

Level of abstraction in parent–child interactions: the role of activity type and socioeconomic status

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Background: Various conversational contexts elicit stimulating parent–child interactions to a different degree. Shared reading, a scripted activity, is reported to elicit most abstract speech compared with other activities (e.g., toy play). Parental socioeconomic status (SES) is another key predictor of abstract talk. Shared reading can attenuate differences in abstract speech between SES groups. In the current study, we compared abstraction of parent–child interactions during nonscripted prompting board and shared reading activities. A prompting board is a complex picture around a certain theme, depicting a scenario (i.e., a picture suggesting a sequence of events), and is meant to elicit child speech.

Method: We observed 44 parent–child dyads (87% mothers; child M_{age} : 63 months) from various socioeconomic backgrounds during prompting board and shared reading discussions and coded interactions for level of abstraction.

Results: Prompting boards were found to elicit both more, and more highly abstract speech (particularly inferencing) than shared reading, and children contributed more often to the conversation. Additionally, most speech on the lowest level of abstraction occurred during prompting boards (e.g., labelling and locating). Shared reading elicited more talk on intermediate levels (e.g., describing aspects of objects and characters and making comparisons to the child's life). Moreover, high-SES parents and children produced more highly abstract speech and less labelling and locating compared with low-SES dyads during both activities. Shared reading did not attenuate SES differences in abstract interactions.

Conclusions: Prompting boards seem promising for early intervention however, future intervention studies are needed.

Keywords: parent–child interactions, abstract language, early literacy, SES

Highlights

What is already known about this topic

- Parental abstract speech contributes to children’s emergent literacy skills and to later reading comprehension.
- Shared reading activities generally elicit more abstract speech than other types of parent–child activities (e.g., manipulative play).
- However, other activities that focus on symbolic representations (e.g., wordless picture books) can elicit abstract speech as well.

What this paper adds

- This study contributes to the research on stimulating parent–child interactions.
- This is the first study to compare parent–child interactions during prompting board activities and shared reading while also examining the interaction effect of activity type and socioeconomic status.

Implications for theory, policy or practice

- Prompting boards are able to elicit more highly abstract speech (particularly inferencing) than shared reading, from higher as well as lower socioeconomic status parents and children.
- Shared reading also elicits abstract talk, however, more often on a lower level than prompting boards.
- Prompting boards are inherently suited to stimulate active participation of the child, as the role of the parent is less dominant than when reading a story aloud.
- Prompting boards seem promising activities for use in (home-based) early literacy interventions.

Differences in emergent literacy skills are affected by the quantity of home literacy activities (how often do parents and children engage in literacy-related activities?) and the quality of these activities, in particular the quality of parent–child interactions (Rowe, 2012). One quality aspect is parents’ use of abstract talk (Van Kleeck, 2008), also referred to as ‘decontextualized talk’ (Curenton, Craig, & Flanigan, 2008) and ‘nonimmediate talk’ (Smith & Dickinson, 1994). Abstract talk (e.g., ‘What do you think is going to happen next?’; ‘Why does the owl look angry?’), as opposed to contextualised talk, such as labelling, requires children to ‘move beyond the immediate conversational context to create and re-create events, analyse experiences, and share opinions and ideas’ (Smith & Dickinson, 1994, p. 347). This act of ‘distancing’ (Blank & Solomon, 1968) is thought to stimulate

children's ability to deal with abstract representations, which is an important component of children's literacy development, because inferencing is essential to reading comprehension (Van Kleeck, 2008). Additionally, the (lexical) diversity that is inherent in abstract talk has been shown to predict children's vocabulary comprehension (Hoff & Naigles, 2002).

Various studies have shown that shared book reading elicits more abstract talk than manipulative play, such as object building and play-doh modelling (Hoff-Ginsberg, 1991; Sorsby & Martlew, 1991). This is because the latter types of activity focus on physical action (Snow & Ninio, 1986). Shared reading, on the other hand, requires little physical action, and consequently, parent and child can focus fully on discussing abstract representations. However, other non-text-based activities, such as reminiscing (Curenton et al., 2008; Korat, 2009) and wordless picture books (Chaparro-Moreno, Reali, & Maldonado-Carreño, 2017), can elicit abstract language as well.

Korat (2009) observed low-socioeconomic status (SES) and high-SES parents' interactions with their kindergarteners during book reading and a reminiscing activity using a photo album and compared maternal 'teaching talk'. Three levels of talk were distinguished: (1) labelling/describing pictures/photos; (2) paraphrasing text and explaining words; and (3) distancing to enhance comprehension (e.g., relating to the child's experience and making connections beyond the text). Overall, they found more abstract talk during shared reading, although higher educated mothers used distancing during reminiscing as well. The latter suggests that, at least for high-SES parents, abstract talk is not limited to text-based activities.

Curenton et al. (2008) observed mothers and preschoolers during wordless picture book activities and contrasted this with shared reading and oral storytelling (e.g., about personal experiences). Results showed that mothers used more decontextualized talk during oral storytelling than during the other two activities. Conversely, children used more decontextualized talk during wordless picture book activities. Similar results were found for teacher-child interactions during wordless picture books (Chaparro-Moreno et al., 2017). The authors examined interactional differences during scripted and wordless picture books among 13 teachers and preschoolers. Children produced significantly more word tokens, word types and utterances in the wordless picture book condition. Moreover, teachers showed higher levels of instructional support than during book sharing. Wordless picture books thus seem well suited to stimulate children's abstract language production.

Another activity that appears suited to elicit abstract talk is a prompting board (De la Rie, Van Steensel, Van Gelderen, & Severiens, 2018): a complex picture around a theme, depicting a scenario (Figure 2). Prompting boards are incorporated in children's magazines (e.g., *Highlights* and *Ladybug*); they are offered on parenting websites,¹ and there are well-known books that include prompting boards (Rémi, 2011). Furthermore, they are commonly incorporated into Dutch (pre)primary school curricula and used in (Dutch) family literacy programmes. Recently, we compared parent and child utterances during prompting board activities to those during shared reading (De la Rie et al., 2018). We coded the interactions of 19 mother-child dyads for abstract talk, operationalised in terms of four levels of abstraction (Van Kleeck, 2008). Results showed that mother's inferencing – the highest level of abstraction – was more characteristic of prompting board than shared reading discussions. Furthermore, children made relatively more utterances during prompting board activities.

To explain these differences, key characteristics of both activities need to be taken into account. The finding that prompting boards elicited a larger share of parental inferencing can be attributed to their 'nonscriptedness'. The scenarios depicted in prompting boards

are not explicated in text, making it an open-ended activity, while in books, many connections between story components (i.e., between characters and/or actions) are made explicit in the narrative, such relationships remain implicit in prompting boards. Consequently, processing the contents of prompting boards requires describing these relationships, for which abstract utterances are needed (e.g., inferring cause-and-effect relationships). Prompting board activities thus more or less compel parents to engage in abstract talk. Therefore, we hypothesise to find more abstract speech during prompting boards than during shared reading (Research Question 1). That children contribute more during prompting board discussions might be because parents are less in charge than during shared reading, putting the child in a more active position (De la Rie et al., 2018). This is interesting, because children's active participation in interactions is seen as crucial for language development (Mol & Neuman, 2014).

In addition to key characteristics of activities, other factors play a role in engaging in abstract talk, such as parental SES. Low-SES parents' interaction patterns are different from those of high-SES parents, where the latter more often use higher level talk (Korat, 2009). On the basis of such research, we expect to find more abstract talk in discussions in higher than in lower SES dyads (Research Question 2). Interestingly, some activities (e.g., play/mealtimes conversations) appear to reveal larger SES differences in abstract talk than others (e.g., shared reading), implying an interaction effect of SES and activity type (Hoff-Ginsberg, 1991). For example, Snow et al., (1976) found that during free play, academic and lower middle-class mothers used more abstract speech than working-class mothers, whereas these class differences did not occur during shared reading. One explanation is that shared reading supports low-SES parents in realising more abstract talk because of the presence of textual information, thereby attenuating SES effects.

Summarising, previous studies reported that activities with a focus on symbolic content elicit abstract interactions. Although shared reading appears to trigger most abstract speech, other activities that focus on symbolic content (reminiscing, wordless picture books and prompting boards) also provide opportunities to engage in abstract talk. Such talk is mostly realised by high-SES parents, although SES effects might depend on activity type. An activity that appears to be particularly suited to elicit abstract talk is a prompting board (De la Rie et al., 2018). It is unclear, however, whether and to what extent this activity is prone to SES effects. It could be that, because (nonscripted) prompting boards depend more on parents' ability to make inferences (De la Rie et al., 2018), this activity could be especially challenging for low-SES parents and hence augment SES differences (Research Question 3).

Thus, the following research questions will be addressed:

1. What is the nature of parent–child interactions during prompting board versus shared reading activities in terms of abstract talk?
2. How does SES predict the use of abstract talk in parent–child interactions?
3. Is the SES effect on abstract talk moderated by activity type?

The current study is an extension of the aforementioned study by De la Rie et al. (2018). We use the same coding system, but the studies differ in the materials used (different storybook and prompting board) and in the sample: the current sample is larger, increasing the power to identify effects, and it includes a larger variability in SES groups, enabling us to identify SES effects. We aim to shed light on what types of activities might be particularly suited for early (home-based) interventions that stimulate children's literacy development.

For family literacy programmes, an important challenge is to better align programme activities with various families’ needs and abilities (Manz, Hughes, Barnabas, Bracaliello, & Ginsburg-Block, 2010). Observations of these activities can provide insight into how parents respond to different activities and, more specifically, if certain activities can attenuate SES differences.

Method

Participants

We observed 44 dyads participating in an intervention study of Early Education at Home, a Dutch family literacy programme (Dutch Youth Institute, 2014). Children were in nine kindergarten classes from seven primary schools. The current study was part of the pretest. The dyads were drawn from the intervention condition, consisting of 119 families. The selection process for the current study is presented in Figure 1. The analytic sample did not differ from the larger sample in parental SES, $\chi^2(5) = 6.633, p = .249$, home literacy environment, $t(117) = -1.30, p = .197$, 95% confidence interval $[-0.27, 0.06]$, reported best language, $\chi^2(2) = 4.901, p = .086$, child age, $t(85) = 1.02, p = .309$, 95% confidence interval $[-0.79, 2.46]$, and child gender, $\chi^2(1) = 0.118, p = .731$. It did differ in ethnicity, $\chi^2(1) = 4.230, p = .040$, odds ratio = 0.421, indicating that there were more native Dutch parents in our analytic sample. This was not unexpected: for practical purposes, only Dutch parent–child interactions could be included in this study. Parent and child characteristics are presented in Table 1. We asked parents to report their highest attained education, country of birth, the language(s) they spoke and the language they were most proficient in (Dutch, other language or equally proficient in both). We asked parents most involved in

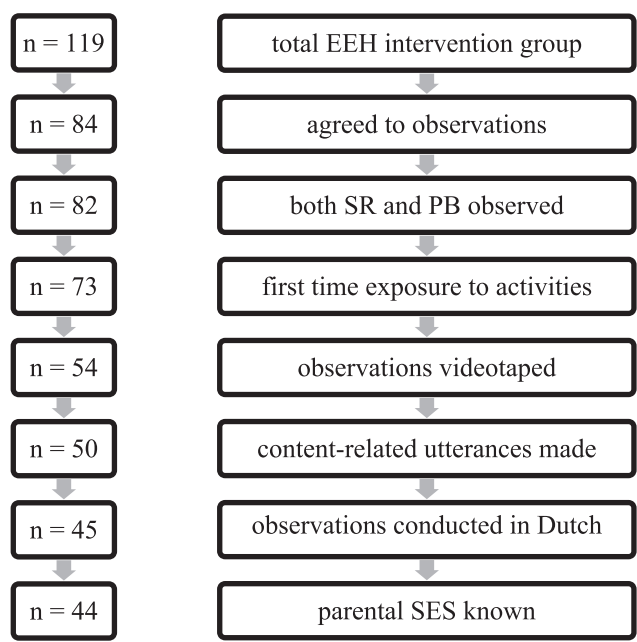


Figure 1. Flow chart of participant selection process. EEH, Early Education at home; SR, Shared Reading; PB, prompting board; SES, socioeconomic status.



Figure 2. Prompting board activity. [Colour figure can be viewed at wileyonlinelibrary.com]

the child's upbringing to fill out the questionnaires. SES was operationalised as parental education. Participating dyads were divided into three categories (Table 1). The lowest includes parents who attained secondary education (up to 18 years of age). The middle category represents parents who attained lower level tertiary education: vocational education preparing for occupations such as mechanic or nursing assistant. The highest category includes parents with a college or university degree. Compared with the Dutch population, higher educated parents are overrepresented in our sample (Central Bureau for Statistics, 2018): 30.4% of the population are low educated, 28.8% middle educated and 29.5% high educated.

Procedure

Parents were initially approached by their child's teacher or the first author. Parents who consented were asked to execute two activities with their child: a shared reading activity and a prompting board activity (in that order). Observations were conducted in October–December 2014. Interactions were recorded on video, and participants were

Table 1. Characteristics of participating parents and children.

Parent characteristics	Mothers (<i>n</i> = 37)	Fathers (<i>n</i> = 7)	Total	Total %
Education ^a				
Secondary school	8	0	8	19
Secondary vocational education	16	2	18	42
College or university degree	12	5	17	39
Parents born outside the Netherlands	10	1	11	26
Parent speaks language other than Dutch	14	3	17	39
More proficient in other language than Dutch ^b	6	0	6	14
Equally proficient in Dutch and other language	3	3	6	14
More proficient in Dutch	27	4	31	72
Child characteristics				
	Girls (<i>n</i> = 21)	Boys (<i>n</i> = 23)		
Age mean (months)	62.6	63.4		
Age range (months)	59–68	57–69		

^aThe numbers for the three educational categories add up to 43 instead of 44, as this information was missing for one parent.

^bThe numbers for self-reported oral language proficiency add up to 43 instead of 44, as this information was missing for one parent.

asked to behave as they normally would and encouraged to ignore they were being recorded.

We kept instructions to a minimum, in order to elicit the most natural behaviour from parents. Most observations took place at school (*n* = 37); seven parents preferred to be observed in their home. The observers interacted minimally with the participants once the videotaping commenced. Shared reading activities lasted 9 min on average (range 3–24), including parents' text reading. Prompting board activities lasted 7 min on average (range 2–15). The first author was aided in conducting the observations by 10 research assistants (mostly pedagogy students), who were trained for the practicalities of data collection during a 3-h session.

Instruments

Activities. Dyads were provided with an illustrated story and a prompting board (Figure 2). The story was written for this age group by a well-known children's literature writer. It is about a dragon and its friends sitting in class, and the teacher talking about the seasons, specifically autumn. The teacher explains how squirrels need to collect nuts, so they will not go hungry in winter. She asks the class what squirrels look like, and the children respond: a big tail and claws, just like dragon. Dragon then hurries into the forest to collect nuts, thinking he is a squirrel. The story is two pages long, and about half of the pages are covered by colourful illustrations. The prompting board (Figure 2) was selected from a

‘Wimmelbook’ (Rémi, 2011). Although there are thematic differences between the activities (the story is about a dragon, and the prompting board is about a sunny afternoon in the park), there are similarities in appearance: both are characterised by the presence of animals and children and by comparable outdoor settings: the forest and the park. More importantly, both activities are suited to elicit utterances on the four levels of abstraction distinguished in this study: they offer opportunities for labelling (e.g., ‘acorns, beechnuts’ [Shared reading, SR] and ‘rowing boat, pier’ [Prompting board, PB]), describing aspects of objects and characters, events and actions (e.g., ‘The dragon shakes the tree’ [SR] and ‘The captain rings the bell’ [PB]), summarising, integrating, defining words, making comparisons to the child’s life and discussing opinions (e.g., ‘Have you ever seen a squirrel?’ [SR] and ‘Remember when we went to the park?’ [PB]), and making inferences, (e.g., ‘Why did the dragon collect nuts?’ [SR] and ‘Why is the captain ringing the bell?’ [PB]).

Coding scheme. Parent–child interactions were transcribed and coded with the aid of a coding scheme (Data S1), adapted from Van Kleeck, Gillam, Hamilton, and McGrath (1997) and Sorsby and Martlew (1991), which are, in turn, based on four levels of abstraction distinguished by Blank, Rose, and Berlin (1978). These four levels are explained in the next section.

Coding was done using transcripts and video recordings. Utterances in the transcripts were distinguished by ‘unit of meaning’, a unit that represents a thematically consistent verbalisation of a single speech act (De Backer, Van Keer, & Valcke, 2012). When an utterance or series of utterances could be coded with one single code, it was seen as one unit of meaning. For example, ‘This is a squirrel. It has a brown color and a fluffy tail’ consists of two levels of abstraction and is therefore coded as two utterances: ‘This is a squirrel’ is labelling (IA), whereas ‘It has a brown color and a fluffy tail’ entails a comment on an aspect of a character (IIA). For the shared reading activity, only extra-textual utterances (beyond literal text reading) were transcribed and coded (Hammett, Van Kleeck, & Huberty, 2003). All utterances related to the storybook/prompting board were coded according to their level of abstraction. Other utterances (procedural and unrelated to the activity) were excluded from our analyses.

Levels of abstraction. We distinguished four levels of abstraction (Blank et al., 1978; Sorsby & Martlew, 1991; Van Kleeck et al., 1997). Level I, ‘matching perception’, is the lowest level and includes speech about the directly visible context, such as labelling, locating and noticing objects/characters pictured in the activities. Level II, ‘selective analysis and integration of perception’, includes questions or comments on specific aspects of objects and characters, or events and actions (e.g., ‘How many ducks do you see?’; ‘The owl is grey’). Level III utterances (‘reorder/infer about perception’) move beyond the immediate context and involve summarising parts of the story or integrating images on the prompting board, defining words, making comparisons to the child’s life and discussing opinions. Level IV (‘reasoning about perception’) is the highest level and involves making predictions and drawing conclusions. Both parents’ and children’s content-related utterances were coded for level of abstraction.

Transcription and coding. Two assistants were trained to transcribe the videos of the verbal interactions, including task-related non-verbal behaviours (e.g., pointing and nodding). Two activities (a prompting board and an illustrated story) were transcribed by the first author and both assistants. Results were compared, and assistants revised their versions

of the transcript based on feedback given by the first author. Thereafter, the assistants were trained to use the coding scheme. They transcribed and coded 5% of the videos, previously transcribed and coded by the first author. Codes were discussed in an iterative process over a total of five sessions, lasting 2 h on average. During each session, one or two transcripts were discussed, codes were compared and disagreements resolved.

Inter-rater reliability. To assess inter-rater reliability between the two coders, intraclass correlations were calculated for 18% of the transcripts. Results indicated high agreement among coders on average (0.87), ranging from 0.80–0.95.

Analyses

Main analyses. Our data are hierarchical: activities (shared reading/prompting board) are nested within dyad members (parent/child) and dyad members within dyads. Consequently, we first of all tested for significant variance on the upper levels, to determine the need for multi-level analyses. Exploration of intercept-only models using MLwiN 2.36 (Charlton, Rasbash, Browne, Healy, & Cameron, 2017) showed no significant variance on the Dyad-member level, implying that parents and children were very similar regarding the use of abstract language. Variance on the Dyad level was significant for three of four outcome variables (Levels II, III and IV). For these three variables, we proceeded with two-level models, consisting of Activities (Level 1) and Dyads (Level 2). For the outcome variable Level I, we conducted uni-level regression analyses in SPSS (version 23.0; IBM Corp, 2015).

We first added the Level 1 variable Total number of utterances to the intercept-only model, because this variable might act as a confound in our comparison of activity types (for similar procedures, see Sorsby & Martlew, 1991; Yont, Snow, & Vernon-Feagans, 2003). Because we did not code literal reading of the text, but focused on extra-textual utterances, we expected to find fewer utterances in shared reading activities than in prompting board activities, where there is no text (this was corroborated by our results; see Table 2).

To examine differences between the two activities in the use of abstract talk, we then entered the Level 1 predictor Activity type (Research Question 1). In a following model, we added SES (transformed into dummy variables: Middle-SES and High-SES) as a Level 2 predictor (Research Question 2). In order to answer Research Question 3, we first tested whether the effect of activity type was characterised by random slopes. We then added cross-level interaction terms (Middle-SES \times Activity type and High-SES \times Activity type) to examine the hypothesised interaction effect of SES \times Activity type.

Additional analyses. Before running our analyses, we checked if relevant background variables of parents (ethnicity and reported best language) and children (age and gender) were correlated with utterances on the four levels of abstraction. This was the case for parent ethnicity (Parent ethnicity \times Level IV utterances by child: $r = -.315$, $n = 44$, $p = .040$) and child age (Child age \times Level II utterances by parent: $r = .443$, $n = 44$, $p = .008$; Child age \times Level II and IV utterances by child: $r = .412$, $n = 44$, $p = .014$ and $r = .338$, $n = 44$, $p = .047$, respectively). However, when including these as covariates, parent ethnicity and child age were no longer significant and were hence excluded from the analyses.

Table 2. Mean number of utterances across levels of abstraction for low-SES, middle-SES, and high-SES parents and children.

	Prompting boards				Shared reading			
	<i>M (SD)</i>				<i>M (SD)</i>			
Total utterances	93.00 (42.05)				60.18 (41.80)			
Utterances by parent	49.93 (22.96)				34.73 (25.84)			
Utterances by child	43.07 (21.58)				25.44 (17.98)			
% Utterances by child ^a	46.36				42.02			
Level of abstraction	I	II	III	IV	I	II	III	IV
Parent utterances								
Total	12.60 (7.66)	14.29(8.90)	14.16(9.38)	8.89(6.6)	3.67(4.00)	12.89(8.96)	12.87 (13.69)	5.31(6.90)
Low SES	10.63 (6.39)	12.25 (6.52)	10.13 (10.54)	3.75(5.06)	3.50(3.96)	11.63(6.16)	4.50(4.14)	0.75(1.75)
Middle SES	13.68 (8.76)	16.05 (11.09)	14.95 (9.44)	8.95(7.00)	3.53(3.81)	10.32 (7.48)	10.21 (11.26)	4.37(4.87)
High SES	12.47 (7.31)	13.53 (5.70)	15.06 (9.13)	11.47 (5.67)	3.24(3.55)	14.29 (7.32)	17.35 (13.96)	6.76(5.83)
Child utterances								
Total	12.67 (7.99)	13.02 (8.52)	9.40 (6.77)	7.98 (6.69)	2.80 (3.27)	8.00 (5.40)	10.64 (10.96)	4.00 (4.81)
Low SES	10.88 (6.77)	11.50 (7.39)	8.38(8.43)	3.88(4.16)	1.75(2.38)	7.13(3.91)	4.38(3.11)	0.75(1.39)
Middle SES	14.58 (9.67)	14.79 (10.62)	10.21 (7.47)	8.53(7.52)	3.05(3.94)	7.11(6.02)	8.95(9.58)	3.42(4.54)
High SES	11.65 (6.45)	12.06 (6.43)	8.71(5.38)	9.53(6.29)	2.65(2.71)	9.35(5.40)	13.71 (11.48)	5.35(4.44)

SES, socioeconomic status.

^aThe percentage of utterances by child of the total number of utterances per activity (parent + child).

Results

Descriptive statistics

The descriptive statistics are presented in Table 2. First of all, as expected, prompting boards elicited a larger total number of (content-related) utterances than shared reading activities. To establish whether the two activities differed in proportion of utterances made by the child versus utterances made by the parent, we performed a Wilcoxon signed-rank test. We found a significant difference. During both activities, children talked less than their parents did. However, during the prompting board activities, child utterances took up a significantly larger proportion of the conversation ($Mdn = 46.01$) than during shared reading ($Mdn = 42.33$), $z = 2.56$, $p = .011$, $r = .27$. Both activities elicited utterances on all distinguished levels of abstraction, and number of utterances varied greatly between dyads (as reflected in the large standard deviations). As we were also interested in SES effects, mean numbers of utterances across the four levels of abstraction are additionally presented for low-SES, middle-SES, and high-SES dyads separately in Table 2.

Abstract talk during prompting boards and shared reading (Research Question 1)

We found that activity type significantly predicted the amount of talk on all distinguished levels while controlling for the total number of utterances. Parents and children produced a larger share of talk on Level I and Level IV during prompting board discussions than during shared reading (Tables 3 and 6): during prompting board activities, relatively more

Table 3. Multiple regression analyses predicting parent and child utterances on Level I.

	0	1	2	3	4
	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)
Intercept	7.875*** (0.583)	7.875*** (0.416)	4.735*** (0.529)	5.748*** (0.960)	6.566*** (1.209)
Total utterances (gm)		0.242*** (0.019)	0.184*** (0.018)	0.192*** (0.018)	0.195*** (0.018)
Activity type (1 = prompting board)			6.279*** (0.783)	6.114*** (0.772)	4.525 (1.663)
Middle-SES				−0.236 (0.998)	−0.948 (1.382)
High-SES				−2.143* (1.030)	−3.413* (1.439)
Middle-SES × Activity type					1.375 (1.947)
High-SES × Activity type					2.475 (1.981)
ΔR^2		0.489***	0.268***	0.04*	–

Note. $N = 176$.

gm, grand mean centered; SES, socioeconomic status.

* $p < .05$.

*** $p < .001$.

Table 4. Multi-level regression analyses predicting parent and child utterances on Level II.

	0	1	2	3	4	5
	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)
Fixed part						
Intercept	11.898*** (0.719)	11.898*** (0.580)	12.777*** (0.722)	14.886*** (1.477)	14.945*** (1.470)	15.379*** (1.667)
Total utterances (gm)		0.271*** (0.019)	0.296*** (0.022)	.302*** (0.022)	0.299*** (0.023)	0.297*** (0.023)
Activity type (1 = prompting board)			–1.758* (0.810)	–1.873* (0.810)	–1.818 (1.036)	–3.121 (1.918)
Middle-SES				–2.105 (1.647)	–2.282 (1.621)	–3.234 (1.991)
High-SES				–2.957 (1.688)	–2.985 (1.669)	–3.27 (2.07)
Middle-SES × Activity type						2.166 (2.626)
High-SES × Activity type						0.729 (2.672)
Random part						
Activities	54.538 (6.713)	23.061 (2.840)	21.850 (2.691)	21.743 (2.680)	13.024 (1.964)	13.057 (1.969)
Dyads	9.111 (5.132)	9.030 (3.228)	10.249 (3.414)	9.464 (3.233)	14.241 (4.528)	13.968 (4.475)
Random slope Activity type					26.306*** (8.615)	25.608*** (8.477)
Deviance	1,225.789	1,093.250	1,088.799	1,085.788	1,065.348	1,064.515
Reference model		0	1	2	3	4
Fit improvement		$\chi^2 = 132.539$ $df = 1$ $p < .001$	$\chi^2 = 4.451$ $df = 1$ $p < .05$	$\chi^2 = 3.011$ $df = 2$ $p = \text{n.s.}$	$\chi^2 = 20.440$ $df = 2$ $p < .001$	$\chi^2 = 0.833$ $df = 2$ $p = \text{n.s.}$
ΔR^2 Level 1		0.577***	0.05*	–	0.401***	–
ΔR^2 Level 2		0.009***	–	–	–	–

Note. *N* activities = 176; *N* Dyad members = 88; *N* Dyads = 44.
gm, grand mean centered; n.s., nonsignificant.
* $p < .05$.
*** $p < .001$.

Table 5. Multi-level regression analyses predicting parent and child utterances on Level III.

	0	1	2	3	4	5
	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)
Fixed part						
Intercept	11.324*** (1.068)	11.324*** (1.584)	14.440*** (0.728)	14.047*** (1.423)	13.572*** (1.554)	11.154*** (2.177)
Total utterances (gm)		0.311*** (0.023)	.377*** (0.024)	0.374*** (0.024)	0.333*** (0.024)	0.332*** (0.024)
Activity type (1 = prompting board)			−6.233*** (0.965)	−6.174*** (0.969)	−5.414*** (1.339)	−1.323 (2.911)
Middle-SES				−0.155 (1.534)	−0.034 (1.552)	2.393 (2.539)
High-SES				1.116 (1.578)	1.227 (1.589)	4.735 (2.615)
Middle-SES × Activity type						−4.099 (3.435)
High-SES × Activity type						−5.933 (3.495)
Random part						
Activities	64.509 (7.941)	41.188 (5.071)	32.471 (3.997)	32.437 (3.993)	13.423 (2.024)	13.406 (2.024)
Dyads	34.509 (10.876)	4.687 (2.28)	4.980 (2.965)	4.675 (2.903)	30.713 (8.040)	29.371 (7.721)
Random slope Activity type					57.120*** (15.174)	52.863*** (14.257)
Deviance	1,282.748	1,170.365	1,133.055	1,131.854	1,089.384	1,086.589
Reference model		0	1	2	3	4
Fit improvement		$\chi^2 = 112.383$ $df = 1$ $p < .001$	$\chi^2 = 37.310$ $df = 1$ $p < .001$	$\chi^2 = 1.201$ $df = 2$ $p = \text{n.s.}$	$\chi^2 = 42.470$ $df = 2$ $p < .001$	$\chi^2 = 2.795$ $df = 2$ $p = \text{n.s.}$
ΔR^2 Level 1		0.361***	0.212***	−	0.586***	−
ΔR^2 Level 2		0.864***	−	−	−	−

Note. *N* Activities = 176; *N* Dyad members = 88; *N* Dyads = 44.
gm, grand mean centered; n.s., nonsignificant; SES, socioeconomic status.
* $p < .05$.
*** $p < .001$.

Table 6. Multi-level regression analyses predicting parent and child utterances on Level IV.

	0	1	2	3	4	5
	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)
Fixed part						
Intercept	6.341*** (0.731)	6.341*** (0.562)	5.412*** (.641)	2.750* (1.328)	3.405** (1.164)	3.650** (1.189)
Total utterances (gm)		0.164*** (0.014)	0.135*** (.016)	0.131*** (0.016)	0.142*** (0.014)	0.143*** (0.014)
Activity type (1 = prompting board)			1.858*** (0.553)	1.940** (0.553)	1.739* (0.776)	0.413 (1.77)
Middle-SES				2.500 (1.523)	2.103 (1.345)	1.958 (1.382)
High-SES				3.990** (1.557)	2.997* (1.385)	2.564 (1.426)
Middle-SES × Activity type						0.792 (2.010)
High-SES × Activity type						2.470 (2.045)
Random part (variances)						
Activities	19.716 (2.427)	10.791 (1.328)	9.775 (1.205)	9.746 (1.200)	2.962 (0.447)	2.963 (0.447)
Dyads	18.554 (5.043)	11.187 (2.977)	12.248 (3.135)	10.435 (2.758)	9.241 (2.297)	9.190 (2.285)
Random slope Activity type					20.619*** (5.049)	19.724*** (4.63)
Deviance	1,092.888	990.205	979.647	973.429	896.801	895.014
Reference model		0	1	2	3	4
Fit improvement		$\chi^2 = 102.683$ $df = 1$ $p < .001$	$\chi^2 = 10.558$ $df = 1$ $p < .001$	$\chi^2 = 6.218$ $df = 2$ $p < .05$	$\chi^2 = 76.628$ $df = 2$ $p < .001$	$\chi^2 = 1.787$ $df = 2$ $p = \text{n.s.}$
ΔR^2 Level 1		0.453***	0.094***	0.003*	0.696***	—
ΔR^2 Level 2		0.397***	—	0.148*	0.114***	—

Note. *N* Activities = 176; *N* Dyad members = 88; *N* Dyads = 44.
gm, grand mean centered; n.s., nonsignificant; SES, socioeconomic status.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

speech was dedicated to labelling, locating and noticing and to inferencing (drawing conclusions and making predictions). During shared reading activities, a significantly larger share of parent and child speech was on Level II and Level III (Tables 4 and 5). The former level entails utterances that focus on specific aspects of objects or events, while the latter includes summarising/integrating discourse elements, defining words, making comparisons to the child's experiences and discussing opinions. Activity type explained 27%, 5%, 21% and 9% of the variance in Level I, II, III and IV utterances, respectively.

The role of socioeconomic status (Research Question 2)

We found that high-SES parents and children produced relatively less talk on Level I, and more on Level IV, compared with low-SES parents and children: high-SES dyads thus used more inferencing talk than low-SES dyads did. Low-SES dyads, on the other hand, produced more labelling, locating and noticing. SES explained 4% of the variance in Level I utterances and 15% of the variance in Level IV utterances (Tables 3 and 6). SES was not a significant predictor of Level II and III utterances: parents and children from the three SES groups did not vary in the share of this type of talk (Table 4).

Activity type as a moderator (Research Question 3)

Analysis of Level I utterances showed no interaction effect of activity type and SES (Model 4 in Table 3): activity type did not moderate the SES effect on the share of Level I utterances. For Level II, III, and IV utterances (see Models 4 and 5 in Tables 4–6), we first tested whether the effect of activity type was characterised by significant random slope variance. This proved to be the case for all three outcome measures, indicating that the effect of activity type varied significantly across dyads. However, adding the SES \times Activity type interaction terms did not improve model fit for any of the three outcomes, implying that the SES effect was not moderated by activity type.

Discussion

The current study examined the effects of activity type and SES on abstract talk in parent–child interactions. We compared a scripted activity (shared reading) to a nonscripted activity (a prompting board), because we assumed the degree of scriptedness would influence the share of abstract interactions. Moreover, we hypothesised an interaction effect of SES and activity type. Regarding our first research question, we found that activity type was associated with speech on all four levels of abstraction. During prompting board discussions, parents and children produced a larger share of utterances on the lowest level of abstraction (labelling, locating and noticing) and on the highest level (inferencing). Shared reading, conversely, was characterised by more talk on the intermediate levels, which involved focusing on specific aspects of objects and characters or events and actions. Furthermore, summarising/integrating discourse elements, defining words, making comparisons to the child's life and discussing opinions were more prevalent during shared reading. Similar differences were found in a previous study (De la Rie et al., 2018).

We believe these outcomes can be explained by differences in the scriptedness of the two activities. First, the finding that prompting boards elicited more speech on the lowest level of abstraction follows logically from the absence of written text in prompting boards:

parents and children likely feel the need to label objects, because they are not addressed in a narrative, as is the case during shared reading. Second, the finding that prompting boards elicited more inferencing might also be explained by the absence of a script. Whereas during shared reading many connections between story components are made explicit in the text, such relations remain implicit in prompting boards. In other words, processing the contents of a prompting board requires explicating relationships between characters and/or actions (i.e., inferencing) in addition to merely describing them.

Additionally, we found children contributed to the discussion more often during prompting boards than during shared reading. This also replicates De la Rie et al. (2018) and can be explained by the fact that reading aloud naturally places parents in charge, putting the child in a more passive position: children can perceive their main contribution as listening. This is also in line with findings from studies comparing scripted shared reading to wordless picture books (Chaparro-Moreno et al., 2017; Curenton et al., 2008). Because parents are not reading during a prompting board activity, they take up a less dominant role and thus leave more opportunity for the child to engage, making the child feel more invited to actively participate. This is interesting, as children's active participation in language learning situations is important for language development (Mol & Neuman, 2014). Future research could further test whether children's active participation in prompting board activities can support their language development.

We also found shared reading to elicit a larger share of utterances on the second level of abstraction: describing specific aspects of objects/characters and events/actions. This is not in line with previous findings: De la Rie et al. (2018) found no such differences. This might be because the storybook used for the current study includes the question 'Do you know what a squirrel looks like?'. Consequently, many parents asked their child to answer this question, requiring utterances on the second level. A similar situation did not occur in the stories used in the previous study. Similar to De la Rie et al. (2018), we found shared reading to elicit a larger share of summarising/integrating discourse elements, opinions and connections to the child's experiences. A likely explanation is that storybooks are more episodic in nature than prompting board activities and thus are probably more conducive to remarks and questions such as 'OK, so frog cannot find his friends' or 'Can you tell me what we just read?'.

Regarding our second research question, concerning the effect of SES on abstract talk, we found that high-SES dyads produced a larger share of utterances on the highest level of abstraction, and a smaller share on the lowest level, compared with low-SES dyads. This relationship between SES and abstract talk by parents has been found in previous studies (Hoff & Naigles, 2002; Korat, 2009). Our analyses revealed no interaction effect of SES and activity type, suggesting SES differences were equal across activities. Therefore, our hypothesis that, because (nonscripted) prompting boards depend more on parents' ability to make inferences, they would be especially challenging for low-SES parents and hence augment SES differences was rejected. Thus, shared reading did not attenuate SES differences in abstract interactions, as was the case in previous studies in which shared reading was contrasted with other, more play-like activities (Hoff-Ginsberg, 1991; Snow et al., 1976).

However, we did find that the effect of activity type was characterised by random slope variance, indicating that while for some dyads, prompting boards led to more abstract interactions, for other dyads, this was the case for shared reading. We could not identify a source for this random slope variance, implying that other variables than SES explain the varying effect of activity type on abstraction of interactions. Possibly, there is a

(confounding) effect of parent and/or child interest. For example, the dragon story might trigger parents' and children's interest if they saw a cartoon about a dragon on television recently; the prompting board might elicit interest if they just took a stroll in the park. Alternatively, parental preferences might have played a role (Phillips & Lonigan, 2009). It may be that some parents favour shared reading and thus put more effort in this activity than in a prompting board activity or vice versa. Preferences may be a result of the structure both activities offer: some parents may prefer scripted activities such as shared reading because a storyline provides guidance, while others might prefer the unscripted prompting board, allowing them to let their imagination run wild. Future research could examine which factors explain the association between activity type and abstract interactions. This can provide relevant information for interventionists seeking to stimulate abstract speech in parent-child interactions, as identifying what types of activities work for different sub-groups of parents might help make interventions more tailor-made.

Limitations

Several limitations to this study are noteworthy. First of all, because of our limited sample size, our analyses lacked statistical power to detect small effects. Hence, it is possible that the random effect of activity type on abstract speech is in fact (partly) explained by parental SES, but that the effect was too small to detect with our sample. Furthermore, the range of educational levels was limited: our sample did not include parents without any education or primary school only. We therefore recommend to replicate this study, using a larger sample and including parents with more varied educational backgrounds.

Second, our study includes only one measurement of parent-child interactions. Multiple measurements are preferable as these would have likely provided a more reliable picture.

Third, the order in which parents conducted both activities was not counterbalanced. The shared reading activity was conducted first, followed by the prompting board. This could have influenced results in two directions. On the one hand, starting with shared reading might have made children more at ease during the prompting board activity, which could lead to them talking more easily. On the other hand, it could be that children were less attentive after having listened to the story.

Fourth, observations took place both in school and at home, as we wanted to let parents decide where they felt most comfortable. The setting could have influenced our results. Some parents might have used more abstract language in school, because they see school as a learning environment; this could then elicit more stimulating/abstract talk. However, we found only one significant correlation between setting and parent utterances: parents showed fewer utterances on the lowest level in the school setting, indicating that setting only played a role for one of the abstraction levels.

Fifth, we used a narrative storybook to compare abstract talk during shared reading and prompting boards. The use of other genres might have yielded different results. Other studies have, for instance, found that nonnarrative books elicited more extra-textual talk compared with storybooks (Anderson, Anderson, Lynch, & Shapiro, 2004; Price, Van Kleeck, & Huberty, 2009).

Sixth, only seven fathers participated in the observations. Although fathers are known to engage in other types of interactions with their children than mothers (Duursma, 2016; Vandermaas-Peeler, Sassine, Price, & Brilhart, 2012), the number of fathers was too small to analyse these differences. Future studies might include larger numbers of fathers.

Finally, we did not code interactions for contingency of parent–child utterances: the extent to which parental utterances were timely and functional for children was not taken into account. For example, when the child sees a picture of a hedgehog and does not know the corresponding label, a labelling utterance by the parent, although of a low level of abstraction, is likely beneficial for the child’s understanding. In contrast, when the child is highly engaged in a story, a question about the child’s experiences can be distracting rather than stimulating. It would be interesting to analyse the influence of utterance contingency on children’s literacy development.

Implications for policy and practice

Although shared reading was characterised by more talk on the intermediate levels, prompting boards were found to elicit more talk on the highest level of abstraction, from both high-SES and low-SES parents and children. Abstract speech by parents predicts inferencing abilities in children, which, in turn, predict later reading comprehension (Van Kleeck, 2008). Moreover, children contributed more to the conversation during prompting boards. Previous studies have underlined the importance of children’s active participation in language use situations for the development of their language skills (Mol & Neuman, 2014; Uccelli, Demir-Lira, Rowe, Levine, & Goldin-Meadow, 2018). These findings indicate that prompting boards might be promising for interventions aiming to improve children’s language development. However, future intervention studies are needed to test this hypothesis.

Even though prompting boards did not augment SES differences in abstract interactions, we still observed considerable differences between low-SES and high-SES parent–child dyads. High-SES parents used more than three times as many inferencing utterances during prompting boards and nine times as many during shared reading. In this light, implementers and deliverers of family literacy programmes (e.g., teachers and social workers) should pay special attention to supporting low-SES families when engaging in prompting board activities, for them to be able to realise decontextualized talk (Korat, 2009; Sonnenschein & Munsterman, 2002).

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References

- Anderson, J., Anderson, A., Lynch, J. & Shapiro, J. (2004). Examining the effects of gender and genre on interactions in shared book reading. *Literacy Research and Instruction*, 43, 1–20. <https://doi.org/10.1080/19388070409558414>.
- Blank, M., Rose, S.A. & Berlin, L.J. (1978). *Preschool language assessment instrument: The language of learning in practice*. New York: Grune & Stratton.
- Blank, M. & Solomon, F. (1968). A tutorial language program to develop abstract thinking in socially disadvantaged preschool children. *Child Development*, 39(2), 379–389. <https://doi.org/10.2307/1126952>.

- Chaparro-Moreno, L.J., Realí, F. & Maldonado-Carreño, C. (2017). Wordless picture books boost preschoolers' language production during shared reading. *Early Childhood Research Quarterly*, 40, 52–62. <https://doi.org/10.1016/j.ecresq.2017.03.001>.
- Central Bureau for Statistics (2018). Dutch Central Bureau for Statistics. <https://opendata.cbs.nl/statline/#/CBS/nl/>.
- Charlton, C., Rasbash, J., Browne, W.J., Healy, M. & Cameron, B. (2017). *MLwiN version 3.36*. Centre for Multilevel Modelling, University of Bristol. <http://www.bristol.ac.uk/cmm/software/mlwin/refs.html>.
- Curenton, S.M., Craig, M.J. & Flanigan, N. (2008). Use of decontextualized talk across story contexts: How oral storytelling and emergent reading can scaffold children's development. *Early Education and Development*, 19, 161–187. <https://doi.org/10.1080/10409280701839296>.
- De Backer, L., Van Keer, H. & Valcke, M. (2012). Exploring the potential impact of reciprocal peer tutoring on higher education students' metacognitive knowledge and regulation. *Instructional Science*, 40(3), 559–588. <https://doi.org/10.1007/s11251-011-9190-5>.
- De la Rie, S., Van Steensel, R.C., Van Gelderen, A.J. & Severiens, S. (2018). The role of type of activity in parent–child interactions within a family literacy programme: Comparing prompting boards and shared reading. *Early Child Development and Care*, 188, 1076–1092. <https://doi.org/10.1080/03004430.2016.1248957>.
- Dutch Youth Institute (2014). Early Education at Home Program. <http://www.nji.nl/nl/Kennis/Dossier/Positie-van-voor-en-vroegschoolse-educatie-inde-basis>
- Duursma, E. (2016). Who does the reading, who the talking? Low-income fathers and mothers in the US interacting with their young children around a picture book. *First Language*, 36, 465–484.
- Hammitt, L.A., Van Kleeck, A. & Huberty, C.J. (2003). Patterns of parents' extra-textual interactions during book sharing with preschool children: A cluster analysis study. *Reading Research Quarterly*, 38, 442–468. <https://doi.org/10.1598/RRQ.38.4.2>.
- Hoff, E. & Naigles, L. (2002). How children use input to acquire a lexicon. *Child Development*, 73(2), 418–433. <https://doi.org/10.1111/1467-8624.00415>.
- Hoff-Ginsberg, E. (1991). Mother–child conversation in different social classes and communicative settings. *Child Development*, 62(4), 782–796. <https://doi.org/10.2307/1131177>.
- IBM Corp (2015). *IBM SPSS statistics for Windows, version 23.0*. Armonk, NY: IBM Corp.
- Korat, O. (2009). The effect of maternal teaching talk on children's emergent literacy as a function of type of activity and maternal education level. *Journal of Applied Developmental Psychology*, 30, 34–42. <https://doi.org/10.1016/j.appdev.2008.10.001>.
- Manz, P.H., Hughes, C., Barnabas, E., Bracaliello, C. & Ginsburg-Block, M. (2010). A descriptive review and meta-analysis of family-based emergent literacy interventions: To what extent is the research applicable to low-income, ethnic minority or linguistically-diverse young children? *Early Childhood Research Quarterly*, 25, 409–431. <https://doi.org/10.1016/j.ecresq.2010.03.002>.
- Mol, S.E. & Neuman, S.B. (2014). Sharing information books with kindergartners: The role of parents' extra-textual talk and socioeconomic status. *Early Childhood Research Quarterly*, 29, 399–410. <https://doi.org/10.1016/j.ecresq.2014.04.001>.
- Phillips, B.M. & Lonigan, C.J. (2009). Variations in the home literacy environment of preschool children: A cluster analytic approach. *Scientific Studies of Reading*, 13(2), 146–174. <https://doi.org/10.1080/10888430902769533>.
- Price, L.H., Van Kleeck, A. & Huberty, C.J. (2009). Talk during book sharing between parents and preschool children: A comparison between storybook and expository book conditions. *Reading Research Quarterly*, 44, 171–194. <https://doi.org/10.1598/RRQ.44.2.4>.
- Rémi, C. (2011). Reading as playing. The cognitive challenge of the Wimmelbook. In B. Kümmerling-Meibauer (Ed.), *Emergent literacy: Children's books from 0 to 3*, (pp. 115–140). Amsterdam: John Benjamins.
- Rowe, M.L. (2012). A longitudinal investigation of the role of quantity and quality of child-directed speech in vocabulary development. *Child Development*, 83(5), 1762–1774. <https://doi.org/10.1111/j.1467-8624.2012.01805.x>.
- Smith, M.W. & Dickinson, D.K. (1994). Describing oral language opportunities and environments in head start and other preschool classrooms. *Early Childhood Research Quarterly*, 9, 345–366. [https://doi.org/10.1016/0885-2006\(94\)90014-0](https://doi.org/10.1016/0885-2006(94)90014-0).
- Snow, C.E., Arlman-Rupp, A., Hassing, Y., Jobse, J., Joosten, J. & Vorster, J. (1976). Mothers' speech in three social classes. *Journal of Psycholinguistic Research*, 5(1), 1–20. <https://doi.org/10.1007/BF01067944>.
- Snow, C.E. & Ninio, A. (1986). The contracts of literacy: What children learn from learning to read books. In W.H. Teale & E. Sulzby (Eds.), *Emergent literacy: Writing and reading*, (pp. 116–138). Norwood, NJ: Ablex.

- Sonnenschein, S. & Munsterman, K. (2002). The influence of home-based reading interactions on 5-year-olds' reading motivations and early literacy development. *Early Childhood Research Quarterly*, 17, 318–337. [https://doi.org/10.1016/S0885-2006\(02\)00167-9](https://doi.org/10.1016/S0885-2006(02)00167-9).
- Sorsby, A.J. & Martlew, M. (1991). Representational demands in mothers' talk to preschool children in two contexts: Picture book reading and a modelling activity. *Journal of Child Language*, 18(2), 373–395. <https://doi.org/10.1017/S0305000900011119>.
- Uccelli, P., Demir-Lira, Ö.E., Rowe, M.L., Levine, S. & Goldin-Meadow, S. (2018). Children's early decontextualized talk predicts academic language proficiency in midadolescence. *Child Development*. <https://doi.org/10.1111/cdev.13034>.
- Van Kleeck, A. (2008). Providing preschool foundations for later reading comprehension: The importance of and ideas for targeting inferencing in storybook-sharing interventions. *Psychology in the Schools*, 45, 627–643. <https://doi.org/10.1002/pits.20314>.
- Van Kleeck, A., Gillam, R.B., Hamilton, L. & McGrath, C. (1997). The relationship between middle-class parents' book-sharing discussion and their preschoolers' abstract language development. *Journal of Speech, Language, and Hearing Research*, 40, 1261–1271. <https://doi.org/10.1044/jslhr.4006.1261>.
- Vandermaas-Peeler, M., Sassine, B., Price, C. & Brilhart, C. (2012). Mothers' and fathers' guidance behaviours during storybook reading. *Journal of Early Childhood Literacy*, 12, 415–442. <https://doi.org/10.1177/1468798411417381>.
- Yont, K.M., Snow, C.E. & Vernon-Feagans, L. (2003). The role of context in mother–child interactions: An analysis of communicative intents expressed during toy play and book reading with 12-month-olds. *Journal of Pragmatics*, 35, 435–454. [https://doi.org/10.1016/S0378-2166\(02\)00144-3](https://doi.org/10.1016/S0378-2166(02)00144-3).

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