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Sharing information books with kindergartners: The role of parents' extra-textual talk and socioeconomic status

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ABSTRACT

The purpose of the study was to explore how features of parent–child extra-textual talk during information book-sharing might vary across different socioeconomic backgrounds, and to determine if certain interactional patterns might mediate their effects on children's receptive and expressive vocabulary development. Sixty parents and their 5-year-old children were audio-recorded reading an unfamiliar information book in their home. Holistic coding on six parent and two child engagement scales, examining low to high cognitive demanding talk was conducted. Results indicated that lexical richness and contingent responsiveness positively predicted receptive and expressive vocabulary. Further, contingent responsiveness appeared to mediate the influence of socioeconomic status on children's receptive and expressive vocabulary, suggesting that positive environmental contexts and supportive parent–child interactions can have a powerful influence on children's development.

In many homes, parent–child book reading is ubiquitous prior to formal schooling (Anderson, Hiebert, Scott, & Wilkinson, 1985). Narrative reviews (Scarborough & Dobrich, 1994) and meta-analyses (Bus, Van Ijzendoorn, & Pellegrini, 1995; Mol & Bus, 2011; Mol, Bus, De Jong, & Smeets, 2008) exploring the frequency of storybook reading, and the interactions that take place during parent–child activity have reported significant effects on children's vocabulary development and written language skills. These studies have converged on the contributions of book reading for developing vocabulary, a significant predictor of reading comprehension (Cunningham & Stanovich, 1991; Storch & Whitehurst, 2002). In homes where many books are prevalent, and parents engage in book-reading routines, children are likely to come to school with richer vocabulary skills associated with school readiness (Mol & Bus, 2011). In brief, these studies emphasize that shared book reading can be a dynamic context to improve the quantity and quality of the language interactions around text.

These findings build on the understanding that it is the extra-textual talk—the conversation that supports the book—which can give children a long-lasting language advantage (Whitehurst et al., 1988). Such extra-textual talk has been conceptualized along a continuum ranging from less cognitively challenging to more cognitively challenging utterances (A. Anderson, J. Anderson, Lynch, Shapiro, & Kim, 2012; Price, Van Kleeck, & Huberty, 2009). Less cognitively demanding utterances, for example, may involve simply labeling, pointing to pictures, and asking 'what' questions (Mason & Sinha, 1993); in contrast, high cognitively demanding utterances may include the use of generic nouns, categorization, and references to events not present in the text (Gelman & Raman, 2003; Sigel, 1982). Studies (Gelman, Coley, Rosengren, Hartman, & Pappas, 1998; Tizard & Hughes, 1984) have shown that parents' use of high cognitively demanding utterances is associated with children's receptive and expressive language.

Yet as many researchers have reported, there are wide variations across parents in the amount and quality of extra-textual talk during book sharing (Hess & McDevitt, 1984; Neuman & Celano, 2012; Sénéchal, LeFevre, Thomas, & Daley, 1998). Heath (1983), for example, found differences in book-reading styles between middle- and working-class families, with working-class families less likely to discuss and relate events in the story to children's lives. Bus, Leseman, and Keultjes (2000) observed differences in book reading interactions among Dutch, Surinamese-Dutch, and Turkish-Dutch families in the Netherlands, and found that Dutch parents were more likely to relate the story to their children's lives, and engage

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in decontextualized conversations than parents from the other cultural groups. These differences in interactions were attributed to the parents' own literacy levels and the possible role of culture in child-rearing. Within the book-sharing context, children may be socialized very early on in the types of talk that are considered to be appropriate.

These socioeconomic and cultural differences in the quality of parent–child interactions seem to be especially salient for children's early language development (Hart & Risley, 1995). Numerous studies (Hoff, 2003; Weizman & Snow, 2001) have reported differences in the lexical richness of parents' interactions (e.g., sophisticated vocabulary; elaborated sentences) between higher-SES parents compared to lower-SES parents. Children from economically disadvantaged circumstances tend to have less extensive vocabularies before they enter school than their middle-class counterparts (Hart & Risley, 1995; for a critique of this research, however, see de Villiers & Johnson, 2007; Miller, Cho, & Bracey, 2005; Stockman, 2010). From this perspective, vocabulary differentials are an important factor contributing to the achievement gap between poor and middle-income children (Farkas & Beron, 2004; Hart & Risley, 2003). By second grade, middle-class children are likely to have acquired around 6000 root word meanings whereas children in the lowest quartile on the Living Word Vocabulary List (Dale & O'Rourke, 1981) around 4000 root words, a gap estimated to equal about two grade levels (Biemiller, 2006).

In addition to lexical richness, studies have also shown that parents' verbal responsiveness to children's cues, and their uses of contingent responses during book-sharing activities (Landry, Smith, Swank, Assel, & Vellet, 2001; Leseman & De Jong, 1998; Neuman & Gallagher, 1994) may uniquely contribute to children's language skills. That is, responsive parents tend to interact in ways that are sensitive to children's cues, acknowledging their interests, attention spans, and vocabulary. Children, in turn, seem to talk more. In fact, a recent study suggests that contingent responses in book sharing interactions may partially mediate the relationship between SES and language outcomes (Raviv, Kessenich, & Morrison, 2004).

Further, there is evidence to suggest that parents' responsiveness and children's initiative may be bi-directional. Snow (1986) found that mothers were able to provide children with semantically relevant speech because it followed up on topics initiated by the child. In such responsive contexts, children asked questions that are related in topic and structure, suggesting that the goal of this behavior is to recruit needed information. Examining children's questions in a series of studies, Chouinard (2007) noted that the content of these questions shifted within exchanges over the course of development in ways that reflected concept building. Children generated questions efficiently, tapping into their existing conceptual knowledge to gather needed information.

Book-sharing research, however, has relied almost exclusively on storybooks, and most of the interest in information books has been in the context of classrooms and teacher–child book sharing (Yopp & Yopp, 2006). Nevertheless, there have been a small number of studies that have revealed ways in which parent-child talk may differ during storybook and information-book reading. Pellegrini and his colleagues (Pellegrini, Perlmutter, Galda, & Brody, 1990) investigated the effects of genre on the interactions between 13 Head Start mothers and their children, and found that mothers offered more extra-textual comments with information text than during the storybook reading. Potter and Haynes (2000), studying 20 low-income toddler–parent dyads, found that parents exhibit significantly higher frequencies of asking 'wh-' questions, labeling and feedback when reading information books compared to wordless picture books. Price et al. (2009), in a study comparing storybook and information book conditions among middle-class families, found that parent utterances among 62 parent–child dyads were longer in the information book context than in the storybook context. Further, parents' extra-textual talk contained significantly greater vocabulary diversity with the information genre than storybooks, suggesting that these information books may represent a fertile ground for improving language development (Anderson et al., 2012).

In addition, these studies provide initial evidence that the information genre may elicit more cognitively demanding teaching interactions around vocabulary than narrative, especially for low-income parents. Pellegrini, Perlmutter, Galda, and Brody (1990), for example, reported significantly more utterances of high cognitive demand during expository texts reading (16%) compared to reading storybook texts (4%). Similarly, children used greater numbers of initiations, book-relevant responses to questions, and text-external response (e.g., text to life) with expository texts than storybook reading. Consequently, given the substantial differences in the accumulation of words among low- and middle income children's vocabulary prior to school entry, information books could serve as a potential resource for promoting vocabulary development.

Although findings from these studies are important and provocative, the samples were largely homogeneous; further, in two of the studies, sample sizes were small ($\leq$20 dyads). In addition, while initial comparisons of genres may capture the unique quality of each type of text, it may be more useful to determine the conditions under which a particular genre—in this case, information text—might influence parent–child utterances and its relationship to children's language development. This issue is particularly timely given that publishers in the U.S. have been asked to increase their informational selections to over 50% in their core reading programs in kindergarten through second grade (Coleman & Pimentel, 2011).

Further, there is evidence that factors in the home environment may well influence parent–child book reading (Bradley, McKelvey, & Whiteside-Mansell, 2011; Neuman & Celano, 2012). Book access, for example, has been shown to vary considerably among low-income and middle-income families. In a comprehensive audit of book access for children who lived in low-income and middle-income neighborhoods, Neuman and Celano (2001) reported striking differences across these communities: Whereas children in the middle-income neighborhoods had multiple opportunities to observe, use, and purchase books (estimated at about 13 titles per individual child), few such occasions were available for low-income children (estimated to be about 1 book for every 300 children). Further, using the World Inequality database (27 nations, $N = 73{,}349$), a recent study reported that the size of home libraries appeared to have a substantial effect on educational attainment even after adjusting for parents' education, occupational status and other family background characteristics (Evans, Kelley, Sikora, & Treiman, 2010). Substantiating this claim, several studies have shown that book access may mediate the relationship between SES and children's language development (Foster, Lambert, Abbott-Shim, McCarty, & Franze, 2005; Mistry, Biesanz, Chien, Howes, & Benner, 2008).

To this end, the aim of the current study was to examine the quality, variety, and responsiveness of parent–child extra-textual talk during information book reading and how this talk might predict children's language development—their receptive and expressive vocabulary. Previous studies have reported differential effects for these outcome variables measured. In Whitehurst et al.'s (1988) classic studies, for example, effects were found for young children's acquisition of expressive but not receptive vocabulary. In contrast, Sénéchal (1997) reported no differences between these outcome measures when children were listening to storybooks; whereas, active responding during book reading events enhanced children's expressive vocabulary more than their