



## Associations between teacher–child relationships and children’s writing in kindergarten and first grade

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### ABSTRACT

When children experience conflict in relationships with their teachers during early education, they perform more poorly on measures of language development and overall academic competence. Whereas children who have close relationships with teachers, often perform better on these measures. A close teacher–child relationship may be important for children learning to write, given the complex and personal nature of writing. Yet, scholars have not examined associations between teacher–child relationship quality and children’s early success in writing. The current study examined associations between quality of the teacher–child relationship (defined as teachers’ perceptions of closeness and conflict and children’s feelings about teachers) and children’s writing quality in kindergarten and first grade. Children’s receptive language was also investigated as a moderator of these associations. Results indicated teacher–child conflict was significantly associated with children’s writing quality, after accounting for grade level, initial reading status, and type of instruction. Findings of the study have important implications for future research and practice. Attention to the importance of conflict in teacher–child relationships and its influence on children’s literacy learning and development should be included in future research studies.

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The early years of school are an important time in children’s early literacy development. Early experiences with reading and writing in classrooms shape children’s understanding of both the purpose and power of literacy. The academic demands of the kindergarten and first grade literacy curriculum can be challenging, particularly for children with few literacy experiences prior to entering school (Juel, 1988; Pianta, Cox, Taylor, & Early, 1999; Teale & Sulzby, 1986). For years, researchers have sought to better understand how children successfully acquire literacy skills. While much attention has been paid to children’s early reading development, less attention has been paid to children’s early writing development (Clay, 2001). Yet, writing is a complex and demanding task for young children (Lienemann, Graham, Leader-Janssen, & Reid, 2006) because it involves a great deal of cognitive effort, attentional control, and self-regulation (Graham & Harris, 2003) as children must use and integrate a variety of skills and processes, while also attempting to make their writing meaningful for the intended audience. Given this complexity, children often need instructional, as well as emotional support from their teachers in order to create coherent, well-written texts.

According to the emotional security hypothesis, an extension of attachment theory, feeling secure in one’s environment is

important for a child’s direct interactions and relationship with the teacher, but is also important for the child’s general functioning in the classroom (Davies, Winter, & Cicchetti, 2006). The emotional security felt by a child helps to organize experiences and actions in the child’s environment, as well as to make appraisals of self (Davies et al., 2006). Also, maintaining a sense of security is important for the child’s concentration in a task (Koomen, van Leeuwen, & van der Leij, 2004). When stressed, a child’s regulatory system is activated and strategies are employed to maintain the child’s sense of security (Davies & Cummings, 1994). These strategies may include approaching an adult for help or visually checking-in. Therefore, a child who feels emotionally secure with (or highly connected to) his teacher may experience more comfort when facing the complex task of writing. For example, the child may be more motivated to ask questions about writing or bounce ideas off the teacher.

This study is also informed by self-systems theory which argues children are most engaged in school when their basic psychological needs are met. These include the need to feel socially connected and valued (Baumeister & Leary, 1995; Connell & Wellborn, 1991; Ryan & Deci, 2000). Particular emphasis is placed on students’ feelings of relatedness to teachers, which is measured by the students’ perceptions of emotional security with teachers. The more positively connected children feel with their teachers, the more engaged they will be in school and the more motivated they will be to learn. Close relationships with a teacher increase students’ engagement

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in school likely because these relationships foster more positive attitudes about school in general. Consequently, children who feel disconnected from teachers become disengaged in school and lack motivation to learn (Ryan & Deci, 2000) impacting their overall performance and satisfaction with school. One might assume then that students who feel connected to their teachers will be more motivated to learn to write and may associate more positive feelings with learning to write given the teacher's positive appraisal of writing as an important skill to learn. Alternatively, students who feel less connected with teachers may be less motivated to learn and therefore make less progress in learning to write.

The goal of the teacher–child relationship is one of providing emotional security to children while learning to write so it would be important to consider children's feelings of security with teachers and how it impacts their writing ability. Yet little research exists on how teacher–child relationship quality impacts children learning to write. The current study measured both the teacher's and children's perceptions of closeness and conflict felt in relationships in an attempt to investigate associations between closeness, conflict, and children's writing in kindergarten and first grade.

### 1. Research on teacher–child relationships and child outcomes

Teacher–child relationship quality is often defined and measured as the amount of closeness and conflict teachers perceive in relationships with students. In a *close* teacher–child relationship, the teacher values his/her relationship with the child and feels in tune with the child's feelings (Pianta, 2001). The child may seek comfort from the teacher when upset and is described as eager to share exciting news with the teacher. In a *conflictual* relationship, the teacher generally feels anxious or frustrated when interacting with the child (Pianta, 2001). The teacher may struggle to connect with the child and may feel unable to help the child out of a difficult mood. The child in a *conflictual* teacher–child relationship may not feel cared for or liked by the teacher and may be uncomfortable when shown physical affection by the teacher. The child may anger easily when interacting with the teacher or be unpredictable in mood (Pianta, 2001).

Research on closeness in teacher–child relationships has shown a variety of benefits for young children's social, behavioral, cognitive, and academic development. Supportive teacher–child relationships are associated with children's successful adjustment in the transition to school (Birch & Ladd, 1997; Birch & Ladd, 1998; Burchinal, Peisner-Feinberg, Bryant, & Clifford, 2000; Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Ladd, Birch, & Buhs, 1999; Peisner-Feinberg et al., 2001). Children in high-quality teacher–child relationships exhibit better social skills and peer relationships in preschool and kindergarten (Birch & Ladd, 1997, 1998; Ladd et al., 1999) and better work habits in elementary school (Baker, 2006; Hamre & Pianta, 2001).

On the contrary, students who experience relationships regarded as high in conflict often do poorer academically, are less engaged, and report liking school less (Baker, 2006; Furrer & Skinner, 2003; Hamre & Pianta, 2001; Klem & Connell, 2004; Ladd et al., 1999). These students are also rated by teachers as less cooperative and less self-directed (Birch & Ladd, 1997). Preschool children in teacher–child relationships reported as high in conflict, versus those in relationships reported as low in conflict, have poorer work habits and lower frustration tolerance (Pianta, Nimetz, & Bennett, 1997). Elementary school students in relationships regarded as high in conflict are rated by their peers as less cooperative, more aggressive and are more commonly reported

as the students who are “liked least” (Hughes, Cavell, & Wilson, 2001). Conflict in relationships is also found to be associated with higher rates of externalizing behaviors in kindergarten (Silver, Measelle, Armstrong, & Essex, 2005) and conflict in the preschool teacher–child relationship is associated with higher rates of child aggression later in elementary school (Howes, 2000).

Research has also documented associations between teacher–child relationship quality, children's engagement, and academic development in early schooling (preschool through grade five). Preschool and kindergarten children in teacher–child relationships regarded as high in closeness participate in classroom activities at higher rates (Ladd et al., 1999), exhibit better work habits (Baker, 2006; Hamre & Pianta, 2001) and like school more (Birch & Ladd, 1997) than children in relationships regarded as lower in closeness.

Teacher–child relationship quality has important implications for children's literacy learning. At-risk children given little emotional support from teachers in first grade perform significantly lower on standardized reading measures (Hamre & Pianta, 2005). Whereas those who are provided with emotional support from their teachers, perform similarly in reading to their classmates who are not at-risk (Hamre & Pianta, 2005). Hamre and Pianta (2005) describe emotional support to include teacher sensitivity and the presence of a positive classroom climate (laughter, pleasant conversation, enthusiasm for learning). Teachers rated as emotionally supportive also have high expectations of students' performance and behavior, and are less controlling.

Specific associations between teacher–child relationships and children's reading grades have also been documented. Children in close teacher–child relationships have better reading grades and better work habits in elementary school than children in conflictual teacher–child relationships. Yet, conflict in the relationship is more salient in predicting children's reading grades and work habits (Baker, 2006). It seems for young children learning to read, a close teacher–child relationship is beneficial, but a relationship regarded as high in conflict is especially harmful.

While previous studies have addressed associations between teacher–child relationship quality and children's reading, research has yet to address associations between teacher–child relationship quality and children's writing. This may be particularly important given the complexity of learning to write.

Furthermore, while research has shown the teacher–child relationship to be important for a variety of developmental areas, some studies have shown differential effects of the relationship when accounting for particular child characteristics. The present study investigated the presence of language as a moderator of teacher–child relationship quality given the connection between children's language ability and teacher–child relationship quality. Children in higher quality teacher–child relationships perform better on language measures than peers in low-quality teacher–child relationships (Burchinal et al., 2002). Children in higher quality relationships continue to be more advanced in their receptive language ability over a period of five years (Peisner-Feinberg et al., 2001).

Yet, to date no studies examined associations between children's relationships with teachers, children's language, and children's writing ability in kindergarten and first grade. To address this gap in the literature, this study examined the moderating effect of receptive language on associations between teacher–child relationship quality (in terms of closeness, conflict, and children's feelings about teachers) and children's writing. Language ability was expected to moderate the association between teacher–child relationships and writing quality. Specifically children with lower language ability were expected to benefit more from a high-quality teacher–child relationship than children with high language ability in developing writing skills.

## 2. Research on writing

Emergent writing is defined as the period of development during which children learn to write, generally between the ages of three and five, during the preschool years and into the kindergarten and first grade years (Clay, 2001). The development occurs in stages and begins when children experiment with drawing (Levin & Bus, 2003) and making marks on paper. Children's knowledge of letter sounds develops simultaneously with their knowledge of the writing process (Diamond, Gerde, & Powell, 2008). Once children become aware of print, they combine letter writing and drawing to convey their ideas (Barnhart & Sulzby, 1986; Bus et al., 2001; Morrow & Sharkey, 1993). Often using letters in their name, children begin to write using letters they are most familiar with (Treiman, Kessler, & Bourassa, 2001). Children eventually begin to connect letters with the sounds they make in order to spell words and label their drawings more accurately.

Children begin to use more conventions in their writing toward the end of kindergarten and into the first grade year. They often can hear and write the beginning, middle, and/or ending sounds to spell a given word. They express ideas in writing more coherently, their sentences are constructed appropriately, and the order of the ideas presented becomes more logical. During this period, children begin to represent their ideas with multiple words or sentences and sometimes use drawing in addition to (rather than in place of) writing.

Research has shown most children learn to write with the help of high-quality, interactive instructional strategies. Specific instructional strategies teachers use to support children's writing include scaffolding (Bodrova & Leong, 1998; Bruner, 1966) and modeling (Chapman, 1996; McGee & Purcell-Gates, 1997). Scaffolding and modeling are instructional techniques that can be described as interactive because they require a back and forth dialogue between teacher and student. When teachers use scaffolding to help children create a piece of writing in kindergarten, children make significant, accelerated progress in writing over the course of the school year, including the use of appropriate spelling and directionality in written texts (Bodrova & Leong, 1998). Effective teachers model the writing process for students and monitor student progress throughout writing lessons, and deliver support, such as questioning, only when needed (Wharton-McDonald, Pressley, & Hampston, 1998). Kindergarten children who are taught to plan and revise their pieces through teacher modeling produce texts of greater length and clarity (Brooks, Vaughn, & Berninger, 1999).

Young children's writing is found to develop best in interactions with supportive adults. Neuman and Roskos (1993) examined the effect of adult mediation of writing activities. They designed an intervention for preschool children in which the use of writing materials at a play center was mediated at three different levels. Writing materials and print tags were placed in the housekeeping center to encourage children's use of writing in their play (Neuman & Roskos, 1993). In the highest level of mediation, parent volunteers were asked to interact directly with the children and model how the writing materials could be used. Children receiving this level of mediation made the greatest progress on writing outcomes and were also found to use writing in their play at higher levels, even after the intervention ended (Neuman & Roskos, 1993). Children in both of the other groups made only slight progress and only occasionally used writing in their play. It was determined that adult mediation of the writing environment was most beneficial in supporting children's writing (Neuman & Roskos, 1993).

In an experimental study by Gutman and Sulzby (2000), researchers worked with children to compose a letter using either a controlling or supportive style of interaction. In the controlling context, the adult demonstrated how to complete steps, corrected the child's performance, limited the child's choices, and verbally

commanded the child. In the supportive context, adults let children make choices about the writing, indicated understanding and agreement of the child's choices when writing, responded to the child's questions, and let the child write autonomously without disruption (Gutman & Sulzby, 2000). Texts produced by children with the help of the supportive adult included more drawings, more attempts at spelling, and more words in general than did samples produced by children in the controlling context. Adults who were more controlling not only limited the child's ability to create texts, but also limited their ability to fluently and coherently express ideas (Gutman & Sulzby, 2000).

The present study expanded notions of classroom support to include an investigation of teacher-child relationship quality. Furthermore, the findings on the importance of teacher-child relationship quality for children's reading outcomes raise specific questions on how teacher-child relationships might be associated with children's writing. The purpose of the current study was to investigate associations between teacher-child relationship quality (including teacher-perceived closeness and conflict and children's feeling about teachers) and children's writing quality. Children with high-quality teacher-child relationships (high teacher-perceived closeness and/or children's positive feelings about teachers) were expected to produce higher quality written products. Specifically, these students were expected to use more standard conventions, include greater detail in their writing, and express their ideas more coherently. Children in conflictual relationships with teachers were expected to write using fewer standard conventions, to develop less coherent ideas, and to include little to no detail in their writing.

## 3. Method

### 3.1. Participants

The sample included kindergarten and first grade teachers and students participating as control subjects in a large, federally funded study. The Targeted Reading Intervention project (TRI) was designed to provide professional development and consultation to teachers in rural schools to help them better meet the needs of struggling readers (Vernon-Feagans et al., 2010). Schools were randomly selected to participate as experimental or control sites in the study. Schools in both groups were matched within their districts on several factors including school poverty and percent of minority students enrolled. Teachers in the three experimental schools received professional development and consultation, but teachers in the three control schools (who were participants in the present study) did not.

#### 3.1.1. Teachers

The analytic sample for the current study included a total of 20 teachers (8 kindergarten and 12 first grade). The sample included 1 male and 19 female teachers, 30% of which were Black and 65% were White. The average level of prior teaching experience was over ten years. Education levels of teachers varied, with 80% of teachers holding a bachelor's degree and 20% of teachers holding a master's degree or higher.

#### 3.1.2. Children

The analytic sample for the study included a diverse group of 127 students (65 kindergartners and 62 first graders) ranging in age from 5 to 8 years old, nested within the 20 kindergarten and first grade classrooms. Each classroom included 3–5 struggling readers and 3–5 non-struggling readers. Approximately half of the children in the sample were male (53%) and half were female (47%), with 38% of the children reported as African American, 39% as White, and 13% Native American. Levels of maternal education were fairly low. In

fact, 14% of mothers did not complete high school or receive their GED.

### 3.2. Procedures and measures

Data were collected by the author with the help of trained data collectors in the spring of 2007. Teacher–child relationship quality measures, classroom observations, and child language assessments were collected by the TRI data collectors within the same four-week period in April and May. These data collectors were thoroughly trained on all measures by project staff. All writing samples were collected by the author within a three-week period in May. Writing samples were analyzed by the author and a trained graduate assistant in the summer and fall.

#### 3.2.1. Teacher–child relationship quality: closeness and conflict

The Student Teacher Relationship Scale, Short Form (STRS; Pianta, 2001) is a teacher-report measure of the perceived relationship quality with a given child. This measure has been used extensively in previous studies measuring teacher–child relationship quality. The STRS includes a total of 15 items, yielding an eight-item scale for closeness and a seven-item scale for conflict. Sample items from the closeness scale included: “I share an affectionate, warm relationship with this child” and “It is easy to be in tune with what this child is feeling.” Sample items from the conflict scale included: “This child and I always seem to be struggling with each other” and “This child remains angry or is resistant after being disciplined.” The STRS includes a Likert scale response format with a response of 1 indicating the statement “definitely does not apply” and a response of 5 indicating the statement “definitely applies.” Internal consistency was .86 for items included in the conflict scale and .88 for items in the closeness scale.

#### 3.2.2. Teacher–child relationship quality: feelings about teachers

The Feelings About School Scale (FAS; Valeski & Stipek, 2001) is a 16-item measure of children’s feelings about their teachers, their general attitude toward school, and their perceptions of their own competence in both reading and math. The measure was established by its’ authors in a study of over 400 kindergarten and first-grade children from diverse, low-income families. In this sample, first-grade teacher and child reports of closeness in the relationship measured via the STRS and FAS were correlated with one another. Results also indicated children’s perceptions of their teachers were positively associated with children’s attitudes toward school and towards their self-competence in math and literacy (Valeski & Stipek, 2001).

Though the measure yields four scales, only the scale for children’s feelings about teachers was used in the present study. Children responded to items using a five-point Likert-type scale, with bars of increasing sizes to represent how little or how much the statement read represented the child’s feelings. The lowest possible score was 3 and the highest possible score was 15. Sample items include “My teacher likes me” and “My teacher cares about me.” Internal consistency of the items in the Feelings About Teachers scale was .76. To assess validity of the FAS measure, associations between FAS and STRS items were calculated. Total scores on the STRS and FAS measures were not significantly correlated in the present study as they have been in past studies. Correlations between items on the FAS measure ranged from  $-.52$  to  $.76$ .

#### 3.2.3. Receptive language

The Peabody Picture Vocabulary Test (PPVT; Dunn & Dunn, 1997) is a nationally normed standardized test of receptive vocabulary. An age-based standard score for each child was used in the present study’s analyses. Test-retest reliability ranged from  $.91$  to  $.94$  (Dunn & Dunn, 1997). Validity was achieved with the original

sample by comparing PPVT results with other common measures of children’s language development. Correlations between these measures ranged from  $.69$  to  $.91$  (Dunn & Dunn, 1997).

#### 3.2.4. Initial reading status and grade level

Teachers completed a screener developed by TRI project staff to report each child’s grade level and initial reading status. Participating teachers were asked to indicate whether all students in their class were performing at, above, or below grade level in reading using school assessment data. School assessment data included state literacy assessments, kindergarten readiness assessments, and/or standardized literacy assessments used by the district, such as results from the Texas Primary Reading Inventory (TPRI). Students who were reported to speak little to no English, who received special education services, and/or students who were expected to make rapid progress in reading as a result of the general classroom instruction were removed from the list. Children who were thought to make rapid progress in reading from exposure to the teacher’s general classroom reading instruction were deemed not in need of the larger study’s intervention given its focus on intensive, individualized instruction. From the resulting list, the research team randomly selected 3–5 struggling readers (those performing below grade level) and 3–5 non-struggling readers (those performing at or above grade level). This resulted in 6–10 total child participants within each classroom.

#### 3.2.5. Interactive and didactic teaching

Interactive and didactic teaching were collected as part of a whole-class observation of each teacher’s literacy instruction. The whole-class observation is an observation of teacher behaviors and teaching practices conducted during the teacher’s regularly scheduled literacy instructional block. The teachers were asked to tell the observers when their literacy instruction was scheduled, and the observers randomly selected a 20-min block within each teacher’s literacy block. For the purpose of the present study, only the interactive and didactic teaching variables were used to represent type of instruction observed. The total observation was conducted over 20 min and is divided into four 5-min passes. Each 5-min pass is further divided into 30-s blocks in which teacher behaviors and practices are recorded on a presence/absence basis. The lowest total number of times possible for each of the variables was 0 and the highest was 40. Teachers were observed as interactive when children were actively involved in the lesson, whether it was whole group, small group, or individual instruction. For example, the teacher may have had a discussion with the children, encouraged the children’s physical or written participation in a lesson, or asked questions of the students about a book or topic under discussion. Teachers were recorded as didactic when the teacher was observed doing all of the talking, with no active participation on the part of the student in the lesson or activity. Didactic instruction is defined as “top down,” where the teacher is telling and the students are expected only to be paying attention and listening. For example, the teacher may have read directly from a teacher’s manual or given a lecture on a specific topic without asking any questions or soliciting any input from or having discussion with the students. Teachers who were not involved with students (sitting at their desk, out of the room, or talking with a colleague, for example) were coded as neither interactive nor didactic and therefore a rating of interactive or didactic was not collected during that pass. Inter-rater reliability coefficients for the interactive and didactic teaching variables (calculated using kappas) ranged from  $.96$  to  $.98$ .

#### 3.2.6. Writing quality

To assess writing quality, children were asked to produce a descriptive writing sample in response to a picture prompt. Picture prompts have been used to elicit descriptive writing in other



studies of young children's writing development (Calkins, 1986; Coker, 2006; DeTemple, Wu, & Snow, 1991; Feldgus & Cardonick, 1999; Hemphill et al., 1994; McGee & Morrow, 2005; McGee & Richgels, 2004; Snow, Tabors, Nicholson, & Kirkland, 1995; Spandel, 1996). The pictures used in this study were chosen for their appeal and familiarity and allowed children to rely on background knowledge to produce a response. One picture included children fishing along the beach, with one child and a dog in a boat just off shore. The other picture showed several children interacting near a market. One child is doing a cartwheel in the picture as he passes the other children who are smiling and laughing at him. The pictures were piloted to assess their ability to elicit descriptive text from kindergarten and first-grade children living in rural communities similar to those of the actual study participants. Participants in the pilot study produced adequate descriptive text in response to both picture prompts, so the decision was made to use these same pictures in the current study.

Students completed writing samples twice within a three-week period in a small group setting (2–3 children at the most), with the author present. Students were given as much time as needed to write a description of the picture so "someone who had not seen the picture could understand the scene." A majority of the students completed the task within 10–15 min. Presentation of the pictures was counter-balanced. Students occasionally asked for help spelling words, but they were told to try their best to sound each word out on their own. Kindergarten and first-grade students both completed this task in the same way. However, analyses controlled for grade level to account for expected differences in the writing ability of kindergarten and first-grade students.

### 3.2.7. Scoring of the samples

Writing samples were scored using a rubric created by the author based on developmental expectations for children's writing in kindergarten and first-grade and on rubrics previously used in research and classroom settings (see Appendix A). The rubric was reviewed by several early childhood faculty who conduct research in this area to establish validity of the measure. It consisted of six items measuring children's writing quality and each item was rated on a scale of 1–6. The first item captured children's spelling attempts with a 1 given to samples in which children made no attempt to use real letters to represent words and a 6 given to children who spelled all words conventionally. Samples were also scored on a scale of 1–6 for punctuation and capitalization, with a 1 representing no attempts to use punctuation or capitalization and a 6 given to children who used both punctuation and capitalization appropriately throughout the entire text. This included using correct punctuation in other ways, such as the use of commas, quotation marks, or question marks. Samples were scored for clarity of ideas on a scale of 1–6, with a 1 given to children whose ideas were not clear and a score of 6 for extremely clear and well written ideas. To assess the writer's ability to stay on topic, samples were given a score of 1–6, with a 1 given if the child did not draw/write on topic and a score of 6 if the topic identified in writing was very clear and well written. In the area of genre, children were given a 1 when they did not articulate any aspects of the setting in their drawing or writing. A six was given to children who included multiple aspects of the setting. For use of descriptive phrases, samples were scored on a scale of 1–6, with a score of 1 given if no descriptive words or phrases were used and a score of 6 given when 5 or more descriptive words or phrases were used.

Points were summed for all six items and combined to create a writing quality score in response to each prompt. Each student responded to two prompts. Scores in response to both prompts were then combined to get a total writing quality score. The score was totaled in order to get an overall picture of the child's writing ability since this study serves as an initial attempt to identify

**Table 1**

Descriptive statistics for all predictor, control and dependent variables.

|                                 | N   | Min   | Max    | Mean  | Std Dev |
|---------------------------------|-----|-------|--------|-------|---------|
| Predictor Variables             |     |       |        |       |         |
| T-C Relat Quality: Conflict     | 127 | 10.00 | 35.00  | 29.61 | 5.97    |
| T-C Relat Quality: Closeness    | 126 | 19.00 | 40.00  | 35.80 | 4.66    |
| T-C Relat Quality: Feel Abt Tch | 125 | 3.00  | 15.00  | 13.31 | 2.75    |
| Receptive Language              | 124 | 58.00 | 127.00 | 93.46 | 12.55   |
| Control Variables               |     |       |        |       |         |
| Didactic Teaching               | 20  | 5.00  | 26.00  | 14.01 | 5.29    |
| Interactive Teaching            | 20  | 16.00 | 37.00  | 27.90 | 5.18    |
| Dependent Variable              |     |       |        |       |         |
| Writing Quality                 | 121 | 12.00 | 62.00  | 36.66 | 13.32   |

associations between children's writing and teacher–child relationship quality. Future studies will look more closely at specific aspects of the measure that are most closely related to closeness and conflict. The minimum score possible was 12 and the maximum score was 72.

During a pilot test of the measure, the author and graduate assistant both scored over 40 writing samples. Writing samples collected during the pilot phase were collected in the same manner in which samples were collected for the current study. Inter-rater reliability for the children's total writing quality scores was calculated using kappas. Reliability was achieved at a value of .91 during the pilot phase.

For the current study, internal consistency coefficients for the individual items ranged from .80 to .89. Inter-rater reliability was established by the author and a graduate assistant through scoring and consensus of 25% of the samples. These were calculated using kappas. Inter-rater reliability coefficients for the six items ranged from .81 to .94 and the inter-rater reliability for the children's total writing quality scores was achieved at .94.

## 4. Results

### 4.1. Descriptive statistics

Means, standard deviations, and range of scores for variables are reported in Table 1. Teachers reported a wider range of conflict than closeness in relationships with children. Students' reports of their relationships with teachers were generally positive and somewhat skewed. Children's total writing quality scores were highly variable. To account for variability across kindergarten and first grade samples, grade level was controlled for in subsequent analyses.

Pearson correlations were calculated to analyze associations between teacher–child relationship quality (closeness, conflict, and feelings about teachers), control variables, and writing quality variables. These are presented in Table 2. Teacher–child conflict and closeness were positively associated. It should be noted that high scores on conflict reflected less conflict in this dataset. Therefore, higher closeness was associated with lower amounts of conflict. Higher conflict in teacher–child relationships was associated with lower receptive language scores, more episodes of interactive teaching, and increased likelihood of being identified as a struggling reader. Higher teacher–child closeness was associated with higher receptive language scores and kindergarten grade level status.

To further investigate associations between all variables while accounting for differences in grade level and initial reading status, partial correlations were computed, controlling for these two variables. In a partial correlation, the contribution of selected independent variables is accounted for in the correlation coefficient (Tabachnik & Fidell, 2001). Partial correlation coefficients are presented in Table 3. After controlling for grade level and initial reading status, all of the original associations remained significant, with the exception of the association between conflict and

**Table 2**  
Correlation matrix for all predictor, control, and dependent variables.

| Variable                 | 1     | 2     | 3    | 4     | 5     | 6     | 7    | 8    | 9     |
|--------------------------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1 Conflict               | –     |       |      |       |       |       |      |      |       |
| 2 Closeness              | .35*  | –     |      |       |       |       |      |      |       |
| 3 Feelings Abt Teacher   | .01   | .07   | –    |       |       |       |      |      |       |
| 4 Receptive Language     | .21*  | .31*  | .02  | –     |       |       |      |      |       |
| 5 Didactic Teaching      | .16   | .04   | –.01 | .01   | –     |       |      |      |       |
| 6 Interactive Teaching   | –.18* | .09   | .06  | –.03  | –.70* | –     |      |      |       |
| 7 Writing Quality        | .10   | –.08  | .02  | .26*  | .01   | –.23* | –    |      |       |
| 8 Grade Level            | –.11  | –.26* | –.05 | –.05  | .31*  | –.36* | .76* | –    |       |
| 9 Initial Reading Status | .23*  | .10   | .07  | .40*  | –.04  | .06   | .31* | .040 | –     |
| 10 Gender                | –.13  | .02   | –.13 | –.002 | .09   | –.12  | –.11 | .072 | –.20* |

\*  $p < .05$ .**Table 3**  
Partial correlations controlling for grade level and initial reading status.

| Variable                           | 1     | 2    | 3    | 4    | 5     | 6    | 7    |
|------------------------------------|-------|------|------|------|-------|------|------|
| 1 T-C Relat Quality: Conflict      | –     |      |      |      |       |      |      |
| 2 T-C Relat Quality: Closeness     | .30*  | –    |      |      |       |      |      |
| 3 T-C Relat Quality: Feel Abt Tchr | –.01  | .04  | –    |      |       |      |      |
| 4 Receptive Language               | .09   | .26* | –.03 | –    |       |      |      |
| 5 Didactic Teaching                | .17   | .06  | .032 | .02  | –     |      |      |
| 6 Interactive Teaching             | –.24* | .06  | –.08 | .03  | –.64* | –    |      |
| 7 Writing Quality                  | .17*  | –.04 | .02  | .27* | –.27* | .11  | –    |
| 8 Gender                           | –.09  | –.07 | –.05 | .08  | .16   | –.10 | –.15 |

\*  $p < .05$ .

receptive language. In addition, in this analysis, a new association emerged. Conflict and writing quality were negatively associated, such that higher conflict was associated with lower scores on the writing quality measure. Remember in this dataset, higher scores on the conflict measure actually indicate lower conflict in the teacher–child relationship.

#### 4.2. Multilevel models

A series of random-effects regression models were analyzed using SAS PROC MIXED. Two-level models were specified, with one level for teachers and one for children. The random-effects regression model allows for the nested nature of the data, given multiple children are rated by a given teacher (Raudenbush & Bryk, 2002). An initial model was run to confirm differences by teacher. Subsequent models included teacher as a random intercept. Predictor variables were grand mean-centered for ease of interpretation of the intercepts (Raudenbush & Bryk, 2002). The results of the analyses which are described in detail below indicated teacher–child conflict was a significant predictor of children's writing quality in kindergarten and first grade.

##### 4.2.1. Null model

Investigation of the means for total writing quality indicated differences in groups. A random-effects regression model with teacher as random intercept was run without predictors to confirm differences between classrooms. An ICC (intra-class correlation) was calculated at .62. This indicated 62% of the variance in writing quality scores was estimated to be due to differences between classes and 38% of the variance was due to differences among students within classrooms. The average writing quality score (the average group mean) across teachers was calculated at 37.71 ( $p < .0001$ ) with a 95% confidence interval of 32.64–42.78. The average group mean was slightly different than the value for the grand mean (36.66) due to the differences in group size. This step of the analysis justified the use of multilevel modeling as an appropriate method of analysis and also justified using teacher as a random intercept in subsequent models.

##### 4.2.2. Multilevel models addressing teacher–child relationship quality

Initially, each of the teacher–child relationship quality variables (conflict, closeness, and feelings about teachers) was analyzed using separate multilevel models accounting for the nested nature of the data. The next step added control variables to each of the models. These included grade level, initial reading status, didactic teaching, and interactive teaching. Children's (total) writing quality was the dependent variable in all models. Coefficients for each multilevel model indicated how well children's writing quality scores were predicted by each measure of teacher–child relationship quality, accounting for grade level, initial reading status, interactive teaching, and didactic teaching.

The results of the “Conflict + Controls” model are presented in the first set of columns in Table 4. Both initial reading status and grade level accounted for variance in children's writing quality scores. Didactic teaching was significant, but interactive teaching was not and was therefore dropped from subsequent conflict models. With the addition of the control variables, conflict remained a significant predictor of children's writing quality scores. Effect sizes were calculated using Cohen's  $d$  to estimate the size of the effect each predictor had on the dependent variable. The effect size for conflict was calculated at .06, indicating conflict had a small effect on children's writing quality. With each one unit increase in conflict (which is actually a decrease in perceived conflict),

**Table 4**  
Multilevel model investigating the role of conflict in teacher–child relationships.

|               | Conflict + Controls |           |            | Conflict + Controls + Language |           |            |
|---------------|---------------------|-----------|------------|--------------------------------|-----------|------------|
|               | Coefficient         | Std error | $p$ -Value | Coefficient                    | Std error | $p$ -Value |
| Intercept     | 23.67               | 1.70      | <.0001     | 32.74                          | 3.10      | <.0001     |
| Conflict      | .44                 | 1.70      | <.0001     | .42                            | .12       | .0007      |
| Grade Level   | 21.08               | .12       | .0005      | 21.29                          | 2.22      | <.0001     |
| Status        | 5.57                | 1.31      | <.0001     | 3.70                           | 1.36      | .0076      |
| Interactive   | –.04                | .29       | .89        | –                              | –         | –          |
| Didactic      | –.60                | .27       | .04        | –.58                           | .21       | .0151      |
| Language      |                     |           |            | .19                            | .056      | .0008      |
| Lang*Conflict |                     |           |            | –.003                          | .01       | .7657      |

children's writing quality scores increased by .64 points. The effect sizes for grade level and initial reading status were 3.09 and .81, respectively. As expected, this indicated fairly strong effects for grade level and initial reading status on children's writing quality.

To investigate the influence of child language, this variable was added to the "Conflict + Controls" model. The results of this model can be found in the second set of columns in Table 4. The average writing quality score for a struggling reader in kindergarten with average receptive language ability and a teacher who taught didactically an average amount of times was 25.86. The effect of receptive language was calculated to be .19, indicating a child's writing quality score increased by .19 units for every one unit increase in the receptive language score. The effect of conflict remained a significant predictor and was valued to be .42. The average writing quality score for a struggling reader in kindergarten with average receptive language ability increased by .42 units with every one unit increase in conflict (which again means less conflict in this dataset). The effect size for conflict (calculated using Cohen's *d*) was .06 and the effect size for receptive language was .03 in this model, which indicated very small effects for both.

To investigate the presence of language as a moderator of teacher–child relationship quality on children's writing, the child language variable was also entered as an interaction. Baron and Kenny (1986) identify a moderator as "a qualitative (or quantitative) independent variable that affects the direction and/or strength of the relation between an independent and dependent variable". Specifically, children with lower language ability were expected to benefit more from a relationship lower in conflict. However, the analysis revealed language did not moderate the association between conflict and writing.

In the second and third set of multilevel models, teacher–child closeness and children's feelings about teachers were entered as predictors, with grade level, initial reading status, didactic teaching, and interactive teaching as control variables. The results of these multilevel models indicated neither closeness nor children's feelings about teachers were significant predictors of children's writing quality.

In conclusion, the analyses revealed the multilevel model that most appropriately represents the data was the "Conflict + Controls + Language" model. In this model, grade level and initial reading status had a major influence on children's writing quality, confirming the decision to include them in the model as control variables. After accounting for grade level, initial reading status, didactic teaching and receptive language, though its effect was small, teacher–child conflict remained a significant predictor of children's writing quality.

## 5. Discussion

Previous research confirms the significance of teacher–child relationship quality for children's developmental and learning outcomes (Baker, 2006; Burchinal et al., 2000a,b; Mantzicopoulos, 2005; Peisner-Feinberg et al., 2001). Though the findings of the present study are preliminary, the results extend previous research and confirm the importance of teacher–child relationships to children's learning as outlined in the theoretical framework. Children who lacked the support of a positive teacher–child relationship likely felt less secure in relationships with teachers and thus were not able to take full advantage of the learning opportunities available, which likely impacted their performance in writing.

Though the effect was small, teacher–child conflict was associated with children's writing quality beyond the effects of grade

level, initial reading status, and type of instruction. Children who experienced conflict in relationships with teachers were likely to have lower writing quality scores. Previous studies report similar associations, with higher conflict associated with poorer academic success, including children's performance in reading (Baker, 2006; Mantzicopoulos, 2005). Though the effect was small, the current study is the first known to report associations between teacher–child conflict and children's writing quality. Future studies should examine specific behaviors and language used in teacher–child interactions to better understand how conflict is expressed and perceived by both teacher and child. Measuring conflict from the teacher's perspective, the child's perspective, and from observation of their interactions, would provide multiple sources of information and would enable researchers to better capture all that is happening within these relationships.

Teacher–child closeness was not associated with children's scores on the writing quality measure, but was associated with higher receptive language scores. Some studies have suggested teacher–child closeness may serve as a protective factor to children who struggle in school (Burchinal et al., 2002; Silver et al., 2005). Silver et al. (2005) examined the effect of teacher–child closeness on the developmental trajectory of children's behavior problems. For children with higher levels of externalizing behaviors, teacher–child closeness decreased the expression of externalizing behaviors over time. Other studies have found closeness less associated with child outcomes than conflict (Baker, 2006). Closeness may be harder to capture on a teacher questionnaire. It may be a construct that must be observed in order to be understood. Future studies of teacher–child closeness should include observational measures of teacher–child interactions. These studies could better identify the language and behaviors exhibited in close teacher–child relationships, which might help to identify stronger and more specific connections between these behaviors and their effects on children's learning.

Previous studies have documented associations among children's reports of closeness and conflict with academic achievement (Mantzicopoulos, 2005). However in this study, children's feelings about teachers were not associated with their writing scores or with teacher's reports of closeness and conflict. This latter finding contrasts with previous studies reporting positive associations between these two measures of relationship quality (Valeski & Stipek, 2001). However, in this study, almost all children reported positive feelings toward their teachers, despite the teachers more frequent reports of conflict. Future research should more thoroughly examine ways to effectively measure closeness and conflict from the child's perspective.

Previous research has identified specific child characteristics that influence teacher–child relationship quality, including child gender and behavior. In the present study, gender was not associated with children's writing quality, closeness, or conflict. Previous studies have reported direct (Furrer & Skinner, 2003; Hamre & Pianta, 2001; Hughes et al., 2001; Kennedy, 1997; Ladd et al., 1999; Ryan, Gheen, & Midgley, 1998), conditional (Baker, 2006; Kienbaum, Volland, & Ulich, 2001), and indirect effects of gender on teacher–child relationships, indicating the complex context of gender in the classroom. Though similar findings for gender were not found in the present study, future studies should investigate the specific impact of child gender on teacher–child conflict and children's learning.

This study also addressed differences in associations between teacher–child relationship quality and children's writing quality when accounting for children's receptive language ability. Receptive language was associated with variance in children's writing quality in this study. This finding supports previous research linking children's language and literacy development (Clay, 2001; Dickinson, McCabe, Anastopoulos, Peisner-Feinberg, & Poe, 2003;

Juel, 1988; Pellegrini, Galda, Bartini, & Charak, 1998; Snow, 1983; Teale & Sulzby, 1986). The more developed a child's oral language ability is, the more likely their success as readers and writers. However, receptive language did not moderate associations between teacher–child relationship quality and children's writing in the present study. A larger sample size may be required to detect interactions, if they exist. However, it may be the case that language mediates the effects of teacher–child relationship quality on writing. Children in close teacher–child relationships may have higher receptive language which may lead to better performance on writing measures. Children who have teacher–child relationships high in conflict may have poorer language skills leading to poorer writing. Future studies might address the presence of language as a mediating variable in an attempt to better understand how child language is associated with teacher–child relationship quality.

The present study's use of multilevel modeling to account for differences between teachers served as an important analytic method for investigation of classroom and teacher effects on children's learning. Future studies should investigate additional classroom- or teacher-level variables using multilevel models to assess their associations with children's writing quality.

Overall, the present study expands on writing research by beginning to look at contextual factors associated with children's learning to write. While many studies have addressed environmental aspects associated with children's progress in writing, as well as effective instructional strategies associated with success in writing, this was the first study to investigate associations between closeness and conflict and children's writing quality. The classroom environment and instruction largely influence what children learn about writing, but the present study has shown there are additional factors we must consider when deciding how to help children become successful in writing. Results, in general, support including teacher–child conflict in future models investigating children's writing ability.

The present study also supports the need for intervention research. Interventions designed to improve teacher–child relationships have shown benefits for children's learning. One such intervention studied by Denham and Burton (1996) used “floor time” as a way for preschool children and teachers to spend quality time together. “Floor time” facilitated teachers and children getting to know each other better. Results indicated decreased displays of negative emotion, increased skill in interacting with peers, and greater productive involvement in the classroom (Denham & Burton, 1996). Future studies should seek to evaluate interventions aimed at decreasing conflict between teachers and children, while simultaneously improving children's literacy outcomes in school-aged children.

## 6. Limitations

Specific procedures for the measurement of writing quality in this study may have served as a limitation. It may have been easier to establish significant associations between teacher–child relationship quality and children's writing if the writing quality measure had been administered by the child's teacher instead of the author. The administration by a non-teacher may have had a different effect than the teacher's presence on children's performance on the writing measure. For example, had the task been administered within a dyad experiencing high conflict, the child may have had difficulty concentrating on the task and therefore not produced up to potential. Similarly, in a dyad experiencing high closeness, the child may have felt more comfortable during the writing task and therefore performed closer to his/her potential. Future studies should address associations between teacher–child

relationship quality and children's writing by observing interactions between children and teachers during authentic writing activities.

Similarly, though the writing measure served as an effective assessment of writing quality in the present study and captured a variety of skills associated with beginning writing, the measure may not have captured enough variability in children's early writing development. Future work on the measure might include finding a way to better account for children who seem to understand writing can be used to communicate ideas, but who are not yet capable of using appropriate spelling or other standard writing conventions to communicate those ideas. Furthermore, additional work should be done to establish validity of the measure. Perhaps this could be done by comparing students' scores on a similar measure.

Another limitation associated with the writing measure may have been the decision to ask children to submit a descriptive writing sample. The focus on writing instruction in these schools was minimal, and children had little experience writing in the descriptive genre. Though children generally understood the directions when presented with the task and most seemed able to describe the scene in detail, they may have been less confident than they would have been writing a narrative, for example.

The current study assessed the teacher–child relationship from both the teacher and child's perspectives. Given relationships are complex, using multiple sources to identify important aspects of those relationships would be most effective in understanding the value of the teacher–child relationship for children's learning. Furthermore, reports of relationship quality from the child's perspective were not correlated with teacher reports of relationship quality in the present study. A future study might benefit from adding the perspective of an outside observer.

Furthermore, the child measure, the Feelings About School Scale (Valeski & Stipek, 2001) reflected little variability and was positively skewed. Capturing the child's perspective is difficult. While most children understood the directions, and sample questions were built into the measure to guide children's understanding of the response format, there is no way to be sure children were accurately reporting how they felt about teachers. Additionally, the FAS was administered by strangers so children may have been uncomfortable expressing negative feelings about teachers for fear that these responses would get them into trouble. The age of the children may have also been a factor. The children in this study ranged in age from 5 to 7 years old and perhaps may have been at a developmental stage in which reporting their feelings is more difficult. Future studies might try measuring the quality of the teacher–child relationship from the child's perspective in additional ways.

## 7. Conclusion

While knowledge in this area is still evolving, this study contributes to research on the importance of the teacher–child relationship for children's learning in kindergarten and first grade by addressing specific associations between teacher–child relationship quality and children's writing quality. As in other literature, teacher–child relationship quality was significantly associated with children's school outcomes. However, this is the first study to link teacher–child conflict with children's writing and therefore serves as an important step in better understanding the socio-emotional context of young children's literacy learning and development.



## Appendix A. Writing quality rubric

| Use of conventions                          | 1   | 2   | 3  | 4   | 5   | 6  |
|---|---|---|--|---|---|--|
| Spelling                                    | Makes no attempt to use letters to represent words.<br>OR<br>Uses scribbles or letter-like figures. | Exhibits pre-communicative spelling behaviors. Pre-communicative: demonstrates some knowledge that letters are used to make words, but makes no connection between letters and their sounds.<br>Example: SHFUUBT = table  | Exhibits semi-phonetic spelling behaviors. Semi-phonetic: letters used to represent words provide partial mapping of phonetic representation for the word being spelled.<br>Example: BP = bump | Exhibits phonetic spelling behaviors. Phonetic: provides a total mapping of letter-sound correspondence; all of the surface sound features of the words being spelled are represented in the spelling.<br>Example: I WEL<br>KOM TO YOR<br>HOM = I will come to your home. | Exhibits transitional spelling behaviors. Transitional: adheres to basic spelling conventions, vowels appear in each syllable, etc.<br>Example: IT'S GOING TO BE FUN<br>TOMORO = It's going to be fun tomorrow.                                       | Uses conventional spellings.   |
| Punctuation/ capitalization                 | Did not use any end punctuation.<br>Did not use appropriate capitalization.                         | Does not use correct punctuation at the end of any sentences.<br>AND<br>Uses capital letters to begin some sentences, but may insert multiple misplaced capital letters within words or sentences.<br>OR<br>Uses correct punctuation at the end of some sentences.<br>AND<br>Does not use appropriate capitalization at the beginning of any sentences. | Uses correct punctuation at the end of some sentences.<br>Uses capital letters to begin some sentences, but may occasionally insert misplaced capital letters within words or sentences.       | Uses correct punctuation at the end of most sentences.<br>Uses capital letters to begin some sentences.<br>Misplaced capital letters within words or sentences are minimal  | Uses correct punctuation at the end of all sentences.<br>Uses capital letters to begin most sentences.<br>May attempt to use punctuation in other ways but does not always use these marks appropriately.   | Uses correct punctuation at the end of all sentences.<br>AND<br>Uses correct punctuation in other ways.<br>AND<br>Uses capital letters to begin all sentences.<br>Uses capital letters to begin most proper nouns.   |
| Ideas                                       | 1   | 2   | 3  | 4   | 5   | 6  |
| All ideas are clearly expressed             | Idea(s) expressed in drawings are not clear.  | No ideas are expressed in writing, but ideas expressed in drawings are clear.   | Ideas expressed in writing are not clear.  | Ideas expressed in writing are somewhat clear.  | Ideas expressed in writing are clear.   | Ideas expressed in writing are very clear and well written.  |
| Topic and use of detail                     | Topic expressed in drawing/writing is not clear.<br>No major details are included in drawings.      | Topic expressed in drawing is somewhat clear.<br>Sample only includes 1–2 major details in drawing, but no supporting details.  | Topic expressed in drawing is very clear and includes detail.<br>OR<br>Attempts to express topic in writing, but topic is not clear.<br>Sample includes minimal details in writing.            | Topic expressed in writing is somewhat clear.<br>Major details are given in writing which support the topic, with no supporting details.<br>Order of details presented is somewhat logical.   | Topic expressed in writing is clear.<br>Topic is identified toward the beginning of the text.<br>All major details are given clearly and strongly supporting the topic.<br>Text includes some supporting details and is presented in a logical order. | Topic expressed in writing is very clear and well written.<br>Includes clearly written general opening statement describing the topic of the scene.<br>All major details are present in clear support of the topic.<br>Text includes all important secondary details as well.<br>All details are presented in a logical order. |
| Aspects of genre                            | 1   | 2   | 3  | 4   | 5   | 6  |
| Setting (or background) is well articulated | Aspects of the setting are not articulated in drawing or writing.                                   | Important aspects of the setting are included in drawing(s).  | Aspects of the setting are expressed in writing but are not articulated well.  | Important aspects of the setting are somewhat well articulated in writing.  | Important aspects of the setting are well articulated in writing.   | Multiple important aspects of the setting are very well articulated in writing.  |
| Uses descriptive words or phrases           | Does not use descriptive words or phrases.  | Uses 1–2 descriptive words, but word choice was poor or not appropriate.  | Uses 1–2 descriptive words, with moderate appropriateness.   | Uses 2–3 descriptive words or phrases that help describe the scene.   | Uses 3–4 descriptive words or phrases that help describe the scene.   | Uses 5 or more descriptive words or phrases that accurately and effectively describe all major aspects of the scene.   |

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