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## The influence of home-based reading interactions on 5-year-olds' reading motivations and early literacy development

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### Abstract

In order to understand the impact of home-based reading practices on young children's literacy development, we need to consider both the types of comments made while reading as well as the affective quality of the reading interaction. Five-year-olds, during the summer prior to kindergarten, were observed reading both a familiar and an unfamiliar book with a member of their family, usually a parent but in one-third of the cases, an older sibling. Children came from either African-American or European-American families. Most of the children (about 83%) came from low income families. Both the nature of comments made about each book and the affective quality of the interactions were coded. Parents also were interviewed about the frequency with which their children engaged in reading activities at home. Children's phonological awareness, orientation toward print, and story comprehension were assessed during the spring of kindergarten; their motivations for reading were assessed at the start of first grade.

Comments about the content of the storybook were the most common type of utterance during reading interactions. Reported reading frequency was the only significant correlate of children's early literacy-related skills. In contrast, the affective quality of the reading interaction was the most powerful predictor of children's motivations for reading. These results emphasize the importance of the affective quality of reading interactions for fostering children's interest in literacy.

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## 1. Introduction

Engaging in storybook reading with a child has long been thought to be an important means of fostering literacy acquisition (Bus, van IJzendoorn, & Pellegrini, 1995; Scarborough & Dobrich, 1994). More specifically, it is the dialogue about the book being read that is considered at least as important as the actual reading of the text. Observation of reading interactions among middle income families supports the notion that parents and children engage in discussion about stories as they attempt to develop a shared consensus about the meaning of the text. Discussion typically focuses on what is happening in the story, what is going to occur, how issues in the book relate to aspects of everyday activities and how aspects of one's life are reflected in the book being read.

Theorists have suggested that discussion about a shared book may focus children's attention on the sound structure of words and the relation between letters and sounds, make them more aware of the functions of print, and facilitate story understanding (Snow, Burns, & Griffin, 1998). In other words, discussion about a book may help young children develop the comprehension, phonological and graphemic skills necessary for reading. Despite theoretical speculation about the importance of talk about text, research on the impact of reading storybooks on early literacy development has focused more on the frequency of reading than the type of talk occurring (Scarborough & Dobrich, 1994).

Research on the nature and frequency of reading interactions has shown that storybook reading is a common practice in middle income families but less common in low income families. Even when controlling for differences in reading frequency, there appear to be group-based differences in the nature or frequency of comments, with many low income families less likely to engage in the types of discussions viewed as important for later literacy acquisition (see Purcell-Gates, 2000 for review). It should be noted, however, that although it is common to compare low versus middle income families as if the two groups were homogeneous, in reality there is within group variability in the frequency and nature of interactions.

There also is a growing awareness of the role that children's interest in reading plays in literacy acquisition. In a recent literature review, Baker, Scher, and Mackler (1997) suggested that the opportunities preschoolers have to interact with printed matter even before they enter school may foster an interest in reading. More specifically, they hypothesized that children will show an interest in reading if they associate literacy experiences with positive, enjoyable interactions (see also Scarborough & Dobrich, 1994; Snow, 1994). There has been little research, however, directly examining the relation between affective quality of reading interactions and various aspects of children's literacy acquisition.

The present research explores the relation between characteristics of home-based dyadic book reading interactions and children's early literacy skills as well as their self-reported motivations for reading. We focus on the nature of utterances, the social/affective quality of the interaction, the age of the participants and the familiarity of the book being read. Consistent with other researchers, we use the term early literacy skills to refer to those skills that are thought to be relevant for the acquisition of conventional reading skills (Snow et al., 1998). Early literacy skills include but are not limited to an awareness of the uses of different forms of printed matter and sensitivity to the sounds of language.

In the first section of our literature review, we present a brief overview of aspects of early literacy development and the role that reading to children may play in such development (see Bus et al., 1995; Scarborough & Dobrich, 1994; Whitehurst & Lonigan, 1998 for more comprehensive reviews). We then consider the nature of storybook reading interactions by focusing on the type of talk that occurs and the social/affective quality of the interactions.

### 1.1. Early literacy development

Four domains thought to be important for early literacy development are phonological awareness, orientation toward print, story comprehension and children's motivations for reading (Baker, Serpell, & Sonnenschein, 1995; Snow et al., 1998).

*Phonological awareness* is sensitivity to the component sounds in words. Research reveals a reciprocal relation between phonological awareness and early reading skills (Whitehurst & Lonigan, 1998). That is, phonological awareness predicts both early literacy and reading development; learning to read, in turn, increases phonological awareness. Of particular pertinence here is the impact of phonological awareness on reading development. For example, MacLean, Bryant, and Bradley (1987) have shown that preschoolers' scores on measures of rhyme and alliteration were related to their subsequent word reading. Furthermore, providing training in rhyming and alliteration to 5- and 6-year old was positively related to their subsequent reading and spelling, assessed 3 years later (Bradley & Bryant, 1991; see Fernandez-Fein & Baker, 1997 for additional review).

Exposure to linguistic routines, such as nursery rhymes, may familiarize children with phonological patterns. Storybook reading also may provide opportunities for children to become more sensitive to sound relationships, especially if the reader calls the child's attention to the sounds in words.

*Orientation toward print* is familiarity with written conventions and their functions. For example, children growing up in homes where English is the medium of literacy need to learn to turn pages in books from right to left and to scan pages from the top to the bottom. They need to distinguish between pictures on a page and letters or words. Young children's orientation toward print has been shown to predict later reading ability (Whitehurst & Lonigan, 1998). For example, Tunmer, Herriman, and Nesdale (1988) found that children's scores on a measure of orientation toward print, Clay's Concepts of Print test, given at the beginning of first grade predicted their scores on reading comprehension and decoding tasks at the end of second grade, even after controlling for vocabulary and phonological awareness.

Bus et al. (1995) suggested that joint storybook reading represents the most intense contact that young children have with the conventions and rules of written language and, thus, may be a particularly effective way to facilitate knowledge about print. Storybook reading may be especially instructive if readers emphasize print-related aspects of the text during reading.

*Story comprehension* is appropriating meaning from text. Reading storybooks to young children will familiarize them with story structure which, in turn, should help facilitate their comprehension of stories. Discussion about the text will familiarize the children with strategies that readers use to comprehend text (Sulzby & Teale, 1991). For example, based on observations of middle income preschool children's reading interactions with adults, Cochran-Smith (1986) suggested that adult readers guided children's understanding of the text by modeling the use

of four sources of information to facilitate comprehension: general knowledge of the world, knowledge of literacy conventions, knowledge of narrative structure, knowledge of how to respond as members of a reading audience. Cochran-Smith (1986) further noted that such modeling of strategies occurred even though “instruction was neither the goal nor the context of the storyreading” (p. 48).

Snow (1991) has addressed the importance of certain types of talk about text for story comprehension. In particular, Snow suggested that talk that requires the child to go beyond the immediate text, such as asking a child to predict outcomes or asking to evaluate parts of a story, will foster the type of cognitive skills necessary for higher-level comprehension.

Although there is a large body of literature on the general topic of motivation, the more specific area of children’s *motivations for reading* is newer, and less is known about it (Oldfather & Wigfield, 1996). The construct, children’s motivations for reading, is thought to be multi-dimensional, including children’s interest in and attitudes about reading, children’s sense of self-efficacy as readers and children’s valuing of different types of reading activity (Baker et al., 1997; Sulzby & Teale, 1991). Motivations for reading are thought to be important both as a consequence of reading experience as well as a predictor of later reading skills (Oldfather & Wigfield, 1996; Scarborough & Dobrich, 1994).

Although many theorists speculate about the importance of motivation for subsequent reading development (Snow et al., 1998), we are only beginning to study what causes children’s initial reading motivations or their desire to engage in literacy activities (Gambrell & Morrow, 1996). For example, the social context within which reading occurs is hypothesized to be important for fostering motivation (e.g., Gambrell & Morrow, 1996; McCombs, 1996; Snow et al., 1998). That is, children who experience pleasant reading interactions may develop an interest in continuing to engage in such interactions and in learning how to read. Thus, children’s motivations for reading may lead to their increased frequency of engagement in literacy-relevant activities which in turn could improve children’s literacy skills.

Indirect support for the notion that pleasant reading interactions may foster a child’s interest in reading comes from work by Baker, Mackler, Sonnenschein, and Serpell (2001) who found that the affective atmosphere during dyadic reading interactions between first graders and their mothers was related to the frequency with which these children read chapter books during second and third grade. Reading chapter books, in turn, predicted subsequent reading comprehension. Although Baker et al. did not assess motivations for reading, they suggested the affective quality may have fostered children’s interest in seeking out more challenging books.

In contrast to findings described above, DeBaryshe (1995) did not find a significant relation between reading style and children’s interest in reading. However, her study did not involve direct observation of affective quality nor direct assessment of children’s interest but instead coded types of verbal comments/questions during reading and mothers’ reports of the frequency with which their children asked to be read to or read by themselves. DeBaryshe had hypothesized that maternal beliefs about children’s literacy development would predict socialization practices, which in turn would predict children’s interest in reading. She used two separate samples of mother/preschool children dyads. Both samples were predominantly African-American, one low income, the other mainly working class families. To assess maternal beliefs, mothers filled out questionnaires about their views on their role as their children’s

teachers of school-related skills, the importance of positive affect associated with reading, importance of the child's participation in the reading interaction and several other factors. Information about reading practices was based on tape recordings of a dyadic reading interaction. These recordings were coded for the types of conversation that occurred, including the nature of questions asked and the type of feedback given to the child. Children's interest in reading was indexed by maternal ratings of their children's enjoyment of being read to, requests for others to read to them and frequency with which children read on their own. The pattern of results was fairly consistent across the two samples. Although maternal beliefs about literacy development predicted reading practices, reading practices did not predict children's interest in reading. However, maternal beliefs did predict children's interest in reading.

In this study, we considered the relation between the nature of the reading interaction, that is, the type of discussion that occurs during an interaction and the affective quality of the interaction, and children's motivations for reading.

### *1.2. The type of verbal comments during reading interactions*

Talk about the immediate content is the most common type of remark made by parents when reading to their children. However, the type of talk occurring during reading interactions may change depending upon how familiar a child or parent is with the book being read. For example, Phillips and McNaughton (1990) found that talk during parent-child reading interactions initially focused on the literal meaning of the text, but with repeated readings, parents began to ask children to make predictions and inferences that went beyond what was explicitly stated. Morrow (1988) found that there was more talk about the print and the story structure when reading a familiar book than an unfamiliar one; nevertheless, neither type of remark occurred much in naturalistic, non-intervention settings.

In this study, we have adapted Morrow's (1988) way of classifying utterances: content (*immediate or non-immediate*), *story structure*, *print/skills*. Immediate content talk is conversation about facts or ideas explicitly presented in the text. Non-immediate content talk is speech requiring one to go beyond what is explicitly stated in the text (e.g., calling for inferences or prediction). Story structure talk is speech about the structure of a story, such as reference to setting or characters; it includes, as well, reference to previous readings of the text. Print/skills speech are comments about print which serve to make children more aware of grapheme-phoneme associations and increase their knowledge of the alphabet.

### *1.3. Affective quality of reading interactions*

When parents read to their children they have the opportunity to interact positively with their children and create a pleasurable reading experience (Bus et al., 1995; Sonnenschein, Brody, & Munsterman, 1996). Although an increasing number of theorists have discussed the importance of the affective quality of interactions in fostering children's interest in reading, few studies have investigated affective aspects of storybook reading interactions.

Bus and her colleagues considered the quality of parent-child attachment and its relation to characteristics of reading interactions (e.g. Bus & van IJzendoorn, 1988, 1995; Bus, Belsky, van IJzendoorn, & Crnic, 1997). They typically, although not exclusively, observed mothers

interacting with their preschool children. Most of their studies were conducted in the Netherlands. Reading interactions received higher affective ratings when parents read with children who were securely attached. Such children appeared less distracted and their parents engaged in less discipline during reading interactions.

More recently, [Bus \(2001\)](#) discussed how a child's interest in reading may be fostered by the nature of the book reading experience. The parent provides the child with an enjoyable reading experience, one in which the parent bridges "the discrepancy between the child's world and the world of the book" (p. 182). Although affective ratings are based on the atmosphere during reading interactions, the nature of talk plays a role in shaping the atmosphere. For example, [Bus, Leseman, and Keultjes \(2000\)](#) noted that parents who themselves do not read frequently "are less inclined to initiate conversations that make texts enjoyable and comprehensible for young, inexperienced readers" (p. 71). [Baker et al. \(2001\)](#) found that the type of discussion that occurred during reading interactions between mothers and their first grade children was related to affective ratings of interactions; discussion about print resulted in less positive affective ratings.

Affective quality of reading interactions was viewed in this study as behaviors reflecting an enjoyable, engaging interaction. We focused on both the reader's and the child's behaviors: reading expression, physical contact, reader's (child's) apparent involvement with task, and reader's sensitivity to the child's involvement.

#### 1.4. *This study*

We need to consider *both* the type of utterances and the affective quality of reading interactions in order to understand their impact on children's early literacy development. The main question addressed by this study is what literacy-related components (phonological awareness, orientation toward print, story comprehension, and children's motivations for reading) are fostered by the affective quality of reading interactions and the type of talk that occurs during such interactions. As previous research has suggested that the nature of the talk during reading interactions differs depending upon how familiar the text is, a secondary question addressed differences in the nature of talk due to the familiarity of the text (e.g., [Morrow, 1988](#)). Accordingly, reading dyads shared both a familiar and an unfamiliar book.

Most studies of storybook reading have used an adult reader, either a family member (usually the child's mother) or the experimenter. It is important to extend the scope of inquiry to include reading interactions among siblings as a growing body of research suggests that older siblings frequently serve as socializing agents for their younger siblings. For example, [Azmitia and Hesser \(1993\)](#) reviewed literature showing that older siblings often assume a teaching role with their younger siblings, although other research suggests that the relative effectiveness of peers or siblings as teachers may vary depending upon the nature of the task ([Rogoff, 1990](#)). More generally, older siblings may play more of a caretaking role for their younger siblings in low income families in industrialized countries or in families in non-industrialized countries ([Heath, 1983; Rogoff, 1998](#)). There does not appear to be much research on the impact of older siblings reading with their younger siblings. However, there must be some assumption that older siblings can successfully read with their younger siblings, as teachers are often guided to recruit older siblings in families where the parents do not have the skill or time to read with their children.

In this study, we allowed the family to identify who typically read with the focal child. Several families identified a sibling as the primary reader. Unfortunately, too few families identified siblings as the main reader to enable us to statistically compare sibling and adult–child reading dyads. However, we present some descriptive information about reading interactions for the two groups.

## 2. Method

### 2.1. Participants

Focal children and their families were participants in a broad-based longitudinal study of children’s reading development. Children, at the time of recruitment into the larger study, attended inner-city preschools in Baltimore, Maryland characterized by one of four demographic profiles: low income, predominantly African-American; low income, predominantly European-American; low income, mixed ethnicity; and middle income, mixed ethnicity (see Sonnenschein et al., 1997).

As the purpose of this study was to characterize home-based storybook reading interactions, we included only families who reported that such interactions occurred at least once a month, based upon their responses to a structured interview, conducted several months prior to this study. In fact, most of the families in the larger project reported that their child read storybooks at home at least once a month. Thirty families participated: 13 low income African-Americans, 12 low income European-Americans, 3 middle income African-Americans, and 2 middle income European-Americans. (As is apparent, there were few middle income families. In part, this was an artifact of our selection criteria for recruitment into the larger study. There were few mixed ethnicity, middle income schools from which to sample as many middle income families in this city send their children to private schools.) Given the limited number of middle income families, no sociocultural differences were considered in this paper. Of the 30 families who participated in this study, 27 reported reading storybooks with their children at least once a week.

This study took place in the summer after the completion of preschool. The mean age of the focal children at the time of the storybook reading interaction was 5.21 years ( $SD = 3.40$  months). The mean age of the children’s mothers, the typical primary caregiver, was 30.86 years ( $SD = 5.61$ ). The mean number of years of schooling completed by the children’s mothers was 10.70 ( $SD = 2.13$ ).

A few days before our observation, a research assistant telephoned the parents to explain the upcoming visit and identify who usually read with the focal child. In most cases, the typical reader was a parent. In seven cases the reader was an older sibling (or in one case a non-related older child) between 8 and 12 years old. Approximately half the children read to by siblings were African-American and half were European-American. Two of the children (one African-American and one European-American) read to by siblings came from middle income families. All but 3 of the 20 children read to by their parents came from low income families. About half of the children read to by parents were African-American and half were European-American.

## 2.2. Materials and procedures

### 2.2.1. Overview

Data collection in this study, which is part of a larger longitudinal one, began the summer before children entered kindergarten and continued through the fall of first grade. Storybook reading interactions were observed in children's homes during the summer before children started kindergarten. Children were individually assessed in school with a battery of emergent literacy measures in the spring of kindergarten. During this same time period, parents were again asked how frequently their children read books with others at home. Note that responses to the reading frequency question before children entered kindergarten served as selection criteria for this study whereas responses to this question during kindergarten served as data for statistical analyses. Children were individually interviewed about their attitudes towards reading during the fall of first grade.

### 2.2.2. Reading observation

As part of our pre-observation telephone conversation, parents were asked if we could videotape their child reading two books, a familiar one, available in the home, and an unfamiliar one, *The Wolf's Chicken Stew* (Kasza, 1987), to be provided by us. In the few cases ( $N = 4$ ) where parents indicated they had no available book, we also provided, *Where's That Bus?* (Browne, 1991). Although we specified storybooks during our pre-observation telephone call, a few parents chose either alphabet or rhyming books as their child's familiar book.

Upon arriving at the child's home, the research assistant asked the parent to choose a place in which the dyad usually read and the video equipment was set up there. Dyads were told "We would like the two of you to read a story like you normally would. Try if possible to pretend we are not here and act as natural as possible." The camera was then turned on, and the research assistant left the room or pretended to be busy, remaining as unobtrusive as possible. Dyads first read the familiar book, followed by the unfamiliar one. In three cases only one book was read due to either the reader's request to discontinue or the child's inattentiveness or misbehavior.

### 2.2.3. Coding types of utterances made during reading interactions

Videotapes were transcribed and the written transcriptions were used for coding, with reference to the video as necessary. Only relevant utterances were coded. Each relevant utterance was coded as either *content* (*immediate or non-immediate*), *print/skills*, or *story structure*. *Immediate content* talk referred to conversation about facts explicitly presented in the text (e.g., "See that's Woodstock right here, right and that's all his friends."). *Non-immediate content* talk referred to character motives, predictions, external associations and facts not explicitly presented in the text (e.g., "Do you think he's gonna get his chicken stew?"). *Print/skills* speech was talk about print serving to make children more aware of grapheme–phoneme associations and to increase their knowledge of the alphabet (e.g., "N is also in your name"). *Story structure* talk was speech describing reference to setting, characters, theme, plot episodes and resolution as well as comments reminding the child that he had read the story another time (e.g., "All this took place on a rainy day."). Both frequency scores and proportion scores (based upon the total number of relevant utterances) were calculated for each type of utterance.

Table 1  
Coding criteria for affective quality ratings

Category	Scoring and criteria
Reading expression	1—Monotonous, flat reading, little attention to punctuation 2—Some tonal change, no imitation of voices; moderate expression 3—Expressive, multi-tonal reading; imitation of character voices, expression suggests suspense, etc.
Contact with child	1—No or very little contact 2—Occasional or little contact, less than 50% of time 3—Contact greater than 50% of time—arm around child, child on lap
Reader’s appearance of involvement	1—Distracted behavior, little smiling or laughing related to story, irrelevant questions 2—Looks at book 25–75% of time, some appropriate laughing, smiling, asking questions 3—Attends to story most of time, appears to enjoy story most of time, asks questions, smiles, laughs
Child’s appearance of involvement	1—Distracted behavior, little smiling or laughing related to story, irrelevant questions 2—Looks at book 25–75% of time, some appropriate laughing, smiling, asking questions 3—Attends to story most of time, appears to enjoy story most of time, asks questions, smiling, laughing
Reader sensitivity to child’s engagement	1—Displays none of behaviors listed below 2—Displays 1 or 2 of following behaviors: asks child if enjoying story, acknowledges child’s feelings, periodic eye contact to gauge child’s interest, attempts to recapture child’s attention if waning 3—Displays 3 or more of the listed behaviors

Inter-rater reliability was computed by having a second rater independently code ten story-book reading interactions. Overall inter-rater agreement (Kappa) was .85 (immediate content .80, non-immediate content .70, print/skills 1.00, and story structure .90).

2.2.4. *Coding affective quality of reading interactions*

Coding was based on viewing the videotape. Coding categories were developed from observable behaviors reflecting an enjoyable, engaging interaction: reading expression, physical contact, reader’s (child’s) apparent involvement with task, reader’s sensitivity to the child’s involvement (see Table 1). Scores for each category were summed for a composite score. A Cronbach’s alpha of .81 indicated adequate internal consistency for the composite.

Inter-rater reliability was computed by having a second rater independently rate ten of the dyadic interactions. Inter-rater agreement (Kappa) was .82 for the composite score, with a range of between .70 and .90 for each individual item.

2.2.5. *Storybook reading frequency*

Parents rated the frequency with which their children engaged in storybook reading on a 4-point scale: 0—activity did not occur, 1—occurred less than once a week, 2—occurred between once and several times a week, 3—almost daily occurrence.

### 2.2.6. Emergent literacy skills

Although our tasks were ones commonly used to assess children's emergent literacy knowledge, we nevertheless piloted the measures to ensure that the tasks were appropriate for our population.

Each child was individually tested in school during the spring of kindergarten by a female research assistant not previously known by the child, who was matched on ethnicity to the child. Testing took two sessions, each lasted around 20–25 minutes. The two testing sessions typically took place within a few days of each other. The order of tasks during the first session was: word recognition in environmental context, uppercase letters, rhyme detection, rhyme production. The order of tasks during the second session was: knowledge of functions of print, lowercase letters, alliteration detection, nursery rhyme knowledge, concepts about print, story comprehension. Sessions were video-taped.

The literacy-related measures were grouped into three domains based upon theory and statistical analysis: phonological awareness, orientation toward print, and story comprehension (see Sonnenschein et al., 1996).

1. *Phonological awareness*: Four tasks, adapted from MacLean et al. (1987), were selected as measures of phonemic awareness appropriate for preschool and kindergarten-aged children.

For the *nursery rhyme knowledge* measure, the child was given the name of five common nursery rhymes (e.g., Twinkle, Twinkle Little Star; Humpty Dumpty Sat on a Wall) and had to recite as much of each as possible. If the child had difficulty, the research assistant prompted with the first few words of the line, but the rhyming word was never prompted.

We had intended to use both these nursery rhymes as well as other non-traditional or “street rhymes,” which we thought might be more familiar to some of the children in our study. We attempted to elicit such rhymes from a pilot sample of children by asking them to tell us any rhymes they used when jumping rope, singing rap songs or playing hand-clap games. Our attempts were not successful; therefore we used only the traditional nursery rhymes.

The words in the rhyme and alliteration tasks were common one-syllable words familiar to kindergartners. Children heard instructions for each task then did some practice trials with feedback. For the *rhyme production* measure the child was asked to supply a rhyming word for each of eight target words. For *rhyme detection*, the child had to state which of two items rhymed with a standard. Similarly for *alliteration detection*, the child had to state which of two items began with the same sound as a standard. There were 10 trials for each detection task.

### 2.2.7. Coding of phonological awareness measures

Responses on the rhyme production, rhyme detection and alliteration detection tasks were scored as correct or incorrect. Given the nature of the measures it was deemed unnecessary to compute inter-rater reliability. Children's responses on the nursery rhyme knowledge task were rated on a 4-point scale: 0—no knowledge of the rhyme; 1—a little knowledge; 2—more knowledge, including some of the key rhyming words; and 3—knowledge of most or all of the rhyme. The scores were summed and divided by five to arrive at each child's nursery rhyme knowledge score. Inter-rater reliability was computed by having two raters independently score 10 of the nursery rhyme tasks. Inter-rater agreement was .93.

After each individual measure was scored, a composite phonological awareness score was computed based on the sum of the total proportion of correct scores (transformed into Z scores) for each task. A Cronbach's internal consistency alpha of .64 was obtained.

2. *Orientation toward print*: This domain also consisted of four tasks.

The *word recognition in environmental context* (Environmental Print) task, adapted from Harte, Burke, and Woodward (1982), explored how children use clues from the environment to derive meaning from print. Children were shown four familiar items, which were used by them at home, presented along with several distractors. Children had to produce or recognize the name of the familiar item when shown the object, its logo or its printed name.

For the object portion of this task, items were retrieved from grocery bags. The research assistant retrieved an item from her grocery bag and said, "Look, I have Cheerios." The child was then encouraged to retrieve and label an item from his (her) bag of groceries. For the recognition phase, items were randomly arranged on a table. The child was told to show a designated item to a stuffed animal. The next phase required the child to identify or recognize products by viewing just their logos which were pasted on an index card. The final phase involved identifying or recognizing products by reading the name typed on an index card.

The *concepts about print* task was adapted from Clay (1979). Children were shown a storybook, *Where's That Bus?* (Browne, 1991) and asked 10 questions about the printed matter (e.g., letter recognition, directionality of print, word boundaries, punctuation).

The *knowledge of functions of print* task was adapted from Lomax and McGee (1987). Children were shown common printed items (a newspaper, a children's book, a grocery list, a calendar, etc.), one at a time, and asked to identify them. If the child did not know the name of an item, the name was provided. The child was then asked how people use the item.

For the *letter recognition* task, children were asked to identify all the letters of the alphabet, lowercase and uppercase, printed on flashcards. Lowercase and uppercase letters were presented separately.

#### 2.2.8. *Coding of orientation toward print measures*

Responses on the word recognition in environmental context task were scored as correct or incorrect. Inter-rater reliability, based upon agreement between two raters who independently rated responses from ten children, was .98. Children's responses on both the concepts about print task and the letter identification task were scored as correct or incorrect. No inter-rater reliability was computed. Children's responses on the knowledge of functions of print task were scored for correct object identification as well as the ability to correctly state how the object was used. Inter-rater reliability was .90.

A composite score for orientation toward print was computed in the same manner as has been described for phonological awareness. A Cronbach's alpha of .77 was obtained for the composite.

3. *Story comprehension*: Children were read the book, *Where's That Bus?* (Browne, 1991) about an animal visiting a friend, and then asked to answer four questions about the story. Three of the questions required factual recall. The fourth required the child to integrate visual and verbal information from the story.

### 2.2.9. Coding of story comprehension task

Children's responses to the four questions on the story comprehension task were scored as correct or incorrect. Inter-rater reliability was .88.

### 2.2.10. Children's motivations for reading

A 20-item forced choice questionnaire developed by Scher (1996) (see Baker et al., 1997 for further description) addressed four aspects of motivation for reading: the child's enjoyment of reading, how much the child valued reading, the child's feelings of self-efficacy about reading and the child's interest in library reading.

Children were shown two stuffed animals by the experimenter who explained that the animals did not always feel the same way about some things, but neither was wrong. She then said, "I am going to ask you how you feel about some things. Other children may feel differently about these things, but I am interested in what you feel." For each question asked, the child was told that one animal felt one way and the other felt another. The child was then asked which animal was he (or she) more like. After making a choice, the child was asked whether he (she) endorsed that opinion a little or a lot. Prior to beginning the actual task, the child was given three practice items. After successfully completing the practice items, the child proceeded to the actual task of 16 test questions and 4 distractor items (see Table 2 for sample items).

### 2.2.11. Coding of children's motivations for reading

Responses to each question were scored on a 4-point scale: (1) response indicating that a child did not like something at all; (2) response indicating that a child liked something a little; (3) response indicating a moderate liking; (4) response indicating a strong liking. Points were totaled for a maximum of 64 points. Cronbach's alpha for the overall score was .86.

Table 2

Sample questions from motivations for reading scale

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#### Child's enjoyment of reading

1. Regal likes to read, Cha Cha doesn't like to read. Are you more like Regal or Cha Cha?
2. Regal thinks reading is boring, Cha Cha thinks reading is fun. Are you more like Regal or Cha Cha?

#### How much the child values reading

1. Regal thinks books can be used to find answers, Cha Cha thinks books cannot be used to find answers. Are you more like Regal or Cha Cha?
2. Regal thinks he will need to know how to read to do well in school, Cha Cha thinks he won't need to know how to read to do well in school. Are you more like Regal or Cha Cha?

#### Child's feeling of self-efficacy

1. Reading is easy for Regal, reading is hard for Cha Cha. Are you more like Regal or Cha Cha?
2. Regal thinks he will do well in reading next year, Cha Cha thinks he won't do well in reading next year. Are you more like Regal or Cha Cha?

#### Child's interest in library reading

1. Regal likes to get books from the library, Cha Cha doesn't like to get books from the library. Are you more like Regal or Cha Cha?
  2. Regal likes to go to the school library, Cha Cha doesn't like to go to the school library. Are you more like Regal or Cha Cha?
-

### 3. Results

The presentation of findings is divided into two parts. Section one describes the reading interaction. Section two addresses the relation between book reading and children’s early literacy skills as well as their motivations for reading. Although 30 children participated in the reading interactions, complete data are not available for all measures. Accordingly, the N changes across analyses.

#### 3.1. Description of reading interactions

Table 3 shows means and standard deviations for the proportion and frequency of each type of utterance for both the familiar and unfamiliar book. Prior to being subject to analyses, all proportion data were transformed using an arcsine transformation, as recommended by Cohen and Cohen (1983) to compensate for unequal intervals on the proportion scale.

A two-way repeated measures analysis of variance (book familiarity × utterance type), using the transformed proportion data, was performed to determine whether the proportion of comments differed due to the type of utterances and the familiarity of the book. Only dyads in which the same reader read both books ( $N = 19$ ) were used in this analysis. There was a significant effect for utterance type,  $F(3, 54) = 16.83, p = .001, \eta^2 = .52$ . The source of the significant main effect was followed up with a series of Bonferroni  $t$ -tests. Immediate content utterances occurred significantly more frequently than story structure utterances,  $t(54) = 4.50, p = .003, \text{effect size} = .62$ , which in turn occurred significantly more frequently than non-immediate utterances,  $t = 3.00, p = .05, \text{Cohen’s } d\text{-effect size} = .12$  or print/skills utterances,  $t = 7.00, p = .001, \text{Cohen’s } d\text{-effect size} = 1.7$ .

We also considered the relation between the different types of talk and the affective quality ratings of the interactions as there is some suggestion in the literature of relations between the

Table 3  
Mean proportion (SD) and frequency of utterance types for familiar and unfamiliar books

Type of utterance	Familiar book	Unfamiliar book	Collapsed across familiarity
<b>Immediate content (SD)</b>			
Proportion	.44 (.28)	.45 (.28)	.44 (.28)
Frequency	5.84 (7.52)	6.11 (8.85)	5.97 (8.19)
<b>Non-immediate content (SD)</b>			
Proportion	.16 (.19)	.09 (.12)	.13 (.15)
Frequency	2.32 (2.71)	1.79 (2.32)	2.05 (2.52)
<b>Story structure (SD)</b>			
Proportion	.21 (.16)	.35 (.29)	.28 (.23)
Frequency	2.74 (3.18)	2.79 (2.44)	2.76 (2.81)
<b>Print/skills (SD)</b>			
Proportion	.13 (.23)	.00 (.08)	.06 (.15)
Frequency	1.58 (2.57)	0.05 (0.23)	0.82 (1.40)

Note:  $N = 19$  (families who read both the familiar and unfamiliar book).

Table 4

Mean frequency (*SD*) of storybook reading characteristics for parent and sibling readers

	Reader			
	Familiar book		Unfamiliar book	
	Parents ( <i>N</i> = 13)	Siblings ( <i>N</i> = 7)	Parents ( <i>N</i> = 20)	Siblings ( <i>N</i> = 7)
Total content	8.85 (10.31)	6.13 (6.83)	8.55 (10.77)	2.29 (3.95)
Immediate content	6.46 (8.00)	3.38 (6.16)	7.05 (8.00)	1.86 (6.16)
Non-immediate content	2.38 (2.87)	2.75 (3.41)	1.50 (2.32)	.43 (1.13)
Story structure	1.69 (1.70)	4.00 (4.24)	3.20 (2.29)	2.00 (2.70)
Print/skills	2.00 (2.86)	.63 (1.41)	.65 (2.46)	.00 (.00)
Total utterances overall	12.54 (10.94)	10.75 (10.26)	12.40 (12.35)	4.29 (4.53)
Total affective score	11.69 (2.21)	8.71 (2.56)	11.11 (2.79)	8.57 (1.40)

two factors. We limited the analyses to the unfamiliar text as there were more such reading interactions with that type of text. There were significant correlations between the affective ratings and several of the types of talk: story structure,  $r = .54$ ,  $p = .003$ , and non-immediate content utterances,  $r = .40$ ,  $p = .04$ .

As previously noted, approximately one-third of the children were read to by siblings instead of parents. Means and standard deviations for type of utterances and the affective quality of the reading interactions for the adult and sibling readers are presented in Table 4. Based upon perusal of Table 4, affective quality ratings appeared higher when parents rather than siblings were readers for both the familiar and unfamiliar books. There also appeared to be some differences in how much talk occurred when the book was unfamiliar.

### 3.2. Contributions of book reading to early literacy development and motivations for reading

Table 5 presents the mean proportion of correct responses on the early literacy measures and the mean score on the motivations for reading questionnaire. There was some variability across the tasks with the lowest mean score occurring on the environmental print task and the highest on story comprehension. On the environmental print task, children typically were able to recognize products and logos but had difficulty recognizing the actual printed word without any accompanying contextual information. Children generally had positive attitudes about reading as shown by their scores on the motivations for reading questionnaire.

Multiple regression analyses were used to explore the influence of storybook reading characteristics on children's early literacy development. However, given our small sample, we needed to limit the number of analyses conducted. We first computed zero-order correlations between characteristics of the reading interactions, that is type of utterance and affective quality, and early literacy competencies in order to limit the regression analyses to only those in which the criterion variables were significantly correlated with characteristics of the reading interactions. We did not include print/skills utterances as such comments were rare. All regression analyses were based upon data from the unfamiliar book reading interactions as there were more available data for that text. In several cases no data were available for a specific child on a specific measure (e.g., reading frequency or aspects of the reading interactions). In such cases, a mean

Table 5  
Mean correct responses (SD) on early literacy and motivation measures

Task	Mean (SD)
Orientation toward print composite: mean proportion correct	
Concepts about print	.64 (.16)
Environmental print	.47 (.19)
Functions of print	.63 (.16)
Letter recognition	.75 (.28)
Phonological awareness composite: mean proportion correct	
Alliteration detection	.69 (.18)
Nursery rhyme knowledge	.69 (.14)
Rhyme detection	.86 (.19)
Rhyme production	.47 (.30)
Story comprehension	
Mean proportion correct	.88 (.16)
Motivations for reading <sup>a</sup>	49.59 (10.28)

Note: *N* = 29.

<sup>a</sup> Maximum possible score of 64. Ratings of 1–4 with 4 indicating positive motivation.

score was computed based upon the entire sample for whom such data were available. This mean score was substituted for the missing score.

The zero-order correlations between characteristics of the reading interactions and early literacy competencies are shown in Table 6. Talk about the content of the story, either immediate or non-immediate content, and the affective quality of the interaction were significantly correlated with children’s subsequent reading motivations. There were no significant correlations between the type of talk and the other criterion variables.

Table 6 also shows the correlation between reading frequency and components of early literacy, as reading frequency is considered relevant for literacy development (Scarborough & Dobrich, 1994). Reading frequency was significantly correlated with orientations towards print and phonological awareness but not with the other literacy components.

A multiple regression analysis was conducted with motivations for reading as the criterion variable and affective ratings and frequency of content utterances (all content utterances, both

Table 6  
Correlations between storybook reading characteristics, reading frequency and early literacy competencies

Early literacy competencies	Characteristics of reading interaction				
	Immediate content	Non-immediate content	Story structure	Affective quality score	Reading frequency
Phonemic awareness	-.07	-.04	.08	.31	.37*
Orientation toward print	-.19	-.22	.07	.06	.52**
Story comprehension	-.09	-.11	-.01	-.11	-.02
Motivations for reading	.37*	.40*	.15	.55**	.04

Note: *N* = 29.

\* *p* = .05.

\*\* *p* = .004.

Table 7

Contributions of storybook reading characteristics to children's motivations towards reading

	$R^2$	$R^2$ change	$F$ ( $R^2$ change)	$B$	Beta
Affective quality	.19	.19	5.87 ( $p = .02$ )	1.57	.44
Content utterances	.26	.07	2.12	.27	.27

Note:  $N = 29$ . Variables are listed in the order they entered the regression equation.

immediate and non-immediate) as the predictors. Although both types of utterances were significantly related to motivations towards reading, no specific hypotheses had been proposed for the relation between the type of utterance and children's motivations for reading. Because of concerns about the limited sample size and because of the significant interrelation between these two variables,  $r = .58$ ,  $p = .001$ , we combined the two types of content utterances. As shown in Table 7, only the affective quality of the interaction was significantly related to children's motivations towards reading.

#### 4. Discussion

To fully understand the impact of storybook reading, we need to consider the frequency and nature of utterances made during reading interactions, the affective quality of the interactions, characteristics of the participants, and how the interactions relate to children's reading development. The dyads in our study typically discussed immediate content. There were relatively few non-immediate or print/skills utterances. When such utterances were made, they were more likely to occur with familiar rather than unfamiliar books. Such a pattern is consistent with findings by Morrow (1988) and Phillips and McNaughton (1990).

Our study was one of only a few to consider the affective quality of reading interactions. In general, the affective quality in the observed interactions was quite high. Moreover, affective quality was a significant predictor of children's motivations for reading. A perusal of videotapes suggested that readers in interactions rated high on affective quality were attentive to their listener's engagement in the text and attempted to use the text to redirect a listener's attention, if it wandered. Other research by Baker et al. (2001) revealed a negative relation between affective quality and discussion of print. That is, the affective quality was lower when there was more discussion about the print. Future research should consider what other elements of reading interactions are related to affective quality.

How does the nature of reading interactions relate to the development of literacy-related skills? Neither the type of utterance nor the affective quality was significantly related to any of the literacy-related skills we assessed. Instead, consistent with Scarborough and Dobrich's (1994) conclusion, we found that reading frequency was the strongest correlate of children's literacy-related skills. In contrast, children's motivations for reading were best predicted by the affective quality of the reading interaction. Children who experienced more positive reading interactions at the start of kindergarten reported more positive motivations towards reading when they were in first grade.

These results add to the growing body of literature on children's literacy development. Storybook reading has long been considered one of the most important means of fostering

early literacy skills (Scarborough & Dobrich, 1994). Reading stories to a child gives one the opportunity to facilitate growth in the child's vocabulary and knowledge of the world, to familiarize the child with a structure commonly found in books most frequently read in the early grades of school, to demonstrate strategies for appropriating meaning from text and to engage in a fun interaction with a child. Depending on the nature of the text and discussion, theorists have suggested that reading to children can also help foster knowledge about print and phonological awareness. Our results, consistent with that of others, suggest that in everyday settings parents and young children talk about the meaning of the text when reading storybooks. They do not typically engage in talk considered relevant for increasing knowledge about print or phonological skills.

Theorists have stressed the importance of the nature of discussion while reading for literacy development. Less emphasis has been placed on the affective quality of reading interactions or children's interest in reading. As these results show, affective quality of reading interactions plays a role in sparking children's interest in reading. In other research we have shown that the general approach parents advocate for facilitating children's reading is related to their children's literacy development. An approach focusing on engaging the young child's interest by allowing him or her a role in choosing activities and by making reading interactions fun and interesting is also positively related to reading development; an approach focusing on skills inculcation is not (Baker et al., 1997; Sonnenschein, Baker, Serpell, & Schmidt, 2000). The impact of what we have called an entertainment orientation predicts children's early literacy scores during prekindergarten and kindergarten as well reading scores assessed during the first few years of elementary school.

In this study, we have focused on several factors predicting children's motivations for reading. Future research is needed to investigate the relation between motivations for reading and aspects of children's engagement in literacy-relevant activities and the development of literacy competencies. It is possible that motivations for reading do not have a direct effect on literacy development but rather an indirect one. Baker et al. (2001) suggested that children's interest in reading is fostered by a pleasant reading interaction which in turn leads to an increase in their reading challenging books. It is the increased reading activity which leads to higher reading scores. It is also possible that there is a reciprocal relation between children's motivations for reading and their literacy development. That is, children who are better readers may develop more positive reading motivations which could then impact on their activities and subsequent achievement.

The affective quality of a reading interaction, an aspect of the social context, is but one of several factors thought to facilitate children's motivations for reading (Gambrell & Morrow, 1996). Other factors thought to predict reading motivations include the child's role in selecting a text for reading, how interesting the text is, and how understandable it is (Gambrell & Morrow, 1996; Oldfather & Wigfield, 1996). Various factors considered relevant for fostering motivations for reading have tended to be studied independently of each other. However, it is reasonable to assume that some of the factors may interact. For example, would the importance of the social context vary depending upon the type of text or the child's role in choosing a text? Furthermore, although the type of talk that occurred during reading interactions was not related to subsequent reading motivations in this study, it may be related in situations where the text is harder for the child to understand.

The factors that predict motivations for reading when children are in kindergarten or just beginning school may differ from those that become relevant as the children get older. Future research should explore possible changes in the factors predicting motivations for reading as children develop and become independent readers.

#### *4.1. Implications for educational practice*

Teachers commonly urge parents to read with their children but give little guidance as to the nature of the reading interactions. Reading with children is important but what actually occurs during reading interactions may be as important as the frequency with which such reading occurs. That is, the affective quality of reading interactions with young children may be important for fostering their interest in reading. Such an interest may spark the actual desire to engage in activities that lead to reading development.

Teachers should not only suggest that parents read with their children but they should spend some time discussing ways to foster pleasant interactions. This may be particularly important for children whose parents have limited literacy skills. Teachers could attempt to model “good” reading interactions for interested parents, that is, ones that have a pleasant atmosphere and therefore could engage a child’s interest in reading. Alternatively, teachers could send home books on tape with accompanying texts to help minimize the demands on the parents’ reading skills. Teachers could also suggest that parents read different types or genre of texts with their children if parents would feel more comfortable reading non-storybook texts and thus create a more positive affective atmosphere.

Another approach for teachers to take with children who may not be experiencing positive reading interactions at home is to make sure that these children do have sufficient affectively positive experiences at school. Such experiences would include enjoyable reading interactions with the teacher and others in the classroom. In designing a classroom that allows for enjoyable reading interactions, consideration should be given to the type of text read and the child’s role in selecting texts for reading. It is also important for teachers to realize that the type of interactions that may help develop decoding skills (e.g., discussion about print) may be very different from those that foster a positive affective quality.

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