# Promoting Mother-Child Shared Book-Reading Interactions: The Direct and Delayed Effects of Different Dyadic Interventions


**Dorit Aram and Iris Levin**

**Abstract** This study analyzes how training in dyadic activities affected the quality of Shared Book Reading (SBR) amongst mothers of preschool children from low socioeconomic status (SES). Each mother experienced one of three interventions. All interventions guided mothers in principles of mediating children's learning in one dyadic activity: SBR, word writing, or visuo-motor skills. The mother-child activities took place 3 times a week for 7 weeks. A group with no intervention served as a control. The quality of interactive reading improved substantially from pretest to immediate and to delayed posttest, 2.5 months later, in the SBR group. Improvement was exhibited in the number of mother- and child-initiated dialogues, number of dialogues with scaffolds, elaborations, praise, and criticism, and in all types of prompts. No effect of the intervention on interactive reading emerged in any other groups, revealing no transfer of training mothers in general principles of mediated learning to SBR with their child.

**Keywords** Low socioeconomic status · Preschool children · Parent-child interaction · Interactive shared book reading · Early literacy · Literacy intervention · Home literacy activities · Home literacy

In this study, as in many other ones, we examine literacy interactions in Hebrew. One of the leading researchers in the world in researching Hebrew and Hebrew language development is Prof. Dorit Ravid. The way that she looks at the richness of the Hebrew language and how she describes its components serves as an impetus for us in our research of parent-child interactions that relate to language, such as Shared Book Reading (SBR).

Research provides ample evidence that home literacy activities are related to children's early literacy and predicts later reading and writing acquisition in school (Aram & Levin, 2004; Burgess et al., 2002; Mol & Bus, 2011; Sénéchal, 2006).

D. Aram (✉) · I. Levin (Deceased)
Constantiner School of Education, Tel Aviv University, Tel Aviv, Israel
e-mail: dorita@tauex.tau.ac.il



R. Levie et al. (eds.), *Developing Language and Literacy*, Literacy Studies 23,
https://doi.org/10.1007/978-3-030-99891-2_16

Amongst the different home literacy activities, reading storybooks to children emerges as the prominent and most thoroughly studied activity that characterizes a literate home (Bus, 2002).

## 1 Style of Storybook Reading

Children exposed to frequent storybook reading consistently surpass their counterparts on vocabulary, and in some reports on alphabetic skills as well (e.g., Aram & Levin, 2002; Mol et al., 2009; National Early Literacy Panel, 2008; Noble et al., 2019). However, the contribution of storybook reading to children's vocabulary depends on reading style. In a meta-analysis, based on 16 selected studies that included 626 children, interactive reading (engaging children in discourse surrounding the text) was found to enhance children's progress more than regular reading (Mol et al., 2008).

Many parents simply read the text, rarely attempting to involve the children in discourse. Various causes may underlie the prevalence of this ineffective practice. Parents may be unaware of their children's limited vocabulary and partial understanding of story grammar. Therefore, they may not realize that children need their parents to facilitate understanding through interactive reading. Parents may also have limited skills for involving children in discourse: they do not allow their children enough time to process the questions and form their replies, may not be inclined to scaffold children's insufficient responses and would rather provide the required response, or tend not to elaborate on children's responses. Finally, many parents commonly read at bedtime when they or the children are too tired, consequently adopting a non-interactive style.

## 2 Home Based Shared Book Reading Interventions

Studies that have demonstrated that children's vocabulary was enhanced because parents were trained in interactive reading relied on the assumptions that (1) mothers learned to read interactively due to the training, (2) thereafter, mothers applied interactive reading consistently in reading to their children, and (3) that their children became more verbally active during the reading session. However, few studies have analyzed the changes that occurred in mother-child verbal exchanges during reading following such training. In the few studies that have addressed this issue, trained mothers were asked to read storybooks interactively several times a week for four to 12 weeks (across studies). Reading sessions at pretest and posttest(s) were videotaped or audiotaped, and the frequencies of maternal use of strategies supporting or reducing dialogue were assessed. Results showed that, in general, strategies

supporting dialogue increased (e.g., Aram et al., 2013; Blom-Hoffman et al., 2006; Briesch, et al., 2008; Huebner, 2000; Huebner & Meltzoff, 2005; Whitehurst et al., 1988), whereas strategies reducing dialogue decreased (Huebner, 2000; Huebner & Meltzoff, 2005) from pretest to immediate posttest. In delayed posttest, about 2.5 to 6 months later, the frequency of dialogic strategies slightly decreased but often did not differ from its heightened level at the immediate posttest (Blom-Hoffman et al., 2006; Briesch et al., 2008; Huebner & Meltzoff, 2005).

These promising results should be taken with some reservation, as a closer examination of the *specific strategies* used by mothers showed that the impact of training did not increase all dialogic strategies, and that increasing strategies varied across studies. In particular, *open-ended questions, evaluations, expansions,* and *praise* increased, whereas *repetition* and *recall* (e.g., "do you remember that ….") did not change. Other strategies, such as *distancing* (e.g., connecting events in the story to the child's life) increased, decreased, or remained unchanged across studies (Blom-Hoffman et al., 2007; Briesch et al., 2008; Crain-Thoreson & Dale, 1999; Whitehurst et al., 1988).

The aforementioned studies of interactive reading training included 2–4-year-old children, recruited from middle or mixed/undefined socioeconomic status (SES). In their meta-analysis, Mol et al. (2008) found that the contribution of interactive reading to children's vocabulary was strong for children recruited from middle to high SES but not from low SES. Moreover, the contribution of interactive vs. regular reading decreased with the child's age. Mol and her colleagues suggest that mothers with low education may not be able to carry out interactive reading at the required level, or that their children may find it difficult to respond to open-ended questions or to questions that require inferencing.

Interestingly, in a more recent meta-analysis, Dowdall et al. (2020) found that SBR interventions had a large effect on caregiver book-sharing competence. Child's age and caregiver's education level were unrelated to child outcome. Yet, the impact of the intervention on child language was moderated by intervention dosage, with lower dosage associated with a minimal impact.

Our current study focused on dyads recruited from low SES families, with 5–6-year-old children. In comparative international studies on reading comprehension among primary and secondary students from 35 to 41 countries, the achievement gap between different social strata in Israel was wide relative to other countries (Chiu & McBride-Chang, 2006; Olstein & Zuzovsky, 2004). Consequently, promoting literacy activities in socially disadvantaged Israeli families is a prominent educational goal. Children aged 5–6 are about to start their studies within a year. We assumed that their parents would be interested in advancing their children's early literacy skills and thus our shared book reading intervention included prompts that focus on school literacy skills.

### *2.1 Prompts Used in SBR Interventions*

Studies examining the effects of SBR interventions on mother-child verbal exchange during reading have focused on strategies promoting dialogue that primarily refers to the story and illustrations, facilitating story comprehension. In the current study, in addition to these prompts, we added two new types of prompts to the dialogues: alphabetic skills and story grammar. These components were chosen because they support the two elements of reading – decoding and comprehension. Reference to print was aimed at promoting the alphabetic skills that provide the infrastructure for decoding (Ehri et al., 2001), whereas analyzing stories in terms of their story grammar was believed to enhance the inferencing required for reading comprehension (van Kleeck, 2008).

We assumed that prompts alerting the children to the print, that is, evoking discussion of letters, sounds, and printed words, would be useful for our cohort of children, who would soon start formally attending school. The prompts on story grammar involved identifying the protagonist, the problem(s) s/he copes with, the solution(s) attempted and reached, and the lesson to be drawn from the story (Trabasso & Wiley, 2005). We assumed that in addition to the regular prompts that relate to particular parts of the story, evocation of the story grammar upon completion of story reading might deepen the child's understanding of the story as a cohesive, large unit of text.

## 3 Transfer in Learning

We examined whether interactive reading can be promoted only by a specific SBR intervention or whether mothers exposed to the general principles of beneficial mediated learning and who have been trained in other domains (e.g., joint-writing) can transfer these skills to interactive reading.

Mediated learning in this context includes encouragement of active participation on the part of the child, scaffolding at a challenging but not frustrating level, sensitivity to his/her competence and perspective, and assistance in alerting the child to his/her metacognitive processes (see Kozulin, 2002).

This kind of transfer (i.e., learning principles in one domain and applying them to another) requires learning abstract principles and applying them mindfully to a new context (Haskell, 2000). The present study might reveal that mothers who were exposed to principles of high-level mediation, and who practiced them in mediating writing or visuo-motor skills, could apply these principles to storybook reading. If such transfer occurred, it would indicate a high-level learning of mediation principles (Kozulin, 2002).

In the current study, participating mothers were divided into four groups: SBR intervention, writing intervention, visuo-motor intervention, and a control group. The three Intervention groups were instructed on the same beneficial mediated

learning principles (Kozulin, 2002), which were applied thereafter to a different dyadic parent-child activity (SBR, joint writing and visuo-motor activities). We chose these activities because promoting children's skills in these areas has been found to contribute to early schooling (Aram & Levin, 2004; Ratzon, et al., 2007). By using two groups of mothers guided in mediated learning in two different domains – writing and visuo-motor skills, the former more related to literacy than the latter – we could derive a stronger conclusion concerning transfer to interactive reading from such guidance. In the third control group, mothers were not involved in any intervention.

**Questions of the Current Study**

1. To what extent does training mothers to read interactively increase their interactive reading, as measured at immediate and delayed posttest?
2. To what extent does training mothers to read interactively increase their children's initiation of participation during reading, as measured at immediate and delayed posttest?
3. To what extent does training in mediated learning practices applied to writing or visuo-motor skills transfer to interactive storybook reading?
4. To what extent do maternal pretest reading behaviors, intervention group, child's age, and SES predict maternal interactive reading behaviors following the training?

## 4 Method

### *4.1 Participants*

Participants were 127 mother-child dyads recruited from low SES neighborhoods in the Tel Aviv metropolitan area. Both mothers and fathers were invited to participate, but 122 mothers and only five fathers participated in the study. Therefore, we refer to the caregivers as mothers.

Children's mean age at the pretest was 5;50 (years and months) (*SD* = 0.35 months). Their mothers' and fathers' mean ages were 33;60 (*SD* = 5;60) and 36;60 years (*SD* = 5;60), respectively. Parental education, measured on a 5-point scale: 1 – Less than 12 years; 2 – Professional high school education; 3 – Academic high-school education; 4 – Post high school academic education; 5 – Bachelor's degree. The parents' education ranged from not finishing high school (9% of mothers and 26% of fathers) to graduating from college/university (10% of mothers and 6% of fathers). This education level is low by Israeli standards, where 43% of the population graduates from college or university (OECD, 2013). The families in the study lived in high-density apartments (*M* = 1.3 number of persons per room) relative to the Israeli standard (*M* = 0.84) (Israel Bureau of Statistics, 2021). The four groups (reading, writing, visuo-motor, and control) were statistically indistinguishable on all demographic parameters.

The assignment of mothers to the three intervention groups was done in the following way. First, mothers were invited to participate in an 8-week intervention aiming to promote school readiness. The mothers were notified that the intervention would begin with a 3-h workshop that would take place on one evening. Six workshops were randomly assigned to the three intervention groups – SBR, joint- writing, or visuo-motor activities. The mothers chose one of six proposed dates to participate in the workshop without being informed that the workshops differed by content. They were videotaped before the workshop and the intervention, immediately after the intervention and 3 months later. As to the control group, mothers were similarly invited to participate in an intervention aiming to promote school readiness. The control group was videotaped three times in parallel with the intervention groups. After the third time the mothers attended the workshop on school readiness.

## *4.2 The Intervention Programs*

Each intervention started with its own 3-h workshop held one evening in a local recreational club, attended by 15–20 mothers each. There were several workshops for each intervention. The three workshops shared the same structure and referred to the following topics in a fixed order, including eight steps: (1) We first discussed the role of school readiness and maternal contribution in this arena. (2) Next, we presented the principles underlying high quality mediation. These principles included the importance of mother-child dialogue and of maternal sensitivity to the child's perspective, attention span, and Zone of Proximal Development. We clarified the importance of helping the child become aware of the meta-cognitive processes that s/he was undergoing and of indicating to the child the progress that s/he has been making in solving the problem. We stressed that guidance should be given when the child needed it and was ready to accept it, and that scaffolding should be at a challenging but not frustrating level. Up to this point, the three workshops were practically the same. (3) We discussed the development and significance of success in schooling for the specific target domain (storybook reading, alphabetic skills, and fine visuo-motor skills). (4) The mothers were divided into small groups to discuss their children's performance, home practice, and maternal mediation in the target domain. (5) A 10-min film screening then introduced mothers to short mediation scenes illustrating principles of high-quality mediation specific to the target domain. (6) We next specified mothers' role in the program: to engage their child three times per week, for 7 weeks, in educational and entertaining activities designed by the researchers. We informed them that a tutor would meet them weekly in their home; discuss the progress made, and the difficulties encountered, and provide the tasks for the coming week. (7) We then displayed the materials for use during the 7 weeks of intervention. We explained that mothers would gradually receive these materials during home visits, which would then remain their own property. (8) Finally, mothers received materials and tasks for the first week, along with guidance in how to apply them in interacting with their child.

### 4.2.1 Joint Home Activities

The mother-child joint activities took place three times per week (approximately 20–30 min per session) in a fixed structure. In the reading group, the mother read a new storybook to the child each week, asking parallel sets of questions across books. The selected books were age appropriate, challenging but not frustrating, entertaining, and educationally valuable. For example, *Something Else* (by C. Cave) conveys the value of becoming a friend with someone who is different from oneself or others, and *Good Fresh Salad* (by M. Snir) delivers the idea that "the whole is more than the sum of its parts." These books were chosen in collaboration with two experts in children's literature and two preschool teachers.

Printed stickers placed on different pages proposed questions to ask the child before, during, or after the book reading (around six questions per reading). Mothers were guided to use the proposed questions sensitively, by adjusting the questions to the child's needs. The proposed questions were open-ended, focusing on text comprehension (e.g., "what did grandma think about the problem?") or questions on word meaning (e.g., "what is a cockroach?"). Also, few questions referred to distancing, that is, connecting the story to the child's experiences (e.g., "what present do you like"?). There were questions that referred to the print (e.g., "what letter do you know in the title?", "how many words do you see in this title") and to the story grammar (e.g., "who are the story's characters?"). Print-related questions usually appeared before reading the book, so as not to disturb the child's processing of the story line. Story grammar prompts appeared at the end of the book, after the entire story had been read.

In the writing intervention group, materials included tasks pertaining to spelling words (e.g., write words that begin with a specific sound; write a list of peers) as well as the kit produced by Rosenberg (2004). The kit included two boards and small boxes with magnetic cards for games promoting letter knowledge, phonological awareness, word spelling, and word recognition. For example, one game focused on rhyming and consisted of pairing pictures whose referents rhyme; another centered on pairing words that start or end with the same phoneme or the same letter. In the visuo-motor skills intervention group, materials included seven booklets or boxes with educational games relevant to fine motor skills, such as mazes, coloring shapes, and cutting and gluing models.

### 4.2.2 Home Visits

The same tutor (female graduate students in educational counseling) visited the mother at home each week over the 7 weeks, for a visit lasting about half an hour. The goals of the home visits were to summarize the training experiences of the last week, collect the last week's products (children's drawing, writings, etc.), introduce the tasks for the coming week, discuss the mother's teaching experience, solve emerging problems, and sustain maternal motivation to proceed with the program. Extent of implementation – whether all tasks were completed at the three weekly

sessions – was confirmed and documented by the tutors. The tutors checked maternal reports by discussing the tasks or observing children's products (e.g., completed mazes). Almost all mothers reported that all sessions were completed, that collaboration was smooth, and that the tasks were engaging and productive.

### *4.3 Assessment: Mother-Child Reading Interaction*

Mother-child interactive readings were videotaped three times in the family's home. The pretest took place up to 2 weeks prior to the workshop. The immediate posttest was carried out after the intervention program terminated. The delayed posttest took place two and a half months after the immediate posttest.

Three books were used, one per session, drawn from an award-winning, popular Dutch series, translated into Hebrew (*Frog and A Very Special Day*, *Frog Is Frog*, and *Frog Is Frightened*, Velthuijs, 2000a, b, c). These books were chosen because of their suitability for kindergartners, the similarity among them (22 pages each, sharing author, illustrator, protagonists, etc.), and their educational and artistic value. The dyads (mothers and children) were unfamiliar with the books.

The interactions were videotaped, transcribed, and coded with a key developed for this study. Only dialogues (i.e., words exchange between the child and mother) were coded, because the study's focus was on dyadic interaction. A dialogue referred to any question or comment made by one party that was replied to, either verbally or physically (e.g., nodding the head, pointing with a finger). Dialogue was classified according to the initiator – mother or child, the initiated topic, and the inclusion of scaffolding, elaboration, praise and criticism.

The dialogues were classified into three topics: (1) story or illustration, (2) print or alphabetic skills, and (3) story grammar (see Table 1 for examples). Six prompts were concerned with the *story or illustration*: completion, recall, illustration, wh-questions, word meaning, and distancing. Four prompts were concerned with *print or alphabetic skill*: counting words/letters, naming or sounding letters, isolating sounds or rhyming, and print recognition or decoding. Six prompts were concerned with *story grammar*: summary, characters, protagonist, problem, solution, and lesson. Explanations of prompts and examples taken from mother-child dialogue appear in Table 1.

After the classification of the topics, each dialogue was scored according to its inclusion of maternal scaffolding, maternal elaboration, maternal praise, or maternal criticism. Scaffoldings took the form of follow-up questions, comments, or hints. They were recorded when the child failed to respond in a way that the mother regarded as satisfactory, with the mother attempting to lead the child to the correct response. For example, when the frog failed to fly because it had no wings: M (mother): "Does the frog have wings?" C (child): – nods. M: "How come the frog has wings?" (scaffold). C: "Its hands". M: "Do you think that hands are wings?" (scaffold). C: "No" (the two are laughing). Elaborations were recorded when the mother accepted the child's response as correct but required elaboration of the

**Table 1** Prompt codes appearing in mother-child dialogues

| Prompt code | Explanation | Example |
|---|---|---|
| *Prompts on story and illustration* | | |
| Completion | M starts a word/phrase from the text to encourage C to complete it verbatim | M reads: "Frog in a very special …" (intonation that requires completion). C: day. |
| Recall | M asks a question that requires recalling a piece of information that has been just mentioned (in the last 1–3 sentences). | M reads: "Help! It's a ghost! Screamed all three friends. And then they saw that it was a rabbit." Whom did they see? C: points at the rabbit. |
| Illustration | M or C refers to the illustration, asking who and what questions. | C: Mommy, that's the sea (points at the illustration). M: That's the sky. It looks like a sea. C: That's the sea. M: You know what? Maybe it's the sea, because frogs are going into the water. Maybe it is the sky. |
| Wh- question | M or C asks a 'who', 'what', 'which', 'where', 'when', 'why', or 'how' question. | M reads: "… And he landed on the river … At least he had a soft landing." Why did he have a soft landing? C: Because he landed on water. |
| Word/phrase meaning | M or C asks about the meaning of a word or an idiomatic phrase. | M reads: "Rabbit, may I borrow a book from you?" What is 'borrowing a book'? C: Taking a book from you. M: Right. And then what do you do? C: (a perplexed expression). M: Return the book. C: nods. |
| Distancing | M or C asks a question or produces a comment that connects the text to the child's own experiences or to his/her general knowledge. | M reads: "And they cuddled in bed. The frog warmed up beside the duck, and was no longer afraid." Do you do that sometimes? When you are scared, do you come to sleep with mommy and daddy sometimes? C: nods. |
| *Prompts on print or alphabetic skills* | | |
| Counting words/letters | M asks the C to count words uttered in a phrase and map each onto a printed word, or to count letters in printed words. | M: How many words are in the book's title – (A) frog is (a) frog? C: Three (correct). C: How do know that there are three words? C: Because I see the space. |
| Naming or sounding letters | M asks C to name letters or, rarely, to produce their sounds. | M points to the printed word: Do you know any letters in the word 'frog'? Which letters do you know? C names all letters correctly. |
| Isolating sounds or rhyming | M asks C to isolate the initial or final sound of an uttered word or to trace/produce a rhyme. | M asks: What is the first sound in "frog" [tsfarde'a]? C: tsfa. M: Listen carefully, ts. farde'a. C: ts. |
| Print recognition or decoding | M asks the child to recognize (or, rarely, to attack) a printed word/phrase. | M reads: "He went to visit the rabbit." Where do you see the word 'rabbit' again? Show me another one. C: Points and says: This one. |

(continued)

**Table 1** (continued)

| Prompt code | Explanation | Example |
|---|---|---|
| *Story grammar* | | |
| Summary | M asks C to succinctly reproduce the story line from memory. | M: Tell me what you remember from the book. C: I remember that the frog … that he is the best. But then the duck flew and he also wanted to fly, but and then the pig also wanted to make cakes, and then he [the frog] did not, he wanted to make a cake too and he didn't succeed because the cake burned. |
| Characters | M asks who the characters were. | Now, Tom, which characters are in the book besides the frog? C: A rabbit. M: Who else? C: A duck. |
| Protagonist | The mother asks who the protagonist was and how the child made that decision. | M: Shirley, Who is the main character? C: The frog. M: True. The frog with the pants. And why is he the main character? C: Because he was at the beginning, in the sides, and at the end. M: Right. Instead of saying at the beginning, in the sides, and at the end, what do we say? C: In every place. M: Throughout the … C: Story. |
| Problem | M asks what the protagonist's major problem was. | M: What was his problem? C: And then he solved it. M: Right. But what was the problem? C: That he couldn't fly and couldn't read and couldn't swim. |
| Solution | M asks how the problem was solved. | M: How did he solve the problem that he didn't know this and that and that? C: The rabbit helped him. |
| Lesson | M asks C what s/he has learned from the story. | M: What did you learn from the story? … C: That each one has something else. M: Something else that he is good at. And he must be happy with what he has… Do you understand that Shirley? We shouldn't look at others… |

Note. *M* mother, *C* child

response. For instance, M: "… and she went home happily. What's 'happily?'" C: "Like this!" (he puts on a smiling face). M: "Cheerful, right!" (elaboration). Praise included mothers' responses to the child's answers like "that's right" or "correct" as well as to the child him/herself, like "you are sweet!". Criticism targeted either the child's response, such as "that's wrong," or to the child him/herself, such as "you're just guessing."

Two graduate students coded the interactions. They were blind to the group type (intervention groups and control). Following a few training sessions of learning to use the key, 36 protocols were chosen to measure coding reliability. These protocols were randomly selected equally from the four groups (reading, writing, visuo-motor skills, and control) and the three data collections (pretest, immediate posttest, and delayed posttest). Reliabilities were measured by correlations between the scores given independently by the two coders and by t-tests between their mean scores. All

correlations between coders' scores were highly significant, with a mean correlation of $M = .96$, and a range of .90–1.00. All *t*-tests between coders' scores on individual protocols were insignificant.

# 5 Results

## *5.1 Shared Book Reading Prior to the Intervention*

The characteristics of dyadic reading at pretest are presented in Table 2. Dyadic reading in the pretest lasted on average about 9 min ($M = 9.09$ min, $SD = 4.16$). The number of turns included in mother-child dialogues per reading was on average around 21 ($M = 21.4$, $SD = 33.30$). Each dialogue included at least two turns, one by the mother and the other by the child. The mean number of dialogues initiated by the mother was rather low ($M = 4.30$), considering that the book included 22 pages. Almost all those (98%) referred to a topic of *story and illustrations*. The child initiated fewer dialogues than did the mother ($M = 1.61$), and again practically all of them related to *story and illustrations*. About 12.7% of dialogues initiated by the mother or the child included maternal scaffolds and about 22.2% included maternal elaborations. These figures suggest that mothers sometimes did not stop with the child's immediate response (or failure to respond) and sustained the dialogue to enhance the child's comprehension, involvement, or linguistic communication.

**Table 2** Description of mother-child storybook reading of the entire sample at pretest (N = 127)

| | Mean | SD | Minimum | Maximum |
|---|---|---|---|---|
| *Characteristics of maternal-initiated dialogues* | | | | |
| Total no. of maternal-initiated dialogues (MID) | 4.30 | 5.42 | 0.00 | 28.00 |
| No. of MID on story and illustration | 4.20 | 5.32 | 0.00 | 27.00 |
| No. of MID on alphabetic skills | 0.02 | 0.15 | 0.00 | 1.00 |
| No. of MID on story grammar | 0.07 | 0.26 | 0.00 | 1.00 |
| *Characteristics of child-initiated dialogues* | | | | |
| Total no. child-initiated dialogues (CID) | 1.61 | 2.72 | 0.00 | 13.00 |
| No. of CID on story and illustration | 1.60 | 2.71 | 0.00 | 13.00 |
| No. of CID on alphabetic skills | 0.02 | 0.12 | 0.00 | 1.00 |
| No. of CID on story grammar | 0.00 | 0.00 | 0.00 | 0.00 |
| *Characteristics of maternal- or child-initiated dialogues* | | | | |
| Total no. of dialogues with scaffolds | 0.75 | 1.66 | 0.00 | 11.00 |
| Total no. of dialogues with elaborations | 1.54 | 2.55 | 0.00 | 14.00 |
| Total no. of dialogues with praise | 3.46 | 6.17 | 0.00 | 38.00 |
| Total no. of dialogues with criticism | 0.50 | 1.27 | 0.00 | 9.00 |

## 5.2 The Effects of the Interventions

Table 3 presents the characteristics of dyadic reading by group and wave. The results of two-way ANOVAs, with repeated measures are presented in Table 4.

**Table 3** Description of mother-child joint storybook reading as a function of intervention group and wave (N = 127)

| | Wave | | |
|---|---|---|---|
| | Pretest | Posttest | Delayed posttest |
| | M (SD) | M (SD) | M (SD) |
| *Total no. of maternal-initiated dialogues* | | | |
| SBR intervention | 4.71 (6.49) | 15.14 (13.16) | 9.94 (8.48) |
| Writing intervention | 3.82 (3.56) | 5.06 (5.39) | 3.44 (4.53) |
| VM intervention | 4.71 (6.49) | 7.77 (7.89) | 4.68 (4.85) |
| No intervention | 2.74 (5.65) | 3.33 (4.03) | 1.56 (2.06) |
| *Total no. of child-initiated dialogues* | | | |
| SBR intervention | 1.66 (2.61) | 4.14 (6.18) | 1.00 (1.55) |
| Writing intervention | 1.62 (3.46) | 1.79 (1.98) | 1.12 (1.70) |
| VM intervention | 2.10 (2.29) | 1.84 (2.79) | 1.00 (1.55) |
| No intervention | 1.00 (2.24) | 1.26 (2.64) | 0.85 (1.97) |
| *Total no. of dialogues with maternal scaffolds* | | | |
| SBR intervention | 0.94 (2.57) | 4.83 (5.11) | 2.14 (2.44) |
| Writing intervention | 0.41 (0.78) | 0.71 (1.53) | 0.32 (0.64) |
| VM intervention | 1.31 (1.48) | 1.35 (2.01) | 0.48 (1.15) |
| No intervention | 0.48 (1.01) | 0.63 (1.15) | 0.19 (0.48) |
| *Total no. of dialogues with maternal elaborations* | | | |
| SBR intervention | 1.91 (3.40) | 7.03 (6.57) | 3.66 (3.70) |
| Writing intervention | 1.15 (1.71) | 1.41 (2.22) | 0.74 (1.46) |
| VM intervention | 2.03 (2.32) | 2.77 (3.46) | 1.61 (2.11) |
| No intervention | 1.00 (2.34) | 1.22 (1.99) | 0.52 (0.89) |
| *Total no. of dialogues with maternal praise* | | | |
| SBR intervention | 4.43 (8.83) | 16.71 (18.11) | 7.06 (7.06) |
| Writing intervention | 2.71 (4.39) | 2.62 (3.27) | 2.12 (2.56) |
| VM intervention | 4.52 (5.99) | 5.06 (5.78) | 2.71 (3.12) |
| No intervention | 1.93 (3.33) | 2.63 (4.21) | 1.19 (2.08) |
| *Total no. of dialogues with maternal criticism* | | | |
| SBR intervention | 0.46 (1.60) | 3.54 (4.53) | 1.06 (1.35) |
| Writing intervention | 0.15 (0.44) | 0.44 (1.48) | 0.18 (0.46) |
| VM intervention | 1.13 (1.61) | 0.90 (1.85) | 0.32 (0.75) |
| No intervention | 0.26 (0.71) | 0.78 (1.99) | 0.26 (1.02) |
| *No. of maternal dialogues on story and illustration (specific category of prompts)* | | | |
| SBR intervention | 4.66 (6.34) | 11.71 (10.64) | 8.17 (7.12) |
| Writing intervention | 3.74 (3.56) | 4.50 (5.25) | 3.00 (4.19) |
| VM intervention | 5.52 (5.40) | 7.29 (7.61) | 4.45 (4.72) |
| No intervention | 2.70 (5.48) | 2.89 (3.71) | 1.48 (2.01) |

(continued)

**Table 3** (continued)

| | Wave | | |
|---|---|---|---|
| | Pretest | Posttest | Delayed posttest |
| | M (SD) | M (SD) | M (SD) |
| *No. of maternal dialogues on print and alphabetic skills (specific category of prompts)* | | | |
| SBR intervention | 0.03 (0.17) | 2.14 (2.09) | 0.89 (1.16) |
| Writing intervention | 0.03 (0.17) | 0.41 (0.74) | 0.41 (0.74) |
| VM intervention | 0.03 (0.18) | 0.16 (0.37) | 0.03 (0.18) |
| No intervention | 0.00 (0.00) | 0.30 (1.35) | 0.40 (0.19) |
| *No. of maternal dialogues on story grammar (specific category of prompts)* | | | |
| SBR intervention | 0.03 (0.17) | 1.29 (1.60) | 0.89 (1.25) |
| Writing intervention | 0.06 (0.24) | 0.15 (0.36) | 0.03 (0.17) |
| VM intervention | 0.16 (0.37) | 0.32 (0.60) | 0.19 (0.40) |
| No intervention | 0.04 (0.19) | 0.15 (0.36) | 0.04 (0.19) |

Note. *SBR* shared book reading, *VM visuo-motor*

**Table 4** 2-Way ANOVAs of wave × group, and Bonferroni Post-hoc Comparisons of the Dyadic Reading (N = 127)

| | F-wave | F-group | F-interact. | Comparison of groups | | |
|---|---|---|---|---|---|---|
| Characteristics | df = 2246 | df = 3123 | df = 3246 | Pretest | Immediate posttest | Delayed posttest |
| No. of MID | 17.61*** | 11.80*** | 7.18*** | n.s. | R > W, V, C | R > W, M, C |
| No. of CID | 8.86*** | 1.71 | 3.24** | n.s. | R > W, V, C | n.s. |
| Scaffoldings | 17.74*** | 13.28*** | 9.84*** | n.s. | R > W, V, C | R > W, M, C |
| Elaborations | 14.62*** | 14.53*** | 7.01*** | n.s. | R > W, V, C | R > W, M, C |
| Praise | 14.33*** | 12.44*** | 9.33*** | n.s. | R > W, V, C | R > W, M, C |
| Criticism | 14.43*** | 7.94*** | 7.82*** | n.s. | R > W, V, C | n.s. |
| Story/illustrations | 12.31*** | 8.73*** | 4.62*** | M > C | R > W, V, C | R > W, M, C |
| Print/alphabetic skills | 19.28*** | 15.50*** | 8.67*** | n.s. | R > W, V, C | R > W, M, C |
| Story grammar | 11.85*** | 17.95*** | 6.85*** | n.s. | R > W, V, C | R > W, M, C |

Note. *D* dialogues, *MID* maternal-initiated dialogues, *CID* child-initiated dialogues, *R* reading group, *W* writing group, *V* visuo-motor group, *C* control group
**$p < 0.01$; ***$p < 0.001$

Comparing the groups in each wave showed that at pretest, the groups did not differ on any of the measures. In the immediate posttest, the SBR intervention group significantly surpassed all other groups on all characteristics. The other three groups – writing, visuo-motor skills, and control – were statistically indistinguishable from each other. At the delayed posttest, the SBR group outperformed all other groups on all characteristics except two (number of dialogues with criticism and number of child-initiated dialogues), and the three groups were again statistically indistinguishable.

Analyses of the six characteristics revealed a consistent picture. The effects of wave, group, and the Wave × Group interaction were all significant. In the SBR group, dyadic reading increased substantially and significantly on all measures from

pretest to the immediate posttest and somewhat declined, on all measures, from the immediate to the delayed posttest. This decline reached significance on two measures out of six (number of mother-initiated dialogues and number of dialogues with scaffolds). Nevertheless, dyadic reading remained significantly higher at the delayed posttest than at pretest on all six measures. In contrast, in the three other groups (writing, visuo-motor, and control) the six characteristics of dyadic reading remained statistically indistinguishable on all three waves.

Analyses of intervention group by topic are presented in the lower parts of Tables 3 and 4. Almost all the dialogues initiated by mothers at the pretest were on *story and illustrations*. We examined whether guiding mothers in SBR increased their prompts on this topic as well as on topics that they regularly neglected – *print* and *story grammar*.

Although most dialogues were on *story and illustrations*, all three topics revealed a consistent picture. The effects of wave, group, and the interaction between them were all significant. Bonferroni comparisons showed that in the SBR group, dialogues related to all three topics increased significantly from pretest to the immediate posttest and declined significantly but to a lesser extent from the immediate to the delayed posttest. Consequently, in this group, dialogues related to all three topics remained significantly higher on the delayed posttest compared to the pretest. In contrast, in the three other groups (writing, visuo-motor, and control) dialogues relating to all three topics remained statistically indistinguishable across waves.

Comparing the groups in each wave showed that at the two posttests, the SBR group significantly surpassed all other groups on all three topics. At pretest, no group differed from another on any topic, except in one case (on Story/illustrations the visuo-motor group scored higher than the control group, Table 4).

## *5.3 Child's Age and Maternal Education: Regression Analyses*

To predict each characteristic of interactive reading during the immediate and the delayed posttests, we ran regression analyses with four predictors: child's age, maternal education, performance on the predicted characteristics at pretest, and group. The previous analyses indicated that the interactivity during storybook reading increased due to the intervention only in the SBR group. Therefore, to assess group effect, we compared the SBR group to the three other groups combined (writing, visuo-motor, and control).

The regression analyses included two models of predictors. Model 1 included child's age, maternal education, pretest scores, and group; Model 2 added three-way interaction – Group × Child's age × Maternal education.

Pretest scores and group had effects on all scores at the immediate posttest. These two unique factors combined explained 42% of the variance on the number of mother-initiated dialogues and 17% of child-initiated dialogues. The variances predicted on number of dialogues with scaffolds, elaborations, praise, and criticism, were 54%, 36%, 46%, and 28%, respectively.

Age had a significant effect on immediate posttest scores only in number of mother-initiated dialogues; specifically, younger children were more involved in maternal-initiated dialogues than were older children. This finding was not moderated by the three-way interactions.

At the immediate posttest, the three-way interaction of Group × Child's age × Maternal education added to the prediction of five out of six immediate posttest scores, significantly or closely so. This interaction appeared on the number of child-initiated dialogues, maternal scaffolds, maternal elaborations, maternal reinforcements, and maternal criticisms. These interactions reflected a consistent picture: In the SBR group, among dyads including mothers with lower education levels, interactive reading decreased with the child's age. These mothers used more scaffolds, elaborations, reinforcements, and criticisms for younger than for older children. At the same time, younger children of mothers with lower education initiated more dialogues with their mothers than older children. No such effects were found for mothers with higher education in the SBR group or for mothers with higher or lower education in the other groups combined.

In sum, the regressions explained 44% of the variance in the number of mother-initiated dialogues and 22% of the variance in the number of child-initiated dialogues. Regarding the number of dialogues including maternal scaffolds, elaborations, reinforcements, and criticisms, the models explained an impressive 57%, 40%, 52%, and 33% of the variances, respectively.

At the delayed posttest, pretest characteristics and group had considerable effects on all delayed posttest scores. These factors combined uniquely explained the number of mother-initiated dialogues (33%) and the number of child-initiated dialogues (23%). These factors also explained maternal scaffolds (27%), elaborations (27%), praise (32%), and criticisms (20%).

The regressions explained 34% of the variance in the number of maternal-initiated dialogues and 23% of the variance in number of child-initiated dialogues. For the number of dialogues including maternal scaffolds, elaborations, reinforcements, and criticisms, the models explained 29%, 32%, 33%, and 27% of the variances, respectively.

## 6 Discussion

### *6.1 Interactive Reading: Enhanced Specifically by Training in Reading*

The goal of this chapter was to describe a study that explored how guiding mothers from low SES backgrounds in how to mediate learning applied to different joint activities would affect storybook reading. We expected that directing mothers in reading storybooks interactively would improve their reading quality more than guiding the mothers in other joint activities, that is, writing or visuo-motor skills.

Moreover, we investigated transfer effects, whether guiding mothers in the latter joint activities would contribute to interactive storybook reading more than would no intervention. Results partly accorded with expectations. While directing mothers in mediated learning applied to storybook reading had impressive effects on all measured aspects of interactive reading, directing mothers in the other joint activities had no effect on these measures.

The effects of the Shared Book Reading (SBR) intervention on interactive reading were remarkable in the context of the characteristics of habitual reading of storybooks of these mothers before the intervention. Reading characteristics at pretest were similar to those that have appeared in the literature dealing mainly with younger and higher-SES populations. First, the literature indicates that in habitual storybook reading mothers rarely engage the child (Huebner & Meltzoff, 2005). Similarly, in the current study, we found that the number of dialogues initiated by mothers was relatively low. Second, mothers usually contribute more to the discourse during reading than do their children (Curenton et al., 2008). Here, mothers contributed 2.7 times more to dialogues than did their children. Finally, mothers initiated dialogues during reading that focused almost entirely on the story (i.e., the plot, the behavior of the story's characters) and illustrations, often ignoring print characteristics and story grammar (e.g., reference to the protagonist or the story's solution). Disregarding print, even when the children are kindergartners about to start school the next year, may stem from the possible distractive effect it may have on the on-going processing of the story. Ignoring story grammar may reflect limited maternal comprehension that books portray the general scheme of narrative that can help their children in text comprehension. Perhaps mothers do not recognize the potential that meta-cognitive conversations regarding the hero, the plot, etc. can have on their children's comprehension of stories.

Guiding mothers in interactive reading during the seven-week intervention enhanced their reading quality across the board in the immediate posttest. Mothers tripled the number of times they initiated dialogues with their children, thereby greatly increasing their children's discourse during reading. They used dialogues with scaffolds and elaborations, five and four times more, respectively, than at pretest. Mothers also initiated more dialogues including praise and criticisms, showing that the dialogues were more evaluative and instructive. Notably, the children initiated dialogues – asking questions, demanding clarifications – 2.5 times more after the intervention. Our results are in line with a recent meta-analysis that showed that book reading interventions have a large effect on caregiver book-sharing competence (Dowdall et al., 2020).

Maternal interactive reading slightly decreased but sustained its heightened level relative to the pretest at the delayed posttest, measured 2.5 months following termination of the intervention. Maintenance emerged on all measured aspects of maternal reading. This result corroborates previous findings on delayed posttests on trained interactive reading, mainly based on small samples (Abarca, 2018; Blom-Hoffman et al., 2007; Briesch et al., 2008; Huebner & Meltzoff, 2005).

### 6.1.1 New Prompts: Print and Story Grammar

Discourse on print and on story grammar has hardly been mentioned in the literature on storybook reading. The inclusion of dialogues on print was motivated by the rich evidence indicating the significance of alphabetic skills and print concepts acquired in preschool for reading and writing acquisition in first grade (Foulin, 2005; Goswami, 2003; Lyytinen et al., 2006; National Reading Panel, 2000; Shatil et al., 2000). Research has shown that interactive reading enhances print concepts (Mol et al., 2008, 2009). It has also been shown that children can be alerted to print during interactive reading (Justice & Ezell, 2002; Justice, et al., 2002), and that such a practice enhances children's print and word knowledge (Justice, et al., 2006). The motivation to encourage mothers to initiate dialogues on story grammar was based on the conclusion drawn from a review, stating that story comprehension is supported by analyzing stories within the framework of story grammar (Gersten et al., 2001). The intervention raised the number of these two types of prompts, but these prompts remained minor.

## *6.2 Why Transfer Failed to Occur, and What Could Facilitate Transfer*

The expectation that guiding mothers in other joint activities, that is to say, writing and visuo-motor skills, would improve the nature of their storybook reading quality relative to the control group of no intervention was refuted. In general terms, the rich literature shows that transfer of training is a highly regarded but not very common outcome of training, the reasons not being entirely clear (Haskell, 2000).

Many of the mothers who were not trained in reading interactively were in the habit of reading storybooks to their children (as indicated in maternal reports), and this may account for the resistance of storybook reading interactivity to change. Further, parents have been found to view storybook reading as a context for bonding with the child and a time of enjoyment, more than as a context for learning (Audet et al., 2008). This view has been supported by the mass media where parents are told that storybook reading contributes to the child's security by creating an atmosphere of warmth, tranquility, and caring (Ben-Gur, 2009). Therefore, unless parents endorse the view that storybook reading is a teaching-learning opportunity and are encouraged to read interactively and guided in how to do so, they may be unaware of other ways that reading might be productive. Interventions that include some direct parental guidance to use the knowledge that they gained in one domain to promote their children in other domains may help parents to make a transfer. For example, if parents receiving guidance in the writing program were taught to ask their children questions in different activities, perhaps they might also have progressed in interactive book reading.

### 6.3 Child's Age and Maternal Education

In a meta-analysis, the effect of interactive reading on children's vocabulary was found to decrease with children's age, from 2–3 to 4–6-years-old (Mol et al., 2008). The authors suggest that older children may need less interactive reading with parents, becoming better able to monitor story comprehension and ask questions on their own. We found that with children's age, particularly mothers with lower education (within our low SES sample) changed their level of interactivity. Specifically, mothers trained to read interactively increased their interactive reading from pretest to posttests, but those with lower education were less interactive with the child's increasing age. These mothers used more scaffolds, elaborations, reinforcements, and criticisms for younger than for older children. Concurrently, younger children of mothers with lower education in the SBR group initiated more dialogues with their mothers than did older children. This finding suggests that maternal interactive reading tends to decline when children get older, as mothers believe their children to need less assistance (De Temple & Snow, 2001), and this belief is held more by mothers with a lower education. In addition, within a sample of mothers from low SES backgrounds, mothers with a lower education may have greater difficulty in crafting challenging questions for older children, which would lead to high-quality discourse. These explanations corroborate the finding that dialogic reading has been found to be more productive for children whose mothers were more highly educated (Mol et al., 2008).

### 6.4 Limitations and Suggestions for Future Research

The slight decrease from immediate to delayed posttest, apparent in this and in previous studies, may suggest that maintenance of interactivity requires some boosting (e.g., phone calls) following the intervention. However, it may alternatively be proposed that the degree of interactivity in the immediate posttest was perhaps to some extent overdone, due to the intensive intervention. The decrease in the delayed posttest may have moved the interactivity to a more convenient level. Currently, we have no evidence regarding the optimal level of interactivity in storybook reading (appropriate per age or literacy level), or to the amount of support parents need to maintain interactivity in the long run. These important issues deserve investigation.

No transfer of mediating learning in other joint activities to interactive reading occurred. If we had suggested to mothers trained in mediating learning of other activities that they consider applying these principles to storybook reading, it is possible that they could have done it. Such an additional investment could have been productive. No such suggestion was offered in the current study. Future studies should try elaborating procedures to enhance mother-child verbal interactions across a wide variety of contexts, including storybook reading.

In sum, the substantial improvement in interactive reading that emerged in this study raises the hope that such rich reading interactions may continue in the SBR group. Professionals should directly guide parents in how to read to their children. Parents as well as educators should be encouraged to acknowledge this potential and use the context of shared book reading for rich conversations with children.

## References

Abarca, D. L. (2018). Young minds, young readers: Dialogic reading with adolescent mothers and their children. *International Public Health Journal, 10*, 455–467.

Aram, D., & Levin, I. (2002). Mother-child joint writing and storybook reading: Relations with literacy among low SES kindergartners. *Merrill Palmer Quarterly, 48*, 202–224.

Aram, D., & Levin, I. (2004). The role of maternal mediation of writing to kindergartners in promoting literacy achievements in second grade: A longitudinal perspective. *Reading and Writing: An Interdisciplinary Journal, 17*, 387–409.

Aram, D., Fine, Y., & Ziv, M. (2013). Enhancing parent–child shared book reading interactions: Promoting references to the book's plot and socio-cognitive themes. *Early Childhood Research Quarterly, 28*, 111–122.

Audet, D., Evans, M., Williamson, K., & Reynolds, K. (2008). Shared book reading: Parental goals across the primary grades and goal-behavior relationships in junior preschool. *Early Education and Development, 19*, 112–137.

Ben-Gur, N. (2009). When mothers read. *Woman's World, 308*, 160–161.

Blom-Hoffman, J., O'Neil-Pirozzi, T. M., & Cutting, J. (2006). Read together, talk together: The acceptability of teaching parents to use dialogic reading strategies via videotaped instruction. *Psychology in the Schools, 43*(1), 71–78. https://doi.org/10.1002/pits.20130

Blom-Hoffman, J., O'Neil-Pirozzi, T., Volpe, R., Cutting, J., & Bissinger, E. (2007). Instructing parents to use dialogic reading strategies with preschool children: Impact of a video-based training program on caregiver reading behaviors and children's related verbalizations. *Journal of Applied School Psychology, 23*, 117–131.

Briesch, A. M., Chafouleas, S. M., Lebel, T. J., & Blom-Hoffman, J. A. (2008). Impact of videotaped instruction in dialogic reading strategies: An investigation of caregiver implementation integrity. *Psychology in the Schools, 45*, 978–993.

Burgess, S. R., Hecht, S. A., & Lonigan, C. J. (2002). Relations of the home literacy environment (HLE) to the development of reading-related abilities: A one-year longitudinal study. *Reading Research Quarterly, 37*, 408–426.

Bus, A. G. (2002). Joint caregiver-child storybook reading: A route to literacy development. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (pp. 179–191). Guilford Press.

Chiu, M. M., & McBride-Chang, C. (2006). Gender, context, and reading: A comparison of students in 43 countries. *Scientific Studies of Reading, 10*(4), 331–362.

Crain-Thoreson, C., & Dale, P. S. (1999). Enhancing linguistic performance: Parents and teachers as book reading partners for children with language delays. *Topics in Early Childhood Special Education, 19*, 28–39.

Curenton, S. M., Craig, M. J., & Flanigan, N. (2008). Use of decontextualized talk across story contexts: How oral storytelling and emergent reading can scaffold children's development. *Early Education and Development, 19*, 161–187.

De Temple, J. M., & Snow, C. E. (2001). Conversations about literacy: Social mediation of psycholinguistic activity. In L. Verhoeven & C. E. Snow (Eds.), *Literacy and motivation: Reading engagement in individuals and groups* (pp. 55–69). Routledge.

Dowdall, N., Melendez-Torres, G. J., Murray, L., Gardner, F., Hartford, L., & Cooper, P. J. (2020). Shared picture book reading interventions for child language development: A systematic review and meta-analysis. *Child Development, 91*(2), e383–e399.

Ehri, L. C., Nunes, S. N., Stahl, S. A., & Willows, D. M. (2001). Systematic phonics instruction helps students learn to read: Evidence from the National Reading Panel's meta analysis. *Review of Educational Research, 71*, 393–447.

Foulin, J. N. (2005). Why is letter knowledge such a good predictor of learning to read? *Reading and Writing, 18*, 129–155.

Gersten, R., Fucks, L., Williams, J., & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of research. *Review of Educational Research, 71*, 279–320.

Goswami, U. (2003). Phonology, learning to read and dyslexia: A cross-linguistic analysis. In V. Csepe (Ed.), *Dyslexia: Different brain, different behavior: Vol. 23. Neuropsychology and cognition* (pp. 1–40). Kluwer Academic.

Haskell, R. E. (2000). *Transfer of learning: Cognition and instruction*. Elsevier.

Huebner, C. E. (2000). Community-based support for preschool readiness among children in poverty. *Journal of Education for Students Placed at Risk, 5*, 291–314.

Huebner, C. E., & Meltzoff, A. N. (2005). Intervention to change parent-child reading style: A comparison of instructional methods. *Journal of Applied Developmental Psychology, 26*(3), 296–313. https://doi.org/10.1016/j.appdev.2005.02.006

Israel Bureau of Statistics. (2021). *House density*. https://www.cbs.gov.il/he/publications/doclib/2021/households_eco19_1816/t_02.pdf

Justice, L. M., & Ezell, H. K. (2002). Use of storybook reading to increase print awareness in at-risk children. *American Journal of Speech-Language Pathology, 11*, 17–29.

Justice, L. M., Weber, S. E., Ezell, H. K., & Bakeman, R. (2002). A sequential analysis of children's responsiveness to parental print reference during shared book-reading interactions. *American Journal of Speech-Language Pathology, 11*, 30–40.

Justice, L. M., Skibbe, L., & Ezell, H. K. (2006). Using print referencing to promote language awareness. In T. A. Ukrainetz (Ed.), *Contextualized language intervention: Scaffolding preK-12 literacy achievement* (pp. 389–428). Thinking Publications University.

Kozulin, A. (2002). Sociocultural theory and the mediated learning experience. *School Psychology International, 23*, 2–35.

Lyytinen, H., Erskine, J., Tolvanen, A., Torppa, M., Poikkeus, A.-M., & Lyytinen, P. (2006). Trajectories of reading development: A follow up from birth to school age of children with and without risk for dyslexia. *Merrill-Palmer Quarterly, 52*, 514–546.

Mol, S. E., & Bus, A. G. (2011). To read or not to read: A meta-analysis of print exposure from infancy to early adulthood. *Psychological Bulletin, 137*(2), 267–296.

Mol, S. E., Bus, A. G., de Jong, M. T., & Smeets, D. J. H. (2008). Added value of dialogic mother-child book reading: A meta-analysis. *Early Education and Development, 19*, 7–26.

Mol, S. E., Bus, A. G., & de Jong, M. T. (2009). Interactive book reading in early education; A tool to stimulate print knowledge as well as oral language. *Review of Educational Research, 79*, 979–1008.

National Literacy Panel. (2008). *Report of the National Literacy Panel: Developing early literacy: A scientific synthesis of early literacy development and implications for interventions*. www.NIFL.gov

National Reading Panel. (2000). *Report of the National Reading Panel: Teaching children to read*. National Institute of Child Health and Human Development.

Noble, C., Sala, G., Peter, M., Lingwood, J., Rowland, C., Gobet, F., & Pine, J. (2019). The impact of shared book reading on children's language skills: A meta-analysis. *Educational Research Review, 28*, 100290. https://doi.org/10.1016/j.edurev.2019.100290

OECD. (2013). *Education at a glance*. https://www.oecd-library.org/education/education-at-a-glance-2012_eag-2012-en; https://din-online.info/pdf/std1.pdf

Olstein, E., & Zuzovsky, R. (2004). *Haknajat orjanut hakriaa beisrael: Mimtsaej hamexkar habenleumi beorjanut hakriaa* [The attainment of reading literacy in Israel: PIRLS 2001 reading literacy assessment]. Ramot – Tel Aviv University. (Hebrew).

Ratzon, N. Z., Efraim, D., & Bart, O. (2007). A short-term graphomotor program for improving writing readiness skills of first grade students. *American Journal of Occupational Therapy, 61*, 309–405.

Rosenberg, M. (2004). *Ready to read: A game kit preparing children to learn to read*. Reading and Thinking. (Hebrew).

Sénéchal, M. (2006). Testing the home literacy model: Mother involvement in preschool is differentially related to grade 4 reading comprehension, fluency, spelling, and reading for pleasure. *Scientific Studies of Reading, 10*, 59–87.

Shatil, E., Share, D. L., & Levin, I. (2000). On the contribution of kindergartners' writing to grade 1 literacy: A longitudinal study in Hebrew. *Applied PsychoLinguistics, 21*, 1–21.

Trabasso, T., & Wiley, J. (2005). Goal plans of action and inferences during comprehension of narratives. *Discourse Processes, 39*, 129–164.

Van Kleeck, A. (2008). Providing preschool foundations for later reading comprehension: The importance of and ideas for targeting inferencing in story-sharing interventions. *Psychology in the Schools, 45*, 627–642.

Velthuijs, M. (2000a). *Tsfardea beyom meyuxad meod* [Frog on a very special day]. Zmora-Bitan.

Velthuijs, M. (2000b). *Tsfardea hu tsfardea* [Frog is frog]. Zmora-Bitan.

Velthuijs, M. (2000c). *Tsfardea poxed* [Frog is frightened]. Zmora-Bitan.

Whitehurst, et al. (1988). Accelerating language development through picture book reading. *Developmental Psychology*, 552–559.