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Parents and Preschool Children Interacting with Storybooks: Children’s Early Literacy Achievement

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Abstract
This research reports on one area of a larger study in Western Canada examining the literacy activities of families from culturally diverse backgrounds. The research focused on parents’ interactions with preschool children in storybook sharing and children’s emergent reading development as measured by the Test of Early Reading Ability-2 (TERA-2). The sample consisted of 35 parents and children. Parents’ and children’s interactions in storybook sharing were videotaped and coded using a modified scale by Shapiro, Anderson, and Anderson (1997). Relationships were found between parents’ and children’s interactions in storybook reading and children’s early literacy achievement.

The purpose of this study was to examine the relationship between parents’ and children’s interactions in storybook reading and children’s literacy achievement. Storybook reading has been viewed as an important means for supporting young children’s literacy development. Of all the experiences said to contribute to early literacy, shared book reading is often considered to be the most important literacy experience between caregivers and children (Neuman, 1999). To develop accurate models of the home literacy environment, it is necessary to examine how parents
interact with their children when encouraged by educators to read to them (Senechal, LeFevre, Thomas, & Daley, 1998). Overall, storybook exposure in the early years of formal schooling has been shown to contribute to children’s language skills and has also been shown to relate to reading comprehension in the later primary grades (Senechal et al., 1998; Whitehurst, Zevenbergen, Crone, Schultz, Velting, & Fischel, 1999). Other models of literacy acquisition can be developed when findings of research with diverse cultural groups are incorporated into theories and models of early reading development (Hammer & Miccio, 2004). Moreover, insight into both parents’ and children’s interaction with text can challenge or refine theories about the importance of various types of interactions in storybook reading.

**Theoretical Frame and Background**

This research was based on a Vygotskian or social constructivist perspective that maintains that learning occurs in the context of shared meaningful activities, of which storybook reading is an example. According to Vygotsky (1978), adults deliberately structure shared activities within a child’s zone of proximal development so children can demonstrate more complex behaviors than they might on their own. One way children learn about literacy is by interacting with significant others in their lives. Specifically, in storybook reading, adults may phrase questions and statements in relation to children’s literacy knowledge. Parents can adjust the types of interactions with children to the child’s literacy knowledge, while also supporting a higher-level of learning.

One method of examining parent-child interactions in storybook reading is to examine the levels of cognitive demand associated with each interaction. Sigel (1970, 1993) referred to distancing as behavior or events that involve cognitive separation from the immediate environment. Cognitive distancing is evident in parent-child book sharing when parents ask certain types of questions and make statements that place more cognitive demands on children. Low-level distancing utterances include repeating text or labeling what is seen in the pictures. High-level distancing utterances involve more cognitive distance, such as explaining or extending the text (Leseman & de Jong, 1998). According to Bus and van IJzendoorn (1995), parents who engage children in higher level thinking skills are thought to benefit children’s literacy learning by promoting literacy understandings in terms of developing the skills of hypothesizing, predicting, and understanding the relativity of one’s own perspective to others.
Sonnenschein and Munsterman (2002) and Phillips and McNaughton (1990), found that while parents and older siblings focus on various types of interactions in storybook reading with preschoolers, there was little focus or talk about print. Evans and Saint-Aubin (2005) researched children’s focus on print in storybook sharing by videotaping children’s eye movements when they were being read to by a parent or a preschool teacher. They found that based on the children’s eye fixations on the print, when read a storybook by a teacher or parent, the children pay little attention to print.

In relation to children’s achievement, in a study of Turkish, Surinamese, and Dutch families living in the Netherlands, Leseman and de Jong (1998) found that there were differences in children’s receptive knowledge of Dutch words after parents engaged in storybook sharing with their children. Interactions during book reading revealed differences among each cultural group. According to the researchers, the Turkish group, relative to both of the other groups, pointed far less to the pictures in the book and also uttered fewer picture labels and descriptions. It seemed that Turkish mothers made less use of pictures in the storybook to support their young children’s understanding of the story. Furthermore, the Dutch group engaged in fewer utterances requiring literal repeating and completing of read sentences than the Surinamese and the Turkish group. Higher level utterances (i.e., explaining, evaluating, and extending utterances) were more predominant among the Dutch group than in the other groups, which seemed to relate to children’s vocabulary knowledge. Similarly, DeTemple (2001) found that engaging in non-immediate talk or higher-level utterances, such as drawing inferences and making predictions, while storybook sharing, was positively associated with children’s later literacy skills, including their emergent literacy knowledge and comprehension skills.

In one of the few studies to compare questions with comments, Kertoy (1994) examined the types of interactions between White, middle-class parents and children ages three to six years old. She found that questioning by the adult contributed to a greater percentage of the children’s utterances related to story structure and print than did commenting or general story reading by the adult. However, commenting by the adult contributed to a greater percentage of utterances by the child related to story meaning than did questioning or general story reading by the adult. Kertoy (1994) recommended that parents and teachers combine questioning and commenting during storybook reading to maximize opportunities for lengthier comments by children. Senechal, Thomas, and Monker (1995) found that four-year-olds who were asked what/where questions or who pointed to illustrations depicting the target word acquired significantly more words than peers who only
heard the text read verbatim. Vocabulary knowledge has also been shown to be a strong predictor of reading comprehension and academic achievement (Pressley, 2006). These studies signify the importance of having children actively involved in the shared-reading experience.

To gain a better understanding of the quality of interactions in storybook sharing, this study addressed the need to focus on areas of interactions in storybook reading that may relate to children’s literacy achievement. Because most research on storybook reading has involved White, middle-class families, this study also extends our understanding by providing an exploratory account of the way in which families from diverse backgrounds interact in storybook reading. In particular, the research questions addressed in this study were: Do parents’ and children’s interactions in storybook reading relate to young children’s literacy achievement as measured by the TERA-2? If so, what types of interactions relate to children’s literacy achievement?

**Method**

**Participants**

Participants included 35 parents and their preschool-age children living in an urban area of Western Canada. Children were three \((n = 12, \text{range = 36-45 months, } M = 41.17, SD = 2.72)\) or four \((n = 26, \text{range = 48-59 months, } M = 52.92, SD = 3.90)\) years of age and were attending preschool. There were 13 boys and 22 girls along with 28 mothers and seven fathers in this study. Parents were from diverse cultural backgrounds; the sample included East Asian Canadians, South Asian Canadians, European Canadians, First Nations (Native Canadians), and Mexican Canadian families. Most parents (24) had a post-secondary education.

**Procedure and Instruments**

Daycare centers and preschools in a number of neighborhoods with diverse populations were contacted. Many areas of the city where this study was conducted were very culturally diverse so the sample would be representative of this area. Preschool administrators were contacted and those who agreed to participate distributed a permission letter and information about the study to the classroom teachers and parents. The information letter, sent to the administrators by the researchers, outlined the purpose of the study (i.e., to examine how parents from diverse cultural groups support their young children’s multiliteracy development) and
the types of tasks in which parents and their children would engage. As the literacy measure used in this study is standardized for age three and above, we asked that only parents of children ages three and four be contacted. The researchers were also particularly interested in working with children before they began formal schooling to examine how storybook interactions may relate to children’s achievement. Furthermore, we asked that because of the diversity of languages spoken, parents who could complete most of the tasks in English be approached.

This study was part of a longitudinal study on multiliteracies. As part of the larger, longitudinal study, parents and children were involved in a number of tasks. These included interviews with parents about their literacy beliefs, videotaping parents and children playing a board game, and experiencing shared reading twice over a two-year period. Children were assessed for language, literacy, and early mathematical knowledge. In particular, the tasks and the analysis presented in this article were from a videotaped parent-child shared reading session and children’s performance on the TERA-2 measure (Reid, Hresko, & Hammill, 1989).

Depending on their preference, parents were videotaped sharing a storybook with their children either at the preschool or in their home. Children were then assessed by using the TERA-2 (Reid et al., 1989). The TERA-2 was selected for this study because of its examination of many aspects of children’s literacy development. Moreover, its uniqueness lies in its assessment of reading behavior that emerges during the preschool years (Reid et al., 1989). It is a norm-referenced test of early literacy achievement based on the work of researchers in emergent literacy from the 1960s to present (Harp, 1996).

**Videotaped Shared Reading**

Parents were asked to share a storybook with their child as they normally would, in their home or at the preschool, and were videotaped by one of the researchers. Approximately half of the parents chose to be videotaped at home, while others chose the preschool where a quiet area was chosen to minimize distraction. Parents and children sat side-by-side and were given time to feel comfortable with the video recorder. The researcher would appear distracted or would leave the room while the videotaping was in progress. Because this study was part of a longitudinal study and there was a need to control for book familiarity as tasks would be repeated over time, two different narratives were used, *Swimmy* (Lionni, 1991) and *Mr. McMouse* (Lionni, 1992). The books were counter-balanced in this study and were chosen in consultation with two specialists in children’s literature who
recommended the storybooks because of their popularity and their general accessibility to the public. All verbal and gestural interactions during book sharing on the videotapes were transcribed. Whether the child or parent spoke or gestured while story sharing, and whether the verbal interaction was phrased as a question or statement, were included in the transcriptions. When a parent or child spoke a second language during story sharing, these interactions were transcribed into English and included in the analysis. Second language use was minimal during book sharing. Data from the videotaping were analyzed using a modified category scheme developed by Shapiro, Anderson, and Anderson (1997). This scheme was used because of its focus on different levels of thinking skills associated with particular types of interactions and its level of complexity in the evaluation of storybook interactions. When a word, phrase, or sentence was separated by a pause or the injection of a new speaker, this was then coded as an interaction. In addition, the speaker, whether the parent or child, was recorded. Most obviously, Shapiro et al.’s (1997) scheme was modified by differentiating questions from statements within each category, rather than using questioning as a separate category. The specific coding categories (Lynch, 2004) used in this study as well as examples of the categories are listed in Figure 1.

**Figure 1.** Coding Categories and Examples from Videotapes

<table>
<thead>
<tr>
<th>Gestures</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Gesture 1: Parent points to the illustration.</td>
</tr>
<tr>
<td>- Gesture 2: Child points to the illustration.</td>
</tr>
<tr>
<td>- Gesture 3: Parent points to the print.</td>
</tr>
<tr>
<td>- Gesture 4: Child points to the print.</td>
</tr>
</tbody>
</table>

**Print/graphophonics:** Parent or child makes statements or asks questions about the print.

- Child: Those letters are a mouse too.
- Parent: There is the word mouse.

**Confirmation:** Parent or child confirms what is written in the text by paraphrasing the text, repeating the text exactly, or confirming what is in the illustrations.

- Parent reading text: HE SWAM FASTER THAN HIS BROTHERS AND SISTERS. HIS NAME WAS SWIMMY.
- P: His name was Swimmy. Did he swim fast?
Parents and Preschool Children

Nineteen categories of interactions were focused on in this study (see Table 1). Only one child asked a question about print, and because this child also made statements about print, children’s statements and questions have been combined for this category only and labeled children’s statements/questions about print. Furthermore, prediction and association questions and comments were omitted from the analysis of this study because of the low frequency of responses falling into these categories.
### Table 1. Total Number and Mean Scores of Parent-child Interactions

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Total</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 35</td>
<td>N = 35</td>
<td>N = 35</td>
</tr>
<tr>
<td>Gesture 1</td>
<td>320</td>
<td>9.14</td>
<td>8.48</td>
</tr>
<tr>
<td>Gesture 2</td>
<td>223</td>
<td>6.37</td>
<td>6.06</td>
</tr>
<tr>
<td>Gesture 3</td>
<td>56</td>
<td>1.60</td>
<td>3.01</td>
</tr>
<tr>
<td>Gesture 4</td>
<td>14</td>
<td>.40</td>
<td>.91</td>
</tr>
<tr>
<td>Print 1</td>
<td>50</td>
<td>1.43</td>
<td>3.64</td>
</tr>
<tr>
<td>Print 2</td>
<td>34</td>
<td>.97</td>
<td>4.39</td>
</tr>
<tr>
<td>Print 3</td>
<td>30</td>
<td>.86</td>
<td>2.29</td>
</tr>
<tr>
<td>Confirmation 1</td>
<td>520</td>
<td>14.86</td>
<td>13.51</td>
</tr>
<tr>
<td>Confirmation 2</td>
<td>395</td>
<td>11.29</td>
<td>9.20</td>
</tr>
<tr>
<td>Confirmation 3</td>
<td>329</td>
<td>9.40</td>
<td>12.11</td>
</tr>
<tr>
<td>Confirmation 4</td>
<td>50</td>
<td>1.43</td>
<td>2.16</td>
</tr>
<tr>
<td>Clarification 1</td>
<td>193</td>
<td>5.51</td>
<td>5.23</td>
</tr>
<tr>
<td>Clarification 2</td>
<td>38</td>
<td>1.09</td>
<td>1.60</td>
</tr>
<tr>
<td>Clarification 3</td>
<td>47</td>
<td>1.34</td>
<td>2.09</td>
</tr>
<tr>
<td>Clarification 4</td>
<td>38</td>
<td>1.09</td>
<td>1.90</td>
</tr>
<tr>
<td>Elaboration 1</td>
<td>36</td>
<td>1.03</td>
<td>1.60</td>
</tr>
<tr>
<td>Elaboration 2</td>
<td>11</td>
<td>.31</td>
<td>.76</td>
</tr>
<tr>
<td>Elaboration 3</td>
<td>13</td>
<td>.37</td>
<td>1.09</td>
</tr>
<tr>
<td>Elaboration 4</td>
<td>2</td>
<td>.06</td>
<td>.24</td>
</tr>
</tbody>
</table>

**Note:** 1 = parent-statement; 2 = child-statement; 3 = parent-question; 4 = child-question.

Exception: Gesture 1 & 2 = point to illustration; Gesture 3 & 4 = point to print.

The sum for each interaction was used in the analysis. The first author coded all of the data. A graduate student who specialized in literacy education independently coded 26% of the randomly selected data by the researcher. An agreement of 81% was obtained before discussion, and 89% after discussion of the disagreements.
Early literacy development was determined using a standardized measure, the TERA-2. This assessment measures three components of reading - the ability to construct meaning, knowledge of the alphabet, and knowledge of the conventions of print (Reid et al., 1989). The following are examples of questions on the TERA-2: “Tell me about this. What can you get there?” (meaning), ”What letter is this? Tell me its name” (alphabet), and ”Which one is the letter? Point to the letter” (conventions). A reliability analysis was performed on the TERA-2 based on the results found in the present study. For this group of children, an alpha reliability of the total test was .76. Based on the age of most of the children in this study, they answered questions that focused on their understanding of meaning, such as being able to label or point to pictures of objects. Other questions focused on their ability to label or point to some of the alphabetic letters.

Data Analysis

In order to answer the research question, Pearson correlations (Gay, Mills, & Airasian, 2006) were used to examine relationships between parents’ and children’s interactions with text and children’s achievement. A t-test was conducted to examine whether differences existed in parent-child interactions based on the two storybooks shared. No significant differences were found.

Results

Parents’ clarification, \( r(35) = .40, p = .01 \), and elaboration statements, \( r(35) = .40, p = .01 \), related to children’s overall reading achievement. The findings suggested that the more parents made clarification and elaboration statements, the higher the children scored on the TERA-2. Parents may have also made more of these types of statements when children had higher literacy knowledge as assessed by the TERA-2. In addition, children’s confirmation questions related to their overall reading achievement, \( r(35) = .34, p = .04 \) (see Table 2). That is, the more confirmation questions children asked, the higher the children’s achievement. This finding could also suggest that the higher children’s achievement, the greater number of confirmation questions they asked during storybook reading. There were many interactions around the pictures as well as confirmation statements made by parents and children of what was pictured and written in the text. There were also similarities in the number of oral interactions about the illustrations (i.e., confirmation) and
gestures to the illustrations. Confirmation interactions ranged from two to 182 for each parent-child dyad and the average confirmation interactions for parent-child dyad were nine. Clarification comments by parents were also very popular in shared reading. There was, however, little focus on print in this shared reading activity (see Table 1).

Table 2. Correlations Between Parent-child Interactions and Children’s Literacy Scores

<table>
<thead>
<tr>
<th>Children’s literacy achievement (TERA-2)</th>
<th>Parent-child interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. points to illustration</td>
<td>.12</td>
</tr>
<tr>
<td>C. points to illustration</td>
<td>.10</td>
</tr>
<tr>
<td>P. points to print</td>
<td>-.01</td>
</tr>
<tr>
<td>C. points to print</td>
<td>.17</td>
</tr>
<tr>
<td>P. print statements</td>
<td>.20</td>
</tr>
<tr>
<td>C. print statements/questions</td>
<td>.18</td>
</tr>
<tr>
<td>P. print questions</td>
<td>.24</td>
</tr>
<tr>
<td>P. confirmation statements</td>
<td>.20</td>
</tr>
<tr>
<td>C. confirmation statements</td>
<td>-.01</td>
</tr>
<tr>
<td>P. confirmation questions</td>
<td>-.02</td>
</tr>
<tr>
<td>C. confirmation questions</td>
<td>.34*</td>
</tr>
<tr>
<td>P. clarification statements</td>
<td>.40*</td>
</tr>
<tr>
<td>C. clarification statements</td>
<td>.20</td>
</tr>
<tr>
<td>P. clarification questions</td>
<td>-.00</td>
</tr>
<tr>
<td>C. clarification questions</td>
<td>.23</td>
</tr>
<tr>
<td>P. elaboration statements</td>
<td>.40*</td>
</tr>
<tr>
<td>C. elaboration statements</td>
<td>.05</td>
</tr>
<tr>
<td>P. elaboration questions</td>
<td>.09</td>
</tr>
<tr>
<td>C. elaboration questions</td>
<td>.09</td>
</tr>
</tbody>
</table>

Note. P = parent; C = child, *p < .05.
Discussion

Parents’ Interactions with Children in Storybook Sharing

Wells (1985) found that the “ineffective” mother asked questions that focused on names and the “effective” mother asked questions that required much more from the child, such as asking exploratory questions. In this study, the types of questions asked by an “effective” parent would be classified as clarification and elaboration questions. Clarification and elaboration statements made by parents positively related to children’s overall literacy achievement, which may indicate the importance of explaining and extending the text for enhancing children’s early literacy development. It may also have been the case, as Bus and van IJzendoorn (1995) found in their study, that children were at a more advanced developmental level in literacy and parents were adapting to the children’s current literacy knowledge. Nevertheless, interactions involving high cognitive demands (i.e., parents’ clarification and elaboration statements) were related to children’s literacy achievement as measured by the TERA-2. Parent questioning was not as important for children’s literacy achievement as were statements made by parents in this study. Perhaps parents made statements about the text that they felt children could understand or were in the child’s zone of proximal development (Vygotsky, 1978). Questions asked by parents may also have been a way of testing children’s knowledge about the text, and therefore did not relate to children’s current knowledge. As children were three- and four-years-old, confirmation statements could be a first step in helping children understand the text.

This study supports the finding that there is little engagement in talk considered relevant for increasing knowledge about print during book sharing (Sonnenschein & Munsterman, 2002). It is evident in Table 1 that there were few interactions around print among this culturally diverse group. Except for one parent-child dyad who talked about print 37 times in one story sharing event, most parents and children interacted only a few times around print, with two-thirds of the sample talking about print once or not at all. Parent-child talk about print often related to a gesture to the print. As can also be seen in Table 1, the number of print talk interactions was similar to the number of gestures to the print. About one-third of the parents did not follow the print with their finger or they did so only once on one line of the text. Similar to Evans and Saint-Aubin’s (2005) findings, parents also focused more on discussing the story with children rather than using it as an opportunity to teach children about print.
The type of early literacy knowledge examined in this study focused mostly on children’s meaning development and some knowledge of letters. It has been shown that shared reading can support children’s vocabulary and comprehension development (Pressley, 2006; Senechal et al., 1998). Parents who engaged with children in discussions that went beyond labeling or pointing to objects in the text seemed to enhance their child’s literacy knowledge. This finding was similar to the results of DeTemple’s (2001) study. When parents pointed to or labeled objects, this may have been the result of parents’ perceptions that children did not already possess that particular knowledge and required further support in this area.

**Children’s Interactions in Storybook Sharing**

It seemed that children were taking more control over the learning process by contributing their own knowledge to the story, such as by asking questions about the text. Wells (1985) claimed that when children were encouraged to ask questions about events and their causes and significance, children’s awareness of the ways in which language can be used are developed and their inner representations of the world are enriched. Flood (1977) further supports the role of questions asked by children in storybook reading in literacy achievement. He found that the number of questions asked by children in book sharing was one of the best predictors of children’s success on pre-reading tasks. The confirmation questions children asked in this study related to their early literacy knowledge. Very little recent research has focused specifically on the role of children’s questions in the shared reading process. However, Phillips and McNaughton (1990) found that children ask more questions about the text over several readings.

**Conclusion**

This research has identified relationships between parents’ and children’s interactions with text and young children’s literacy achievement. It was found that parents’ statements that were more cognitively advanced related positively to children’s literacy achievement. Sorsby and Martlew (1991) have suggested that there may be a link between difficulties in reading and writing in school and difficulties with developing abstract approaches and strategies. The current findings suggest that storybook reading provides a context for parents to promote more abstract thinking in their children by modeling specific types of interactions with text. Parents may also have been perceptive to children’s current literacy knowledge and interacted with children in ways to extend that knowledge. The child’s role in the
interaction process was also important for their achievement. In the examination of storybook interactions, research has often focused specifically on the parents’ role in relation to children’s achievement. Hayden, Reese, and Fivush (1996) found that most of the comments made by children during storybook reading were not prompted by mothers. The study discussed in this article suggests that children’s interactions may reveal important information about their literacy development.

Many theories about how children become literate have been developed and are mostly based on research with Caucasian families (Bus, Leseman, & Keultjes, 2000). By including diverse groups in the sample of this study, this can contribute to a fuller understanding of children’s early literacy development. This study revealed similar findings to that of previous research with more mainstream groups, in that confirmation-type interactions were most common with preschool children with little focus on print in shared reading. However, in order to make generalizations about storybook reading and children’s literacy achievement, researchers should include diverse cultural groups in further studies. Indeed, “... there are still many unanswered questions concerning families from different cultural backgrounds and those who are from low socio-economic classes” (Cairney, 2003, p. 90). Because young children’s literacy knowledge is often built on in schools, it is important for educators to be aware of the ways in which parents support children’s early literacy knowledge at home. This study highlighted the importance of culturally diverse parents and children story sharing by demonstrating the connections between interactions and achievement.

There were several limitations of this study. First, the use of videotapes may have influenced parents’ behaviors while reading to their child. Nevertheless, in order to capture what happens when parents read to their children, including their gestures to the text and illustrations, this necessitated the use of video recording. There may also be some cultural incongruency with asking parents to read to their children when they do not do this on a regular basis. However, because parents volunteered to participate, it can be assumed they had some experience reading to their children. Furthermore, the results presented here were those of one shared reading experience and the findings may vary among several shared reading activities. Nevertheless, the goal of this analysis was to examine some of the trends in storybook sharing with diverse cultural groups in relation to an early reading measure.

This study provided a detailed account of the types of interactions associated with one particular group of young children’s early literacy knowledge. It is important for parents to continue to support their child’s literacy development
in ways that relate to their achievement. Even when parents are adjusting their storybook interactions with children in relation to the child’s current knowledge, one goal of story sharing is to further develop the learning experience for children. Many classroom teachers extend children’s literacy knowledge by engaging in higher level interactions, such as by making clarification and elaboration statements, as engaged in by some parents in this study. Parents need to be aware that specific types of interactions they engage in with children around storybooks at home may support children’s early literacy development in schools. It is important for further research to examine the role of child initiated interactions in this process. This study provides supporting evidence of the positive association between higher level storybook interactions and children’s early literacy achievement among families from diverse cultural groups.

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References


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