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# A Review of parent interventions for preschool children's language and emergent literacy

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**Abstract** It is well known that children's language development lays the foundation for their literacy development, though it is difficult for preschool teachers alone to consistently engage in the individual interactions necessary to boost children's language skills. Given that parents are their children's first teachers, it is imperative to consider how parents can help improve their children's language and emergent literacy development prior to formal schooling. This article reviews parent-training studies of children's language and literacy in three contexts: parent-child book-reading; parent-child conversations; and parent-child writing. Parent training in each of these contexts has the capacity to improve children's language and literacy, with the effects being specific to the targeted skill. All three contexts are potentially valuable sites for training parents to help their children's language and literacy. In conclusion, parents are an untapped resource for improving children's language and literacy.

**Keywords** book-reading; conversations; language, literacy; narrative; parent-child interactions

## Introduction

Parents are the first teachers of their children (Bornstein, 1995; Britto et al., 2006) and they are uniquely motivated to promote their children's well-being and development. Moreover, there is evidence of a positive link between parents' home literacy practices and children's later language and literacy skills (see Bus et al., 1995; Scarborough and Dobrich, 1994;

Sénéchal et al., 1998). Most of this research focuses on the importance of parent-child book-reading, yet other growing lines of research focus on the importance of parent-child conversations and parent-child writing interactions for preschool children's language and literacy. Our aim in this article is to integrate these different strands of research to arrive upon a more complete view of the role of parents in their preschool children's language and literacy development.

In this article we review only experimental studies that have tested whether these links between parental practices at home and children's language and literacy development are causal. Table 1 contains a brief description of the studies included in this review, including characteristics of the participants, the program and the outcomes. Our review is different from those conducted by others (e.g. Brooks-Gunn et al., 2000; Sénéchal, 2006) in that it focuses only on language and/or literacy training programs for parents of preschoolers, and for parents of kindergarteners who are not yet receiving formal reading instruction. In addition, we focus only on parents of typically developing children from a range of social classes. We did not review the literature on training parents of children with language delays or communication disorders (e.g. Crain-Thoreson and Dale, 1999), although we will address these interventions in our conclusions.

Our criteria for including studies in the review were as follows: (1) the study had to be experimental in nature (i.e. it had to contain treatment and control groups); (2) the study included a direct parent-training component (i.e. we did not review studies that merely distributed books or information to parents); (3) the study focused on parents of preschool or kindergarten children who were not receiving formal reading instruction; and (4) the parent training attempted to improve children's language and/or emergent literacy. We review studies that focused on children's language development because it is now widely accepted that oral language in early childhood is the foundation for children's literacy development, especially for their reading comprehension after the first several years of reading instruction (e.g. Dickinson and Tabor, 2001; Reese, Suggate, et al., 2009; Scarborough, 2001; Sénéchal and Lefevre, 2002; Snow et al., 1998). By oral language, we refer to all aspects of language: lexical, syntactic, phonological, narrative, and pragmatic development, although typically vocabulary is the only measure of oral language in many literacy studies. By emergent literacy, we refer to precursors of formal reading, such as children's print concepts and their recognition and writing of letters and words (Whitehurst and Lonigan, 1998).

It is important to conduct parent interventions in language and emergent literacy because parents are engines of change in early intervention

**Table 1 Description of parent-focused language and literacy programs and their outcomes**

Study	N, age of child, duration of intervention	Description of intervention	Outcomes
Aram and Levin (2009)	141 families Preschoolers ( $M = 5;5$ ) 7-week intervention	3-hour workshop on mediated practices. Parents carried out pre-planned joint activities with the child three times a week. Weekly home visits by a tutor $T_1$ = joint writing $T_2$ = joint storybook reading $T_3$ = visuo-motor activities C = no-treatment control	Alphabetical skills: Letter naming and sounding, phonological awareness, word recognition and invented spelling: $T_1 > T_2, T_3$ and C at $t_2$ . $T_1 > C$ at $t_3$ . Linguistic competencies: Receptive and expressive vocabulary, listening comprehension and definitions: $T_2 > T_1$ and C at $t_2$ . $T_2 > C$ at $t_3$ .
Arnold et al. (1994)	64 families 2 years old (24–34 months at pretest) 5-week intervention	Parents in direct instruction received same training as Whitehurst et al. (1988); parents in video instruction watched 2 15–20 minute training tapes; controls received no training $T_1$ = dialogic reading direct instruction $T_2$ = dialogic reading video instruction C = no-treatment control	Expressive language $T_1$ and $T_2 > C$ at $t_2$ ; however, $T_2 > C$ on three language outcomes at $t_2$ and $> T_1$ on 2 out of 3 language measures at $t_2$ .
Chow and McBride-Chang (2003)	86 families 4,83–5,92 years 8-week intervention	Parents were instructed in dialogic reading strategies in a 20-minute phone call training at the outset and they received written guidelines for dialogic reading; children brought home 8 books with suggested questions. $T_1$ = typical reading $T_2$ = dialogic reading C = no-treatment control	Receptive vocabulary $T_1$ and $T_2 > C$ at $t_2$ ; Print knowledge $T_2 > C$ and $T_1$ at $t_2$ .

*Continued*

Table 1 Continued

Study	N, age of child, duration of intervention	Description of intervention	Outcomes
Chow et al. (2008)	148 families 57-71 months 12-week intervention	Parents in training conditions were instructed in separate hour-long sessions at the outset. The dialogic reading group received books with suggestions for questions and a set of guidelines for dialogic reading; the combined condition received same materials with added guidelines on explicit teaching for increasing awareness of morphology of Chinese characters. T <sub>1</sub> = typical reading T <sub>2</sub> = dialogic reading T <sub>3</sub> = dialogic reading and morphological training C = no-treatment control	Receptive vocabulary T <sub>2</sub> > T <sub>1</sub> , T <sub>3</sub> , C at t2; for morphological awareness T <sub>3</sub> > T <sub>1</sub> at t2; for Chinese character recognition T <sub>3</sub> > T <sub>1</sub> , T <sub>2</sub> , C at t2.
Huebner (2000)	129 families 2 years old (25-34 months) 6-week intervention	Parents instructed in dialogic reading strategies at a library for an hour at the outset then again 3 weeks later; control group attended existing library program for parents without training in book reading style. T = dialogic reading C = typical library reading program	Expressive language: T > C at t2.

Continued

Table 1 Continued

Study	N, age of child, duration of intervention	Description of intervention	Outcomes
Jordan et al. (2000)	248 families Kindergarteners 5-month intervention	1 session per month. Instruction included modeling parent-child activities with high quality language interaction and opportunities for parents to practice. Scripted activities (including book reading) were sent home each week by coach. T = conversation and book-reading training C = no-treatment control	Language competencies: Vocabulary, story comprehension and sequencing in story production: T > C at t2. Phonological and print skills: T = C at t2.
Justice and Ezell (2000)	28 families 4-year-olds 4-week intervention	Parents in T and C read 2 books 4 times per week. Parents in T received training in print-referencing behaviors. T = print-referencing training C = typical reading	Print concepts, concepts regarding words in print and word segmentation: T > C at t2.
Peterson et al. (1999)	20 families Preschoolers (43–68 months) Pretest at 3;7 (t1); Intervention phase for 12 months; post-tests at 4;7 (t2) and 5;8 (n = 14 for t3)	Parents in T received individual training in eliciting effective narratives from preschoolers. Parents in C participated in pre-test and post-test but did not receive training. T = conversational training C = no-treatment control	Receptive vocabulary: t2 > t1 only for T and not for C. Narrative measures (number, length complexity): T = C at t2; but T > C at t3 for context-setting information.

Continued

Table 1 Continued

Study	N, age of child, duration of intervention	Description of intervention	Outcomes
Reese and Newcombe (2007)	<p>115 families                      Toddlers (19–44 months)                      Pretest at 19 months (t1); Intervention phase 21–29 months; Post-tests at 32 (t2) and 44 months (t3).                      Intervention sessions at 21-, 25-, and 29-month home visits</p>	<p>Parents in T received individual training in elaborative conversations. Parents in C received an equal number of home visits but no training. T = conversational training                      C = no-treatment control</p>	<p>Utterances containing new information in mother-child conversations: <math>T &gt; C</math> at t2. Number of actions and descriptions in past event narratives with a researcher: <math>T &gt; C</math> at t3.</p>
Reese, Leyva and Sparks (in press)	<p>33 families                      4-year-olds                      Pretest (t1) 1-session intervention at home; Post-test 6 months later (t2).</p>	<p>Parents in T groups received individual training in either dialogic reading (T<sub>1</sub>) or elaborative conversations (T<sub>2</sub>). Follow-ups consisted of monthly phone calls and exchanges of books. Parents in C were visited at home and received an interview but no training.                      T<sub>1</sub> = dialogic reading                      T<sub>2</sub> = conversational training                      C = no-treatment control</p>	<p>Quality of children's story retelling narratives (number of evaluatives and orientations): <math>T_2 &gt; T_1</math> at t2. Story comprehension: <math>T_2 &gt; T_1</math> and <math>T_2 &gt; C</math> (<math>p = .06</math>) at t2.</p>
Whitehurst et al. (1988)	<p>29 families                      2-year-olds (21–35 months)                      4-week intervention</p>	<p>Parents in the intervention group received 2 half-hour training sessions, at the outset and 2 weeks later; they were instructed on strategies and given the chance to role play.                      T = dialogic reading                      C = typical reading</p>	<p>Expressive language: <math>T &gt; C</math> at t2; <math>T &gt; C</math> at t3 (marginal).                      No differences in receptive vocabulary at t2 and follow up.</p>

Notes: T = Treatment group; C = Control group; t1= Time 1 (pre-test); t2 =Time 2 (post-test 1), t3 = Time 3 (post-test 2).

programs (Brooks-Gunn et al., 2000). A comprehensive review of parent-focused intervention programs by Brooks-Gunn et al. (2000) showed that parent education is a pathway through which early childhood programs influence child outcomes. Thus, early childhood programs that are coupled with parent engagement have the greatest potential to impact children (Brooks-Gunn et al., 2000). Researchers and practitioners who include parents in their models of change allow for the possibility of direct and indirect (mediated through parents) effects of intervention programs on early childhood development.

We argue that it is particularly important to include parents as a source of intervention when attempting to promote children's language development. Hart and Risley (1995) noted that the levels of adult language stimulation in the home varied dramatically as a function of social class, and children's language development varied as a direct function of adult language input. Although we can and should attempt to make up for these differences in language input in preschool settings (see Tennant et al., 1988; Wasik, Bond, and Hindman, 2006), it is difficult for preschool teachers to find time for one-on-one language interactions with their pupils (see Wasik, 2008). Clearly we need to focus our efforts on parents and preschool teachers simultaneously in order to boost the language development of low-income children.

We divide our review into three types of studies or contexts for intervention. The first and most common type of intervention revolves around teaching parents to read storybooks to children as a way to enhance their language and literacy. The second context for intervention is parent-child conversations as a springboard for children's language and narrative development. The third type of intervention focuses on parents' assistance for children's writing as another important component of emergent literacy.

## **Book-reading interventions**

At the pediatrician's office, the library, the grocery store, and on the television and radio, parents encounter the message that shared book reading will benefit their young children's early learning. Programs affiliated with a variety of human service agencies, like Reach Out and Read and Reading is Fundamental, promote parent book reading with children from infancy through the early elementary years. Very few experimental studies have evaluated the effectiveness of these programs (Fuligni and Brooks-Gunn, 2004), yet they reach many families with the message that reading to children is as important as giving them immunizations and providing proper nutrition. Given these large-scale efforts to promote early

intervention through shared story reading, a review of the extant experimental studies of parent book-reading interventions should provide some important feedback for programs that are, in many cases, already in place.

Intervention studies that implement parent training in shared book reading have for the most part used a 'dialogic reading' program that Whitehurst and colleagues developed initially for toddlers (Whitehurst et al., 1988) and later adapted for preschoolers (Arnold et al., 1994; Lonigan and Whitehurst, 1998; Whitehurst et al., 1994). Dialogic reading is a method of reading picture books that draws upon a variety of strategies used successfully in language interventions with young children. The goal of the interaction is to encourage the child to participate actively. Parents are taught ways to facilitate their children's learning so that the role of narrator slowly shifts from the parent to the child as the story becomes more familiar over many readings. The intervention consists of teaching parents strategies to support children's acquisition of the story vocabulary and discussion of the story plot. Parents are trained to ask open-ended questions, evaluate, repeat or expand upon the child's responses, follow the child's line of interest, and connect the story to real events in the child's life.

The first of several studies by Whitehurst and his colleagues taught dialogic reading strategies to parents of two-year-old children from middle-class families (Whitehurst et al., 1988). Parents were instructed in dialogic reading methods over two half-hour training sessions at the beginning of the four-week intervention and then two weeks later. The control group received no instruction. Parents read to their children daily over four weeks. At the post-test, children in the treatment group scored significantly higher on two tests of expressive language than those in the control group. At the nine-month follow-up, the difference in expressive vocabulary was only marginally significant, in favor of the dialogic reading intervention, but this was believed to be due to differential attrition (see Table 1). Arnold et al. (1994) extended these findings in another study of middle-class families using a video format to train parents. This study compared the families who were trained with a video program to the direct instruction used in the earlier study and to a no-treatment control group. All parents were asked to read to their children at least four times a week. Both groups of children whose parents received training outperformed the control group on expressive language measures (see Table 1). The authors concluded that parent instruction from video was as effective as direct instruction techniques. However, a study that also examined the conditions under which parents could successfully learn to use dialogic reading found that parents who were from a less educated background were better at

learning from direct instruction than from the video-based program (Huebner and Meltzoff, 2005).

Another study that included typically developing children in Hong Kong focused on training parents in dialogic reading with their kindergarten-age children (4–5 years). Parent training in dialogic reading took place in a 20-minute telephone call training format and via instructions that came in books that children brought home from school during an eight-week intervention (Chow and McBride-Chang, 2003). The families were Chinese-speaking from middle-class backgrounds. Parents were randomly assigned to a typical reading group, a dialogic reading group, and a no-treatment control group. The design included measures of receptive vocabulary and emergent literacy. Children in both the typical reading and dialogic reading groups made significant gains in receptive vocabulary, but only the children in the dialogic reading condition made significant gains on the measure of literacy skills relative to the control group. The authors suggest that gains in emergent literacy may have been due to the increased opportunity to provide explicit instruction in print skills during dialogic reading, but this study did not measure the way that parents implemented the training.

Chow et al. (2008) conducted a second parent-intervention study with Chinese-speaking kindergarteners in Hong Kong that again included a control condition, a typical reading condition, and a dialogic reading condition, as well as a fourth combined condition (see Table 1). In the combined condition, parents were trained both in dialogic reading and in strategies to enhance their children's metalinguistic skills through explicit teaching of morphological awareness of Chinese characters, which is especially important in learning to read in Chinese. Parents in the dialogic reading condition and the combined dialogic and morphological awareness condition were trained separately in a one-hour session at the outset of the intervention. The parents in the dialogic reading group were given 12 books with suggestions for questions and a set of guidelines for dialogic reading; in the combined condition, parents were given the same materials with added guidelines on explicit teaching to increase their children's awareness of the morphology of Chinese characters. At the post-test, Chow et al. demonstrated that children whose parents were trained in the dialogic reading condition did significantly better than all of the other groups on a measure of receptive vocabulary. In addition, the children who were in the combined condition significantly outperformed the three other groups on Chinese character recognition, and children in this condition also outperformed children in the typical reading group in morphological awareness.

Another study with parents that adapted dialogic reading for an urban library program with a sample of families from both low- and middle-income families also produced gains in children's expressive language skills after a six-week program (Huebner, 2000). Families of two-year-old children from lower- and middle-class backgrounds were recruited and completed the program through to the post-test at a local library (see Table 1). Children were identified as typically developing. Although testing indicated that some children were at risk for a language delay, none of the children were considered in need of a referral for further testing. They were randomly assigned to a dialogic training group and a control group. The training was provided by a librarian and included 2 1-hour sessions occurring 3 weeks apart in groups of 6–12 parents. The control group received the library's regular training for parents at the same time intervals but without instruction on book reading style. At the end of the training sessions, parents were instructed to read to their children 5–10 minutes daily. At the post-test, children in the dialogic reading group scored significantly higher on a test of expressive language than did the children in the control group. The authors did not, however, conduct separate analyses of the benefits of dialogic reading as a function of family income.

A meta-analysis (Mol et al., 2008) of dialogic book reading intervention studies with parents of preschool or kindergarten-age children concluded that these sorts of reading programs explained about eight per cent of the variance in children's language skills in those studies that used measures of expressive language as an outcome. Dialogic reading accounted for only four per cent of children's language skill when the language measures included receptive as well as expressive vocabulary. The authors believe this pattern highlights the importance of interactions in which parents ask open-ended questions and children actively participate by formulating their own responses. Moreover, they assert that this finding supports the notion that the quality of book reading is as important as the frequency of book reading for language development. It is interesting to note that their finding was consistent with an earlier meta-analysis (Bus et al., 1995) and with a review (Scarborough and Dobrich, 1994) of primarily correlational research on the effects of picture book reading that reported shared reading accounted for eight per cent of the variance in preschool children's language and literacy.

The impact of parents' dialogic reading on children's language and, on occasion their literacy, has been replicated repeatedly in studies that have included, in addition to parent training, a condition in which preschool teachers are taught dialogic reading that is adapted for group reading in the classroom. The classroom context is beyond the parameters of the literature

under review here. Thus, we will just briefly state some findings related to the role of parents in children's early language and literacy from studies that included both home and classroom interventions. Results from all of these studies show that conditions including parent training consistently yield the strongest effects of the intervention. For instance, Whitehurst et al. (1994) compared a preschool dialogic reading intervention with a combined preschool and parent-implemented intervention and a control group in a low-income sample. Immediately after the six-week intervention the children in the intervention displayed significantly better expressive language skills than their non-treatment peers. Moreover, children in the combined treatment condition, which included dialogic reading at home and school, significantly outperformed those in the school-only condition on the same measure of expressive language. Even stronger evidence for the importance of the role of parents in their children's early learning comes from another study with a low-income sample by Lonigan and Whitehurst (1998) in which they contrasted four conditions, a home-based model, a school-based model, and a combined condition in which children attended classes where teachers had implemented dialogic reading and parents were using similar intervention techniques in the home, and a no-treatment control group. Significant effects of the reading intervention were obtained, though the largest effects were found in conditions that included a parent-reading component.

Shared book reading might also be a context where parents facilitate their children's print and word awareness. For example, in some of the above studies, dialogic reading helped children's emergent literacy skills as well as their language and metalinguistic skills (e.g. Chow and McBride-Chang, 2003). Justice and colleagues also implemented a home-based book reading intervention for parents of typically developing preschoolers to enhance their print skills (Justice and Ezell, 2000; see also Ezell et al., 2000 for a similar program for parents of children with communication disorders). This program aimed at increasing parents' explicit verbal and non-verbal references to print during shared reading (e.g. pointing or commenting on print). Parents who participated in this program increased their references to print and, in turn, these print-referencing behaviors helped children acquire knowledge of written language (see Table 1).

Thus, shared book-reading interventions that train parents to adopt dialogic reading techniques are an effective way to enhance children's expressive vocabulary, and in some studies, their receptive vocabulary. Children's metalinguistic and print skills can also increase as a result of shared book-reading interventions (Chow and McBride-Chang, 2003; Chow et al., 2008; Ezell et al., 2000). Yet these parent-training programs have rarely examined their effects on children's narrative development. One

study in the dialogic reading literature focused on children's inclusion of evaluative devices in their narratives, but this work included a teacher/classroom intervention as well as a parent book reading component and so was not reviewed here (Zevenbergen et al., 2003). The only other research to include narrative outcomes contrasted parent training in dialogic reading with parent training in elaborative conversation strategies (Reese, Leyva and Sparks, in press) so will be reviewed in the next section. Given the known value of narrative as a measure of children's complex language skills and a predictor of reading (Reese et al., 2009), this area of research would benefit from more studies that include narrative as an outcome measure. Future studies of dialogic reading should also include more complex measures of language for outcomes in addition to tests of expressive and receptive vocabulary typically used in these studies.

The meta-analysis by Mol et al. (2008) indicated, however, that parent-led dialogic reading interventions were not as effective for children from low-income families or for older preschoolers. Other ways of reading books with preschoolers besides dialogic reading have yet to be tested experimentally with parents (but for an effective researcher-led intervention with older and more advanced preschoolers, see Reese and Cox, 1999). If we want to reach children beyond middle-class populations with effective interventions for their language skills, then we need to know more about cultural differences in the role of books in the home and how parents structure shared reading with their children (Kaderavek and Justice, 2008; for examples of this kind of research see Hammer et al., 2005; Melzi and Caspi, 2005). These observational studies will make it possible to adapt interventions to enhance the social interaction patterns observed in families from diverse cultural and economic backgrounds (Barrera and Bauer, 2003). Emphasis should be placed upon building onto home literacy practices to improve children's learning (McNaughton, 1995; Van Kleeck, 2006) rather than merely superimposing styles of talk that have been shown to be beneficial to children from middle-class models of intervention.

Next we will review intervention studies in which parents were trained to adopt more effective strategies in the context of conversations with their preschool children. These conversational interventions address some of the gaps in our knowledge of effective practices with families from lower socioeconomic and educational backgrounds.

## Conversational interventions

Parent conversational interventions arose to acknowledge that parents talk and tell stories in many other contexts besides shared book-reading. And,

although shared book reading is a frequent and beloved event in most middle-class Anglo families (Phillips and McNaughton, 1990), it is not as frequent or natural in other socio-cultural groups. In a large-scale study, Raikes et al. (2006) found particularly low rates of shared book reading among low-income Hispanic and African-American families. Knowing this, it seems necessary to extend the context for language interventions beyond book reading to other forms of storytelling.

Storytelling about personally experienced events is one promising context for intervention. Parents in a diverse range of cultures talk with their children about past events (Miller et al., 1990), although the frequency and style of past event talk varies across cultures and income levels (Leyva et al., 2008; Wang, 2001). Moreover, personal narratives are the first stories that children tell (e.g. Reese, 1999). In the first parent intervention of this type, Peterson et al. (1999) trained a group of low-income Canadian Anglo mothers to talk in topic-extending ways with their preschool children. The intervention focused on increasing parents' use of open-ended questions during past event narratives, particularly their use of 'where' and 'when' questions. Researchers also trained parents to encourage their children to continue a narrative by repeating all or part of the child's utterance. Training sessions occurred at home every two months and via phone calls to parents. Parents in a control group were only visited at pretest and post-test. At the end of the year-long intervention, children in the parent-training group had higher PPVT scores than children in the control group. One year after the end of the intervention, children of trained parents told narratives that contained more context-setting information to a researcher compared to children of parents in the control group.

A larger-scale study of New Zealand mothers (primarily of European descent) and their preschoolers replicated and extended these findings. In Reese and Newcombe (2007), researchers trained one group of mothers to talk in more elaborative ways about past events with their children at 21, 25, and 29 months of age. Specifically, mothers were encouraged to use more 'wh-' or open-ended questions containing new information about the event, and to praise and expand upon children's utterances with another elaborative question. By 32 months, children of trained mothers were providing more utterances containing event information in conversations with their mothers compared to children of mothers in the control group, whom researchers visited in the home the same number of times but who did not receive special training in conversation. By 44 months, the children of trained mothers told richer narratives to a researcher than did the children of untrained mothers. Specifically, the children of trained mothers

provided more actions in their narratives than did children in the control group. This study included mothers from a wide range of education levels. About half of the mothers had only a high-school education, whereas the other half of mothers had completed some university training or had a tertiary or postgraduate degree. Critically, however, the intervention worked equally well with less and more educated mothers. Both groups of mothers increased their elaborative talk with their children; there was no interaction between maternal education and training group in the effects on children's narrative skills at age 3–1/2.

Project EASE (Jordan et al., 2000) is another parent intervention that focused on a broader range of parent–child conversations. In this program, parents of kindergarteners were given specific training in engaging in extended discourse with their children. Families were primarily Anglo and were recruited from schools receiving government assistance. Like elaborative reminiscing, extended discourse is a talk style that is distanced from the present. Extended discourse includes narrative and explanatory talk. A hallmark of extended discourse is its lexical richness. This talk typically occurs during shared book reading, toy play, and mealtime conversations. Children whose parents were in the intervention group displayed enhanced language competence in terms of vocabulary and narrative, but not phonological or print skills, at the end of kindergarten (see Table 1). The effects of the program were present even after accounting for home environment and literacy practices. Degree of parent participation was related to the effect size of the training, and the intervention had greater effects on children who had low language scores at pre-test.

Although Jordan et al. (2000) included a broad range of conversational contexts in their intervention, that study did not compare directly the benefits of parent training during shared book-reading to other conversational contexts. This comparison is important given that some parents do not read books often with their children, presumably because they do not feel comfortable with their own reading skills, or because shared book-reading is not a typical practice in their culture. Can parent conversation interventions produce benefits for children's language development that are as strong as those delivered in book-reading interventions? Given that Mol et al. (2008) concluded that dialogic reading interventions are not as effective for low-income children, it is particularly important to conduct this comparison with low-income families.

We are aware of only one parent intervention that directly compared the benefits of book-reading and conversation for children's language development (Reese et al., in press). We included three conditions in our design: low-income parents of four-year-old children attending Head Start were

assigned either to dialogic reading, elaborative reminiscing, or a no-treatment control condition. The intervention consisted of training parents in the prescribed conversational technique or, for parents in the control group, conducting a parent interview at a home visit in the Fall of the child's last year of Head Start. In the spring of that year, post-tests of children's language and narrative skills revealed that elaborative reminiscing boosted the quality of children's story retelling narratives in comparison to dialogic reading. Elaborative reminiscing was also effective in promoting children's story comprehension in comparison to the dialogic reading and the no-treatment control conditions. Importantly, these effects of training held for bilingual and monolingual children, and regardless of children's racial/ethnic background. Therefore, training parents in elaborative conversations poses a promising alternative or supplement to book-reading for enhancing the language and especially the narrative development of children from a range of social classes and cultures. As more of these interventions using elaborative conversations accumulate, it will be important to conduct a meta-analysis, similar to Mol et al.'s (2008) for dialogic reading, to evaluate more fully the contribution of these conversations to children's language and narrative development.

## Writing interventions

Intervention programs focused on increasing parents' strategies to help children develop emergent writing skills are far less common than interventions involving shared book-reading or conversations. Perhaps this gap is due to perceptions of writing activities for this age group. Emergent writing might be perceived as developmentally inappropriate for preschoolers, given the fine-motor skills involved, or as a skill that teachers and schools, not parents, are responsible for teaching. It might also be perceived as 'too didactic' (i.e. parent-driven, involving direct teaching of skills), and thus not appropriate for many parents who prefer to adopt a child-centred approach (see Sénéchal et al., 1998). In general, informal practices such as book-reading and talking with children are more frequently represented in parent-training programs because their effects have been demonstrated and because they are viewed as generalizable to populations with diverse socioeconomic status and cultural backgrounds.

The only exception is Aram and Levin's (2009) study comparing the effects of three intervention programs for low-SES parents and their preschool children: joint-writing, joint storybook reading, and visuo-motor mediation (e.g. painting, gluing, drawing). The intervention program instructed and then monitored parents on mediated learning

principles in either writing, book-reading, or painting/gluing activities. Differential effects at the end of the program (time 2) and three months after completion of the intervention (time 3) were found for the joint-writing and joint storybook reading programs (see Table 1). Children whose parents received the joint-writing intervention had greater gains in alphabetical skills. In contrast, children whose parents received the joint storybook reading intervention had greater gains in linguistic skills such as receptive and expressive language. These differences were present even after accounting for child age, home literacy practices and pre-test scores on alphabetic skills and linguistic competencies. This study shows that training parents in joint-writing has specific benefits to children's literacy skills beyond those of joint storybook sharing and drawing/painting activities. Thus, parent intervention programs focused on emergent writing are a promising area that deserves future exploration as it has important implications for children's literacy development.

## Conclusions and implications

We conclude that all three types of parent-training programs – shared book-reading, conversations, and writing interactions – are effective ways to improve the language and emergent literacy skills of preschool children. The skills enhanced are often specific to the training that parents receive. An intervention that trains parents to encourage their children to talk about the pictures in a book enhances children's vocabulary. An intervention that trains parents to encourage their children to tell richer stories improves children's narrative skill. An intervention that trains parents to focus on print improves children's emergent print and writing skills. Thus, these different parent-training programs should not be viewed in competition or as mutually exclusive; rather, parent-training programs can be designed for the specific needs of particular populations of children.

In conducting this review, we noted that the interventions shown to be most effective for typically developing children's language share many features with those designed to help children with language delays. For instance, following the child's talk with particular types of questions, repeating and expanding upon the child's utterances, and using praise and encouragement are common techniques that speech-language pathologists encourage in parents of children with language delays. In fact, Whitehurst and colleagues developed dialogic reading through their work with children with expressive language delays and their parents (Whitehurst et al., 1989). Justice and Ezell (2000) have also successfully adapted some of these interventions for special populations for parents of typically

developing children. Yet researchers rarely acknowledge this parallel literature when discussing parent interventions with typically developing children. Integrating these two literatures is a high-priority task.

Several caveats to these general recommendations are in order, however. Researchers may need to consider other vehicles for intervention than book-reading with low-income parents, given the lower levels of effectiveness of parent-led dialogic reading with this population (Mol et al., 2008). Conversational interventions may promote some of the same language skills as dialogic reading, although the effectiveness of conversation for children's expressive vocabulary has only been demonstrated in one study to date (Jordan et al., 2000), and that study did not explicitly compare the benefits of book-reading versus conversation for low-income parents. A second caveat is that we do not yet know the combined or additive effects of parent-training programs that target multiple skills. For instance, is it possible or desirable to train parents to simultaneously read in a dialogic fashion with children AND to have elaborative conversations and joint-writing interactions? Or are parents less effective teachers when loaded down with multiple tasks simultaneously? Future experimental studies with combined conditions, similar to the dialogic reading studies that compared the benefits of home and school training, are needed to answer these questions. Only one study that we reviewed contained a combined condition in which parents were trained in both dialogic reading and morphological awareness (Chow et al., 2008). Notably, in this combined condition, only children's print recognition and morphological awareness showed a statistically significant improvement (see Table 1). Children's receptive vocabulary in the combined condition was statistically indistinguishable from children in the typical reading or no-treatment control groups, although the effect size for children's improvement in language in this condition was moderate ( $d = .43$ ). When parents are trained in two very different techniques, they may choose to focus more on the technique that is the most concrete and that yields the most obvious gains – in this case, training children's metalinguistic awareness.

If the results of these studies indicate that it is necessary to choose between parent-led interventions for children's language versus their literacy, then we must advocate for choosing parent-training programs that promote language development over literacy development in early childhood. Whereas literacy skills can be taught effectively in schools, it is much more difficult for teachers to intervene in children's language development. Unlike print skills, language skills are unconstrained – there is no ceiling to language development (Paris, 2005). Moreover, language skills only become more important, not less important, in children's academic

achievement after they have mastered basic decoding skills (see Reese et al., 2009).

There are many efforts in the USA to recruit non-familial adults to serve as tutors (e.g. teachers, home visitors, coaches) in programs designed to support literacy and language achievement in early childhood. However, the most highly motivated tutors, parents, are not always involved in intervention programs (Jordan et al., 2000). Intervention programs, particularly those working with low-SES communities, prefer to train non-familial adults and not parents for several reasons (Aram and Levin, 2009). First, other adults are considered more knowledgeable and skilled, and thus more easily trained compared to parents. Second, other non-familial adults are seen as more reliable and presumably have higher fidelity of implementation of the program in comparison with parents. Fidelity of implementation is central to finding program effects. Finally, parents struggle with competing duties at home and at work; asking them to participate in an intervention program might add more stress to their life. Nonetheless, the present literature review shows that low-SES parents, who typically have more stressful lives, are able to incorporate strategies when interacting with their children that have a positive impact on their children's language and literacy development. We conclude that parents are an undertapped resource. Overall, these studies provide a body of evidence that supports the value of implementing parent interventions for children's early learning.

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