The Effects of Parental Dialogic Reading and Elaborative Reminiscing on Children's Narratives and Vocabulary

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ABSTRACT

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Seven mothers were taught the same language support strategies, in one of two conditions: dialogic reading or elaborative reminiscing with their child. They were also supported in using these strategies over a 6-week period.

The frequency, distribution, and diversity of mothers' strategies were examined before and after the intervention, in two tasks: reading a storybook and reminiscing about a past event. Mothers were also interviewed about their experience and perceptions of dialogic reading or elaborative reminiscing. Additionally, children's narrative and vocabulary skills were examined.

Mothers in the dialogic reading condition used strategies more frequently than those in the elaborative reminiscing condition on the storybook and reminiscing tasks, as revealed by descriptive statistics. Surprisingly, mothers in the reminiscing condition used fewer strategies in the reminiscing task at posttest than at pretest. Descriptively, mothers also showed changes at posttest in their distribution of strategy types, notably greater use of WH questions during both the storybook and reminiscing tasks. All mothers increased their diversity of strategy types on the reminiscing task.

Following the intervention, the children showed improvements in fictional and personal storytelling and receptive vocabulary. Expressive vocabulary and story comprehension did not show an effect. The findings suggest that dialogic reading or elaborative reminiscing, implemented by mothers, has positive effects on certain aspects of children's narrative and

vocabulary skills. Nuances in mothers' strategy use across conditions and their impact on children’s language skills merit further investigation.

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Knowing how to read and write well is important in highly literate societies. In addition to being important for school success, literacy has a significant bearing on employment opportunities, especially in economies in which technical and informational jobs predominate (Wood, 2010). However, a substantial percentage of children are not acquiring or maintaining grade-level reading skills in Canada (Conference Board of Canada, 2014) as well as in the United States (National Assessment of Educational Progress, n.d.). Given this reality, expert panels have been established to examine research on reading proficiency and to make recommendations based on the findings. These include the National Reading Panel (NRP, National Institute of Child Health and Human Development, 2000) and the National Early Literacy Panel (NELP, National Institute for Literacy, 2008) in the U.S. These panels have pointed out the continuity between early and later literacy and have suggested that interventions to improve children's reading skills are most beneficial when they are introduced early in development and target skills relevant to acquiring literacy.

The NELP identified a number of precursors to later literacy achievement, including alphabet knowledge, phonological awareness and rapid automatic naming. The panel also found that oral language played a role in later literacy achievement, especially when the language measures serving as predictors went beyond simple vocabulary knowledge (National Institute for Literacy, 2008). Children who do not have adequate oral language skills are at risk of experiencing reading difficulties and academic problems (Storch & Whitehurst 2001; Swanson et al., 2011). Additionally, schools often expect children to have a good command of oral language as part of school readiness (Burgess, Hecht, & Lonigan, 2002; Phillips & Lonigan, 2009).

Given these findings, a variety of strategies have been proposed in the literature to improve children's language skills in the preschool years. These include language support strategies embedded in dialogic reading (Whitehurst & Lonigan, 1998) and elaborative reminiscing (Haden, Haine, & Fivush, 1997). These two approaches involve stories as a context for language support. As both Whitehurst and Lonigan (1998) and Haden et al. (1997) claim, these approaches also promote children's knowledge of story structure, and this knowledge is believed to help children understand the stories they hear and later read. In addition, a meta-analysis by Troesch, Keller and Grob (2016) revealed that children with higher oral language skills gained peer acceptance easily compared to those with lower skills. Longoria, Page, Hubbs-Tait and Kennison (2017) also found a positive correlation between children's language ability and teacher ratings of social competence which includes making friends.

Language and Narrative Support through Dialogic Reading and Elaborative Reminiscing

The social interactionist view stresses the role of the social context and adult-child interaction in language acquisition (Giralometto, Weitzman, & Greenberg, 2012; Peterson et al., 1999). According to this view, opportunities to foster the child's language arise organically in interaction. The adult can capitalise on these opportunities, giving the child a chance to practice and gradually internalize language skills. Moreover, the adult can fine-tune input to the child's current level of development following Vygotsky's concept of scaffolding in the *zone of proximal development.* These ideas are the underpinnings for dialogic reading and elaborative reminiscing.

Dialogic reading occurs in the context of book reading, particularly storybooks. The adult reads a book to the child in an interactive style. In this context, scaffolding involves the adult adapting their reading to increase the child's verbalisations over time. Information is elicited

from the child with the adult asking open-ended questions, providing feedback, and modifying their reading style as the child matures. Specific techniques include asking the child to recall specific parts of the story, asking WH questions, and asking the child to link book content with her or his own experience. Specifically, WH questions are considered to be open-ended questions, as such they do not have a right or wrong answer (e.g., “What is the [insert character name] doing?”, “What happened next?”, “Why do you think s/he is sad?”). Dialogic reading also incorporates prompting, expanding upon, and evaluating the child's responses (Reese, Leyva, Sparks, & Grolnick, 2010).

Elaborative reminiscing occurs in the context of conversation and is sometimes referred to as an elaborative conversational style. The adult actively involves the child in conversation about a past event. In this context, scaffolding involves the adult eliciting details from the child about the event being recounting and adapting elicitation as the child matures by requesting more information (Peterson et al., 1999). The adult who engages in elaborative reminiscing elicits information and increases the child's participation by asking open-ended questions, expanding on the child’s verbalisations, and providing feedback (Peterson et al., 1999; Reese et al., 2010). More specifically, the adult asks WH questions, asks the child to make links with other experiences, and evaluates the child's responses (Boland, Haden, & Ornstein, 2003). Thus, elaborative reminiscing is similar to dialogic reading in the ways that adults elicit language and storytelling from children. The techniques used to scaffold children’s language in dialogic reading and elaborative reminiscing can be viewed and researched as language support strategies.

Dialogic Reading Effects on Children’s Vocabulary and Narratives

Findings from a meta-analysis on the effects of dialogic reading by parents showed that

dialogic reading was beneficial for children's vocabulary, with greater effects for expressive vocabulary compared to receptive vocabulary (Mol, Bus, de Jong, & Smeets, 2008). Mol and colleagues (2008), however, reported that the effects for vocabulary were greater for younger children than for older children. The authors suggested that parents may not have adapted the dialogic reading style for older children. In fact, two sets of strategies have been developed for dialogic reading: one for reading to two- to three-year-olds and the other for four- to five-year-olds (Pearson Early Learning, 2002). The language support strategies for older children involve more challenging questions and focus on elaborating and expanding the child's responses. However, Mol and colleagues (2008) noted that the information in the studies they reviewed was not always sufficient to determine which set of dialogic reading techniques parents were trained to use. Mol et al. (2008) also examined the effect of socioeconomic status and found that the effects of dialogic reading on vocabulary was greater for children in middle-class families than those in low-income families. They speculated that parental education might have influenced dialogic reading by parents or that children were not developmentally ready for some of the language support strategies (i.e, inference-eliciting strategies).

Lonigan and Whitehurst (1998) conducted a study with 91 three- and four-year-old children from low-income families measuring vocabulary as well as other oral language skills. Participants were randomly assigned to one of four conditions: dialogic reading at home, dialogic reading at school, dialogic reading at home and school, or control. The study was conducted over a period of six weeks. Pretest and posttest measures included tests of receptive and expressive vocabulary and language samples collected from a subset of the children ($n = 66$). To elicit the language samples, the experimenter prompted the child to talk about illustrations in storybooks and coded children's verbalisations for quantity and lexical diversity. Significant effects were

revealed, with the children in the three intervention groups outperforming those in the control group on all measures except receptive vocabulary. Furthermore, children in the home-only condition scored significantly higher than those in the other two intervention conditions on the story task. The authors explained that in the home-only group, parents were probably better able to tailor their questions and feedback to their preschoolers' interests and abilities, while the interaction in dialogic reading at school was perhaps not tailored enough to be conducive to improvements in children's oral language skills. Overall, though, dialogic reading, whether it was with a teacher or a parent, had positive effects on children's oral language skills.

Zevenbergen, Whitehurst, and Zevenbergen (2003) examined the effects of dialogic reading on features of the narratives told by 123 four-year-olds from low-income families. Participants were randomly assigned to either the dialogic reading intervention or a no-treatment control group. The dialogic reading intervention consisted of a 30-week program at home and at school. A standardised story-retell task (the Renfrew Bus Story) was used to assess children's narratives before and after the intervention. Children were told a story while they viewed illustrations, and immediately afterwards, they were asked to retell the story while looking at the same pictures. The children's retells were coded for evaluative devices (i.e., devices that narrators use to indicate the significance of the narrated events), such as references to the internal states of characters. A significant intervention effect was found, albeit small, with children in the dialogic reading condition including more evaluative devices in their narratives than the children in the control group. This finding demonstrated that dialogic reading had an effect on specific narrative skills.

Elaborative Reminiscing Effects on Children's Vocabulary and Narratives

Although studies of elaborative reminiscing exist, the majority of studies have

investigated its effects on children's memory (e.g., Boland, Haden, & Ornstein, 2003; Valentino et al., 2014), socioemotional development (e.g., Fivush, Haden, & Reese, 2006), or self-concept (e.g., Reese, 2008), rather than language. Peterson et al. (1999), however, proposed using elaborative reminiscing to promote the language of children from low-income families, given findings of differences in their home literacy environment (HLE) compared to middle-class children (e.g., Bracken, & Fischel, 2008; Burgess, Hecht, & Lonigan, 2002; Hood, Conlon, & Andrews, 2008; Lonigan & Whitehurst, 1998). For example, Storch and Whitehurst (2001) report that low-income families have fewer books in the home compared to middle-class families. Children of low socioeconomic status have also been estimated to enter school with an average of 25 hours of one-on-one reading at home, while their peers in higher socioeconomic status families average over 1,000 hours (Adams, 1990, as cited by Lonigan & Whitehurst, 1998). While one response to this disparity is to encourage low-income families to increase reading in the home, Peterson and colleagues (1999) proposed an alternative focus on elaborative reminiscing. They reasoned that experience with the narrative genre in the oral modality would prepare children for later reading and writing of narratives.

Peterson et al. (1999) conducted their study with 20 mother-child dyads. Participants were low-income, Canadian families. The children were approximately three and a half years of age (3 years, 7 months) at posttest and just over 5 and a half (5 years, 8 months) at delayed posttest. The mother-child dyads were randomly assigned to an intervention or control group. The year-long intervention consisted of training mothers to use elaborative reminiscing when their children recounted past events (e.g., a trip to the park, a birthday party). Receptive vocabulary skills were measured pre- and post-intervention with the Peabody Picture Vocabulary Test (PPVT). Children's narratives were also collected pre- and post-intervention and one year

after the end of the intervention period, using a procedure referred to as the "conversational map" (McCabe & Rollins, 1994). In this procedure, personal narratives are elicited from children with prompts embedded in conversations (e.g., the examiner states “Once, I stepped on a bee and got stung. Have you ever been stung by a bee?”).

Peterson and colleagues (1999) coded children’s narratives for quantity (e.g., number of narratives produced, average length of three longest narratives) and narrative indicators (e.g., information about when and where events took place; qualifiers or descriptors about a place, character, or thing). A significant effect of intervention was found, with children in the elaborative reminiscing condition making greater gains than the control group on the receptive vocabulary test. No significant intervention effects on narrative skills were observed on the immediate posttest. However, at the delayed posttest (one year post-intervention), the children in the elaborative reminiscing condition showed greater overall improvement in their narrative skills compared to the control group, with the greatest change in children’s inclusion of information about setting. Thus, experimental findings showed that elaborative reminiscing does significantly improve narrative skills of children from low-income families in the long-term. Cain, Eaton, and Baker-Ward (2010) also showed that narratives of children from low-income families were of higher quality when recalling an event with a high versus a low elaborative conversation partner. This showed children tell better stories with scaffolding (high elaborative conversation partner).

Comparison of Dialogic Reading and Elaborative Reminiscing

Reese and colleagues (2010) compared the effects of elaborative reminiscing and dialogic reading on the vocabulary and narrative skills of children from low-income families. They conducted an intervention study with 33 low-income parents and their four-year-olds.

Participants were divided into three groups: parents trained in elaborative reminiscing, parents trained in dialogic reading, and parents in a no-treatment control condition. Narrative comprehension was measured as correct answers to six comprehension questions about a story the child had just heard. Narrative quality was examined by coding children's utterances for temporal, causal, and internal state terms. The findings revealed that children in the elaborative reminiscing condition showed better story comprehension and produced better quality retells than children in the dialogic reading condition. The comparison of the elaborative reminiscing group to the controls was in the expected direction, but failed to reach significance. To the authors' surprise, dialogic reading depressed narrative quality. The authors suggested that parents may not have used dialogic reading as often or as effectively as elaborative reminiscing. Measures of expressive vocabulary tests were also administered at pretest and posttest. While no intervention effects were found on these tests for either the dialogic reading or elaborative reminiscing group, both groups' results were in the expected direction (i.e., increased from pretest to posttest).

In the present study, I propose to extend Reese's research to a Canadian context, replicating some of their intervention procedures. I will also expand upon Reese's research by examining parent's perspectives on dialogic reading and elaborative reminiscing conditions. Before presenting the study in greater detail, I present below some background information on narrative skills that will aid the reader in understanding the methods.

Narrative Skills in Children

Narratives have been studied from both socio-cultural and cognitive-linguistic perspectives. Scholars adopting the second perspective have proposed a mental representation or schema for stories (Owens, 1994). According to widely-accepted story schema models (or story

'grammars'), mature stories include these elements: setting, initiating events that often constitute a problem, goal-directed actions to solve the problem, outcomes, and reactions to outcomes, typically in that order. In order to produce these elements, the narrator needs to establish a sequence among the events; set the story in time and space; refer to character's motivations, plans, thoughts and emotions; and describe cause-and-effect relationships (i.e., give the reason(s) for internal states or a situation). For example, a narrator could say "the little girl was sad because she didn't go to the zoo." Children gradually learn to include all these elements in their stories with preschoolers demonstrating narrative features, regarded as precursors to story grammar.

Features of Preschoolers' Narratives

The narrative features preschoolers typically express have been assessed with narrative levels (Owens, 1994; Stadler & Ward, 2005). These narrative levels can be conceptualised as the stages children progress through to achieve mature narration (Owens, 1994). Owens (1994) synthesizes prominent models of narrative levels including Applebee's model (1978) and Stein and Glenn's model (1980). According to Owens' (1994) summary, at the first level, children only name and describe things or people without connecting their statements. At the second level, children make statements that cluster around a central topic, such as character actions or the surroundings. Third, children start to make perceptual links between characters and events, but not temporal or causal links. At the highest (fourth and fifth) levels, children incorporate temporal links between events, cause-and-effect relationships, and characters' internal states. Stadler and Ward's (2005) newer model follows the same progression and there is strong conceptual overlap with the models described by Owens. An advantage of Stadler and Ward's (2005) model is that it is very accessible to practitioners and novice researchers.

Based on level analysis, the narratives of children three to five years old have been described as follows. First, at about age three, children demonstrate temporal and causal organization in their accounts of familiar activities (e.g., birthday party), also called *scripts* (Owens, 1994). However, when recounting specific events, they tend toward descriptions that lack temporal organization, background, and orienting information ("I have a doggie. I eat supper. Doggie eats supper. I walk my doggie"). They also jump around between events, leading to a narrative style described by McCabe and Rollins (1994) as "leap-frog". Then by age four, most children begin to include background and orienting information, as well as the physical and internal states of characters (Owens, 1994; Schick & Melzi, 2010). By age four and a half, children show less jumping around, and begin to use temporal markers such as "then" and "while" to link events together (Schick & Melzi, 2010). It appears that four- to five-year-olds possess many narrative features, although they may still lack the skill to produce a fully coherent narrative (Owens, 1994).

The Present Study

The study aimed to (a) examine parents' use of language support strategies across and within the dialogic reading and elaborative reminiscing conditions before and after intervention; (b) explore children's language skills following the intervention; (c) explore the effects of the parental intervention condition (i.e., either dialogic reading or elaborative reminiscing) on parents' strategy use and children's language skills. Another aim was to explore parents' experience with these condition and strategies with interviews.

Parents' behaviour was assessed on two tasks: storybook reading and reminiscing tasks. It was expected that all parents would increase the number and types of the language support strategies from pretest to posttest on both tasks. Also, I anticipated that parents would perform

better on the task congruent with their teaching condition at posttest. That is, parents in the dialogic reading condition to use more strategies and strategy types on the storybook task than on the reminiscing task at posttest. Similarly, parents taught in the reminiscing condition to use more strategies and strategy types on the reminiscing task than on the storybook task.

Children were given two storytelling tasks – fictional and personal storytelling – as well as vocabulary measures. Children were expected to improve their narrative level on both storytelling tasks at posttest.

I also expected the children to improve their expressive vocabulary (number of total and different words) used in storytelling tasks from pretest to posttest. Children in the dialogic reading condition were expected to show greater gains on different words compared to the elaborative reminiscing condition, in keeping with findings of a higher density of unique words in parental bookreading than in conversation (Montag, Jones, & Smith, 2015). I also conducted an exploratory analysis of the number of total and different internal state terms within children's stories, given such terms are often used in narrative contexts.

Method

Design

All parents learned the same language support strategies but were randomly assigned to one of two intervention conditions: dialogic reading or elaborative reminiscing. Given the small number of participants, the data were collapsed across conditions for pretest-posttest comparisons. However, descriptive statistics were used to compare the four parent-child dyads in the dialogic reading condition to the three parent-child dyads in the elaborative reminiscing condition. The study also had a qualitative component. Parents were interviewed about their intervention experience and the interview data were analysed thematically.

Participants and Recruitment

This study was approved by the Human Research Ethics Committee at Concordia University and was conducted in accordance with their ethical guidelines, regulations, and policies. This study was advertised at libraries, places of worship, community centres, and daycares. Informed written consent was obtained from each parent for their own participation and their child's participation at the first visit (see Intervention, Procedures section). Also, the child's assent was obtained. A thank-you gift consisting of a $25 gift card and a toy of a $15 value on average was given to each parent-child dyad upon completion of the study.

The families lived on the island of Montreal. Overall, the average age of the two girls and five boys was as follows: pretest M = 58.63 months (SD = 6.67), posttest M = 60.11 months (SD = 6.70). In the dialogic reading condition (one girl and three boys), the average age was as follows: pretest M = 54.78 months (SD = 5.81), posttest M = 56.28 months (SD = 5.95). In the elaborative reminiscing condition (one girl and two boys), the average age was as follows: pretest M = 63.76 months (SD = 3.70), posttest M = 65.22 months (SD = 3.62). An independent t-test of ages showed that the difference neared significance: $t(5) = 2.32$, $p = .068$. One family dropped out stating lack of time as their reason for withdrawing.

The socioeconomic status of families was mixed. Income ranged from $20,000 to more than $72,000. Three mothers reported household income at more than $72,000, with two of them in the dialogic reading condition. Education level ranged from high school to bachelor's degree and above. Four mothers had completed or were completing a bachelor's degree; of these, three were in the dialogic reading condition. Also, all of the parents who volunteered were mothers. There was one single mother in each condition.

Intervention

Content. The intervention was provided individually (see Procedures) and divided into three segments: (1) didactic information, (2) demonstration of practices with videotaped examples[1], and (3) applying the language support strategies. In the first segment, I gave parents information on the objectives and rationale for the dialogic reading or elaborative reminiscing approach using a short PowerPoint presentation. In the second segment, I showed examples of dialogic reading or elaborative reminiscing in a dyad with a four-year-old child, depending on the condition to which the parent was assigned. The dialogic reading or elaborative reminiscing approaches were equated as much as possible while maintaining their qualitative uniqueness - a reading and talking versus a talking only modality. To this end, the same language support strategies were targeted in both approaches: (1) asking the child open-ended questions, (2) expanding on the child's utterances, and (3) increasing the child's participation by eliciting more details and answering his/her questions (adapted from Reese et al., 2010). While Reese included ideas for parents to elicit talk about special past events, these were broadened to include novel and recent activities at daycare/pre-kindergarten or in the home (e.g., an activity in the child's class, a trip to a particular park, or neighbourhood events).

In the third segment, parents were given a chance to apply the strategies that I showed them through role-plays. A copy of the intervention is presented in Appendix A. I gave parents a one-page summary containing an explanation of dialogic reading or elaborative reminiscing and examples of the strategies as a visual aid to help them with the role-play and the implementation at home (see Appendix B). For the dialogic reading group, I gave parents the children's book *Bunny Cakes* by Rosemary Wells, selected from a published dialogic reading kit (Pearson Early Learning, 2002) and asked them to read it using the language support strategies I had showed

1 These video examples were produced by me with a volunteer and her child. They were thanked with gifts of the same monetary value as the study dyads.

them. I pretended to be the child to facilitate their practice. For the elaborative reminiscing group, I also pretended to be the child and presented parents with a synopsis of "the time I was stung by a bee" (see Appendix A). I asked them to reminisce about this event using the strategies I had shown them.

Procedures. After the administration of pretest measures for each dyad (described below), I carried out the intervention individually with the parent. I chose individual instruction because of its potential to limit feelings of self-consciousness that might occur in a group and could hinder parents' participation. However, to ensure fidelity across participants, I scripted the intervention. Parents had the choice of completing the study at their home or at the thesis supervisor's research office. Three participants chose to do the study at home, while four visited the research office. Following this visit, I asked parents to implement the language support strategies for six weeks. During this period, I called them every two weeks to remind them to use the strategies and address any questions they had. At the end of the six weeks, I either returned to their home or received them at the research office to administer the posttest measures.

Materials, Measures, and Procedures

Parent measures and procedures. Two measures - storybook and reminiscing tasks - were administered to parents at pre- and posttest. For the storytelling task, parents were videotaped 'reading' *Franklin in the Dark* (Bourgeois & Clark, 2011) to their child at pretest and *Franklin and the Thunderstorm (*Bourgeois & Clark, 1998*)* at posttest. These books were chosen because they were age-appropriate, had a story grammar structure, and were similar in length, themes, illustrations, and had the same main character. All parents were also videotaped reminiscing with their child about a past event of their choosing. While parents were encouraged to choose any recent and salient event, I gave the following examples to parents: a visit to a

special place (e.g., a park with water jets or a pool), a family gathering/dinner with a visitor, an accident of some kind (e.g., an object breaking or something spilling). Parental input to the child at pretest and posttest was coded for the use of language support strategies. The coding scheme was developed based on the strategies taught at pretest and key studies of elaborative reminiscing (see Peterson et al., 1999; Reese et al., 2010).

Parents were interviewed at posttest about their experience with the condition they were taught. The interview was semi-structured (see Appendix C) so that I could compare parents' responses to a core set of questions, but also to explore issues that parents raised spontaneously.

Coding and scoring of parent measures. I transcribed the video recording of the storybook and reminiscing tasks using CHAT, an internationally used system for transcribing child language (MacWhinney, 2000). Then, I coded and analyzed the transcripts using CLAN programs (specialized software to study language samples, accompanying CHAT). I queried the data in CLAN to generate a count of the language support strategies by condition and time. The goal of coding parental input was to determine whether language support strategies increased from pretest to posttest. The six coding categories and definitions are as follows:

(1) Naming and labelling. The adult either labels items in pictures or elicits labels from the child (e.g., "What's that?" while pointing to a picture, or "What new fruit did you eat?")

(2) Asking WH questions. The adult asks questions about story setting (i.e., when and where); causes (why); feelings (how did you/the character feel); and hypothetical situations (what if).

(3) Expanding. The adult elaborates nouns (e.g., Child: "Cat!, Parent: "It's a grey cat.") or verbs (Child: "The girl was running.", Parent: "The girl was running fast"), or provides

additional semantic information (e.g., Child: “That’s a fruit!”, Parent: “Yes, it’s a fruit. It’s a cherry!”).

(4) Increasing participation. The adult helps the child connect events in the storybook or from the personal story to other events in their life. The adult acknowledges the child’s spontaneous input, answers the child’s questions, and entertains their novel or whimsical ideas. The adult also acknowledges or corrects the child’s responses to their questions.

(5) Asking Yes/No questions. The adult asks yes/no questions to confirm or elicit story information (that could be obtained with WH questions).

(6) Other. The adult does something interesting, but it does not fit well into existing categories. This category included comments not directly related to the task and print referencing on the storybook task.

The coding scheme is provided in more detail in Appendix D.

These interviews entailed three core questions, while being sensitive to novel or spontaneous issues parents raised. The core questions were: (1) What are parents' perceptions of dialogic reading or elaborative reminiscing, and of language support strategies?; (2) How easy or difficult was it for parents to do dialogic reading or elaborative reminiscing and use the strategies, and how did their children respond to the activities?; and (3) How did these activities fit with parents’ past practices? These questions relate to themes identified in the implementation literature as key explanations for the adoption of novel practices, for example, perception of an activity as positive or negative, and facilitators and barriers to an activity. The thematic analysis of the semi-structured interviews consisted of reading each interview transcript thoroughly and colour-coding information pertaining to each question. Though the coding was selective, the vast majority of what parents said was captured with this process. This coding was then compiled

across participants and synthesized. The synthesis consisted of reading each compilation twice to gather general, shared, and specific ideas in the group.

The measures and procedures for parents are summarized in Figure 1; also included are the measures for children, described next.

Pretest	**Intervention**	**Posttest**
Child Story Comprehension Receptive Vocabulary Fictional Story Narrative Level Expressive Vocabulary Personal Story Narrative Level Expressive Vocabulary	**Parent** *Elaborative reminiscing* Language support strategies • asking open-ended questions • expanding utterances • increasing participation	**Child** Story Comprehension Receptive Vocabulary Fictional Story Narrative Level Expressive Vocabulary Personal Story Narrative Level Expressive Vocabulary
Parent Language support strategies in: Reminiscing task Storybook task (Franklin in the Dark)	*Dialogic Reading* Language support strategies • asking open-ended questions • expanding utterances • increasing participation	**Parent** Language support strategies in: Reminiscing task Storybook task (Franklin and the Thunderstorm) Interview

Figure 1. Summary of study procedures and measures.

Child measures and procedures. The Multilingual Assessment Instrument of Narratives (MAIN) was used (Gagarina et al., 2012). This instrument uses six-picture sets to assess children's story comprehension and storytelling. The picture sets were developed to be parallel in terms of scene, level of detail, and story structure, while depicting different story lines (Gagarina et al., 2012). Although the MAIN was initially developed for bilingual children (i.e., to assess a child's narrative skills in two languages), the parallel stories are appropriate for pretest

and posttest in a single language (Pesco & Kay-Raining Bird, 2016). The MAIN includes two parallel stories to assess comprehension at pretest and posttest (Cat story, Dog story) and two different but also parallel stories to assess storytelling (Baby Birds and Baby Goats). The story comprehension task preceded the storytelling task at both pretest and posttest. To elicit a personal story from the child, I used the conversational map technique alluded to in the introduction: telling a story and then asking the child if they have had a similar experience. This technique has been incorporated to the Test of Personal Generation: Preschool (TPG:P) (Spencer & Petersen, 2012). The measure comes with forty different prompts. Eight parallel prompts (see Appendix E for themes) were used in my study.

To assess vocabulary growth, I analyzed the children's fictional and personal stories for the following: number of different words, and internal state terms. I chose these variables since children may show gains in specific kinds of vocabulary related to storytelling. Also, the NRP recommends assessing vocabulary with author-created tools (Hoffman, Teale, & Paciga, 2014) in addition to standardised vocabulary measures, as these may lack the sensitivity to detect small improvements. Consequently, I administered the PPVT-4 (Dunn & Dunn, 2015) to assess children's receptive vocabulary at pretest and posttest.

Coding and scoring of child measures. The children's response to comprehension questions on the MAIN (Cat and Dog stories) was scored following procedures provided by the measure's authors (Gagarina et al., 2012). The fictional story task also had scoring procedures, based on story grammar. However, as discussed above the narrative level schema is a more developmentally appropriate method to assess children's storytelling skills. I used Stadler and Ward's (2005) model starting with level one and ending with level five to score the fictional and personal stories. Points were awarded based on the narrative level the child demonstrated. For

example, when a story met the criteria for a third level narrative, the child received three points.

The vocabulary measures were a frequency count of the number of total and different words, and total and different internal state words (see Appendix F; Recchia & Howe, 2011) used in fictional and personal stories. I transcribed these stories with CHAT. Then, I generated a count of total and different words from CLAN. In a final step, I specified a list of internal state terms to CLAN and generated a count of these terms.

Data Analysis

The parent and child data were examined for normality. The Shapiro-Wilk test was not significant for the parental variables. However, the Shapiro-Wilk test was significant for the child variables of fictional and personal story narrative level, and for the total internal state terms. The histograms and Q-Q plots were inspected visually to assess the degree of deviation from normality. The deviations appeared relatively minor. Given the relative robustness of the *t*-test to deviations of normality, a paired samples *t*-test was conducted after collapsing the data across conditions. The condition results were explored only with descriptive statistics, as the sample size precluded statistical testing. Furthermore, the condition by time data are reported even when a *t*-test was not significant (i.e., in the absence of a main effect of time) in order to dissect the results, as this is an exploratory study. All the data generated from the CLAN program were entered into and analyzed using SPSS software.

Results

Mothers' Use of Language Support Strategies

Storybook task. The language support strategies used by mothers at pretest and posttest were analyzed in terms of their frequency and type. Exact *p*-values are reported for the one-tailed *t*-tests, since the hypotheses were directional. Alpha was set at .05 for the *t*-tests.

Frequency of strategies. The average frequencies of mothers' language support strategies (collapsing across types) on the storybook task were as follows: pretest $M = 27.86$ ($SD = 10.19$), posttest $M = 84.14$ ($SD = 73.64$). The results were in the expected direction and a paired-samples t-test showed borderline significance: $t(6) = 1.94$, $p = .051$. The standard deviation also showed considerable variability among the participants at posttest. Figure 2 displays this result by condition and time. As elaborated in the preceding section on Data Analysis, the condition results are only reported descriptively and allusions to higher or lower scores are not intended to imply a statistically significant result. Mothers in the dialogic reading condition used strategies more frequently, while the mothers in the elaborative reminiscing condition, used strategies less frequently at posttest than at pretest.

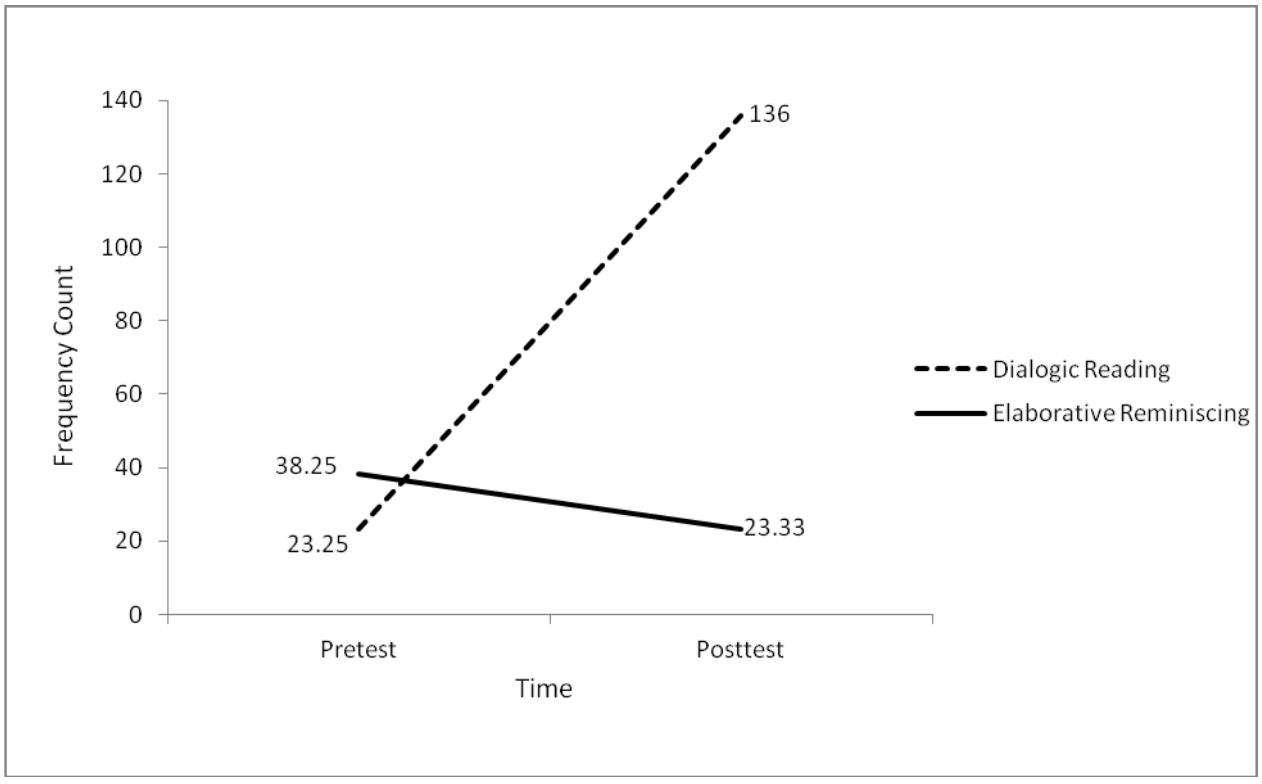

Figure 2. Frequency of strategy use on the storybook task, by condition.

Distribution of strategy types. As elaborated in the Method, the language support strategies parents used were grouped to six types: increasing participation, naming and labelling, expanding, asking WH questions, asking yes/no questions, and other. Collapsing across mothers, all six of these strategy types were used at both pretest and posttest. At pretest, the top three strategies were increasing participation, accounting for 76.06% of the data; naming and labelling (10.94%); and expanding (7.12%). At posttest, the top three strategies were increasing participation, accounting for 66.36% of the data; asking WH questions (15.96%); and naming and labelling (9.62%). At both times, increasing participation was the most used strategy, but decreased at posttest, as other categories rose. For example, asking WH questions showed the most dramatic increase.

This result for asking WH questions was observed in both the dialogic reading and elaborative reminiscing conditions, as shown in Figure 3. Also, on naming and labelling, mothers in both conditions were observed performing similarly to other mothers in their same condition at posttest (i.e., less variability at posttest than at pretest). Furthermore, the mothers in the elaborative reminiscing condition used less naming and labelling at posttest than at pretest, as was observed for the entire sample, while those in the dialogic reading condition did the opposite.

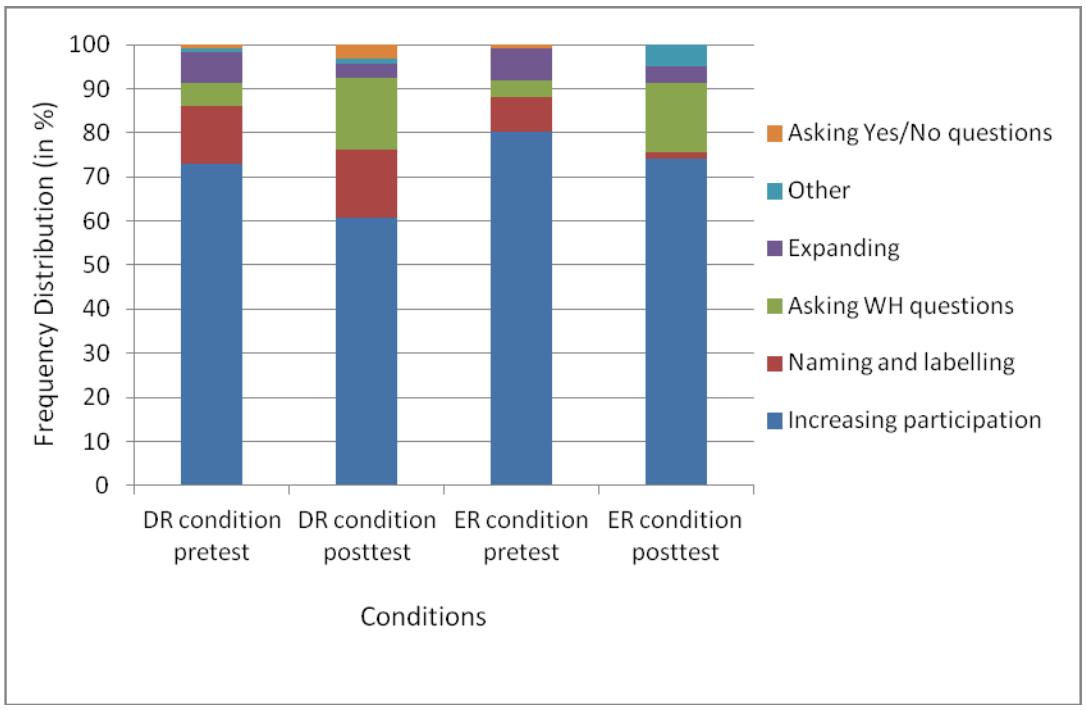

Figure 3. Distribution of types of strategies (in %) in storybook task, by condition.

Diversity of types. As described in the section above, there were six different types of language support strategies. The average number of different types of strategies that mothers used on the storybook task was as follows: pretest $M = 3.71$ ($SD = 1.38$); posttest $M = 4.29$ ($SD = 1.50$). A paired-samples t-test did not show a statistically significant difference between these means: $t(6) = .80$, $p = .230$. Figure 4 illustrates this result by condition and time. Mothers in the dialogic reading condition used more types of strategies, while mothers in the elaborative reminiscing condition used fewer types at posttest than at pretest.

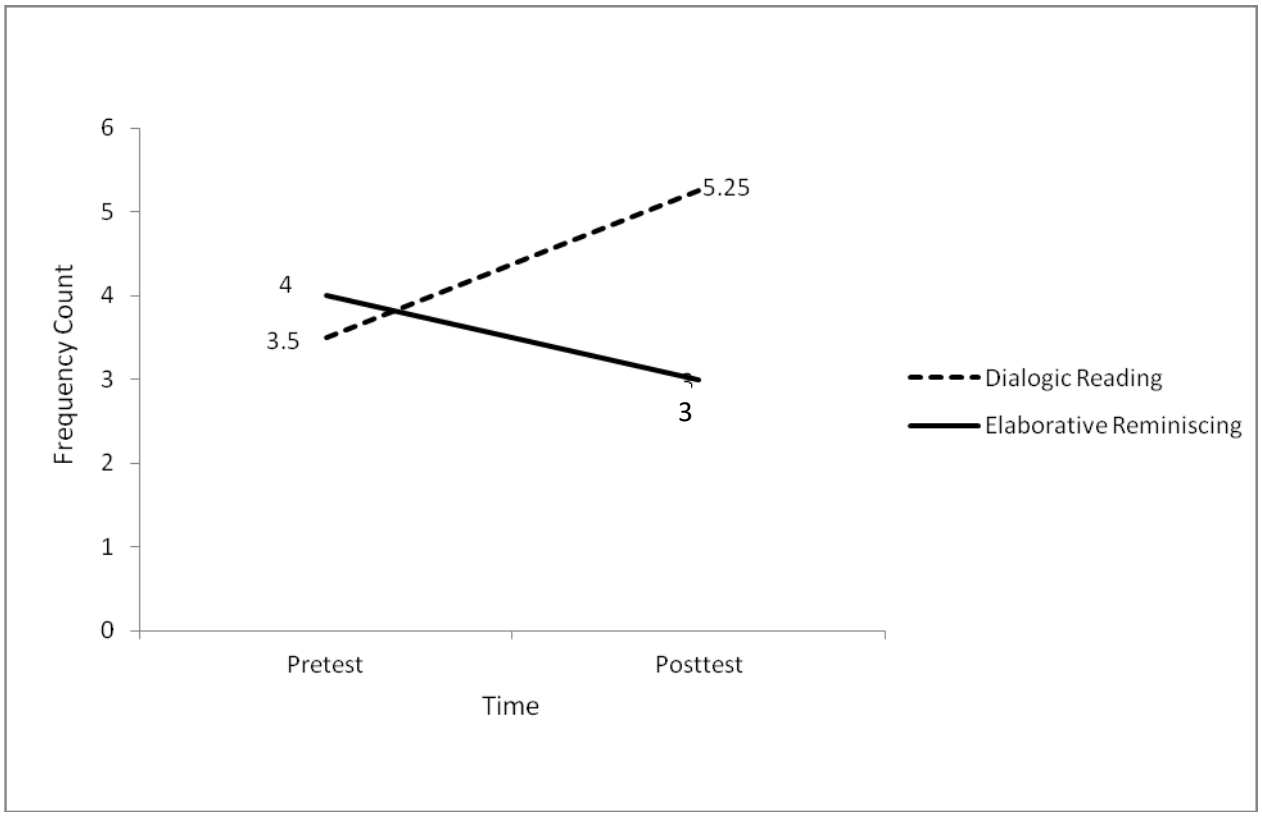

Figure 4. Types of different strategies used on the storybook task, by condition.

Reminiscing task. Maternal use of language support strategies were also examined for the reminiscing task. As for the storybook task, the variables were frequency and type.

Frequency of strategies. The average frequencies of mother's language support strategies (collapsing across types) on the reminiscing task were as follows: pretest, $M = 43.43$ ($SD = 25.26$) and posttest $M = 36.00$ ($SD = 17.70$). A paired samples t-test did not show a statistically significant difference between the means: $t(6) = .58$, $p = .290$, but the results were not in the expected direction. Four of seven mothers used fewer strategies at posttest than at pretest; of these four, three were in the elaborative reminiscing condition. Figure 5 shows this result by condition and time. Mothers in the dialogic reading condition used strategies more frequently, while the mothers in the elaborative reminiscing condition, used strategies less frequently at posttest than at pretest.

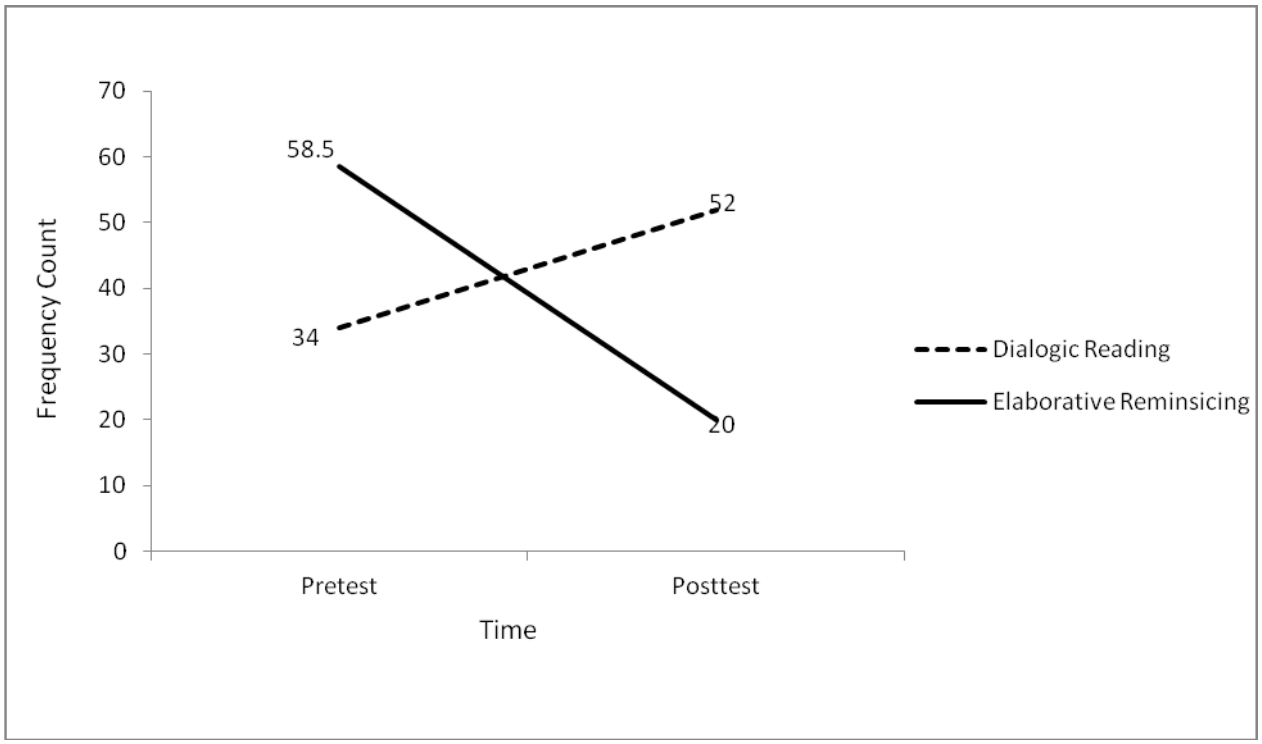

Figure 5. Frequency of strategies on reminiscing task, by condition.

Distribution of strategy types. As was the case for the storybook task, collapsing across the mothers, all six strategy types were used at both pretest and posttest in the reminiscing task. At pretest, the top three strategies were increasing participation, accounting for 56.88% of the data; asking WH questions (21.13%); and asking Yes/No questions (12.33%). At posttest, the top three strategies were increasing participation accounting for 56.44% of the data; asking WH questions (24.63%); and asking Yes/No questions (8.75%). At both times, the same strategy types were the top three most used types, but asking Yes/No decreased at posttest, while asking WH questions increased. Additionally, still collapsing across the mothers, naming and labelling showed a increase from nearly one percent at pretest to over five percent at posttest. The result for asking WH questions was only mirrored in elaborative reminiscing condition, as illustrated by Figure 6, while the increase in naming and labelling was observed in both conditions.

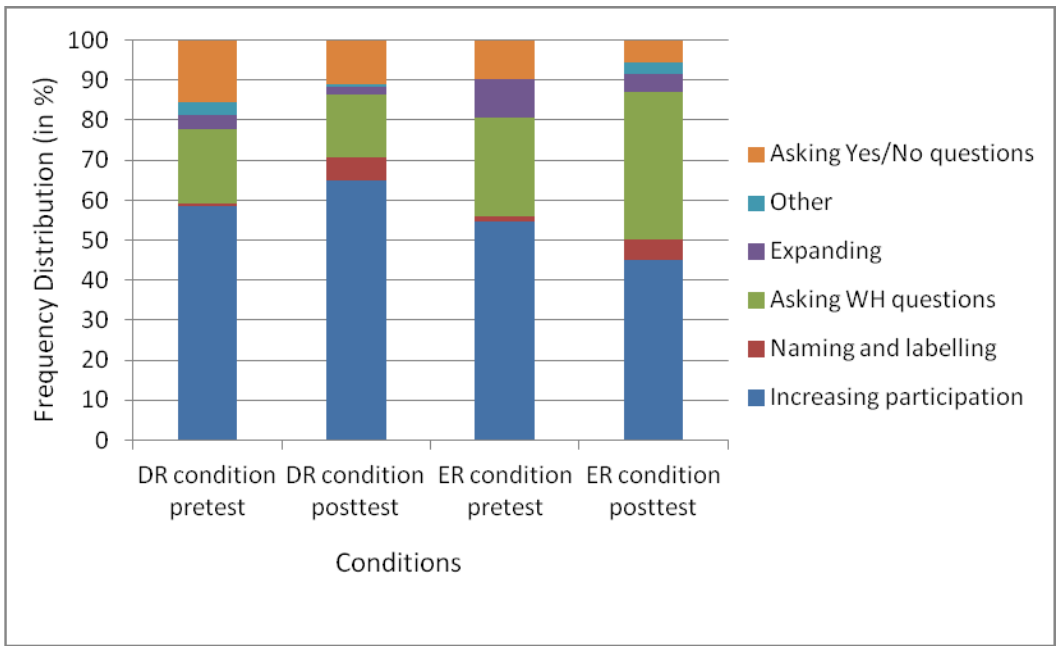

Figure 6. Distribution of types of strategies (in %) in reminiscing task, by condition.

Diversity of types. The average number of different types of language support strategies that mothers used on the reminiscing task was as follows: pretest $M = 4.29$ ($SD = .95$); posttest $M = 5.14$ ($SD = .90$). A paired-samples t-test did show a statistically significant difference between these means: $t(6) = 2.12$ $p = .039$. Four of seven mothers used more types of strategies at posttest than at pretest; of these four, two were in the dialogic reading condition. Additionally, a mother in the elaborative reminiscing condition used the six types at both times. Figure 7 shows the result by condition and time. Mothers in the dialogic reading condition used fewer types of strategies, while mothers in the elaborative reminiscing condition used more types at posttest than at pretest.

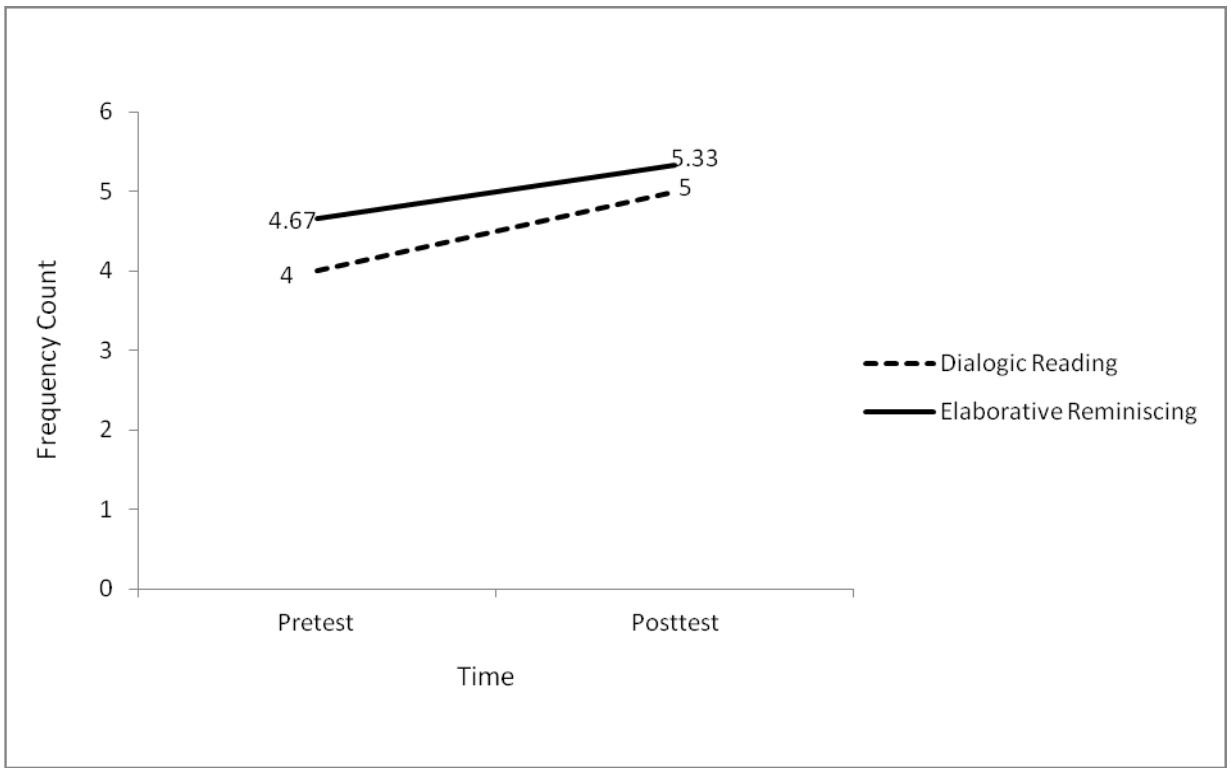

Figure 7. Types of Strategies on Reminiscing Task by Condition.

As revealed in Figures 2 and 5, parents in the dialogic reading condition used more strategies on the storybook task than on the reminiscing task at posttest, while parents in the elaborative reminiscing condition used fewer strategies on both tasks, contrary to expectations. As revealed in Figures 4 and 7, parents in the dialogic reading condition also used slightly more types of strategies on the storybook task than on the reminiscing task at posttest, and parents in the elaborative reminiscing condition used more types of strategies on the reminiscing task than on the storybook task.

Mothers' Experiences with Dialogic Reading and Elaborative Reminiscing

General impressions of dialogic reading and elaborative reminiscing. Mothers were interviewed, as planned, regarding their experience of learning about and implementing language support strategies. The mothers uniformly described their experience in positive terms, using

words such as educational, enjoyable, helpful, interesting, worthwhile, nice, useful, fun, and good, or said they "liked it."

The mothers in the dialogic reading condition talked about a variety of things they liked. One mother liked that her child "was expressing himself more" and also reported that "all my children got involved ... and they started reading to him sometimes. I like that." Another mother saw dialogic reading as an opportunity to discuss certain behaviours: "[I]f he gets in trouble ... [but] doesn't really want to talk about it, maybe it's a way that I can talk about it without, you know, making it so intense." She also described it "as a teaching kind of tool" whereby she could introduce her child to "counting and … identifying things and … vocabulary." Yet another mother liked how it afforded her a chance to be actively involved in an activity with her typically independent child, as it "creates a more direct interaction ... she is pretty independent but [for] reading, because she doesn't know how to read on her own, she really has to rely on me."

Mothers in the elaborative reminiscing condition similarly identified a variety of things they liked and disliked about the activity. One mother found it engaged her child, and helped her child feel included. As the mother described, it "gave her a chance to feel she was not being talked directly to, she was being asked and included." She further elaborated "a lot of the times when you talk ... [children are] told, you know, or they're told no and told, told, told." Another mother noted that personal stories were actually family stories with the potential to help her child with identity construction "to have him understand where he came from." She also said the activity allowed her to have quality one-on-one time with her child: "I liked giving him the individualized attention ... He especially liked the individualized attention. He liked talking one-on-one." Yet another mother said it was interesting to see what her child recalled: "interesting to

see how he remembered things... [if] he remembered them clearly or differently or if he remembered things I had completely forgotten about."

When asked their opinion regarding the effect of the strategies on children's language skills, the majority of mothers agreed that the strategies were beneficial for language, as it improved their child's fluency and expressive language. Some said the strategies were beneficial for learning in general. For example, one mother felt the strategies could "accelerate learning" and another mother described them as "good because it makes her pay attention to what's going on" and she thought the strategies helped develop cognitive skills "I think [dialogic reading] makes them think more and like absorb more." No mother viewed the strategies as adversely impacting learning.

Other mothers reported changes to their own awareness or behaviours that they attributed to the strategies. Specifically, one mother in the dialogic reading condition said "[The intervention] gave me a perspective, because before I would want to get through the story ... I feel like that was helpful to put that in perspective ... the goal isn't to get through this story, the goal is to engage him in language and in speaking and in exploring ideas ... so that was very helpful in having guidelines." Similarly, mothers in the elaborative reminiscing condition shared that the strategies helped them think about and change their interaction. One said the strategies "makes parents aware of avenues to engage." Another reported the strategies make you "aware of how you're speaking...So that gives him more time to answer... So yeah, I find it helps... I've seen a marked improvement."

Facilitators and barriers. Mothers reported it was easy to engage in elaborative reminiscing or dialogic reading. They attributed this ease to the child's receptiveness (i.e., their enthusiasm for the activity and/or, their attention on it) and noted that children were more

receptive at certain moments (i.e., when energetic/not tired). They also identified other factors that facilitated the reading or reminiscing activity and encouraged them to use it over several weeks. One of these was the child liking to read or talk or feeling proud about their contributions.

Mothers in the dialogic reading condition were pleasantly surprised by how much their child liked the activity, as evident in the following quotes.

> "His interest. Like he was very enthusiastic about it which I was surprised I guess." (mother 3 in dialogic reading condition)

> "I actually didn't think he would like it that much. ... I thought he might be irritated by me asking him questions and stuff but he seemed to enjoy it quite a bit. And I didn't realise that he wanted to talk about it more than I thought he did." (mother 6 in the dialogic reading condition)

Mothers in the elaborative reminiscing condition reported their child feeling proud or was talkative, as evident in the following quotes.

> "she enjoyed when I would say oh, I don't remember what kind of cake it was and then she… would take pride in informing mummy because she had the answers" (mother 1 in the elaborative reminiscing condition)

> "…is very talkative… That's how he is. He likes to talk about stories" (mother 4 in the elaborative reminiscing condition)

> "very talkative child… he's just going to keep going and going and going regardless if at the end of the conversation you even talked about the question you asked him. He's always going to talk to you, so that made it very easy. He's not a shy kid" (mother 8 in the elaborative reminiscing condition)

Another facilitating factor was the frequency of reading or talk of past events in daily life:

> "We already read a lot together so it was fairly easy to just, once I just changed the way I read to him..." (mother 6 in the dialogic reading condition)

> "… [talked about the past] daily at this age 'cause everything reminds her of something or she'll ask about something and to put it into perspective to her it'll bring like what is x, y, z. And I'll be like remember the time we did this, that's an x, y, z. So daily. But the exercise was just not to like, yeah x, y, z, ... it was to be like do you, ... x, y, z and then <yoooo> and then go forward" (mother 1 in the elaborative reminiscing condition)

Finally, some mothers appreciated that the activity aligned with a personal goal of improving their child's language skills (a mother in the dialogic reading condition) or fluency (a mother in the elaborative reminiscing condition) and so they were motivated to do their prescribed activity for six weeks (and even beyond).

> "even though I wanted to do it before, it wasn't happening with the same frequency but once I … signed up for the study it was like 'Okay I'm doing this for a good reason and I have a goal' which is to help him improve his language skills." (mother 3 in the dialogic reading condition)

> "And like I said it came at the perfect time ... So it kind of worked super well together." (mother 4 in elaborative reminiscing condition)

Parents sometimes found it challenging to engage in dialogic reading or elaborative reminiscing for the following reasons: difficulty fitting the activity into their schedule (finding the time or the best time of day) and sustaining their child's engagement. For example, the following quotes demonstrate that it was sometimes difficult for parents to find time to read or talk about a past event, while others prudently chose the time of day to do the activity.

> "Sometimes it was hard to find the time." (mother 3, dialogic reading condition)

> "I tried to do it at least three times a week… Some weeks were easier than others" (mother 4, elaborative reminiscing condition)

> "…once I just changed the way I read to him, that's how I read to him mostly except for at bedtime. Then it's not very easy to do 'cause it's difficult to keep his attention" (mother 6, dialogic reading condition)

Parents also reported having difficulty sustaining their child's engagement, as evident in the following quotes.

> "Sometimes it was boring because he wanted to read the same book again" (mother 3, dialogic reading condition)

> "To get her to talk more about something a little further that was what I found kind of challenging, is to, to continue on with that conversation. … So, but just, I guess to give her the opportunity to fill in the blanks.*"* (mother 1, elaborative reminiscing condition)

> "I still find it a little bit challenging for myself to make it naturally flow but it is getting easier again still." (mother 7, dialogic reading condition)

Preferred strategies. In the dialogic reading condition, mothers varied in their affinity and disfavour for the three strategies that were shared with them. For example, some mothers preferred expanding, while others preferred open-ended questions and liked expanding the least. However, they offered similar reasons for their likes and dislikes. Two of the mothers named expanding as the strategy they liked and used the most. One mother found expanding to be the easiest "because it's already there, what else can I say about the word that he just used… rather than like thinking up something totally new." The other mother viewed increasing participation by describing what your child saw as expanding, for example "easiest one is to describe objects like, to further describe the things that he notices. (me: Like the expanding.) Yes. (me: Like if he says something add to it.) Yes. Like a frog. 'Oh, what colour is the frog?' And then we talked about colours, or how many are there…" She appeared to confuse expanding with increasing participation. She also found open-ended questions "good too." Another mother liked and used expanding the least "because she doesn't always say something… so like the second one expand is not always possible." She further elaborated that "although mostly she would say something, but not always something that I found easy to expand on." She found open-ended questions to be the easiest and used it the most "because you can do it no matter what."

In the elaborative reminiscing condition, all the mothers reported liking and using open-ended questions the most. One of them said she used this and increasing child's participation the most "because I find the two link very, very well together." Similar to another mother, she had an issue with expanding, but for a different reason "I would do it, but I'd do the other two

more… because he talks a lot! So even if I try to expand on what he's saying he's gonna cut me off and tell me what he wants to say anyway." In contrast, the other mother encountered frustration trying to expand on her child's closed answers. For example, she said about expanding "That, personally I had a challenge with. […] Expanding on her close[d] answers." Yet, the third mother claimed to not like increasing participation the least but rather "It's not that I don't like the third one. I just needed a little more time to get a handle on it. That's all… I had to be more aware of it, more in my head than more natural about talking to him. That's what I mean. (me: It took some reflecting on your part for increasing your child's participation.) That's it! Yes! (me: Rather than just being in the conversation.) Conversation, yes."

Relationship to past and future practice. For the majority of mothers, the strategies were new. Although the mothers already read and talked to their child about past events, their ways of interacting during reading or talking changed (mother 1 and 6). The mothers who had personal goals of improving their child's fluency (mother 4) or language skills (mother 3) said they wanted to talk or read to their child but it was not happening or happening infrequently. For example, one of them said the intervention "came at the perfect time" and the other reported "I wanted to do it before, [but] it wasn't happening with the same frequency." Both these mothers said they would continue using the strategies I shared with them: "We're gonna continue now having him speak to us like this" and "I will continue to do it… Like now this is part of our routine and we're going to continue."

Checklist data. At the time of the interview, the mothers also returned the checklist they had been filling out weekly for six weeks. As shown in the descriptive statistics in Table 1, mothers in both conditions reported reading to their child and talking about the past, but did the assigned activity more often than the unassigned one. Moreover, mothers in the dialogic reading

condition reported doing these two activities at higher rates than mothers in the reminiscing condition.

Table 1

Items Checked by Mothers on Checklist of Weekly Activities

Condition	Item on Checklist	*M*	*SD*
Dialogic Reading	Read a storybook	27.75	10.91
	Talked about the past	21.75	17.06
Elaborative Reminiscing	Read a storybook	13.67	3.79
	Talked about the past	19.00	3.61

Children's Narrative and Vocabulary Skills

Children's scores on the narrative and vocabulary measures at pretest and posttest are reported in this section, along with the results of paired samples *t*-tests comparing the seven children. These are supplemented with line graphs displaying children's performance as a function of the condition in which their mothers learned and practiced the language support strategies (i.e., dialogic reading or elaborative reminiscing). Exact *p*-values are reported for the *t*-tests. Alpha was set at .05 for the one-tailed *t*-tests on the narrative variables because the hypotheses were directional. For the vocabulary variables, alpha was adjusted for family-wise error to be .013 (.05/4 = .013) given that these variables were closely related. One-tailed *t*-tests were used for the vocabulary variables, with the exception of the internal state terms (as I had no hypothesis for this variable, I conducted a two-tailed test).

Story comprehension. Children's story comprehension scores (from the MAIN) were in the expected direction: $M = 7.14$ ($SD = 2.27$), posttest $M = 7.43$ ($SD = 1.51$), but did not increase

significantly, $t(6) = .40$, $p = .352$. Figure 8 displays the means by condition and time. As this Figure shows, children in the dialogic reading condition had slightly higher scores than those in the elaborative reminiscing condition at pretest, but the opposite pattern was observed at posttest.

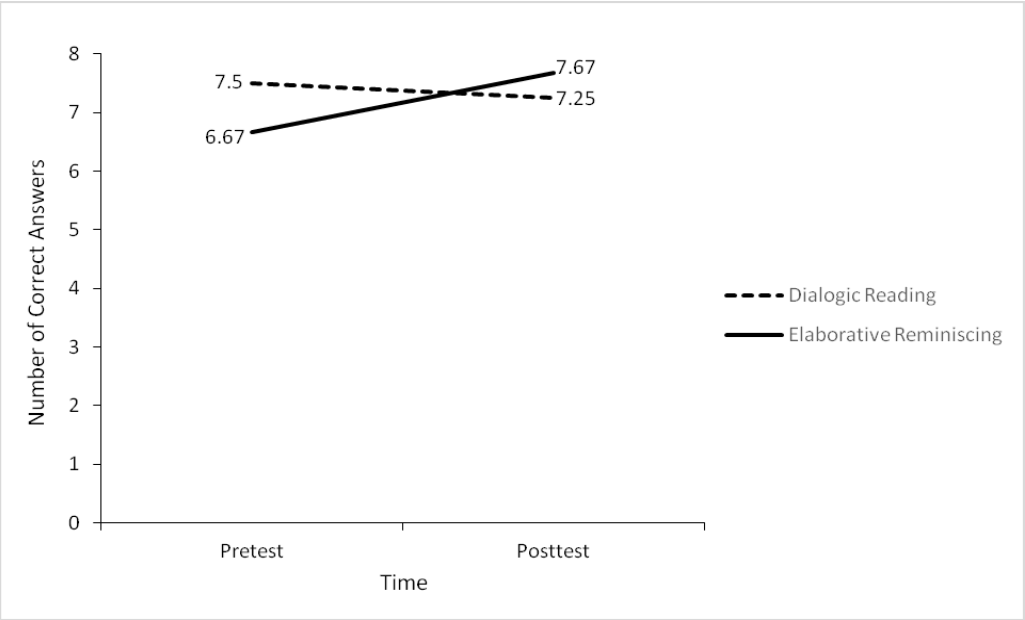

Figure 8. Children's story comprehension scores, by condition.

Receptive vocabulary. On the PPVT-4, raw scores increased: pretest $M = 86.14$ ($SD = 17.68$); posttest $M = 108.14$ ($SD = 21.40$). The increase was significant: $t(6) = 6.09$, $p = .001$. Figure 9 displays the means by condition and time. As this Figure illustrates, children in both conditions showed a similar pattern of growth, although the pretest and posttest scores for children in the dialogic reading condition were lower compared to those in the elaborative reminiscing condition.

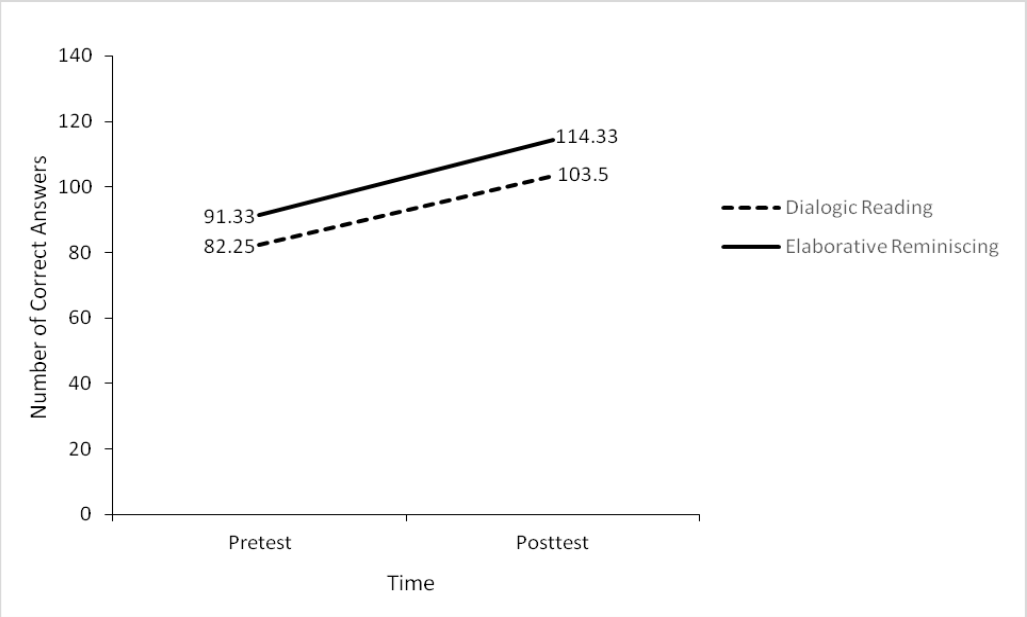

Figure 9. Children's raw scores on receptive vocabulary (PPVT-4), by condition.

Fictional story. The storytelling task of the MAIN required that the child tell a story based on a series of pictures (as described in the Method, parallel stories were used to reduce practice effects from pretest to posttest). The stories children produced on the two parallel picture sets were analyzed for narrative level and vocabulary.

Narrative level. The children's stories were awarded a level from 1 to 5 based on Stadler and Ward's (2005) schema: pretest, $M = 3.43$ ($SD = .79$) and posttest $M = 3.86$ ($SD = .90$). A paired samples t-test was significant: $t(6) = 2.12$, $p = .039$. Figure 10 displays the means by condition and time. As the figure shows, the children in each condition achieved higher narrative levels at posttest than at pretest. Also, the children in the dialogic reading condition scored lower than those in the elaborative reminiscing condition at both times.

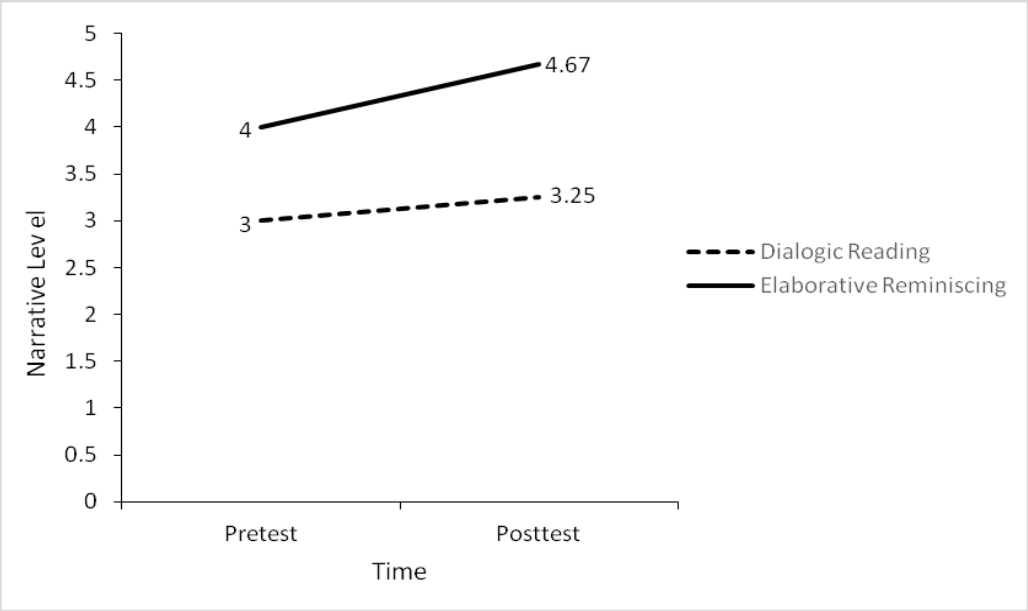

Figure 10. Children's narrative level on fictional story task, by condition.

The individual data showed that three of the participants increased their scores on narrative level. The participant with the lowest score at pretest advanced from listing (level 2) to connecting events (level 3) with "and" and through other lexical choices (e.g., the child used "chasing" at posttest, compared to "running next to" at pretest, showing a better understanding of the unfolding events). This child's story is provided in Table 2.

Table 2

Fictional Story Told by Participant 3

Pretest	Posttest
The cat stays away. The cat [reformulates], the bird [is] saving its babies. The big bird is [unintelligible speech] inside. The baby bird is eating the worm. The cat is up the branches. The dog is on the [cat's] tail and the dog is running next to the cat.	The sheep[1] got in the water, the baby sheep is scared of the water. The big sheep got in the water. The sheep got in the water, her seed [= saw] something. The racoon is eating the baby, the little baby sheep. The racoon is chasing the sheep. And this sheep is going on the water. He [= the bird] ate the tail of the racoon … The birdie is trying to chase, the bird is chasing the racoon. The end.

[1]The animals depicted were goats and a fox; however, the MAIN permits the child to refer to the animals with other terms indicating a plausible predator/prey relationship.

Even participants with relatively high levels of narrative skills at pretest showed growth from pretest to posttest. For example, two participants progressed from sequencing (level 4) to narrating (level 5), the highest level requiring that the child link events both temporally and causally. As shown in Table 3, the participant included temporal terms (*then, when*) at both pretest and posttest. At posttest, she also referred explicitly to cause-and-effect relationships (i.e., "... fell *because* he wanted to eat the grass") and alluded to internal states causing behaviours (e.g., "when he wolf *wanted* to eat them, he was running"; "he saw the wolf *trying* to attack the goat").

Table 3

Fictional Story Told by Participant 1

Pretest	Posttest
So, the birdies were tweeting and the mummy was saying nothin'. Then, the little birdies weren't saying anything and the mama flew off. Then, a cat saw them. And when it was climbing up, when the mama came back, she gave the little birdie a worm. And then, the cat got the little birdie. And then, the dog got the cat and the mama was *scared*. And so the doggie chased the cat and the mama and the babies were *happy* together. I'm finished.	The baby goat fell in the water because he *wanted* to eat the grass. The daddy goat was *surprised*. And then when they were drinking the water and the other lamb was eating, a wolf *wanted* to eat them. And when the wolf *wanted* to eat them, he was running, chased the goat. And then when a crow came by, he saw the wolf trying to attack the goat. Then when the crow bitted the wolf the goat was *surprised*. And then the crow *scared* the wolf away.

Note. Italics indicate internal state terms, discussed further under vocabulary.

Table 4 shows a level 5 narrative by participant 8. Like participant 1, this participant used a causal term ("since") and referred to character motivations at posttest ("the fox wants to eat the other goat; "The crow was like 'Oh I can bite the fox so I can help the little lamb'"), but not at pretest.

Table 4

Fictional Story Told by Participant 8

Pretest	Posttest
The birds was *happily* living around its two babies living in the nest. Then it flew away to get some food and a cat came. They were *surprised* that a cat came. And then, the mother got the worm, but then the cat came, up the tree, but then the dog, the dog came, and it bit its tail. And then it chased the cat away.	A baby goat stuck inside the pond. The mum sees, goes inside the pond, then the fox is super &de [= delighted?] since he sees that the goat is distracted from helping the other baby goat. The fox *wants* to eat the other goat [points to correct reference]. When he tried to grab the goat, he almost ... well, he was like "Ahh!" [a scream from the baby goat] and then the fox was like "Yeah!" [excitement from fox] . And then the crow was like "Oh, I can bite the fox so I can help the little lamb" [a thought from crow]. And then he bit the fox. And then he chased him away. And that's the end. Then mum and little lambs are safe all together. I am done.

Note. Italics indicate internal state terms, discussed further under vocabulary.

Vocabulary. Table 5 displays the descriptive statistics for the vocabulary used by children in their fictional stories, specifically, the total and different words, and the total and different internal state terms.

Table 5

Expressive Vocabulary in Fictional Story[1]

	Pretest		Posttest	
	M	*SD*	*M*	*SD*
Total words	83.43	31.70	110.86	28.10
Different words	34.29	7.93	43.14	13.74
Total internal state terms	2.43	1.72	4.00	2.45
Different internal state terms	1.86	1.07	2.57	1.40

[1]MAIN Storytelling Task

Number of total and different words. Paired sample *t*-tests showed that neither the total number nor the number of different words was significantly different from pretest to posttest: total words $t(6) = 1.73$, $p = .068$; different words $t(6) = 1.47$, $p = .096$. However, scores for both

measures were in the expected direction as shown in Table 5.

Figures 11 and 12 display the mean scores by condition and time for total and different words. As these figures show, the children in each condition had higher mean scores at posttest than at pretest, but the gains were greater for children in the dialogic reading condition.

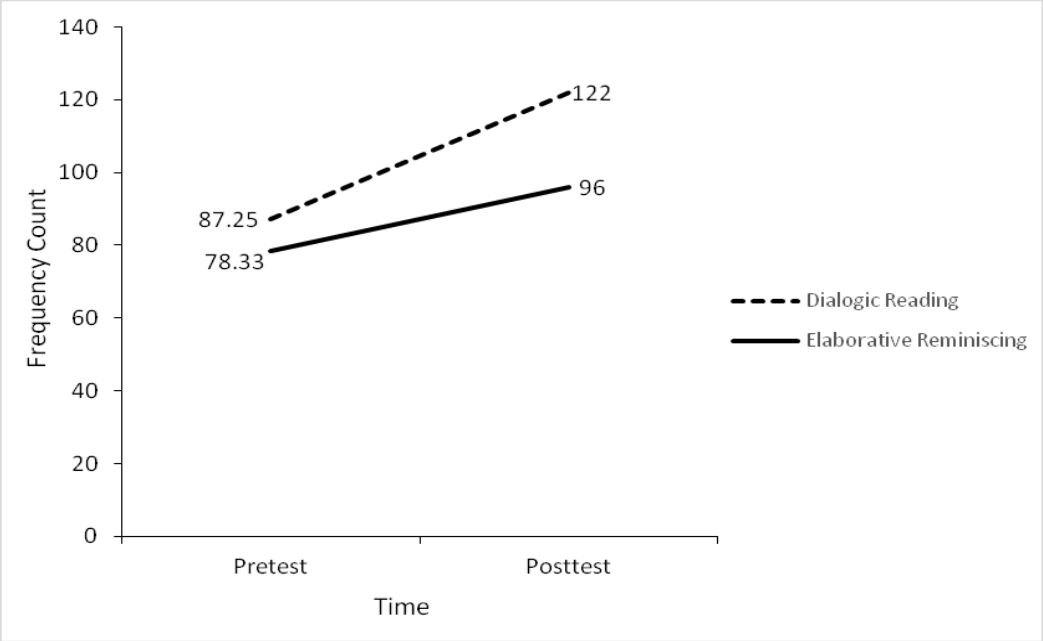

Figure 11. Number of total words on the fictional story task, by condition.

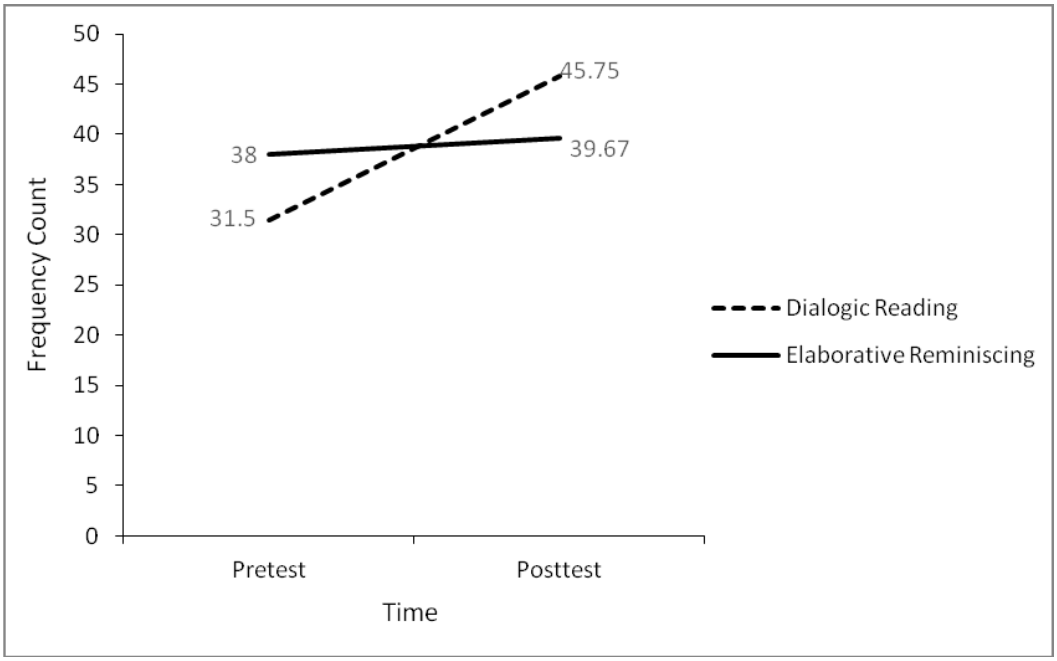

Figure 12. Number of different words on the fictional story task, by condition.

Internal state terms. The total and different internal state terms used by children in telling a fictional story were not statistically different: total terms $t(6) = 1.75$, $p = .130$; different terms $t(6) = 1.26$, $p = .253$. At pretest, the terms children used expressed emotions, desire, attempt, and intention. At posttest, children referred to the same emotions as at pretest, but additionally used the terms 'worried' and 'hurt', and used the same terms they had at pretest for intentions; attempts and desire.

Figure 13 illustrates the mean scores by condition and time for total internal state terms. A relatively similar pattern was observed for different internal state terms. The average different internal state terms were as follows: in the dialogic reading condition pretest $M = 2$ ($SD = 1.41$), posttest $M = 3.25$ ($SD = 1.26$) and in the elaborative reminiscing condition pretest $M = 1.67$ ($SD = .58$), posttest $M = 1.67$ ($SD = 1.16$).

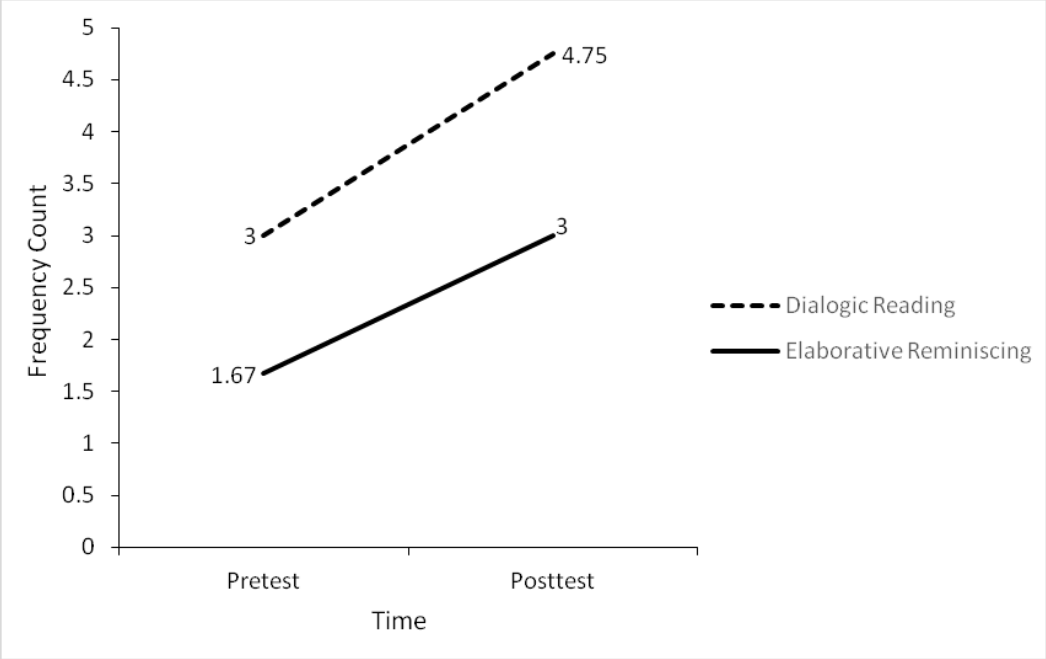

Figure 13. Total internal state terms on the fictional story task, by condition.

Personal story. As was the case for the fictional stories, the children's personal stories

were analysed for narrative level and vocabulary.

Narrative level. The narrative level scores were pretest $M = 2.86$ ($SD = 0.90$), posttest $M = 4.07$ ($SD = 0.44$). The difference was significant $t(6) = 3.97$, $p = 0.004$. Figure 14 shows the means by condition and time. As this Figure illustrates, the children's scores in each condition were higher at posttest than at pretest and converged at posttest.

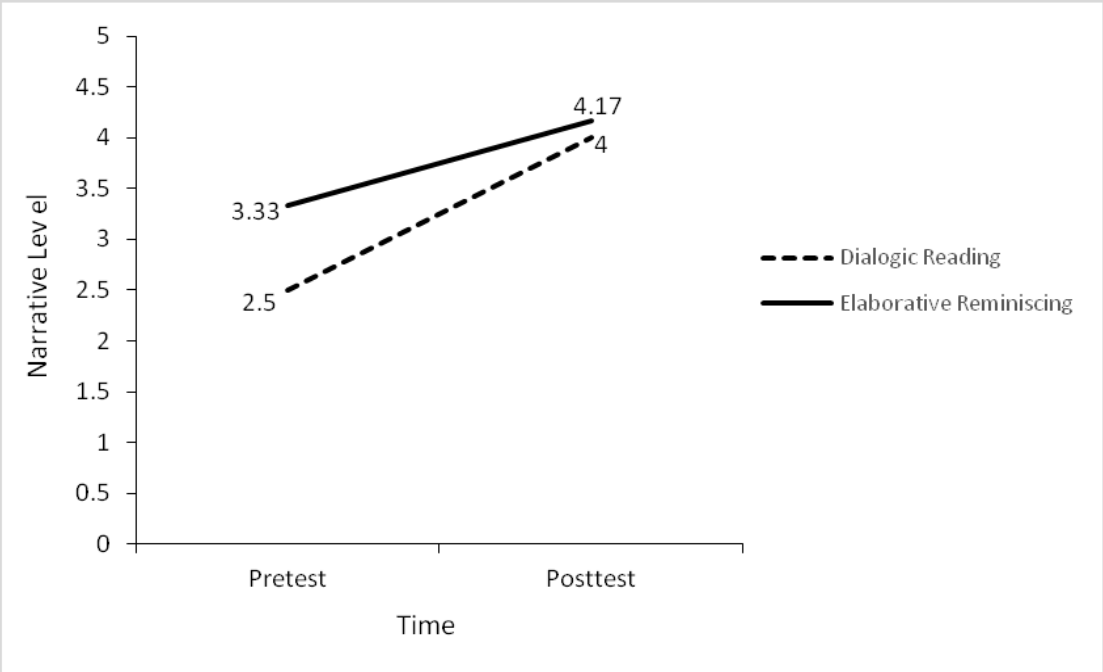

Figure 14. Narrative level on personal story task, by condition.

Participant 2 progressed from connecting (level 3) at pretest to sequencing (level 4) at posttest. As illustrated in Table 6 below, this child used temporal terms to set the story in time at posttest (i.e., “one time”) and to indicate that two events coincided (i.e., “friends laughed at *when* I smashed [into the mat]”).

Table 6

Personal Story Told by Participant 2

Pretest	Posttest

I only be careful. Only when snow time, and there's ice, I slip and I do *unintelligible*. I hold on to stuff.	And one time, there's another thing, I smashed into a mat. And then my both friends *laughed* at me when I smashed.

Note. Italics indicate internal state terms, discussed further under vocabulary.

Participant 4 also improved from level 3 to 4. As displayed in Table 7 below, he set the story in time at posttest (i.e., “a very long time ago), and used the temporal terms “still” and “morning” to imply he had spent the night at the doctor’s. Other features made the posttest narrative more elaborate, such as the child's repetition of the words “really” and “forever”, hinting at his perception of the severity of the events, and the inclusion of more events relative to pretest. His parent spontaneously gave some context for this story; the child had spent the night in the emergency department with stomach cramps, which turned out to be the residual effects of a recent bout of gastroenteritis.

Table 7

Personal Story Told by Participant 4

Pretest	Posttest
I have a, I have [shows his foot with scratches]. I scratched my knee. I scratched it and then it got like that.	In a very long time ago, I was really, really, really, really *sick*. I was going and mummy was putting me on the doctor and mummy was coming with me. And it took long, and I sleep on [= at] the doctor. I sleep on a [= whispering to his mother] I was sleeping on the couches and it took the forever. And I was still in the doctor and it took the forever, forever, and it was morning.

Note. Italics indicate internal state terms, discussed further under vocabulary.

Participant 8 progressed from sequencing (level 4) to narrating (level 5). As shown in Table 8 below, the pretest and posttest story shared the same main idea of “falling and scraping [a] knee”, but the posttest story included the cause for falling (i.e., “I was running too fast...”); a resolution (i.e., “at the end it felt better because she put a bandaid on”); and a more specific time

reference (i.e., “first time I went”) than at pretest (i.e., “once”).

Table 8

Personal Story Told by Participant 8

Pretest	Posttest
Yeah, once I fell down and I scraped my pants so hard that it made a hole and I scraped my knee and I'm bleeding. And then I asked Miss Michael for bandaids.	The first time I went to the waterpark, ... I was running too fast and I couldn't stop myself ‘cause I was running down the toy hill. And I fell down and I scraped my knee. There was lots and lots of blood and my mum had to wipe and it really hurt. But at the end it felt better because she put a bandaid on.

Note. Italics indicate internal state terms, discussed further under vocabulary.

Vocabulary. Table 9 displays the descriptive statistics for the total and different words and internal states terms (the same measures applied to the fictional stories).

Table 9

Expressive Vocabulary in Personal Story[1]

	Pretest		Posttest	
	M	*SD*	*M*	*SD*
Total words	38.00	27.01	45.43	20.41
Different words	21.71	8.98	26.71	10.26
Total internal state terms	1.00	2.24	1.43[2]	.79
Different internal state terms	.57	1.13	1.43[2]	.79

[1]TPG:P

[2]None of the seven children used an internal state term more than once, hence the identical values for the total and different internal state terms at posttest.

Number of total and different words. On the personal story task, the number of total and different words were not significantly different: total words $t(6) = .56$, $p = .298$; different words $t(6) = 1.07$, $p = .163$. The results, however, were in the expected direction as shown in Table 9. Figure 15 and 16 display the mean scores by condition and time for total and different words. As these figures show, children in the elaborative reminiscing condition had higher scores at posttest

than at pretest, but the opposite was observed in the dialogic reading condition. Also, the children's scores in elaborative reminiscing condition surpassed that of the dialogic reading condition at posttest.

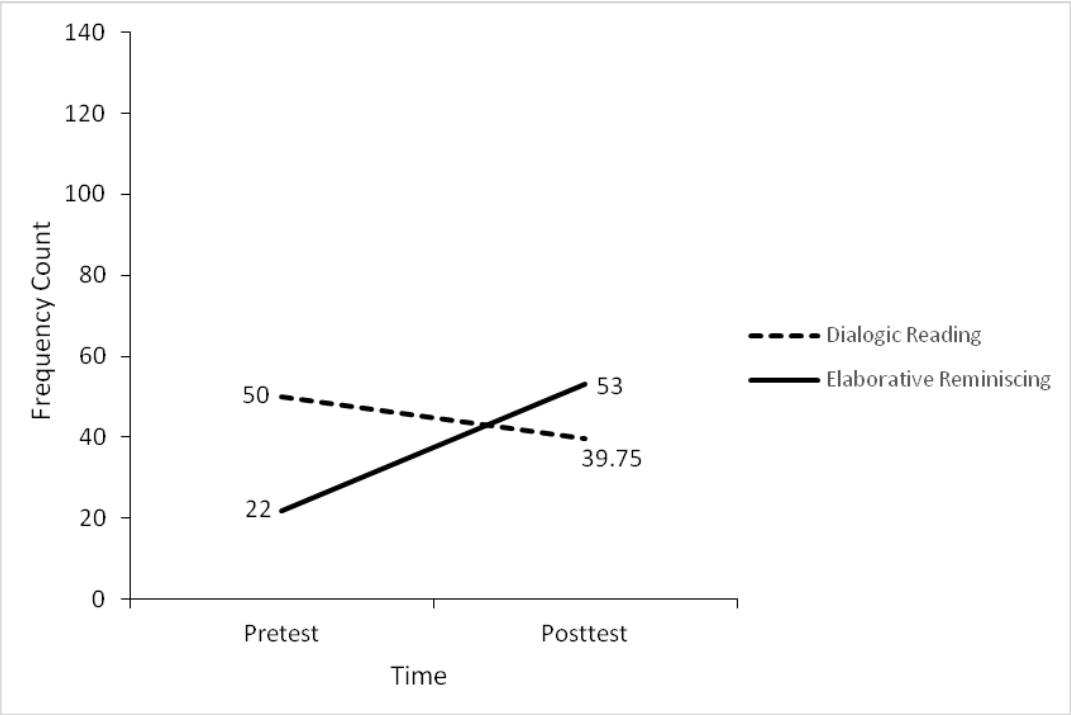

Figure 15. Number of total words on the personal story task, by condition.

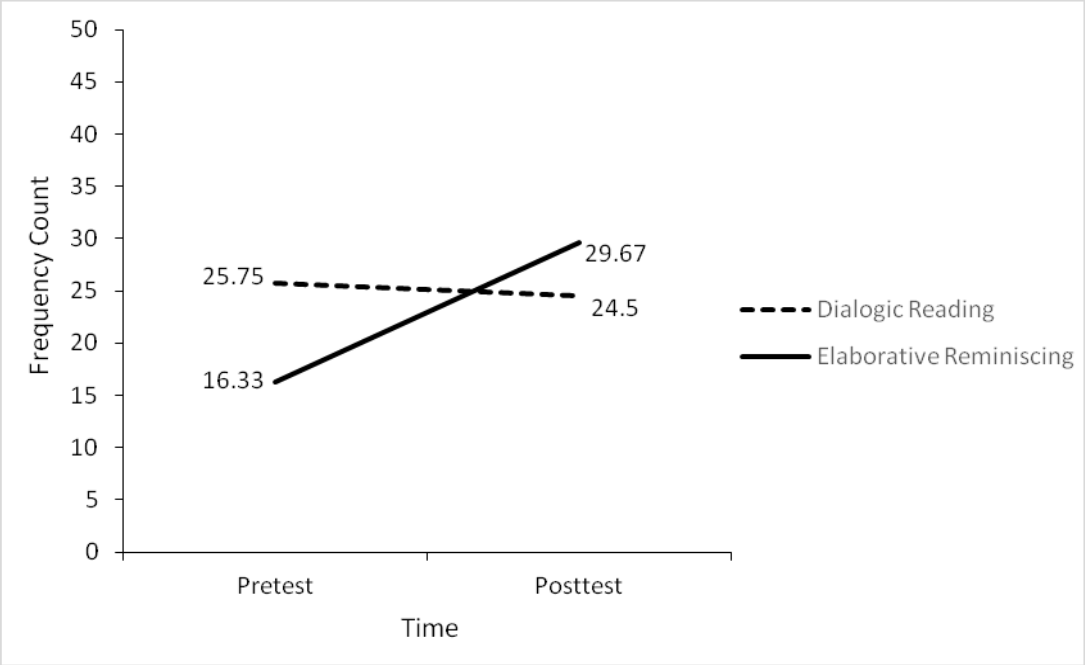

Figure 16. Number of different words on the personal story task by condition.

Internal state terms. The total and different internal state terms used by children in telling a personal story were not statistically different from pretest to posttest: total terms $t(6) = .44$, $p = .675$; different terms $t(6) = 1.44$, $p = .200$. At pretest, the internal state terms expressed emotions and desires. At posttest, the terms expressed emotions and obligations.

Figure 17 illustrates the mean scores by condition and time for total internal state terms. A relatively similar pattern was observed for different internal state terms. The average different internal state terms were as follows: in the dialogic reading condition pretest $M = 1.00$ ($SD = 1.41$), posttest $M = 1.00$ ($SD = 0$) and in the elaborative reminiscing condition pretest $M = 0$ ($SD = 0$), posttest $M = 2.00$ ($SD = 1.00$).

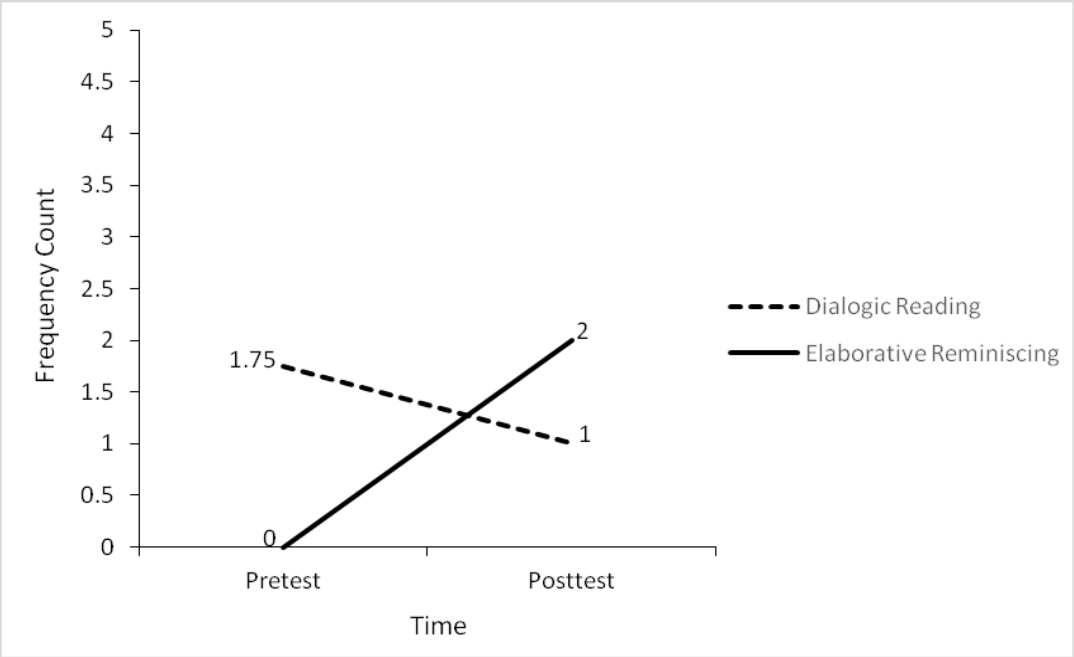

Figure 17. Total number of internal state terms on the personal story task by condition.

Discussion

Often parents are the focus of public service announcements and campaigns (see Appendix G) telling them to support their child's language and literacy development. These campaigns suggest activities without necessarily saying how to carry them out (i.e., the strategies parents should use) or what benefits to expect in terms of their child's development. This has the potential to induce feelings of incompetence in parents. For example, parents could feel they are not doing the suggested activities "correctly", or become worried about their children's response to these activities. In the present study, I attempted to address this gap in practice by offering an intervention to parents with a "practise at home component", focused on either dialogic reading or elaborative reminiscing. The intervention included background information about the contributions of the activities to children's language development in lay person terms, strategies (*how)* to do these activities with examples, and an opportunity to practise the activity and receive

feedback. Then parents were asked to practise either dialogic reading or elaborative reminiscing using the strategies for six weeks. The present study explored the impact of this intervention.

The main objectives were (a) to teach parents to use language support strategies in one of two conditions: dialogic reading or elaborative reminiscing; (b) to examine parents' use of language support strategies across and within these two conditions, before and after intervention; (c) to explore children's narrative and vocabulary skills following the intervention. Data were gathered from seven mother-child dyads randomly assigned to the dialogic reading (n = 4) or elaborative reminiscing condition (n = 3). Given the small sample size, data were collapsed across the two conditions to allow comparisons of pretest and posttest data for mother and child measures. However, data are reported descriptively by condition.

Language support strategies used by mothers were analysed in terms of their frequency, distribution, and diversity. The study also included interviews with mothers about their use of language support strategies and their experiences with dialogic reading or elaborative reminiscing. Children's narrative and vocabulary skills were also examined before and after the intervention. The narrative measures included story comprehension and storytelling of both fictional and personal stories. The vocabulary measures similarly included receptive and expressive measures.

Mothers' Use of Language Support Strategies

I expected all parents (all of whom turned out to be mothers) to increase their frequency of language support strategies from pretest to posttest on both the storybook and reminiscing tasks. On the storybook task, the mothers appeared to use more strategies at posttest than at pretest, but this increase was borderline significant. This increase appeared to be due to parents in the dialogic reading condition who dramatically increased their use of strategies during the

storybook task, while those in the elaborative reminiscing showed a modest decrease. On the reminiscing task, mothers used strategies with similar frequency at pretest and posttest. As was the case for the storybook task, however, mothers in the dialogic reading condition increased their use of strategies, while those in the elaborative reminiscing condition showed a considerable decrease.

I expected all mothers to increase the number of types (i.e., diversity) of language support strategies from pretest to posttest on both tasks. On the storybook task, the mothers did not use significantly more types at posttest than at pretest; however, the results were in the expected direction. The results were examined descriptively by condition given the low power for the statistical test. These findings showed that the mothers in the dialogic reading condition used more types at posttest than at pretest, while those in the elaborative reminiscing condition used fewer types. On the reminiscing task, an increase in types at posttest was significant and consistent with my hypothesis.

It stands to reason that parents would perform relatively better on the task congruent with their teaching condition at posttest. For example, parents in the dialogic reading condition would use more strategies and more types on the storybook task at posttest than on the reminiscing task. This was observed for mothers in the dialogic reading condition. In contrast, mothers in the elaborative reminiscing condition decreased their use of strategies far more dramatically during the reminiscing task (i.e., their congruent task) than on the storybook task. However, they did show better performance on types on the congruent task. While at first glance it might seem like mothers in elaborative reminiscing benefitted less from the intervention than mothers in dialogic reading, it could be that mothers had to work harder at pretest to engage their child and elicit talk about the past. This possibility is supported by the distribution of strategy types.

The analysis of distribution of strategy types revealed that increasing participation was the strategy type used most at pretest and posttest, on both tasks, in both conditions. On the storybook task, mothers in the dialogic reading and elaborative reminiscing conditions decreased their use of this strategy at posttest, but increased WH questions. Mothers in the elaborative reminiscing condition also showed this pattern on the reminiscing task. WH questions allowed mothers to scaffold children's language and storytelling, while increasing participation allowed them to sustain the interaction. Thus, the increase of WH questions relative to increasing participation could be seen as a positive change in elaborative reminiscing, despite the lower frequency of strategies overall.

Mothers' Experiences with Dialogic Reading and Elaborative Reminiscing

To the best of my knowledge, this study is the first to elicit parents' views on either dialogic reading or elaborative reminiscing. An interview designed for this study provided information on mothers' perceptions and experience of the activities, facilitators and barriers to implementing them, and the relationship of the activities to mothers' practices. Mothers in both conditions reported a positive experience with their assigned activity. For example, they recounted enjoying the activity with their child and described it as interesting, fun, and worthwhile.

Mothers in both conditions perceived the activity as something that could help their child learn language and/or improve cognition (e.g., enhance attention, absorb information, explore ideas). Additionally, they spontaneously shared other benefits of a more social or affective nature. For example, a mother in the dialogic reading condition cited the involvement of siblings in bookreading and mothers in the elaborative reminiscing condition cited more parent-child exchanges, opportunities for identity construction, and increased agency of the child.

Mothers in both conditions conveyed very similar facilitators and barriers to practising the activity at home. For example, all the mothers reported that their child's receptiveness (enthusiasm for the activity or their attention to it) made it "easy" for them to do the activity. Additionally, a mother in the elaborative reminiscing condition reported her daughter felt proud of her contributions. Another major facilitator was that parents read or talked frequently to their child prior to participating in the study, but without using the strategies introduced in this study. In contrast, mothers reported difficulty finding the time to do the activity and/or finding an optimal time (e.g., a time when child was not tired). Mothers also reported having difficulty sustaining their child's engagement at times. This result is consistent with the direct observations of mothers showing high rates of the category of increasing participation.

The majority of the mothers, including all three in the elaborative reminiscing condition, preferred open-ended questions (WH questions and asking names and labels) to the other strategies of expanding and increasing participation. The minority of mothers preferred expanding. Despite the high rates of increasing participation, no mother named this as their preferred strategy. This finding could help explain the observed increase in WH questions discussed above.

All the mothers described the activities as novel, even those who articulated some awareness of the strategies prior to the study. Interestingly, the two mothers who expressed a personal goal of improving their child's fluency or language skills spontaneously shared that they intended to continue the activities once the study was complete.

Children's Narrative and Vocabulary Skills

The study was originally designed to contrast the conditions of dialogic reading and elaborative reminiscing in terms of their effects on children's narrative and vocabulary skills.

Given the small sample size, statistical comparisons were not possible. Nonetheless, the study provides some indication that neither condition had an effect on story comprehension, and that both conditions positively affected children's storytelling. Storytelling included a fictional and a personal story. On the fictional and personal story children's narrative levels were significantly higher at posttest than at pretest. Children in the elaborative reminiscing condition had a higher narrative level at posttest, but those in the dialogic reading condition showed greater growth.

The storytelling tasks also afforded an opportunity to assess children's expressive vocabulary. I expected all of the children to improve in the number of total and different words from pretest to posttest. This was not the case. However, the descriptive data suggested a combined effect of condition and task. Specifically, children in the dialogic reading condition used more words and more diverse vocabulary than children in the elaborative reminiscing condition to tell a fictional story. Conversely, children in the elaborative reminiscing condition outperformed children in the dialogic reading condition on the personal story. The exploratory analysis of the number of total and different internal state terms showed a similar result; that is, children in the dialogic reading condition used a greater number and variety of internal state terms on the fictional story than children in the elaborative reminiscing condition, while children in the elaborative reminiscing condition had higher scores on these same measures on the personal story.

All children showed growth on the standardised measure of receptive vocabulary, as the difference on the raw score from pretest to posttest was significant. This increase is plausibly related to the intervention, as inspection of the standardised scores revealed growth above and beyond expected maturation for the study duration. The descriptive data suggested an effect of condition, as children in the dialogic reading condition underperformed those in the elaborative

reminiscing condition. This condition effect may be confounded by age, as the descriptive data showed children in the dialogic reading group were younger than those in the elaborative reminiscing condition. This is discussed in the Limitations section below.

Implications and Future Directions

Prior to the present study, only Reese and colleagues (2010) had contrasted the two conditions and included a control group. They found that dialogic reading depressed children's narrative skills, counter to their expectations, while in the present study it appeared to enhance storytelling skills. This discord could be due to differences in the measures or the samples. For example, the current study improved upon Reese and colleagues' method by using fictional and personal genres of stories, while they used only the fictional genre. Mothers in the present study were also of mixed income levels, while Reese's, by design, were low-income and perhaps less familiar with dialogic reading from the outset. It is also possible that the intervention provided in my study, although far shorter than in Reese, was better tailored to mother's needs.

This study also adds to the sparse literature contrasting dialogic reading and elaborative reminiscing by analyzing in detail the strategies mothers used during a task that mirrored their teaching condition and one that did not. The data suggested that mothers were benefiting from the intervention and generalizing their knowledge to some extent. The novel congruent-incongruent task design would be worth pursuing in further research.

The data reported in the present study also lends support to the idea that elaborative reminiscing has benefits for children in terms of language. This finding is important, since not all parents necessarily enjoy or engage in storybook reading. In particular, elaborative reminiscing could be more appealing to low-income parents who do less storybook reading compared to middle-income parents (Lonigan & Whitehurst, 1998). Additionally, elaborative reminiscing is

understudied as it relates to children's language. It is frequently studied in the context of memory, socioemotional development, and self-concept (e.g., Boland, et al., 2003; Fivush et al., 2006; Reese, 2008).

In the current study, children's receptive vocabulary skills (measured by the PPVT-4) improved greatly. In the Reese et al. study (2010), receptive vocabulary scores were used only for matching children and no other measure of receptive vocabulary was included. However, consistent with Reese and colleagues (2010), no effect was observed on expressive vocabulary in the present study. My findings confirmed the importance of assessing both receptive and expressive vocabulary. Mol and colleagues (2008) reported dialogic reading has greater effects on expressive vocabulary than on receptive vocabulary, but in the present study, receptive vocabulary gains were present for children in both conditions, while expressive gains were not.

Studies have shown that non-linguistic factors, such as attentiveness to the child and maternal sensitivity, positively affect children's language (e.g., Roberts, Jergens, & Burchinal, 2005). Interestingly, in the interviews, parents suggested the opposite is also possible: language activities affect other domains of development and the mother-child relationship. For instance, parents pointed out the benefits of language support strategies for their child's social and personal development (citing, for example opportunities for family interaction and identity construction). It would be interesting to further investigate the effect of language activities on other areas of child development. Additionally, future research could include a focus group to deepen our understanding of the value of dialogic reading and elaborative reminiscing from parents' point of view.

Public language and literacy campaigns were alluded to earlier in the Discussion. As these do not generally involve any evaluation, it is not possible to explore their benefits to

children or whether they are a good use of public resources. Furthermore, these public campaigns often encourage parents to read to their children or engage them in conversations without providing strategies on how parents should carry out these activities. In contrast, the intervention (teaching mothers strategies) in this study was beneficial to children's language development. The teaching was brief and cost-effective, lasting about 30 minutes, but supplemented with reminders (telephone calls and a checklist for parents to record weekly parent-child activities). It thus complemented the kinds of campaigns we see in the public domain well. Based on the parent interviews, other parents maybe be appreciative and welcoming of the teaching and it would clarify some strategies to parents.

In summary, the results of the current were promising and provided an improved methodology for further research to compare and contrast the effects of dialogic reading and elaborative reminiscing on children's language. Also, the intervention is one that could be used by others and complements public campaigns aimed and improving children's language skills.

Limitations

The sample size was the biggest limitation of the current study. A larger sample size is needed to sort out the effects of condition (dialogic reading or elaborative reminiscing) on all variables and to examine the interactions of condition, time (pretest-posttest) and task (storybook and reminiscing). While some interactions were indicated, there were only a few parents in each condition and the data could not be tested statistically. A larger sample was planned, but recruitment proved difficult. The reasons for this are not entirely clear, but the parent interview data suggested that even mothers who volunteered had busy schedules and the one mother that withdrew from the study cited time constraints as a barrier; time might have been a factor.

The lack of a no-treatment control group also means maturation effects cannot be ruled out. However, the changes observed on the child language measures seemed greater than one would expect over a 6-week period. This was particularly the case for receptive vocabulary. On the PPVT-4 not only the raw scores increased, but so did the standard scores. One would not expect standard scores to rise since they are referenced to the child's age and peer group. While practice effects on the measures could account for increased scores on the PPVT-4 or on the other child measures, parallel forms were used on all child measures precisely to mitigate such effects.

Differences in age across conditions are also a limitation in the present study. Children in the dialogic reading condition were, on average, younger than those in the elaborative reminiscing condition, an unplanned consequence of recruiting children from the ages of four to five. Age could be an important variable that could explain variations in parental behaviours across the conditions or predict children's performance on the outcome measures.

Conclusion

The study aimed to (a) assess the influence of an intervention on language support strategies on parent’s behaviour and children’s language skills and (b) explore the effects of the condition in which parents learned and practised the strategies on these same variables. The intervention had positive effects on the frequency and diversity of mothers' strategy use. However, this study suggested condition and tasks effects that warrant further investigation. Nonetheless, children in this study showed growth in their storytelling in both the fictional and personal story tasks and on receptive vocabulary, suggesting that both conditions have benefits. These are promising results given the short duration of the intervention. The positive outcomes

for children also accord nicely with the positive feedback parents gave in interviews regarding their experience with and perceptions of dialogic reading and elaborative reminiscing.

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Appendix A

Intervention Protocols

Intervention Protocol Dialogic Reading Condition

So, to situate us, we are now at the workshop part where I will share with you the strategies mentioned on the consent form. You may already be aware of some of the things I am going to share with you. Let's begin.

Segment 1: didactic information

- **So, reading together Slide 1**
  Dialogic Reading

- **What is dialogic reading? Slide 2**
  - It is an interactive way of reading with young children.
  - Because the interaction is like a dialogue, this style of reading has been called dialogic reading or shared reading
  - To help the child take on an active role in the reading session, the reader asks the child questions or elicits details from the child about the story.

- **What are the benefits of dialogic reading? Slide 3**
  - Studies show that it helps children understand language, develop new vocabulary, and express themselves.
  - These skills are also believed to help children later on as they begin to read and write.

- **How is dialogic reading done? Slide 4**
  - Choose a book to read with your child
  - During the reading, use different strategies to get your child involved:
    - ask your child open-ended questions
    - expand on what s/he says
    - hold their interest in different ways

- **Asking open-ended questions Slide 5**
  Ask your child questions that require more than a yes or no answer
  Example
  You: "What is the dog doing on here (point to image)?"
  Your child: "He's digging!"

  You: "Who is helping the little girl?"
  Your child: "Her mommy!"

  You: "When is the party?"
  Your child: "Today"

  You: "Where is the rabbit?"

Your child: "In his house"

You: "Why is the cat feeling sad?"
Your child: "Because he has no one to play with."

Expanding on what your child says Slide 6

Add on to what your child says by adding words to

- describe objects/ people/ animals
  Your child: "Flower (points)."
  You: "Yes, a yellow flower."

- describe events
  Your child: "The horse was running!"
  You: "Yes, the horse was running fast!
  That's called galloping" (revisit galloping)

- describe locations
  Your child: "She's walking."
  You: "Yes, she's walking in the playground."

Holding your child's interest Slide 7

Follow your child's interest to increase their participation

- Follow your child's gaze
  - If your child looks at a picture of an insect, you look at the insect too
- Describe what your child is looking at
  - You: "Insects are crawling on that bush"
- Answer your child's questions
  - Your child: "What is that?" (child points to a kite)
  - You: "That's a kite! You fly it in the wind."
- Connect ideas or events in the book to your child's life experience
  - You: "Do you remember the time we saw people flying kites in the park?"

Segment 2: demonstration of practices

Strategies in action Slide 8

- Now we will look at a video clip of a mother using these strategies with her 4½ year old son

Show Video clip: 2-5 minutes, to be finalized (for sound and relative equal representation of all strategies)

Segment 3: role-playing

"Now let's practise the strategies we just saw. To help you remember, the strategies are listed here (show paper, this was the summary page)

- Ask open-ended questions (wh questions?)

- Expand on what child says (a bit more detail?)
- Hold child's interest (a bit more detail?)

you can refer to it at any time (motion to paper).

You'll play the role of the parent and I'll play the role of the child.

This is the book we'll be using, Bunny Cakes. You can read the book or tell the story from the pictures or do a little of both. Whatever you decide, I would like you to try to use the strategies.

To start, take a few minutes to look through the book from the cover to the end. When you're ready tell me and I'll play the role of the child.

Questions to suggest to parents:

Parent: "What do you think the bunnies are doing?" (On the first page)
Me: Making mud pies!
Parent: "You were very close. Max made an earthworm cake for grandma's birthday."

Parent: "What is Ruby doing?"
Me: "Making a cake!"

Intervention Protocol Elaborative Reminiscing Condition

So, to situate us, we are now at the workshop part where I will share with you the strategies mentioned on the consent form. You may already be aware of some of the things I am going to share with you. Let's begin.

Segment 1: didactic information
So, talking together Slide 1
Elaborative Reminiscing

What is elaborative reminiscing? Slide 2

- It is an interactive way of talking with your child about a past event.
- To help the child play an active role in the conversation parents ask the child questions or elicits details from the child about the event.
- Because the conversation is about a past event and the parent asks the child to elaborate, this way of talking is called elaborative reminiscing

What are the benefits of elaborative reminiscing? Slide 3

- Studies show that it helps children understand language, express themselves, and may help them develop new vocabulary.
- These skills are also believed to help children later on as they begin to read and write.

How is elaborative reminiscing done? Slide 4

- Choose an event to talk about with your child
- During the conversation, use different strategies to get your child involved:
  - ask your child open-ended questions
  - expand on what s/he says
  - hold their interest in different ways

Asking open-ended questions Slide 5

Ask your child questions that require more than a yes or no answer

Example

You:	"What was the big dog doing?"
Your child:	"He was jumping on me!"
You:	"Who helped you?"
Your child:	"Mommy"
You:	"When did it happen?"
Your child:	"Yesterday!"
You:	"Where did we meet this dog?"
Your child:	"In the big park!"
You:	"Why were you crying?"
Your child:	"Because I was scared."

Expanding on what your child says Slide 6

Add on to what your child says by adding words to

- describe objects/ people/ animals

Your child:	"I saw a clown."
You:	"Yes, you saw a clown with a big red nose."

- describe events

Your child:	"The boy moved the boat with a big stick."
You:	"Yes, the boy moved the boat with a paddle." (revisit paddle)

- describe locations

Your child:	"The clown was riding around."
You:	"Yes, the clown was riding around on the stage."

Holding your child's interest Slide 7

Follow your child's interest to increase their participation

- Follow your child's topic
  - If your child starts talking about going to the party, you join in talking about that event
- Describe what your child saw or experienced
  - "There were lots of people at that party"
- Answer your child's questions
  - Your child: "Whose birthday was it?"
  - You: "That was a party for my uncle when he retired" (revisit)

- Connect the event to your child's other life experiences
    - You: Remember the party with the dinosaur cake?

Segment 2: demonstration of practices
Strategies in action Slide 8

- Now we will look at a video clip of a mother using these strategies with her 4½ year old son

Segment 3: role-playing

"Now let's practise the strategies we just saw. To help you remember, the strategies are listed here (show paper, this was the summary page)

- Ask open-ended questions (wh questions?)
- Expand on what child says (a bit more detail?)
- Hold child's interest (a bit more detail?)
-

you can refer to it at any time (motion to paper).

You'll play the role of the parent and I'll play the role of the child.

The event we'll talk about is the time a bee stung me. If this was with your child you would probably already know about the event. So to make it realistic I'll tell you what happened, and then you'll try to get me to tell the story when I'm playing the role of the child.

It happened one summer when I was swimming in my friend's pool. The wasp was on the other side of the pool right on the ledge. It was trying to make a nest underneath the ledge. I was swimming back and forth across the pool and all of a sudden it stung me right on my forehead! It really hurt and I cried. My mother helped me out of the pool and put ice on the sting. Then, I felt better. Then we all ate ice cream

Questions to suggest to parents:
Parent: "Do you remember when the bee stung you?"
Me: Yes.

Parent: "Where did the bee sting you?"
Me: "On my forehead. It hurt. A lot."

Parent: "Aww, I bet it did. And who helped make it better for you?"
Me: "Mommy."

Parent: "What did mommy do?"
Me: "Mommy looked at it and gave it a kiss.

Parent: "That was nice of mommy. Where were you when this happened?"
Me: "In the pool!"

Parent: “In the pool! Whose pool was it?”
Me: “My best friend!”

Parent: Oh, you’re best friend has a pool. Lucky you!
Child: “My best friend in the whole wide world!”

Parent: “And where does your best friend live?”
Child: “On the next street.”

Parent: “What do you do when you go to your best friend’s house?”
Child: We play with his doggie, we run.

Parent: “Uh-huh, and you swim too!”
Child: Yeah! The doggie swims too!

Appendix B

Parent Summary Page

Dialogic reading condition

PARENTS TALKING TO YOUNG CHILDREN!

What is dialogic reading?

- It is an interactive way of reading with your child.
- To help your child take on an active role in the reading session, ask your child questions or elicit details from him or her about the story.

What are the benefits of dialogic reading?

- Studies show that it helps children understand language, develop new vocabulary, and express themselves.
- These skills are also believed to help children later on as they begin to read and write.

How is dialogic reading done?

- Choose a book to read with your child
- During the reading, use different strategies to get your child involved

STRATEGIES

- **Ask your child open-ended questions: ask questions that require more than a yes or no answer**

Examples
You: "What is the dog doing on here (point to image)?"
Your child: "He's digging!"

You: "Why is the cat feeling sad?"
Your child: "Because he has no one to play with."

- **Expand on what your child says: add words to describe objects, people or animals, events, or locations**

Examples
Your child: "Flower (points)."
You: "Yes, a yellow flower."

Your child: "She's walking."
You: "Yes, she's walking in the forest."

- **Increase your child's participation: follow your child's gaze, describe what he or she is looking at, connect the ideas or events in the book to your child's life experience, and answer his or her questions.**

Examples
Your child: "What is that?" (child points to a kite)
You: "That's a kite! You fly it in the wind."

You: "Do you remember the time we saw people flying kites in the park?" (give child time to respond)

Elaborative reminiscing condition

PARENTS TALKING TO YOUNG CHILDREN!

What is elaborative reminiscing?

- It is an interactive way of talking with your child about a past event.
- To help your child play an active role in the conversation, ask your child questions or elicit details from him or her about the event.

What are the benefits of elaborative reminiscing?

- Studies show that it helps children understand language, express themselves, and may help them develop new vocabulary.
- These skills are also believed to help children later on as they begin to read and write.

How is elaborative reminiscing done?

- Choose an event to talk about with your child
- During the conversation, use different strategies to get your child involved

STRATEGIES

- **Ask your child open-ended questions: ask questions that require more than a yes or no answer**

Examples
You: "When did it happen?"
Your child: "Yesterday!"

You: "Why were you crying?"
Your child: "Because I was scared."

- **Expand on what your child says: add words to describe objects, people or animals, events, or locations**

Examples

Your child: "I saw a clown."
You: "Yes, you saw a clown with a big red nose."

Your child: "We were riding around."
You: "Yes, we were riding around the park.

- **Increase your child's participation: follow your child's topic, describe what he or she saw or experienced, connect the event your child is talking about to their other experiences, and answer his or her questions.**

Examples (in a conversation about a birthday party)
Your child: "The cake was SOOO good."
You: "Yes, I liked that cake too! Chocolate."
You: "Remember your friend's birthday party with the dinosaur cake?" (give child time to respond)

Appendix C

Parent Interview Questions

Dialogic Reading Condition

Question at end of first visit – end of intervention

Now that I've talked to you about reading together, how familiar would you say you were with the information I provided? How would you say this approach compares with what you usually do at home?

Questions at second visit

1. What did you think about reading together? (prompts: Was there anything in particular that you liked about it? Was there anything you disliked?)

2. How did your child respond to reading together?

(prompts: Did they seem to enjoy it? Did they seem to look forward to it or show a lack of interest?)

3. Did you find it easy or hard to read together? And why?

4. How often do you think you read together in the past six weeks? How does this compare to how often you were doing this before?

5. We talked about specific strategies to encourage your child to talk during book reading. These were open-ended questions, on expanding on your child's words, and increasing your child's participation. What strategy do you think you used more often (prompt: why?). Which did you like most (prompt: why?). Which did you like least? (prompt: why?).

Elaborative Reminiscing Condition

Question at end of first visit – end of intervention

Now that I've talked to you about talking with your child about past personal events, how familiar would you say you were with the information I provided? How would you say this approach compares with what you usually do at home?

Questions at second visit

1. What did you think about talking about a past personal experience with your child? (prompts: Was there anything in particular that you liked about it? Was there anything you disliked?)

2. How did your child respond to talking about a past experience?

(prompts: Did they seem to enjoy it? Did they seem to look forward to it or show a lack of interest?)

3. Did you find it easy or hard to talk about a past experience with your child? And why?

4. How often do you think you talked about a past experience in the past six weeks? How does this compare to how often you were doing this before?

5. We talked about specific strategies to encourage your child to talk about past events with you. These were open-ended questions, on expanding on your child's words, and increasing your child's participation. What strategy do you think you used more often (prompt: why?). Which did you like most (prompt: why?). Which did you like least? (prompt: why?).

Appendix D

Coding Scheme for Parents' Strategy Use

Exclude consecutive exact repetition

1. Naming and labelling
The parent initiates labels to items in the pictures or activities/things in personal story. If a parent points to item while reading the word for the item, transcribe as www with note [= points to item while reading word for that item] and use this code. If a parent translates a word into French (or another language) use this code. If a parent simply points to picture while reading, but does not clearly make a link between words and pictures, do not use this code. (NB: If the label is provided in response to a child's question, code as increasing participation)

Examples:
Parent: points to a picture "That's a watch."
Parent: points to a picture "She has her floaties on."

The parent verbally or non-verbally elicits labels from the child for items or activities in the pictures or for items or activities present in the personal story with a focus on the label for objects or action. The apparent goal is to test vocabulary (e.g., "What is this?", "What was the caterpillar eating?") Exclude other WH question types before coding as naming and labelling.

Examples:
Parent: points to a picture "What's that?"
Parent: taps on a picture

Asking Yes/No questions, giving directive ("Show me the…"), or asking WH question (e.g., "Where's the thermometer?") with clear intent to confirm/negate a label.
****

2. Yes/No questions
Asking Yes/No questions to confirm or elicit story information as in #**5** (but in yes/no format), or asking forced choice questions.
****

3. Expanding
The parent expands on what their child said, the text they read: provides *additional* semantic information, such as a correct label*, an adjective, a noun.

Expansion can span 2 or 3 consecutive turns by mother, but be mindful that these subsequent turns may be initiations.

*Be careful with this code, if parent initiates, code as **naming and labelling**.

Examples:
Noun: Child: "Cat!"
Parent: "It's a grey cat"

Verbs: Child: "The girl was running"
Parent: "Yes, the girl is running fast!"
Info: Child: "That's a fruit!"
Parent: "Yeah, it's a fruit! That's a cherry"

*****

4. Increasing participation

1. Parent attempts to:
(a) elicit a story/establish the topic of the story by prompting with directives (e.g., "Let's tell Katie (be)cause she hasn't been there"), or statements to child or Katie ("First, she didn't know how to ski.");
(b) elicit story elements with directives or statements including trailing off (e.g., "We …"), or tells part of the story (e.g., "And you went and you ate your favourite.").
(c) Parent provides story information (e.g., setting) in response to child;
(d) Parent provides a perspective on character's action or motivation, object/events, or perspective of child or parent or others in personal stories (sometimes these include rhetorical questions, or statements with tag questions, be careful not to code as Yes/No or WH questions).

2. Parent encourages child to talk by asking a non-WH and open or Y/N questions of these kinds (e.g., "And?", "Do you remember?" by itself; "Did we do something fun?", "Do you remember X?", "Remember X?", "Remember X, right?" *at the very beginning of the interaction/before establishing the topic*). These are questions that do not reference specific story information

3. Marking beginning or end of story with formulaic expression: The parent says "once upon a time…" "the end" or reads book title.

4. The parent helps the child connect events in the storybook or the personal story to other past events in their life, or other stories the child knows, either with comments or questions, such as "Do you remember X?", "What about X?"

Examples:
"We saw a bear at the zoo too."
"Do you remember when it did that a nani's house?"
"Do you remember you also had cotton candy at the fair?"

5. The parent animates the story with sound effects, humour[2], mime of story actions, facial expressions, or emotional expressions; changes voice for reported speech; draws attention to picture and details with "look", "see" while pointing to or tracing pictures; and asks yes/no questions *about pictures* to keep engaged (e.g., "Is this a crocodile?"[3]).

Examples:
Parent: reads Franklin said "No!" (with a shout)
Parent: mimes action while reading could zip zippers and button buttons
Parent: points or says words to draw child's attention to picture

[2]Do not confuse with other codes based on form: a humourous statement in Y/N format e.g., "Did we fly like superman?" gets coded as **increasing participation**
[3]Do not confuse with asking for label; this is simply to engage child.

6. Parent asks opinion of story or story events (e.g., “Did you like that story?”, “What did you like best about the story?”) or asks about desires/preferences.

7. Parent
(a) answers child’s questions in one or more close-by turns with a comment or question;
Example:
Child: “This one we have, right?”
Parent: “Yeah.” / “I don’t know” / “What do you want it to be?”

(b) complies with child’s demands (e.g., to hold the book)
Example:
Child: “Can I see?”
Parent: “Sure” [child takes book from mother and looks intently at back cover].

(c) tells child their answer to the parent's PI is correct/incorrect without any further information, or backchannels with “yeah”, and/or exact repetition or smile/laugh;
Example:
Child: “It looks like a snake.”
Parent: “That’s right.” / “It does, eh?”

(d) backchannels, corrects, or acknowledges story information that child provides (e.g., child says: “storms can cause a lot of damage” parent responds: “I agree”, “that’s true too”).

(e) describes what child is pointing to in picture (goes beyond labelling).

(f) asks for clarification with “what?” or rising intonation, or asks “You don’t remember?” when child says “I don’t know.”

8. Parent suggests child imagine or think of an answer to their own question.
Example:
Child: “Why?” [= mother stopped turning page at her child's question]
Parent: “Why do you think?”

9. Parent suggests child listen to the story or look at the pictures to answer their questions.

10. Parent entertains child’s novel (not in the book/ not introduced by parents) ideas (responds with questions, comments, or backchannelling without correction even if silly and nonsensical; adding “that’s/ we’re silly” after being complicit will still get this code).
Example:
Child: “They gonna eat it.”
Parent: “Really? “
Child: “Mhmm.”
Parent: “That'll be pretty crunchy.”

11. Parent projects into the future or talks about a hypothetical situation.
Examples:

Parent: "Who do you want to come with us?"
Parent: "Next time we could go skating other places, up at Mount Royal which is Beaver lake or we could go skating in the Old Port of Montreal and we could go skating in Ottawa with auntie Clara."

*****

5. WH questions

Eliciting story info with WH Questions: The parent asks questions to elicit information about

- the story setting (i.e., when and where);
- the events[4] (e.g., "What happened next?" "What else did we do?")
- causes and effects of events (physical and psychological);
- object descriptions (e.g., size, colour, texture, appearance)
- internal states (e.g., "How did you/character feel when…?") and
- characters (e.g., "Who was there?") or character's attributes/roles/names/preference
- character knowledge (e.g., "What did Franklin think of…?");
- hypothetical situations ("What if…?") or world knowledge related to story events

WH questions that elicit a desire or preference are generally coded as **increasing participation**

*****

6. Other

When an utterance could be worth coding, but may not be related to the story or does not fit well into existing categories, use this code

Example:
Child: [continues giggling].
Parent: "Why are you laughing?"

Parent acknowledges child, but returns to topic s/he has in mind (or already being discussed).

[4] Might seem like **naming and labelling** in form; but think about the purpose of parents' question to decide on code

Appendix E

Themes of Personal Story Prompts

Personal stories were elicited from children using prompts included in the TPG:P (Spencer & Petersen, 2012). The full stories are not included here for reasons of copyright. However, the central themes of the stories are listed. For the TPG:P, the researcher tells the story and entertains a story if the child begins one on their own, or asks after telling the story, "Has something like that happened to you?" Further prompts are provided in the test guidelines for children who need more probing.

Pretest

Going to bed

Falling and getting hurt

Sibling taking a toy away

Finding a playmate

Posttest

Visiting the doctor

Asking for a treat when shopping

Running around with a sibling

Ruining artwork

Appendix F

Internal State Coding Scheme

(Recchia & Howe, 2008: updated October 2011)

1) **Goals**: words that apply to goals, specifically desires, obligations, intentions, or attempts.

a. Desires

- change my mind
- desire
- dying to
- hope
- hopefully
- PERSON cry for
- PERSON expect (another person) to
- would like
- would love to
- want, wanna
- need (as in want)
- wish
- would love
- pray for
- aim for
- looking for
- interested

b. Obligations

- got to
- have to/ had to/having to/has to
- make sure
- must
- need to
- not to
- ought to
- should, better
- supposed to
- am expected to/expect someone to
- obliged to

c. Intentions

- accident
- expect to
- intend to
- mean to

- meant
- on purpose
- plan to
- shall
- going to, gonna

d. <u>Attempts</u>

- attempt
- try
- seems

2) **Cognitions:** words that reflect a child's beliefs (thoughts) or knowledge.

a. <u>Beliefs (thoughts)</u>

- believe
- deserve
- decide, as in "what do you think?"
- dreams
- consider
- fair/not fair
- feel ("I feel that you…")
- guess
- kidding/joking
- I'll bet
- Imagine
- mean it, as in "I mean it"
- memories
- might (be)
- probably
- not sure/(to be) sure
- pretend, "I'm making believe", "once upon a time"
- real, as opposed to pretend
- reason, as in no reason
- serious
- suppose
- think, thought
- trust
- wonder
- promised
- worry
- "What is your idea?" ="What do you think?"

b. <u>Knowledge</u>

- aware
- confused

- common sense
- figure out, find out
- forget, never mind
- get it (“Do you get it?”)
- idea
- It’s true
- know/I don’t know
- lying
- “mixed up” as in confused
- notice
- prove
- realize
- remember
- right, as in correct
- understand, “I see”
- wrong, as in incorrect
- "I have no idea" = "I don't know"
- “I mean a cow” – self-correcting

3) **Emotions**: words that indicate a positive, negative, or general (neutral) emotion or a physiological state.

a. <u>Positive</u>

- comforted
- curious
- enjoy
- excited
- feel (better/good/ok)
- fun
- funny (applied to object)
- glad
- happy
- laugh
- pleased
- proud
- smile
- surprised (happily), wow
- to love (a person)
- cozy
- ETC.

b. <u>Negative</u>

- afraid
- angry
- bored

- crying
- embarrassed
- feel (bad/worse/awful/hurt)
- hate (a person)
- hurt (mentally)
- jealous
- lonely
- mad
- miss
- sad
- scared
- scream
- surprised (in a bad way)
- upset
- ew, gross, disgusting
- sorry
- ETC.

c. General

- -"How did you feel when you did that?"
- -"Are you alright?"
- -"What is the matter?"
- -surprised (when there is no indication of whether it is negative or positive)

d. Physiological State

- hunger
- pain (burn, hurt, ouch, ow, sting)
- fatigue
- tired
- alive, living/, dead
- sick
- feel (e.g. feel drops on me; feels cold)
- taste (without a preference)

4) **Preferences**: words that express a preference.
   - hate (something – not person)
   - like/dislike (e.g. I like puppies)
   - love (something, NOT person)
   - "That's my favourite"
   - don't care (lack of preference)
   - better (as in choice)
   - traits (e.g. being lazy, clumsy, silly, stupid, sissy, funny, not very nice)
   - "Do you mind?"
   - "I don't feel like it anymore"

- Yum/yuck/tasty (preference to flavour)

Appendix G

Example of a Public Campaign