1.049</td>
<td>1.191</td>
</tr>
<tr>
<td><strong>Control</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRE OLD</td>
<td>10</td>
<td>2.80</td>
<td>12.85</td>
<td>8.09</td>
<td>3.20</td>
<td>-.020</td>
<td>.687</td>
<td>-.762</td>
<td>1.334</td>
</tr>
<tr>
<td>POST OLD</td>
<td>10</td>
<td>2.04</td>
<td>9.21</td>
<td>5.31</td>
<td>2.56</td>
<td>-.493</td>
<td>.687</td>
<td>-.310</td>
<td>1.334</td>
</tr>
<tr>
<td>PRE Attentive</td>
<td>10</td>
<td>83.66</td>
<td>96.81</td>
<td>91.67</td>
<td>4.00</td>
<td>-.829</td>
<td>.687</td>
<td>.468</td>
<td>1.334</td>
</tr>
<tr>
<td>POST Attentive</td>
<td>10</td>
<td>84.07</td>
<td>100</td>
<td>93.88</td>
<td>5.88</td>
<td>-.694</td>
<td>.687</td>
<td>-.798</td>
<td>1.334</td>
</tr>
<tr>
<td>PRE Scaffold</td>
<td>10</td>
<td>6.67</td>
<td>19.00</td>
<td>12.69</td>
<td>3.89</td>
<td>.323</td>
<td>.687</td>
<td>-.449</td>
<td>1.334</td>
</tr>
<tr>
<td>POST Scaffold</td>
<td>10</td>
<td>4.55</td>
<td>18.84</td>
<td>10.36</td>
<td>4.69</td>
<td>.362</td>
<td>.687</td>
<td>-.747</td>
<td>1.334</td>
</tr>
</tbody>
</table>
A one-tailed, one way analysis of covariance (ANCOVA) test was conducted at an alpha level of .05 to examine each hypothesis. In order to obtain the one-tailed p-value, each p-value reported by SPSS 15.0 was divided in half and reported in the results below. The three p-values were then considered as units in a family for a familywise comparison, false discovery rate (FDR), in order to decrease the Type I error rate for the question (Williams, Jones, & Tukey, 1999). The decision to accept or reject each hypothesis was made based on the results of the FDR comparison, as reflected in Table 5.16.

In order to conduct such a test, the research assumed the scores for the dependent variables were normally distributed in the population for any specific value of the covariate (Pre scores) and for both the intervention and control groups. As with the previous independent-samples t-tests, the research assumed the cases represented a random sample for the population and the scores on the dependent variable were independent of each other. The homogeneity-of-slopes was tested for each hypothesis to ensure this assumption would be met. And finally the assumption that variances of the dependent variables for the intervention and control groups were equal may have been violated for each hypothesis given the unequal sample sizes. However, each ANCOVA was conducted using type III sum of squares which represents an estimation of treatment effects when cell means are weighted equally and is appropriate when sample sizes are considered to be independent of treatment conditions (Howell, 2007). Therefore, each ANCOVA described below assumes equal variance.

_Hypothesis 3a: Teachers in the intervention schools will have higher oral language development scores than teachers in the control schools._
A one-way ANCOVA was used to examine the hypothesis that the teachers in the intervention schools will have higher oral language development scores than teachers in the control schools. The independent variable, intervention status, included two levels: control and intervention. The dependent variable was the post oral language development scores and the covariate was the pre oral language development scores. First, the homogeneity-of-slopes assumption was tested. This test evaluated the interaction between the pre oral language development scores and the intervention status in the prediction of oral language development. The results suggest the interaction was not significant, $F(1,19) = .010$, $MSE = 12.21$, $p = .92$, partial $\eta^2 = .001$. The analysis proceeded with the ANCOVA assuming homogeneity of slopes, with a low partial $\eta^2$.

The ANCOVA was significant, $F(1,20) = 7.55$, $MSE = 11.61$, $p < .05$. The strength of the relationship between intervention status and oral language development scores was very strong, as assessed by a partial $\eta^2$, with the intervention status accounting for 27.4% of the variance of the dependent variable, holding constant the pre oral language development scores. The adjusted means for the two groups were ordered as expected with the control group having a smaller mean ($M = 5.64$) than the intervention group ($M = 9.43$). Follow-up tests were not necessary because the factor only had two levels. Such a finding means the teachers in the intervention group had higher oral language development scores than the control teachers, therefore, we can fail to reject hypothesis 3a.

**Hypothesis 3b**: Teachers in the intervention schools will have higher scaffolds scores than teachers in the control schools.

A one-way ANCOVA was used to examine the hypothesis that for the teachers in the intervention schools will have higher scaffolding scores than teachers in the control schools.
The independent variable, intervention status, included two levels: control and intervention. The dependent variable was the post scaffolding scores and the covariate was the pre scaffolding scores. First, the homogeneity-of-slopes assumption was tested. This test evaluated the interaction between the pre scaffolding scores and the intervention status in the prediction of scaffolding. The results suggest the interaction was not significant, \( F(1,19) = .654, \text{MSE}= 29.69, p = .429, \) partial \( \eta^2 = .033 \). The analysis proceeded with the ANCOVA assuming homogeneity of slopes, with a low partial \( \eta^2 \) score.

The ANCOVA was significant, \( F(1,20) = 5.97, \text{MSE} = 29.17, p < .05 \). The strength of the relationship between intervention status and scaffolding scores was strong, as assessed by a partial \( \eta^2 \), with the intervention status accounting for 29.7% of the variance of the dependent variable, holding constant the pre scaffolding scores. The adjusted means for the two groups were ordered as expected with the control group having a smaller mean (\( M=11.01 \)) than the intervention group (\( M = 16.72 \)). Follow-up tests were not necessary because the factor only had two levels. Such a finding means the teachers in the intervention group had higher scaffolding scores than the control teachers, therefore, we can fail to reject hypothesis 3b.

Hypothesis 3c: Teachers in the intervention schools will have higher attentive scores than teachers in the control schools.

A one-way ANCOVA was used to examine the hypothesis that teachers in the intervention schools will have higher attentive scores than teachers in the control schools. The independent variable, intervention status, included two levels: control and intervention. The dependent variable was the post attentive scores and the covariate was the pre attentive scores. First, the homogeneity-of-slopes assumption was tested. This test evaluated the
interaction between the pre attentive scores and the intervention status in the prediction of attentive. The results suggest the interaction was not significant, $F(1,19) = .190$, $MSE = 26.30$, $p = .67$, partial $\eta^2 = .010$. The analysis proceeded with the ANCOVA assuming homogeneity of slopes, with a low $\eta^2$.

The ANCOVA was not significant, $F(1, 20) = .001$, $MSE = 26.30$, $p > .05$. The strength of the relationship between intervention status and attentive scores was very weak, as assessed by a partial $\eta^2$, with the intervention status accounting for less than 1% of the variance of the dependent variable, holding constant the pre attentive scores. The adjusted means for the two groups were ordered as expected with the control group having a smaller mean ($M= 93.86$) than the intervention group ($M = 93.92$), however the difference was miniscule. Follow-up tests were not necessary because the factor only had two levels. Such a finding means the teachers in the intervention group did not have significantly higher child attentive scores than the control teachers. Therefore, we can reject hypothesis 3c.

*False discovery rate for research question 3.*

<table>
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<th>P-values</th>
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<th>3(.05/3) = .05</th>
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<td>*significant p-values for oral language development and scaffolding, hypotheses 3a,3b</td>
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CHAPTER 6

DISCUSSION

The results of this research provide insight into classroom experiences of minority boys as a result of their teacher-child relationships, implications for using data to guide professional development interventions, and insight into teachers’ ratings of closeness and conflict in their teacher-child relationships. The discussion of the results of this research will be presented in line with each research question followed by limitations of this study and recommendations for future research.

Though the data was collapsed and examined on a teacher level, the data still reflects children’s classroom experiences and will be presented as such. The Emergent Academic Snapshot was used to collect data on classroom experiences of individual students. This data was then collapsed by type of teacher-child relationship in order to give each teacher oral language development, scaffolds, and attentive scores for conflict and closeness, but the original data and scores all resulted from observing how individual children spent their day. Though the data and analysis for the current research report how often children experienced oral language development and scaffolding during the classroom observations, these constructs are best understood as opportunities for children provided by teachers.

The study’s first aim was to examine the difference in the amount of time minority boys experienced oral language development, scaffolds, and attentive as a result of their teacher-child relationship. The study’s second aim was to examine the difference in the amount of time minority boys categorized as having a high in conflict teacher-child
relationship experienced oral language development, scaffolds, and attentive before and after a professional development intervention. The study’s final aim was to examine the difference in the amount of time minority boys, regardless of their teacher-child relationship, experienced oral language development, scaffolds, and attentive before and after a professional development intervention.

Research Question 1

It was hypothesized that the minority boys categorized as having a high in conflict teacher-child relationship would experience less oral language development, less scaffolds, and be attentive less often than the minority boys categorized as having a high in closeness teacher-child relationship. The results indicated that minority boys with conflictual teacher-child relationships did not differ from the high in closeness minority boys in the amount of oral language development and scaffolds they experienced, but they did differ in how often they were attentive.

Oral language development and scaffolds.

Due to previous teacher interaction and teacher-child relationship research which suggests children establish close teacher-child relationships in classroom environments that promote responsive, warm, individualized interactions from teachers (Howes & Ritchie, 2002), a difference in oral language development and scaffolds was expected among children with different relationships with teachers. Furthermore, these responsive interactions are likely to occur in the zone of proximal development when teachers are keenly aware of a child’s current ability or strength and are aiding him to reach the subsequent level (Bodrova & Leong, 2007). Children who have conflictual teacher-child relationships tend to have less positive engagement in school and the classroom environment, lack cooperative
participation in the classroom, and engage in more disruptive behaviors (Birch & Ladd, 1997; Hamre et al., 2008) making the opportunities for individualized, sensitive, and responsive interactions less likely. However, the results of this current research do not support such a theory.

A possible explanation for why a difference in oral language development and scaffolds was not seen might be due to the children were categorized to relationships. An assumption was made for the study that teacher-child relationships are characterized by either high in closeness or high in conflict. In fact, the STRS results suggest the teacher-child relationship may be much more fluid with some teachers rating children as both high in conflict and high in closeness. Previous research has shown that children who experienced dependent and conflictual relationships had poorer academic performance, negative school attitudes and avoided school (Birch & Ladd, 1997). However, the degree of closeness in teacher-child relationships has been significantly correlated with children’s academic performance, school attitude, and engagement in the school environment. Consistent with Hamre and Pianta (2001), it is possible that in those relationships characterized by both high in closeness and conflict, the closeness in the teacher-child relationship may serve as a protective factor that can buffer the unfavorable effects of risk factors for some children. And as a result, those children may experience the classroom more similarly to the high in closeness children than the high in conflict children.

Another possible explanation takes into consideration the classroom climate as a whole. Previous research suggests positive, emotionally supportive classrooms may moderate the risk factors of having or developing conflictual teacher-child relationships (Hamre & Pianta, 2005, Pianta, Belsky et al., 2008). Additionally, Howes et al. (2008)
showed gains in literacy, math, and social skills were primarily related to classroom climate and secondarily to teacher-child relationship quality. Such findings suggest children with conflictual teacher-child relationships may benefit from being in classrooms with teachers who provide supportive, positive classroom climates, even if the child is not receiving responsive, individualized teacher interactions himself. This research did not analyze the data by teacher-child interaction and activity setting, it is unknown if high in conflict children received oral language development and scaffolding on an individual basis.

Attentive.

The results suggest minority boys with different teacher-child relationships have different levels of attentive. Specifically, minority boys with teacher-child relationships characterized by high levels of closeness were attentive more often at 92% of the time observed than minority boys with teacher-child relationships characterized by high levels of conflict, at 86% of the time observed.

A finding that a difference in attentive exists by relationship is consistent with previous academic engagement research suggesting children’s classroom behavior seems to influence teacher’s ratings of closeness and conflict. Hamre et al. (2008) found problem behaviors to be the most significant predictor of teacher reported conflict in relationships and teachers have been found to have closer relationships with children they rate as lower in problem behaviors (Peisner-Fineberg et al., 1999; Peisner-Fineberg et al., 2001). Additionally, Ladd et al. (1999) found teacher relationships to be directly associated with classroom participation. Based on previous research, this study assumed children’s academic engagement both influenced the relationship they had with their teachers and was influenced by the relationship they had with their teachers (Figure 2.1). Conclusions cannot be drawn
from this finding as to the directional pattern of the behavioral influence. We cannot say minority boys have lower attentiveness because they have a teacher-child relationship categorized as high in conflict or that they have a conflictual teacher child relationship because they are attentive less often.

Research Question 2

It was hypothesized that minority boys categorized as having a high in conflict teacher-child relationship would experience more oral language development, more scaffolds, and be attentive more often in the intervention sites after the intervention than those high in conflict boys in the control sites after the intervention. The results indicated that minority boys in with conflictual teacher-child relationships in the intervention sites did differ from the high in conflict minority boys in the control sites in the amount of oral language development and scaffolds they experienced, but they did not differ in how often they were attentive.

Oral language development and scaffolds.

The high in conflict boys in the intervention sites had more oral language development and scaffolds experiences than the boys in the control sites. Minority boys with conflictual teacher child relationships experienced oral language development 8% of their day pre-intervention and 9% of their day post-intervention for the intervention sites and scaffolds rose from 15% to 17%. Though this is not as large of an increase as we would have expected, the more interesting finding is that the amount of oral language development in the control sites dropped from 9% to 6% and scaffolds dropped from 13% to 11%.

It is interesting to note that though the percent of time children spent in oral language development and scaffolds in the intervention sites did not drastically increase, the
opportunities did not decrease as they did for the control sites. It is possible that after engaging in the professional development intervention, teachers began to practice more intentional teaching. Such an explanation is consistent with the second conceptual model proposed in this study (Figure 2.2), which suggests the professional development both influences and is influenced by the classroom experiences of minority boys. The professional development intervention was designed to provide teachers with various opportunities for reflection about their teaching strategies and the opportunities they provide to their students by using actual data collected in their classrooms. The opportunities for reflection coupled with reviewing the data collected within their classrooms may have led teachers to become aware of the classroom experiences and opportunities they provided not only for the high in conflict children, but for the high in closeness children as well. Though teachers may not have been able to increase these opportunities significantly, it is possible that they became aware of what they were offering children and they did not take them away.

_Attentive.

Though the results do not show a difference in the amount of time children were attentive by intervention status, the results are still interesting and should be reviewed. Minority boys with conflictual teacher child relationships in the intervention sites increased attentive pre-intervention to post-intervention 8%, from 84% to 92%. An increase was also made in the control sites from 90% to 94%. Such trends suggest attentiveness may be related to other factors not explored in this research. Additionally, these results should be considered with respect to the limitations of this research including how the EAS defines attentive and the categorization of relationships.

_Research Question 3_
It was hypothesized that after the intervention, minority boys in the intervention sites would experience more oral language development, more scaffolds, and be attentive more often than the minority boys in the control sites, regardless of their teacher-child relationships. The results are similar to the results from research question 2 and indicate that minority boys in the intervention sites did differ from the minority boys in the control sites in the amount of oral language development and scaffolds they experienced, but they did not differ in how often they were attentive.

*Oral language development and scaffolds.*

The results suggest that the same trend in oral language development and scaffolding scores for intervention versus control sites occurred when the data was collapsed and analyzed across teacher-child relationship as well when the results were analyzed just for the high in conflict relationship. Oral language development for the intervention sites rose from 9% to 10% and scaffolding rose from 15% to 17%. Oral language development for the control sites dropped from 8% to 5% and scaffolding dropped from 13% to 10%.

In addition to the explanations mentioned previously for research question 2, the benefits of classroom climate should be considered regarding the findings from analyzing the professional development intervention as well. The findings from this research suggest opportunities teachers provide for oral language development and scaffolds may be influenced by using data for professional development. Such an explanation is consistent with the MyTeachingPartner research (Pianta, Mashburn et al., 2008) that found teachers who received both the continuous observation and feedback related to their interactions with students as well as the access to video exemplars of “best practices”, showed greater gains in aspects of interactions rated with the CLASS than did teachers who only received the access
to “best practices” videos. By providing targeted feedback and time for reflection, the MTP is designed to promote intentional teaching aimed at meeting best practice standards. Similarly, the NAEYC Accreditation system is designed to provide system wide changes and improvements for a lasting effect (Willer, & Ritchie, 2005). It seems probable that a change in teacher behavior would influence more than just two children in a class and may influence the classroom environment as a whole. However, caution should be taken to not generalize the findings of this study to the classroom level. Though it appears that children both high in conflict and high in closeness benefited from the intervention, this study only observed minority boys and the effects of the intervention on the classroom level remain unknown.

"Attentive.

As with the results from research question 2, minority boys in the intervention sites did not differ in the amount of attentive after the professional development than the minority boys in the control group. However, there was an increase in attentive in both groups. The amount of time minority boys were attentive in the intervention sites rose from 87% to 94% and the control sites rose from 92% to 94%.

Limitations and Implications for Future Research

Recommendations for future research will be discussed in terms of limitations of this research as well as implications for future research. These will be presented in terms of categorizing teacher-child relationship using the STRS results, using the EAS to observe specific children, and the sample size and demographics.

"Student Teacher Relationship Scale.

The variability for classroom experiences by relationship varied greatly for some teachers and had zero variability for others. This finding may be due to the fact that some
teachers had very little variability in their STRS results suggesting that their relationships with all minority boys in their classroom were similar and causing the researchers to randomly assign child participants to relationship categories. Based on previous student-child relationship research, it seems improbable that a teacher would have the same relationship with all of her students and if indeed classroom experiences are related to teacher-student relationship, then the variability in those relationships may have been reflected in the classroom experiences, but not in the STRS scores.

Another limitation is a possible study design flaw in how the children were categorized to relationships. The methodology used to categorize participants to teacher-child relationships allowed children with STRS conflict scores as low as 12, the minimum value for conflict, to be categorized as having a high in conflict teacher-child relationship. Likewise, children with relatively low closeness scores and high conflict scores were categorized as having a relationship high in closeness as a result of how the remaining STRS forms were scored by his teacher. This was especially apparent for those classrooms with only four minority boys enrolled because, by default, all four boys were assigned to a relationship category regardless of the variability in their STRS ratings. For example, if in one classroom, the highest STRS conflict scores were 54 and 15, then both child participants were assigned to the high in conflict relationship without regard to the extreme difference in their scores. Therefore, the teacher-child relationship category in which children were assigned for this study did not always accurately reflect the teacher ratings of the relationship. Such an error in categorization may have influenced the results.

Future research should consider cut-off points for STRS results for categorization purposes. Additionally, special consideration should be given to those children who are rated
by their teachers as having high levels of both conflict and closeness in their relationships.

An interesting study would be to examine the differences between three groups of children:

_Emergent Academic Snapshot (EAS)_

Though the EAS is designed to observe four focal children, some of the experiences observed are class wide and not unique to the focal children. This is especially true for oral language development and scaffolds, which are often coded together. Consideration should be given to the overlap of children’s experiences in coding the EAS. When oral language development and scaffolds occur during whole group instruction, all children in the classroom receive these opportunities, regardless of teacher-child relationship. However, Burchinal et al. (2008) found that enriching interactions between children and teachers that encouraged children to communicate and use language tended to occur when teachers interacted individually or with small groups of children. If these opportunities did occur on an individual or small group basis, we would have been more likely to see variability in the scores by relationship, which was found to not be significantly different. Since the analysis for the current research did not include activity setting and corresponding child engagement codes, it is not possible to state whether the majority of these opportunities were provided individually or to the class as a whole. Future research should consider examining the difference in children’s experiences with respect to their activity setting.

An additional limitation to this research considers how the attentive construct is scored on the EAS and the methodology used to analyze the data. The data was collapsed by teacher and not analyzed on a child level. The attentive variable showed the most variability
with regard to particular classroom experiences for children by relationship (Table 6.1). Variability for attentive within classrooms for the high in closeness children ranged from zero to as high as 28.26, meaning in at least one classroom, one of the high in closeness participants was attentive 28% more often than the other high in closeness participant.

Attentive, unlike oral language development and scaffolds, is scored unique to the focal children and as such, it is not surprising to see more variability among the attentive scores than oral language development and scaffolding. Though attentive is directly related to the child, this study chose to collapse the data and analyze attentive on a teacher level due to previous research that suggests children’s level of engagement may be related to how engaging and interesting the teacher designs the classroom environment. Research suggests positive school performance in the elementary grades is related to both attentiveness and responding to teachers’ directions (Finn & Rock, 1997) and students who are interested and involved in the classroom spend more time on task (Alexander, et al., 1993).

**Sample size and demographics.**

Future research should be conducted to further examine the difference in children’s classroom experiences as related to teacher-child relationships and professional development interventions. An important factor in future research will be to increase sample size and extend the demographics of the sample in order to examine a more representative sample of the population. The current study had a sample of 23 teachers, 22 female and 1 male. Though female teachers do represent the majority of early education teachers, it would be interesting to examine classroom experiences for children who have male teachers. An additional factor for increasing the sample demographics would be to change the inclusion/exclusion criteria to include female child participants and children of various
ethnicities. This research was specifically interested in experiences of minority boys; however, not having child participants from other ethnicities as well as female participants limits the generalizability of the findings. These findings cannot be interpreted with regard to the experiences of other children in their classrooms.

Conclusion

Much research is still needed with regard to children’s classroom experiences related to teacher-child relationship, how to improve classroom experiences for minority boys, and how to provide successful, meaningful professional development to early education teachers. Though the findings from this research suggest oral language development and scaffolded learning opportunities remain stable with the help of a professional development intervention, the minority boys examined in this study post-intervention were only receiving these opportunities an average of 10% and 17% of their day. Oral language development affords children increased vocabulary skills which is a predictor of academic achievement as early as the third grade (Storch & Whithurst, 2002). Additionally, children in classrooms with teachers who provide scaffolded learning opportunities have demonstrated greater academic gains than children whose teachers do not provide such opportunities (e.g. Burchinal et al., 2008; Hamre & Pianta, 2001). As the academic performance for minority boys continues to lag behind, teachers, districts, and states should strive to increase the amount of time children spend in responsive, sensitive interactions with their teachers, less than 20% of the day is unacceptable.
Appendix A: Letter to School Districts

<date>

«Honorific». «FirstName» «LastName»
«JobTitle»
«School District»
«Address1»
«City» «State» «Zip»

Dear «Honorific». «LastName»:

We are contacting you to request permission to contact principals at two schools in your district. We would like their school to participate in a research project designed to promote academic success for boys of color (Ready to PAS). In each school we will need to recruit one classroom teacher from the grade levels PreK-3rd grade for a total of 5 classrooms in the school. One school will be designated as an intervention school in which the teachers who are chosen to be part of the project will be involved in the project intervention that includes training, consultation and participation in professional learning communities. The other school will be designated as a control school in which teachers will not receive intervention activities.

The purpose of this project is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The primary goals are to: increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color, enhance teachers’ capacities to handle the challenges of teaching boys of color, and improve academic, socio-emotional, and behavioral functioning of boys of color.

All data collected in this study will remain confidential. No one other than research staff will have any access to the data. Reports, papers, and presentations will not include any information that would allow anyone to identify any child, family, class, teacher, specialist, or school.

Please sign and return this letter to indicate your district’s willingness to participate. Feel free to contact Sharon Ritchie at 919-843-2779 or ritchie@mail.fpg.unc.edu. Thank you very much.

Sincerely,

Sharon Ritchie, Ed.D.
Principal Investigator,
Ready to Promote Academic Success for Boys of Color
Please sign and return via fax:
Attn: Sharon Ritchie
919-966-1786

The ____________________________ (district name) agrees to participate in the Ready to Promote Academic Achievement for Boys of Color project (Ready to PAS).

__________________________________________________________
Print Name
Appendix B: Letter to Principal (Control Schools)

$date

«Honorific» «FirstName» «LastName»  
«Principal»  
«SchoolName»  
«Address1»  
«City» «State» «Zip»

Dear «Honorific». «LastName»:

Your district has given us permission to contact you to request your assistance in a study designed to promote academic success for boys of color (Ready to PAS). Your school indicated a willingness to participate in this project depending upon funding and IRB approval. We have been awarded funding and are inquiring as to whether you continue to be interested.

We will need to recruit one classroom teacher from the grade levels PreK-3rd grade for a total of 5 classrooms in your school. Please see the enclosed flyer for detailed information on teacher involvement in this study.

The purpose of this project is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The primary goals are to: increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color, enhance teachers’ capacities to handle the challenges of teaching boys of color, and improve academic, socio-emotional, and behavioral functioning of boys of color.

All data collected in this study will remain confidential. No one other than research staff will have any access to the data. Reports, papers, and presentations will not include any information that would allow anyone to identify any child, family, class, teacher, specialist, or school.

Please sign and fax this letter to 919-966-1786 to indicate your school’s willingness to participate. Feel free to contact Sharon Ritchie at 919-843-2779 or ritchie@mail.fpg.unc.edu. Thank you very much.

Sincerely,
Principal Investigator, Ready to Promote Academic Success for Boys of Color

**Principal Permission to participate in Ready to PAS Project**

The __________________________ (school name) agrees to participate in the Ready to Promote Academic Achievement for Boys of Color project (Ready to PAS) as a no-intervention school.

_________________________________                         ____________
Principal Signature                                          Date

__________________________________________
Print Name
Appendix C: Letter to Principal (Intervention Schools)

<date>

«Honorific». «FirstName» «LastName»
«Principal»
«SchoolName»
«Address1»
«City» «State» «Zip»

Dear «Honorific». «LastName»:

Your district has given us permission to contact you to request your assistance in a study designed to promote academic success for boys of color (Ready to PAS). Your school indicated a willingness to participate in this project depending upon funding and IRB approval. We have been awarded funding and are inquiring as to whether you continue to be interested.

We will need to recruit one classroom teacher from the grade levels PreK-3rd grade for a total of 5 classrooms in your school. The teachers who are chosen to be part of the project will be involved in the project intervention that includes training, consultation and participation in professional learning communities. Please see the enclosed flyer for detailed information on teacher involvement in this study.

The purpose of this project is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The primary goals are to: increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color, enhance teachers’ capacities to handle the challenges of teaching boys of color, and improve academic, socio-emotional, and behavioral functioning of boys of color.

All data collected in this study will remain confidential. No one other than research staff will have any access to the data. Reports, papers, and presentations will not include any information that would allow anyone to identify any child, family, class, teacher, specialist, or school.

Please sign and fax this letter to 919-966-1786 to indicate your school’s willingness to participate. Feel free to contact Sharon Ritchie at 919-843-2779 or ritchie@mail.fpg.unc.edu. Thank you very much.

Sincerely,

Sharon Ritchie, Ed.D.
Principal Investigator,
Ready to Promote Academic Success for Boys of Color
Principal Permission to participate in Ready to PAS Project

The ____________________________ (school name) agrees to participate in the Ready to Promote Academic Achievement for Boys of Color project (Ready to PAS) as an intervention school.

___________________________________                         ____________
Principal Signature                                 Date

__________________________________________
Print Name
Appendix D: Previsit Teacher Letter (Control Schools)

Dear Teacher:

Your principal has given us permission to contact you to request your participation in a research project designed to promote academic success for boys of color (Ready to PAS). We will need to recruit one classroom from the grade levels PreK-3rd grade for a total of 5 classrooms in your school. Your school has been assigned to be part of the group of control schools. This means that your school will not be involved in the intervention that includes professional development and mentoring at this time. We hope that this project will be successful and that we will be able to obtain funds to provide intervention to the control schools in the future. Please see the enclosed flyer for detailed information specific to control schools.

The purpose of this project is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The primary goals are to: increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color, enhance teachers’ capacities to handle the challenges of teaching boys of color, and improve academic, socio-emotional, and behavioral functioning of boys of color.

All data collected in this study will remain confidential. No one other than research staff will have any access to the data. Reports, papers, and presentations will not include any information that would allow anyone to identify any child, family, class, teacher, specialist, or school.

If you are interested in finding out more about participating, please contact Heather Kiser at hward@email.unc.edu or Erin Brown at brownel@email.unc.edu or 919-843-2291. Thank you very much.

Sincerely,

Sharon Ritchie, Ed.D.
Senior Scientist, Frank Porter Graham Child Development Center
Principal Investigator, Ready to Promote Academic Success for Boys of Color

Enclosure
Appendix E: Previsit Teacher Letter (Intervention Schools)

Dear Teacher:

Your principal has given us permission to contact you to request your participation in a research project designed to promote academic success for boys of color (Ready to PAS). We will need to recruit one classroom from the grade levels PreK-3rd grade for a total of 5 classrooms in your school. Your school has been assigned to be part of the intervention group. Please see the enclosed flyer for detailed information specific to intervention group.

The purpose of this project is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The primary goals are to: increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color, enhance teachers’ capacities to handle the challenges of teaching boys of color, and improve academic, socio-emotional, and behavioral functioning of boys of color.

All data collected in this study will remain confidential. No one other than research staff will have any access to the data. Reports, papers, and presentations will not include any information that would allow anyone to identify any child, family, class, teacher, specialist, or school.

If you are interested in finding out more about participating, please contact Heather Kiser at hward@email.unc.edu or Erin Brown at brownel@email.unc.edu or 919-843-2291. Thank you very much.

Sincerely,

Sharon Ritchie, Ed.D.
Senior Scientist, Frank Porter Graham Child Development Center
Principal Investigator, Ready to Promote Academic Success for Boys of Color

Enclosure
Appendix F: PAS Flyer (Control Schools)

Ready to Promote Academic Success for Boys of Color
(Ready to PAS)

The purpose of this study is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The total duration of this study will be 15 months. The primary goals are to:

1) increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color
2) enhance teachers’ capacities to handle the challenges of teaching boys of color
3) improve academic, socio-emotional, and behavioral functioning of boys of color

Activities and time involvement for control schools (no intervention)

School Involvement
- Completion of school demographics form (Spring 2008 & Spring 2009)

Teacher Involvement
- Attend Pre-study meeting (1 hour)
- Complete teacher questionnaire and consent forms and several rating scales (Spring 2008 & Spring 2009) (1 hour each time)
- Allow observers to conduct full-day classroom observations (one in Spring 2008, one in Spring 2009)
- Attend one Final Project Session (2 hours)

Teacher Incentive
- $200 Stipend for each participating teacher

If you have any questions, please contact:

Sharon Ritchie: 919-843-2779 or ritchie@mail.fpg.unc.edu
Heather Kiser: 919-843-2291 or hward@email.unc.edu
Erin Brown: 919-843-2291 or brownel@email.unc.edu

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Appendix G: PAS Flyer (Intervention Schools)

Ready to Promote Academic Success for Boys of Color (Ready to PAS)

The purpose of this study is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The total duration of this study will be 15 months. The primary goals are to:

4) increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color
5) enhance teachers’ capacities to handle the challenges of teaching boys of color
6) improve academic, socio-emotional, and behavioral functioning of boys of color

Activities and time involvement for intervention schools

School Involvement
- Completion of school demographics form (Spring 2008 & Spring 2009)
- Participation in Ready Schools Assessment with focus on issues of diversity

Teacher Involvement
- Attend Pre-study meeting (1 hour)
- Complete teacher questionnaire and consent forms and several rating scales (Spring 2008 & Spring 2009) (1 hour each time)
- Allow observers to conduct full-day classroom observations (one in Spring 2008, one in Spring 2009)
- Attend data feedback session on observational data (2 hours)
- Participate in professional development training promoting the academic success for boys of color (4 days total—2 during the school year, 2 during the summer)
- Participate in a classroom consultation (6 hours)
- Participate in follow-up Professional Learning Communities (1½ hours for 3 sessions)
- Attend one Final Project Session (2 hours)

Teacher Incentive
- $500 Stipend for each participating teacher

If you have any questions, please contact:

Sharon Ritchie: 919-843-2779 or ritchie@mail.fpg.unc.edu
Heather Kiser: 919-843-2291 or hward@email.unc.edu
Erin Brown: 919-843-2291 or brownel@email.unc.edu

Appendix H: Teacher Consent (Control Schools)
University of North Carolina-Chapel Hill
Consent to Participate in a Research Study

IRB Study #_____________________
Consent Form Version Date: 3/20/08
Title of Study: Ready to Promote Academic Success for Boys of Color

Principal Investigator: Sharon Ritchie, Ed.D.
UNC-Chapel Hill Department: FPG Child Development Institute
Funding Source: State

Study Contact telephone number: 919-843-2779 (Sharon Ritchie)
Study Contact email: ritchie@mail.fpg.unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. To join the study is voluntary.
You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this project is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The primary goals are to: increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color, enhance teachers’ capacities to handle the challenges of teaching boys of color, and improve academic, socio-emotional, and behavioral functioning of boys of color.

How many people will take part in this study?
If you decide to be in this study, you will be one of approximately 30 people in this research study.

How long will your part in this study last?
This study will be conducted for a total of 15 months. Your involvement will include last 12 months (Spring 2008 through Spring 2009).
- Pre-study meeting (1 hour)
- Completion of forms and rating scales (Spring 2008 & Spring, 2009) (2 hours each time)
- Allow observers to conduct full-day classroom observations (one in Spring 2008, one in Spring 2009)
- Attend Final Project Session (2 hours)

What will happen if you take part in the study?
If you take part in the study, you will participate in the following:
1. **Pre-study Meeting.** Sharon Ritchie will conduct a pre-study meeting at your school to provide information regarding the study and answer any questions you may have.

2. **Student-Teacher Relationship Scale.** You will be asked to complete a Student-Teacher Relationship Scale (STRS) on every boy of color in your class. The scale is a 15-item Likert scale that describes the relationship between the teacher and individual child from the teacher’s point of view. These scales will be completed in Spring, 2008 and Spring, 2009. These forms will be given an ID code by the researcher. Only you will keep a linking list of ID codes and boys’ first names. You will also share with the researchers the same unique code that was written on the STRS form. Project staff will not know the identity of any boy for whom this form was completed.

3. **Teacher Questionnaire.** The information requested in this form focuses on teacher education and professional development as well as description (by percentage) of the ethnic background of children in the classroom.

4. **Classroom Observations.** A project staff member will observe in your classroom for two days (one observation in Spring, 2008 and one observation in Spring, 2009). Four children in your class will be observed during the observation. Since Spring, 2009 will be a different school year, we will observe four different children. No identifying information will be collected on any of the children in any of the classrooms. The observer will use an observational instrument to record the educational practices in the classroom as well as the activities in which the children participate. Classroom routines will not be disrupted by the observation. Staff will consult with you to help determine a convenient and “typical” day for the observation.

5. **Final Project Session.** Sharon Ritchie (PI) will present aggregated data from Spring, 2008 and Spring, 2009 to all participants and other interested staff. Data will be aggregated across schools and across grade levels to insure confidentiality. Pre and Post intervention data will indicate any change that might have taken place over the time period. The purpose of the data feedback is to provide education professionals the opportunity to view classrooms practices through a research lens to and to propose possible changes in classroom practice based on the results.

**What are the possible benefits from being in this study?**
Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study. However, in this study, you will help us learn whether the proposed intervention is truly helpful. Once that is established one way or the other, your school could then decide to follow such a program if it appeared useful, and/or could learn that, though reasonable, the approach would not appear to work in your educational setting.

**What are the possible risks or discomforts involved from being in this study?**
As in any study involving teachers working in their classrooms, there can be concern that observed or reported classroom practices will be shared with supervisory staff. We will minimize this through the provision of aggregated data only to anyone in the school system, by declining to discuss observations with supervisory staff, and by making ourselves available to you before and throughout the study to answer questions and address concerns. Steps will be taken to insure confidentiality. You
will be allowed to terminate your participation at any time. In addition, there may be uncommon or previously unknown risks. You should report any problems to the researcher.

**How will your privacy be protected?**
Participants will not be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies for purposes such as quality control or safety.

All data will be kept strictly confidential. You will be assigned an ID code and all data will be stored by ID code only.

All data will be stored in locked file cabinets. A separate file linking ID codes to teachers’ names and institutions will be kept in password protected computer files. Only research personnel for this project will have access to the responses or identifying information.

**Will you receive anything for being in this study?**
You will be receiving a $200 stipend for allowing observers in your classroom and for completing several short forms and measures. Payment will be provided to teachers in two increments: ($100 in Spring, 2008 and $100 in Spring, 2009). Substitutes will be paid for during training sessions that take place during school hours.

**Will it cost you anything to be in this study?**
There will be no costs for being in the study.

**What if you have questions about this study?**
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact the researchers listed on the first page of this form.

**What if you have questions about your rights as a research participant?**
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

**Participant’s Agreement:**
I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_________________________________________  ____________________
Signature of Research Participant                  Date

_________________________________________
Printed Name of Research Participant

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Appendix I: Teacher Consent (Intervention Schools)

Consent to Participate in a Research Study (INTERVENTION TEACHERS)

IRB Study #_____________________
Consent Form Version Date: 3/20/08
Title of Study: Ready to Promote Academic Success for Boys of Color

Principal Investigator: Sharon Ritchie, Ed.D.
UNC-Chapel Hill Department: FPG Child Development Institute
Funding Source: State of North Carolina

Study Contact telephone number: 919-843-2779 (Sharon Ritchie)
Study Contact email: ritchie@mail.fpg.unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. To join the study is voluntary.
You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.
Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.
Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this project is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. The primary goals are to: increase preschool and elementary teachers’ knowledge and understanding of the circumstances of boys of color, enhance teachers’ capacities to handle the challenges of teaching boys of color, and improve academic, socio-emotional, and behavioral functioning of boys of color.

How many people will take part in this study?
If you decide to be in this study, you will be one of approximately 30 people in this research study.

How long will your part in this study last?
This study will be conducted for a total of 15 months. Your involvement will include last 12 months (Spring, 2008 through Spring, 2009).
- Pre-study meeting (1 hour)
- Completion of forms and rating scales (Spring, 2008, Spring, 2009) (2 hours each time)
- Allow observers to conduct full-day classroom observations (one in Spring, 2008, one in Spring, 2009)
- Participate in professional development training promoting the academic success for boys of color (4 days total—2 during the school year, 2 during the Summer, 2008)
- Data Feedback Session (2 hours)
- Receive a classroom consultation (6 hours)
- Participate in follow-up Professional Learning Communities (4.5 hours)
- Attend Final Project Session (2 hours)

**What will happen if you take part in the study?**

If you take part in the study, you will participate in the following:

1. **Pre-study Meeting.** Sharon Ritchie will conduct a pre-study meeting at your school to provide information regarding the study and answer any questions you may have.

2. **Student-Teacher Relationship Scale.** You will be asked to complete a Student-Teacher Relationship Scale (STRS) on every boy of color in your class. The scale is a 15-item Likert scale that describes the relationship between the teacher and individual child from the teacher’s point of view. These scales will be completed in Spring, 2008 and Spring, 2009. These forms will be given an ID code by the researcher. Only you will keep a linking list of ID codes and boys’ first names. You will also share with the researchers the same unique code that was written on the STRS form. Project staff will not know the identity of any boy for whom this form was completed.

3. **Teacher Questionnaire.** The information requested in this form focuses on teacher education and professional development as well as description (by percentage) of the ethnic background of children in the classroom.

4. **Classroom Observations.** A project staff member will observe in your classroom for two days (one observation in Spring, 2008 and one observation in Spring, 2009). Four children in your class will be observed during the observation. Since Spring, 2009 will be a different school year, we will observe four different children. No identifying information will be collected on any of the children in any of the classrooms. The observer will use an observational instrument to record the educational practices in the classroom as well as the activities in which the children participate. Classroom routines will not be disrupted by the observation. Staff will consult with you to help determine a convenient and “typical” day for the observation.

5. **Professional Development Training.** The Promoting Academic Success project (PAS) was developed by Oscar Barbarin at the FPG Child Development Institute. He and his PAS team are providing materials and guidance for this project. The teacher training modules are one part of a systematic approach to strengthen families, schools, and communities in order to promote character, moral, and ethical development in boys of color. You will participate in four training days (one in April, two in July and one in September, 2008) using the PAS modules. Topics to be covered include:
   - Module 1: Getting to Know Boys of Color
   - Module 2: Building Relationships with Boys of Color
   - Module 3: Partnering with Families to Promote Achievement
   - Module 4: Classroom Environment: Engage, Support, Motivate
   - Module 5: Addressing Challenging Behavior in the Classroom
   - Module 6: Promoting Positive Racial and Gender Identity in Boys of Color
6. **Data Feedback Session.** Sharon Ritchie will present aggregated data from Spring, 2008 to you and your school. This meeting will be set up according to your school’s needs and will last less than 2 hours. Data will be aggregated across schools and across grade levels to insure confidentiality. The purpose of the data feedback is to provide you with the opportunity to view classroom practices through a research lens to and to propose possible changes in classroom practice based on the results.

7. **Classroom Consultation.** Sharon Ritchie will observe in your classroom as a follow-up to training (3 times-May, September, & November, 2008). Each observational visit will last 60 minutes and will be followed by a 60 minute discussion with you, to be arranged at your convenience. The consultation is non-evaluative and is designed to support your efforts to integrate ideas from the training in classroom practice.

8. **Professional Learning Communities (PLC).** Sharon Ritchie will meet with you at your school in a follow-up to training (3 times-June, October, 2008, & January, 2009). The purpose of the PLC is to share successes and challenges encountered when making efforts to integrate ideas from training into classroom practice.

9. **Final Project Session.** Sharon Ritchie will present aggregated data from Spring, 2008 and Spring, 2009 to all participants and other interested staff. The purpose of the data feedback is to provide you with the opportunity to view classrooms practices through a research lens to and to propose possible changes in classroom practice based on the results.

**What are the possible benefits from being in this study?**
Research is designed to benefit society by gaining new knowledge. You may also expect to benefit by participating in this study by increasing your knowledge and understanding of the circumstances of boys of color and enhancing your capacities to handle the challenges of teaching boys of color.

**What are the possible risks or discomforts involved from being in this study?**
As in any study involving teachers working in their classrooms, there can be concern that observed or reported classroom practices will be shared with supervisory staff. We will minimize this through the provision of aggregated data only to anyone in the school system, by declining to discuss observations with supervisory staff, and by making ourselves available to you before and throughout the study to answer questions and address concerns. Steps will be taken to insure confidentiality. You will be allowed to terminate your participation at any time. In addition, there may be uncommon or previously unknown risks. You should report any problems to the researcher.

**How will your privacy be protected?**
Participants will not be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies for purposes such as quality control or safety.

All data will be kept strictly confidential. You will be assigned an ID code and all data will be stored by ID code only.
All data will be stored in locked file cabinets. A separate file linking ID codes to teachers’ names and institutions will be kept in password protected computer files. Only research personnel for this project will have access to the responses or identifying information.

**Will you receive anything for being in this study?**
You will be receiving a $500 stipend for participating in training, consultation and professional learning communities, allowing observers in your classrooms and for completing several short forms and measures. Payment will be provided to teachers in three increments: ($100 in Spring 2008, $300 in Fall 2008, and $100 in Spring 2009). In addition, all travel costs will be reimbursed. Substitutes will be paid for during training sessions that take place during school hours.

**Will it cost you anything to be in this study?**
There will be no costs for being in the study. All travel will be reimbursed.

**What if you have questions about this study?**
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact the researchers listed on the first page of this form.

**What if you have questions about your rights as a research participant?**
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

---

**Participant’s Agreement:**

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_________________________________________  __________________
Signature of Research Participant                Date

_________________________________________
Printed Name of Research Participant
Appendix J: Teacher Questionnaire

Ready to Promote Academic Success for Boys of Color

Teacher Questionnaire

A project of

University of North Carolina at Chapel Hill

If you have questions, please call: (919) 843-2779 or e-mail Ritchie@mail.fpg.unc.edu
1. Today’s date: ___ / ___ / 2008
   Month     Day     Year

Teacher Demographics
2. What is the highest level of education you have completed? **Check only one.**
   - a. Bachelor’s degree
   - b. At least one year of course work beyond a BA
   - c. Master’s degree
   - d. Education specialist or professional diploma based on at least one year of course work beyond a Master’s degree
   - e. Doctoral degree (e.g., M.D, J.D., Ph.D.)
   - f. Other: **Specify:** ______________________

3. What was your major when you received your highest degree? **Please check one.**
   - a. Early childhood education
   - b. Elementary education
   - c. Special education
   - d. English as a second language
   - e. Child development
   - f. N/A (no degree)
   - g. Other: **Specify:** ______________________

4. Have you engaged in professional development that specifically addresses working with ethnic minority children? **Check all that apply.**
   - a. No professional development
   - b. Teaching methods courses in elementary education teacher preparation program
   - c. In-service workshops in my school or school system
   - d. Workshops in the community
   - e. Workshops at professional meetings
   - f. Other: **Specify:** ______________________

5. List your years of experience working professionally with children at each of the following levels. **Enter 0 if no experience.**
   a. Prior to kindergarten entry
   b. Kindergarten
   c. 1st-3rd Grade
   d. Above 3rd Grade

6. In what year were you born? 19___ ___

7. What is your gender? □ a. Female □ b. Male
8. Check all the categories that describe your race/ethnicity:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Black/African-American</td>
<td>i.</td>
</tr>
<tr>
<td>b.</td>
<td>j.</td>
</tr>
<tr>
<td>c.</td>
<td>k. Japanese</td>
</tr>
<tr>
<td>d.</td>
<td>l. Korean</td>
</tr>
<tr>
<td>e.</td>
<td>m. Vietnamese</td>
</tr>
<tr>
<td>f.</td>
<td>n. Asian Indian</td>
</tr>
<tr>
<td>g.</td>
<td>o. Other Asian</td>
</tr>
<tr>
<td>h.</td>
<td>p. Other: Specify:__________________</td>
</tr>
</tbody>
</table>

Your Students and Class

9. Is this class a?  
   a. pre-kindergarten class  
   b. kindergarten class  
   c. 1st grade class  
   d. 2nd grade class  
   e. 3rd grade class  
   f. other: Specify: ______________________

10. As of today, how many students are enrolled in your class? Write a number in each space. If you do not teach one or more of these sessions write N/A.  
    a. Classroom ........................................... _______ children

11. As of today, how many girls and boys are enrolled in this class?  
    a. Number of girls ........................................... _________  
    b. Number of boys ........................................... _________
12. As of today, how many BOYS and GIRLS enrolled in this class belong to each of the following racial-ethnic groups? Count each student only once. Please write a number on each line. Enter “0” if none. (The numbers in 21a-h should add up to the number of children enrolled in your class)

<table>
<thead>
<tr>
<th></th>
<th>BOYS</th>
<th>GIRLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Black/African American</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>b. Native American/ Alaska Native</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>c. White/Caucasian</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>d. Hispanic/Latino/a</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>e. Asian</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>f. Pacific Islander</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>g. Multiracial</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>h. Other: Specify: ____________________</td>
<td>________</td>
<td>________</td>
</tr>
</tbody>
</table>

13. How many students in this class are considered Limited English Proficient (LEP)? (children considered LEP are children whose native language is other than English and whose skills in listening, speaking, reading, or writing English are such that they have difficulty understanding school instructions in English).

______ students with Limited English Proficiency

14. Which languages are spoken in this class? Check all that apply.

- [ ] a. English
- [ ] b. Spanish
- [ ] c. Other Language(s)

please specify

15. Which languages do you or your assistant teacher speak in the classroom? Check all that apply.

- [ ] a. English
- [ ] b. Spanish
- [ ] c. Other Language(s)

please specify

16. Do you have a paid assistant teacher or co-teacher?

- [ ] No
- [ ] Yes

17. IF YES: How many hours per week is a paid assistant teacher or co-teacher typically in your classroom?

______ hours per week
Appendix K: Example of STRS Instructions

Ready to Promote Academic Success for Minority Boys (Ready to PAS)
Student-Teacher Relationship Scale

Thank you for your willingness to participate in Ready to PAS! We appreciate your time and interest in this project. As a reminder, the $100 payment you received in December was compensation for your participation in Spring 2009.

Enclosed is the Student-Teacher Relationship Scale (STRS). Please fill out one questionnaire on every minority boy in your class. If a parent expresses concern over their child participating in this study, do not complete an STRS form for that child.

Each STRS contains an ID number that will be used to identify the minority boys in your class. Please indicate on this form which boy is connected to each ID number. This will help us maintain the anonymity of the boys we observe when we come to your class for classroom.

Please keep this form in a safe place, as we will need the information when we observe in your classroom.

Once you have completed the STRS on each boy, please place in the envelope, seal it and we will pick it up from your classroom.

If you have any questions, please contact Sharon Ritchie at 919-943-2779 or by email at ritchie@mail.fpg.unc.edu.

Thank you!

<table>
<thead>
<tr>
<th>ID Number</th>
<th>Child’s Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-3-001</td>
<td></td>
</tr>
<tr>
<td>3-3-002</td>
<td></td>
</tr>
<tr>
<td>3-3-003</td>
<td></td>
</tr>
<tr>
<td>3-3-004</td>
<td></td>
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<tr>
<td>3-3-005</td>
<td></td>
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<td>3-3-006</td>
<td></td>
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<tr>
<td>3-3-007</td>
<td></td>
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<tr>
<td>3-3-008</td>
<td></td>
</tr>
<tr>
<td>3-3-009</td>
<td></td>
</tr>
<tr>
<td>3-3-010</td>
<td></td>
</tr>
</tbody>
</table>
Appendix L: Parent Letter (English)

Dear Parent/Guardian,

Your child’s school has been invited to take part in the Ready to Promote Academic Achievement for Boys of Color (PAS) study. Your child’s teacher has agreed to participate in this research study.

The purpose of this project is to help prepare teachers to improve the early school experiences of and optimize the learning opportunities for boys of color. We are interested in learning more about what happens in classrooms during the course of a whole school day. As part of this study, we will be observing in your child’s class for one day. Your child may notice the observer in the classroom, but the observer will not interrupt the typical school day. No children will be identified and no names will be recorded. The children will remain anonymous at all times. Your child may be chosen to be one of the children focused on during the observation, but his name will not be known to us or recorded in any way. If this makes you uncomfortable or if you have concerns, please let the teacher know, and we will not focus on your child.

If you have any questions or concerns about this study, please call Sharon Ritchie at 919-843-2779. We will be happy to give you more information.

Sincerely,

Sharon Ritchie, Ed.D
Principal Investigator,
Ready to Promote Academic Success for Boys of Color
La escuela de su hijo ha sido invitada a participar en el estudio Preparados para Promover el Éxito Académico de los Niños de Color (Ready to Promote Academic Achievement for Boys of Color, o PAS). El director de la escuela y la maestra de su hijo han consentido en participar en este estudio.

El objetivo de este proyecto es ayudar a preparar a las maestras para mejorar las experiencias escolares tempranas de los niños de color, así como también optimar sus oportunidades de aprendizaje. Nos interesa saber más acerca de lo que sucede en las aulas durante un día escolar entero. Por lo tanto, estaremos observando en el aula de su hijo por un día. Puede que su hijo note la presencia del observador en el aula, pero el observador no interrumpirá el día escolar. Además, no se identificarán a los niños ni se anotarán sus nombres. Se conservará el anonimato de los niños en todo momento.

Si tiene preguntas o inquietudes respecto a este estudio, por favor llame a Sharon Ritchie al 919-843-2779. Le proporcionaremos más información con gusto.

Atentamente,

Sharon Ritchie, Doctora en Educación
Investigadora Principal
Ready to Promote Academic Success for Boys of Color
Appendix N: Emergent Academic Snapshot Codebook

Ritchie, Howes, Kraft-Sayre, & Weiser

Emergent Academic Snapshot (EAS)
(CODEBOOK-Ready to Promote Academic Success)

**ACTIVITY SETTING:** SELECT ONLY ONE CODE (EXCEPT WHEN DOUBLE-CODED WITH OUTSIDE TIME)

This set of codes captures the ACTIVITY that the teacher has prepared for the children OR for the TARGET CHILD if the activity is different from the rest of the group.

**BASICS:** Code when a child is engaged in:

- toileting, standing in line, clean-up time, wait time between activities, waiting for materials to be passed out.

**MEALS-SNACKS:** Code when a child is engaged in:

- eating lunch, breakfast or snacks, or is enjoying food that the class cooked during a cooking project.

**WHOLE GROUP TIME:** Code when a child is engaged with:

- the whole group in a teacher-initiated activity. Activities can include stories, songs, calendar instruction, discussions, book reading, demonstrations. **The child's focus is on the teacher.** This may include structured PE activities on the playground.

**FREE CHOICE/CENTER:** Code when a child is engaged in:

- free choice activities. During this time **children are able to select** what and where they would like to play or learn. Activities can include individual art projects, blocks, pretend area, puzzles, reading, puppets, computers, science areas, etc. **The key here is that children have chosen their activities.** It does not matter if the activity they have chosen is individual or in a small group. It does not matter if the activity is with or without the teacher.

**INDIVIDUAL TIME:** Code when the child has:

- been assigned to work individually without whole group instruction on worksheets, independent projects, computer work etc. Teachers may be interacting with students individually.

**SMALL GROUP TIME:** Code when child is engaged in:

- small group activities that are teacher organized. **Teacher organized means that the teacher decides what children are to be doing and assigns which children participate,** even if the teacher is not participating in the group. These can include group art projects, writing stories, collective building, cooking projects, small group instruction, science experiments, structured PE activities, etc. Often this will be coded during literacy blocks when children go to centers while the teacher works with a specific group. **May be coded when all children in the class are doing the same thing,** but under the direction of teachers in smaller groupings.

_A small group is coded as long as there are 2 or more children and the teacher has directed the activity or dictated what they are to be doing (see note under “Activity Settings” above)
OUTSIDE TIME:  Code when a child is:
OUTSIDE, regardless of what s/he is doing. This will always be double-coded with another
Activity Setting.-typically Free Choice

CHILD ENGAGEMENT:  SELECT ZERO, ONE, OR MORE CODES
This section captures children’s engagement in learning activities. The target child can be
passively or actively engaged in all codes with the exception of gross and fine motor.

READ TO: Code when a child is:
being read to by an adult. Code this category when a teacher is engaged in reading books, and
stories. or engaged in talking about the author, showing the cover, or asking questions about
the book/story. This does NOT include reading sentences or single words outside the context
of a story.

CHAPTER: Code when child is:
being read a chapter book that is above his/her reading level. This is a sub-topic of Read To
and can only be coded IF Read To has been selected

PRE-READ/READ:  Code when a child is:
reading on her/his own or with peers, listening to a book on tape while looking at a book, involved in
a sequencing activity, or recognition of whole words.  Essentially this is a WHOLE LANGUAGE
engagement for children. Includes flannel board stories. Sequencing that is related to math is NOT a literacy activity and is NOT coded under pre-read.

Note: Pay attention to the content of the books as this may be double-coded with social studies
or science.

LETTER/SOUND LEARNING:  Code when a child is:
practicing rhymes that help her/him recognize sounds, talking about sound-letter relationships,
identifying letters, sounding out words or practicing vowel sounds,. Essentially this is about
PHONEMIC awareness.

ORAL LANGUAGE DEVELOPMENT-Code when a child is:
involved in an activity or an interaction where a teacher is taking action to draw
communication from the children to build expressive language or is actively listening to children
speak, by allowing them to complete their thoughts. The teacher may be:
• asking children questions (typically questions are open-ended and not eliciting yes/no
  answers
• helping children expand on their thoughts, express feelings, or resolve conflict.
• involved in verbal social interaction with the children, asking them about their lives or their
  activities.
• Helping children learn or practice new vocabulary. (often coded for second language
  learners)

**always code SCAFFOLDS  if coding oral language development
WRITING: Code when a child is writing or engaged in scribbling, pretend writing, practicing letters, writing stories. This does not include drawing

MATH: Code when a child is:
rote counting, counting with 1:1 correspondence, skip counting, solving math problems identifying written numerals, matching numbers to pictures, making graphs, playing counting games (e.g.: dice, dominoes, Candyland, Chutes and Ladders), keeping track of how many days until a special event, counting, marbles in a jar, playing Concentration or Memory with numbers. Also code when child is identifying shapes, talking about the properties of shapes (e.g. how many sides), finding shapes in the room, identifying same and different, quantitative comparing (e.g.: big/little, biggest), sorting (by color, size, shape), discerning patterns (red, blue, red, blue), measuring for cooking or size. Please code anything that has to do with the CALENDAR, even if it does not expressly refer to numbers, it is still a concept of TIME.

SCIENCE: Code when a child is:
identifying and exploring natural phenomena in their environment (bugs, leaves, weather), using science equipment (mirrors, magnets, magnifying glasses), working with sand or water (note: using funnels, pouring, sifting, packing sand for molds or castles). Includes reading books that identify or talk about animals, body parts, life-cycle of the butterfly, birth, foods and nutrition, class pets (in which case this should be double-coded with READ TO or PRE-READING). The child may be planting seeds, gathering rocks. The child may hypothesize, guess, estimate. She/he may be engaged in trial and error or experimentation, such as figuring out how to use features on a computer or how to solve a problem (such as how to open a box or fix something that is broken). Includes exploration of the senses: smell, touch, taste, sound, vision.

COMPUTER: Code when a child is:
engaged in an activity at the computer. The content of the software will be captured in other child engagement codes.

SOCIAL STUDIES: Code when a child is: engaged with the intern in:
talking about, reading about, or engaged in activities that inform them about their world (their neighborhood, their school, the farm, the community workers). May include block structures and it may include art work where children are drawing buildings or parts of the community. May include fantasy play, dress-up, or role-playing of family members, police officers, firefighters, doctors. May include discussions of cultural diversity, skin color, different family practices (what different families eat, what holidays they celebrate, family configurations). May include discussions or books about stereotypes, prejudice, and bias based on ethnicity, gender, age, or physical challenges. All religious studies are included in this category. Pledge of Allegiance should be coded here.

AESTHETICS: Code when a child is:
engaged in art or music activities. Children may be painting, illustrating stories, sharing art work, making original drawings, using pastels or watercolors, modeling with clay or play doh., making collages, making jewelry. Children may be listening to music using musical instruments, dancing, or taking parts in a play. Do not double code with production. It is one or the other.
**PRODUCTION:** Code when a child is:
engaged in making products that are to match an example. Children may be all making the same ladybug or coloring the same tree. This is coded when there is little or no room for creativity and the objective is more to follow directions or make something that looks like a model than to be creative or artistic. **Do not double code with aesthetics. It is one or the other**

**GROSS MOTOR:** Code when a child is:
involved in gross motor activities such as running, skipping, jumping, swinging, riding bikes, or playing games such as basketball, catch, run and chase, or bean bag throw. This also includes dancing and musical chairs, which should be double-coded with AESTHETICS. **Gross Motor involves movement of the whole body.** Do not code when a child is just moving briefly from place to place. This does not include physical contact that could result in injury. This can take place both inside and outside.

**FLEXIBLE:** Code when a child is:
Provided an opportunity by the teacher to stretch, move around, ‘get the wiggles out’. During activities, the child is allowed choice about where to work. This means that during ‘seat work’, children can stand up, lie on the floor etc. or that during whole group time there are some options for seating…bean bag chairs, T-stools etc. Double code with gross motor when the movement meets that criteria. **DO NOT CODE FOR FREE CHOICE INDOORS OR OUT AS WE WILL CAPTURE THAT INFORMATION IN THE ACTIVITY SETTING.**

**FINE MOTOR:** Code when a child is:
stringing beads, building with Legos, cutting, using crayons and markers or paint brushes, pencils or pens. This will often be double-coded with another activity. **Code use of pincer grasp. (This does not include computer keyboards or use of the mouse)**

**HANGING OUT:** Code if child is:
hanging out with friends/peers during freeplay (inside or outside in playground) and chatting, playfully giggling with one another although not engaged in any specific activity.

**CHILD BEHAVIOR** **SELECT ZERO OR ONE CODE**

**ATTENTIVE:** Code when child is:
**Doing just what the teacher has asked**-typically that will be sitting quietly and paying attention to what the teacher is saying and doing. It will also be coded when the child is independently managing behavior and engagement-he/she is doing an assignment, engaged in appropriate play etc.

**When you code any of these, do not code anything else but activity setting OR a teacher interaction that is responsive to the behavior**

**DISTRACTED:** Code if the child is:
not doing what the rest of the group is doing and is not focused on the assigned activity. The child may be aimlessly wandering, rolling around on the carpet, or not engaged in any activity. The child is NOT bothering or distracting anyone else

SILLY: Code is the child is:

Not doing what the teacher has asked, is talking, laughing, messing around with someone else. This comes under the heading of ‘boys will be boys’..there is no intent of malice or aggression, they are simply on their own agenda, rather than that of the class or the teacher.

AGGRESS: Code if the child is:

Engaged in hitting, fighting, wrestling, teasing that causes or has the potential to cause physical or emotional injury.

DISCIPLINED: Code if the child is:

placed in “time-out”, excluded from the group, sent from the room.

TEACHER BEHAVIOR  SELECT ZERO OR ONE CODE

This code has to do with how the target child is experiencing the teacher and the classroom environment

NEGATIVE: Code when child is:

Individually or as part of a group subject to teacher irritability, annoyance, anger, yelling, or threats or rough physical contact. The teacher may show annoyance, be short-tempered or impatient, may be sarcastic, may demean or humiliate the child or punish him/her. The teacher may express disapproval of the child’s efforts

TEACHER-CHILD ENGAGEMENT: SELECT ZERO, ONE, OR MORE CODES

Note: Use the following codes if target child is individually engaged with the teacher OR if s/he is a participant in the group with which the teacher is working.

LITERATE: Code if:

When the teacher is simply reading to the children and not talking about the book or story, you code LITERATE.

SCAFFOLDS: The defining characteristic is if the teacher shows an awareness of an individual child’s needs and responds in a manner that supports and expands the child’s learning.

Code if the teacher

• is utilizing the curiosity or interest of the child
• uses **child’s initiations as an opportunity to add to his/her learning.**
• asks open-ended questions,
• motivates through personal engagement (plays with the child—does not just demonstrate or model)
• patiently waits in order for a child to work out their thoughts or demonstrate capability
• helps child expand on his answers and thoughts
• works to link classroom activities to child’s life and experiences.
• asks the child questions or poses problems that have multiple solutions, including conflict resolution.
• Is actively engaged in listening to child

**DIDACTIC:** Code if the teacher is doing any of the following:
• providing instructions or giving information without interaction with the children. There is no reciprocity. The teacher talks, the children listen.
• modeling or demonstrating. The teacher is showing the children how to do something
• asking children questions or posing problems that have ONE CORRECT ANSWER. Teacher tries to lead the children to the correct answer. She is looking for precise words or precise numbers to answer the question or solve the problem.
• engaging children in **rote activities** such as counting or saying the days of the week, or practicing with flash cards.
• giving rules of conduct or lecturing about behavior or social expectations.

**SECOND LANGUAGE:** Code if the teacher is:
• speaking in Spanish, or if she is moving back and forth between English and Spanish
Appendix O: Emergent Academic Snapshot Codesheet

<table>
<thead>
<tr>
<th>TARGET CHILDREN</th>
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<tbody>
<tr>
<td>Activity Setting</td>
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<tr>
<td>Basics</td>
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<tr>
<td>Meals/snacks</td>
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<tr>
<td>Whole group time</td>
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<td>Free choice/center</td>
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<td>Individual time</td>
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<td>Small group time</td>
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<td>Outside time</td>
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<thead>
<tr>
<th>Child Engagement</th>
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<tbody>
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<td>Read to Chapter</td>
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<td>Pre-read/read</td>
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<tr>
<td>Letter/sound</td>
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<td>Oral lang develop</td>
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<td>Aesthetics</td>
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<td>Production</td>
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<td>Gross Motor</td>
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<td>Flexible</td>
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<tr>
<td>Fine Motor</td>
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<td>Hanging out</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Attentive</td>
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<td>Distracted</td>
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<td>Silly</td>
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<th>Adult ID</th>
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<tr>
<td>Teacher Behavior</td>
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<tr>
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<td>Didactic</td>
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<tr>
<td>Second Language</td>
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<tr>
<td>Behavior</td>
</tr>
</tbody>
</table>
Content

Adult ID: Teacher=1; Assistant=2; Student teacher=3; Other school adults=4; Parent=5
Appendix P: Student Teacher Relationship Scale

Teacher's name: Jane Smith  
Gender: F  
Ethnicity: Caucasian  
Date: 4/6/01

Child's name: Tim G.  
Grade: 1  
Gender: M  
Ethnicity: Caucasian  
Age: 6

Scoring: For all items, transfer the circled item scores to the white box adjacent to the item. Sum the scores in each column and enter the sum in the box at the bottom of the column. In cases where there is no response, a score of 0 should not be given.

Instructions for prorating subscale raw scores are provided in Chapter 2 of the STRS Professional Manual. Use the STRS Total score formula at the bottom left to compute the STRS Total raw score. Transfer the Total and subscale raw scores to the spaces provided below the Profile Chart. Use the appropriate Appendix table in the STRS Professional Manual to obtain the corresponding percentile value for each raw score. Profiling: Plot the percentiles on the profile chart. Shaded areas indicate critical levels.

Conflicts

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<th>Closeness</th>
<th>Dependency</th>
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<td>85</td>
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<td>37</td>
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%ile

Profile Chart

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<th>Dependency</th>
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STRS Total score formula

\[
\text{STRS Total score formula} = \left( \frac{34}{72} \right) + \left( \frac{37}{85} \right) + \left( \frac{11}{15} \right) = 94
\]

Normative Comparison Group

(Appendix tables for each normative group are indicated in parentheses.)

- Total Sample (A1)
- Caucasians (C1)
- Boys (B1)
- African Americans (C2)
- Girls (B2)
- Hispanic Americans (C3)
References


Pianta, R. C. (2003). *Standardized observations from pre-K to 3rd grade: A mechanism for improving access to high quality classroom experiences and practices during the P-3 years*. Working paper, Foundation for Child Development.


