A COMPARISON OF GENERALIZATION STRATEGIES TO SUPPORT PARENT TRAINING

by

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Abstract

**Purpose:** The objective of this study was to determine how effective three different parent generalization support strategies (annotated books, log keeping or simple book-giving) are in getting parents to maintain a trained behavior.

**Method:** Fifteen parents of preschool children with a diagnosed speech or language disorder completed three book readings and a training on dialogic reading. During the first book reading, parents were asked to read to their child as they normally would. Parents then participated in a twenty-minute training on five dialogic reading strategies called CROWD prompts. During the second book reading parents were asked to use the prompts they had just learned. One of three generalization support strategies was then implemented depending on which group the participant was assigned to. Groups were decided using an algorithm and were assigned in the order participants signed up for the study. At the end of the five weeks, parents completed a third book reading to determine how well they had maintained the CROWD prompts. The number of total prompts used and the number of different prompts used operated as our dependent variables.

**Results:** On average, parents in the annotated and book only groups used a larger total number of prompts than parents in the log keeping group. On average, parents in the annotated and book only groups used a wider variety of CROWD prompts than parents in the log keeping group.

**Conclusions:** Short-term training can increase parents’ dialogic reading behaviors. However, some support strategies promote generalization and maintenance better than others.
Introduction

Although parent training is a growing trend in early intervention service provision (e.g., Roberts et al., 2014), studies of caregiver training demonstrate that generalization is not easily maintained. In other words, even though SLPs can teach language-stimulation strategies to parents in a short amount of time (Lund, 2018), parents do not typically maintain those changes a month later, and do not generalize them to new activities easily (Roberts et al., 2014; Lund, 2018). It is important for speech-language pathologists to determine how best to promote generalization because caregiver involvement significantly affects a child’s speech and language skills and ultimately, success in speech therapy (Roberts & Kaiser, 2011). The purpose of this study was to explore how parent-support strategies affect parents’ abilities to generalize and maintain a skill learned in a parent training context following a five-week interval.

Parent-Child Interactions and Language Development

Parent input to children with language impairment differs from input to children who are typically developing (Rezzonico et al., 2014; Lund & Schuele, 2015). This may be a natural consequence of the transactional nature of language: the actions of one linguistic partner affect the actions of the other (Samerof, 1975). Early on in development, children with language impairment do not give their communication partners, often parents, many utterances to react to and consequently receive less contingent input than their typically developing peers (Paul & Elwood, 1991). Parents of children with hearing loss tend to shorten their utterances to match the language level of their children but do not provide as many language-learning cues to those children as do parents of children with normal hearing matched for vocabulary size (Lund & Schuele, 2014). Differences in language input behaviors may be maintained as children with language impairment get older. Rezzonico and colleagues (2014) studied mother-child
interactions in five- to seven-year-old children with primary language impairment (n =17) and peers with typically developing language matched for age (n = 17). Mothers of children with language impairment were more likely to correct their child’s utterances than were mothers of children with typically developing language, but those corrections are often corrections of speech sounds rather than vocabulary.

Evidence of transactional communication among parents and their children with language impairment provides an avenue for intervention: if parent input can change to support language development, we might expect child language to change as well. Data from studies of parent-led interventions support this idea. Allen and Marshall (2011) investigated the effects of parent-child interaction therapy on eight- to ten-year-old children with primary language impairment and found that the treatment improved verbal initiation and mean length of utterance. In a large-scale study of caregiver-implemented intervention, Roberts and Kaiser (2015) found that teaching caregivers to use language facilitation strategies significantly increases receptive language in toddlers with language impairment over the course of three months. Systematic reviews of parent-implemented speech and language therapy indicate that parent training may be an effective and efficient means of changing child language, provided parents maintain the trained behavior over time (e.g., Roberts & Kaiser, 2011; Tosh, Arnott & Scarinci, 2017).

However, studies of parent training seem to indicate a pattern: for a parent, learning a new behavior in a short-term time period is easy, but maintaining the behavior over time and generalizing that behavior to a new activity is difficult. A follow-up study of the children from the Roberts and Kaiser (2015) randomized controlled trial indicated that adults who received the caregiver training were not using as many strategies at 6- and 12-months post-intervention as they were immediately following the study (Hampton, Roberts & Kaiser, 2017). At the 12-month
follow-up mark, children in the intervention group no longer demonstrated language skills that differed from the control group. Studies using single-case design that track individual caregiver performance during intervention and maintenance intervals indicate that many adults find it difficult to maintain and generalize new behaviors once treatment has been removed (e.g., Lund, 2018; Peredo, Zelaya, & Kaiser, 2018; Roberts, Kaiser, Wolfe, Bryant, & Spidalieri, 2014). Thus, professionals need to begin to ask: how can we support caregiver maintenance and generalization of behaviors? Changing mother-child interactions to improve language outcomes for children with language delays is crucial, and research should consider how parent training can lead to sustained changes in parent behavior.

Parents, language and literacy. Along with language skills, literacy skills are affected by the child’s home interactions. A child’s home literacy environment involves the literacy activities a child is engaged in, children’s access to literacy materials, and frequency of literacy activities. Multiple studies indicate that a child’s home literacy environment impacts his or her language and literacy skills (e.g., Tambyraja et al., 2016; what others?). However, children with language impairments typically have a poorer home literacy environment than their peers (Skibbe et al. 2008). Training can teach caregivers the importance of caregiver/child interactions and how to make literacy interactions meaningful. However, if parents do not maintain the trained behaviors at home, children’s progress could slow substantially.

Dialogic reading is a method of reading to preschoolers that enriches caregiver/child reading interactions and promotes literacy skills (e.g., Whitehurst, 1999). One method of engaging in dialogic reading includes five prompts, Completion, Recall… (CROWD) prompts, to guide caregivers through joint book reading. The first prompt is the Completion prompt. The caregiver leaves out the end of a sentence and allows the child to fill in the blank. For example, a
caregiver might say “The frog jumped over the big, brown _____,” and then allow the child to finish the sentence with “log.” The second prompt is called the Recall prompt. With Recall prompts, the caregiver asks the child questions about a book that he or she has already read. The caregiver could ask, “What happened to the rainbow fish in the story?” The third prompt is the Open-ended prompt. These prompts are most often used with books that have detailed and illustrative pictures. The child uses the picture to describe what is going on at that particular point in the story. Open-ended prompts work best with pictures that the child is already familiar with. The fourth prompt is the Wh- prompt. Like Open-ended prompts, Wh-prompts are often used in accordance with pictures. The last prompt is called the distancing prompt. Distancing prompts help children relate what they read about in books to real life experiences. For example, when you are reading about playing in a park, you could ask the child “Do you remember when we played outside at recess today? Which of these games did we play?” Distancing prompts are good for working on fluency, conversational abilities, and narrative skills (Whitehurst, 2009).

All of these prompts are useful tools for caregivers to use when engaging in joint book reading with a child with language impairment. If it is clear that dialogic reading techniques would benefit children with language impairment or children who are at-risk for language impairment, research should determine how SLPs, who may teach dialogic reading, could best support maintenance and generalization of these techniques.

**Generalization and Maintenance Support Strategies**

Generalization and maintenance of behavior change has traditionally been addressed by experts studying behavior modifications (such as in Applied Behavior Analysis; e.g., Walker & Buckley, 1972). Within this literature, maintenance and generalization support strategies
emphasize reinforcing behavior change via prompting, positive reinforcement and continued feedback (Chandler, Lubeck, & Fowler, 1992). However, little information is available to guide maintenance of interactive language-supporting behaviors learned during parent training (as occurs in early intervention settings).

Other health-related fields have studied maintenance and generalization of behavior change, and provide insights about ways we can conceivably support caregivers following training. For example, the Health Action Process Approach model of medically-necessary behavior change emphasizes a need for “maintenance self-efficacy,” wherein patients may need support to believe they can use new strategies in generalized contexts (Schwarzer, 2008). Maintenance of changes in physical activity has been significantly associated with action planning, availability of behavior instruction, provision of ongoing prompts or cues, behavioral practice, and graded tasks (Howlett, Trivedi, Troop & Chater, 2018). Many of these strategies may provide opportunities for supporting parents in an early intervention context.

The objective of this study was to determine how effective three different parent generalization support strategies (annotated books, log keeping or simple book-giving) are in getting parents to maintain a trained behavior. To explore the efficacy of generalization and maintenance support, we selected three strategies for our intervention groups. The first, use of an activity log for parents, is consistent with a “graded task” support strategy (Howlett et al., 2018) because it requires parents to report regularly on their engagement in the activity over time (creating a sense of accountability). The second, provision of annotated books for parents, serves the purpose of providing behavior instruction and explicit prompts. The third, provision of a book, does not enhance or remind parents of strategy instruction, but may indicate the trainer’s confidence in “maintenance self-efficacy” for participants: the parent receives a new book for
practice (possibly providing a cue for the behavior) but does not need instruction to continue using the book.

**Method**

**Participants**

All procedures in the present study were approved by the Texas Christian University Institutional Review Board. Fifteen parent-child dyads participated in this study: thirteen mothers and two fathers and their children. Children and parents were recruited via advertisement in the Miller Speech and Hearing Clinic Classroom and the Kinderfrogs School. To be eligible for the study, parents needed to have a preschool child with a diagnosed speech or language impairment, speak fluent English, and have normal hearing as reported by parents. Child age ranged from six years, two months to three years, six months and did not differ significantly between groups. Parents were excluded from the study if they had a visual impairment or spent less than an hour with the child each day. Sixteen parents signed consent forms and filled out a demographic form to participate in the study. However, only fifteen parents participated in the study because of conflicting schedules. Participants did not receive monetary compensation for participating in the study but instead received six free books.

Parents in all groups completed three parent-child book readings (recorded via video camera) and one 20-minute training on CROWD prompts. Group characteristics and mean assessment scores are listed in Table 1. Families primarily reported race and ethnicity being white/non-hispanic. Two participants reported Hispanic ethnicity and one identified as black. The participating parent’s education level ranged from associate’s degree to doctorate degree,
and education level was evenly distributed across group (e.g., each group had a participant with an associate’s degree and each group had a participant with a doctorate degree).

Groups did not differ significantly in child diagnosis distribution. All children had diagnosed speech or language disorders. Each group consisted of children with speech-sound disorders, hearing loss, and down syndrome. Parents were also asked to fill out a home literacy survey to determine how often the parents read to their child each week before participating in the study. Parents in the annotation group reported reading to their children an average of 1.12 hours per week, 2.3 hours in the log-keeping group, and 2.2.5 hours in the book-only group. Parents reported that most children rarely or never asked questions about characters or events during story reading. Most parents reported reading to their child right before bedtime.

**Procedure**

**Reading assessment.** Parents completed all reading tasks in a well-lit, quiet room during two sessions. Parent-child dyads were asked to complete three book readings over the course of the study: one prior to CROWD prompt training, one immediately following the training, and one five weeks after the training. All book readings were video-recorded for later coding. The researcher left the room for the readings, so only the parent and child participated. Parents were given a selection of five non-fiction books about insects and asked to select one that they had not seen before. All books shared the same author, were of the same length, and had very similar pictures. Parents were instructed to read to their child for five minutes. Parents selected a different book to read in each of the three readings, and retrospective analysis of books read showed that parents read the books in different orders (i.e., not all parents read the butterfly book first).
Videos of book reading between the parent and child were coded for parent use of the CROWD prompts. Two undergraduate assistants were trained to code prompts by a) reviewing definitions of prompts, b) reviewing the detailed coding manual for rules on how to code each prompt, and c) independently coding prompts in a sample video compared to codes of the author. The author and at least one research assistant coded all videos independently. Prompt codes were mutually exclusive: that is, a parent utterance could only be coded as one type of CROWD prompt. For more detail on the coding scheme, see the manual included in Appendix A.

**CROWD prompt training.** The author and two trained assistants administrated all trainings and facilitated all book readings. The author was present for all parent training sessions. Research assistants watched videos of the author doing the CROWD prompt training before administering the training themselves. They were also asked to video record themselves giving the training to a non-participant for the author and advisor to approve.

CROWD prompt training was based on using the teach-model-coach-review model (Roberts et al., 2014). To determine whether or not the training was effective, a mother-child dyad who were not study participants were asked to complete all three book readings and the training. The mother met the criteria for mastery during the post-test book reading.

CROWD prompt training lasted for approximately 20 minutes and was administered immediately following the first recorded parent-child book reading. First, the administrator explained to parents why using CROWD prompts was important and some of the benefits in using them during parent-child book reading. For each prompt, the administrator would name the prompt, explain how to use it, provide an example for the parent, and then ask the parent to practice the prompt in a book. After the administrator finished discussing all of the prompts, she asked the parent to repeat back all five of the prompts to ensure he or she fully understood the
prompts. If the parent did not have any questions about the prompts, the training session concluded. Finally, parents were asked to read another unfamiliar book with their child and to implement the prompts they had just learned.

**Generalization and maintenance support strategy.** Following CROWD prompt training and the second book reading, each dyad was assigned to one of three groups: a book-only group, an annotated book group, and a log group. All three groups received a different book of the same reading level each week. For the book-only group, this is all they received each week. The annotated book group received the same books as the book-only group, but their books had sample prompts in them. These prompts were meant to cue the parent to use CROWD prompts while reading with their child. The log group received log sheets in addition to their books. Parents were asked to write down how many times they had used each CROWD prompt that week. The log group books did not have prompts in them.

**Reliability.** A research assistant watched all of the pre-test, post-test, and post-post-test videos and re-coded participant responses. Reliability remained above 85% for all prompts in case-by-case comparisons.

**Statistical Analysis.** A repeated measures analysis of variance was planned to compare parent performance over time.

**Results**

The purpose of this study was to determine how effective providing an annotated book or log would be in getting parents to maintain and generalize a trained behavior.

Number of total prompts used and number of different types of prompts used were compared between groups using a repeated measures analysis of variance. For the number of CROWD strategies used during reading, a main effect of time was found ($F (2, 12) = 33.94$, $p$
< .001) but there was not a significant main effect of group, likely as a result of low sample size in this preliminary study \( F (2, 12) = 1.42 \ p = .279 \). See Figure 1 for results. From pre-test to immediate post-test, parents in the annotated book group increased prompt use by 11.65 \( (SD = 5.94) \), parents in the log group increased prompt use by 9.75 \( (SD = .83) \), and parents in the book only group increased by 11.4 prompts \( (SD = 4.14) \). At five weeks post training, the annotation group was using 14.6 prompts \( (SD = 2.88) \), the log group was using 9.8 prompts \( (SD = 7.39) \), and the book-only group was using 15 prompts \( (SD = 4.74) \) on average. The effect size difference between parents in the book-only group (who had the best maintenance rate of the three groups) and the log group (who had the lowest maintenance rate of the three groups) was large \( (d = .95) \). At the last time point, the annotated book group was also using more CROWD prompts than the log group \( (d = .93) \).

For the number of different CROWD strategies used over time across groups, an analysis of variance was also calculated. Again, there was a main effect of time \( F (2, 12) = 28.06 \ p < .001 \) but not of group \( F (2, 12) = .076 \ p = .93 \). See Figure 2 for results. From pre-test to immediate post-test, parents in the annotated book group increased variety of prompts used by 2.25 \( (SD = .71) \), parents in the log group increased prompt use by 2.5 \( (SD = .44) \), and parents in the book only group increased by 2.8 prompts \( (SD = .44) \). At five weeks post training, the annotation group was using 4 different prompts \( (SD = .71) \), the log group was using 2.8 different prompts \( (SD = 1.3) \), and the book-only group was using 3.6 different prompts \( (SD = .54) \) on average. Effect size differences between change from time point two to time point three for parents in the book only and annotated book group as compared to the log group were large \( (d = 2.94 \ and \ d = 1.38 \ respectively) \). Thus, if this study were continued with larger sample sizes, it is anticipated that between-group differences would become significant.
Discussion

The purpose of this study was to explore how parent-support strategies affect parents’ abilities to generalize and maintain a skill learned in a parent training context following a five-week interval. The three strategies explored included giving parents annotated books once a week, asking parents to keep and return a reading log weekly or simple weekly book-giving. The parents in the annotated book and book-only group outperformed the log group relative to generalization and maintenance of dialogic reading.

The parents asked to keep a log were participating in a generalization/maintenance activity that mirrored a “graded activity” (Howlett, Trivedi, Troop & Chater, 2018). Although the researchers did not directly evaluate or give a grade to parents on their reading week to week, parent log keeping was a way for researchers to “check in” on parents’ progress with the strategies. The implication of log keeping here was that the researchers wanted to rate whether or not parents committed to continued reading with their children using the dialogic reading strategies. This strategy proved the least effective for generalization and maintenance, despite the fact that the log group learned as many prompts as the other groups (and used them at the same rate immediately following training). A relevant question then, is to ask why the log group decreased more than the other groups? It is possible, in the spirit of a “graded task,” that the logs acted as a sort of homework assignment for parents. Adding extra work for parents of children with communication disorders may act as a counter-motivation for parents. Another study of homework assigned during a behavioral parent training (Danko, Brown, Van Schoik, & Budd, 2016) found that parents completed, on average, less than half of the homework they were assigned. Parents may have been overwhelmed with having to keep a log, so they may have given up on the trained behavior altogether. This is also consistent with other studies that report
parent “homework” completion tends to decrease over time (e.g., Hogstrom, Enebrink, Melin & Ghaderi, 2015). Unfortunately, “homework assignments” are a very common form of home practice speech pathologists give their parents (Sims, 2015).

Those parents who only received a book, or who received an annotated book (but did not have to “check in” with the researchers) had the best performance at the five-week follow up. These conditions were consistent with cueing strategies for behavior maintenance and generalization (e.g., Howlett, Trivedi, Troop & Chater, 2018). Why did providing a book increase a parents’ use of the CROWD strategies? The researchers’ initial hypothesis was that the book-only group would perform poorly on the generalization/maintenance tasks because this group was not provided any support or accountability. The results were contrary to this hypothesis. Although the condition was initially designed as a control condition (wherein contact between researchers and parents was maintained, but no informational support provided), it is possible that giving the parent a book each week served as enough of a reminder to use the prompts. The book-only group condition may have also communicated the researchers’ confidence in parents’ abilities to use the new prompts without other support (thus communicating “maintenance self-efficacy;” Schqarzer, 2008). A new book may have also been reinforcing for both the parent and the child.

Although parents in the annotated book group outperformed the log group relative to number and diversity of prompts used after five weeks, this group did perform (numerically) lower than the book-only group. Another question arises: did giving parents annotations limit their ability to generate their own prompts? It is possible that parents relied too heavily on the notes in the books and struggled to come up with new prompts. Further analysis could be done to
determine whether or not the annotations affected the parents’ ability to come up with their own prompts.

A very positive result from this study is that parents in each group learned dialogic reading behaviors quickly (after a maximum of 20 minutes of training). Anecdotally, parents reported liking the change to their reading: one parent commented, “My girls love the way I read to them now, thanks!” Even following five weeks, all parents were using more dialogic reading prompts than when they began the study. Because dialogic reading is a way to promote language development in children at-risk for persistent communication disorders, this finding is encouraging: dialogic reading may be an “easy skill” to teach to parents to make differences in their interactions with their children (Whitehurst, 2009).

Changes in parent-child interaction can have effects on child linguistic outcomes (e.g., Roberts & Kaiser, 2015). If parents of children with communication disorders tend to provide different quality input to children than do parents of children who are developing typical language (Rezzonico et al., 2014; Lund & Schuele, 2015), training parents to use new linguistic behaviors is a great therapy goal. Ultimately, the present study indicates that parents can be trained to change their typical linguistic input, at least in the context of book reading.

However, studies of parent training are consistent with the results of this study: the majority of parents did not use as many strategies five weeks post-training as immediately following training. Studies of long-term generalization and maintenance (e.g., Hampton, Roberts & Kaiser, 2017; Lund, 2018; Peredo, Zelaya, & Kaiser, 2018; Roberts, Kaiser, Wolfe, Bryant, & Spidalieri, 2014) emphasize a need for more exploration of ways to support parents to permanently alter behavior patterns. It is possible that different supports are needed for different types of behaviors: for example, behavior was maintained and generalized in this study more so
than in the Lund, 2018 study. Within this study, the trained behavior was dialogic reading, which is a concrete behavior to be used during a specified time (parent-child storybook reading). Within the Lund (2018) study, the trained behaviors included linguistic behaviors that could be used any time throughout the day (e.g., linguistic mapping). It is possible that the results of the present study would not be as robust for a skill that is hard to learn (e.g., linguistic mapping) – in this case, thinking about support strategies for generalization and maintenance is crucial.

Finally, the results of this study have an additional clinical implication: twenty minutes of training produced significant change in parent behavior. Although encouraging, this finding may indicate that clinicians need to “check in” with parents many weeks after teaching a new skill. If parents can learn to change their behaviors immediately after training (consistent with other training studies; e.g., Peredo, Zelaya, & Kaiser, 2018), clinicians may be tempted to stop checking in on, or teaching that particular skill. Professionals need to be mindful that even though parents might show immediate retention of new behaviors, their implementation can change over time.

Limitations

Limitations of the present study provide avenues for future direction. Since there were so few participants, it is difficult to get a population-generalizable sense of the impact the support strategies had. For future, we would like to increase the number of participants. Another limitation is the time frame of the study. Parents were only observed for five weeks and may need to be observed longer to determine if parents really generalized and maintained the trained behavior. Most children in the study were not responsive to the new reading strategies (it is unclear if this was just during the video recorded book readings or at home as well) which could affect parents’ continued use of the strategies over a longer period of time. A lack of response or
even a negative reaction from the child would not be reinforcing for the parent. A possible avenue for future direction is observing changes in parents over six months instead of five weeks. Finally, it is possible that the results of this study are not reflective of the possible outcomes for all parents. All participants in this study were recruited from either the Miller Speech and Hearing Clinic or the Kinderfrogs School. These parents are often very involved and are therefore more likely to practice the tasks asked of them. It is possible that recruiting participants from a wider range of backgrounds could produce different results. Therefore, to get a more accurate picture of the support strategies’ effectiveness, we would also like to recruit parents from more diverse backgrounds.

This study provides preliminary evidence that short-term training can increase parents’ dialogic reading behaviors. However, some support strategies, such as giving parents annotated books or even un-annotated books, promote generalization and maintenance better than others (e.g., giving parents a log to maintain). Future research and professionals should work to support parents in their generalization and maintenance of behaviors, not only in new behavior acquisition.
References


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<tr>
<th>Group</th>
<th>Age</th>
<th>Diagnosis</th>
<th>Average Hours Reading</th>
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| Annotatio n   | 4;7  | Speech Sound Disorder: 3
                      Hearing Loss: 1
                      Down syndrome: 1 | 1.12                  |
| (n = 5)        |      |                                          |                       |
| Log           | 4;8  | Speech Sound Disorder: 3
                      Hearing Loss: 1
                      Down syndrome: 1 | 2.3                   |
| (n = 5)        |      |                                          |                       |
| Book-only     | 5;1  | Speech Sound Disorder: 2
                      Hearing Loss: 1
                      Down syndrome: 2 | 2.25                  |
| (n = 5)        |      |                                          |                       |
Figure 1. Number of dialogic reading prompts used based on generalization strategy group

Main effect of Time: $F(2, 12) = 33.94 \, p < .001$

No Main effect of Group: $F(2, 12) = 1.42 \, p = .279$
Figure 2. Different types of dialogic reading prompts used based on generalization strategy group

Main effect of Time: $F(2, 12) = 28.06 \ p < .001$
No Main effect of Group: $F(2, 12) = .076 \ p = .927$
Appendix A

Criteria for Mastery:

1. Caregiver must use at least two new types of CROWD prompts not used in pre-test.
2. Caregiver must use at least five more total prompts than used in the pre-test (ex: if a parent uses 3 prompts in pre-test, must use 8 prompts in post-test to prove mastery).

Example of Mastery:
- Pre-test: C (2); W (2) = total of 4
- Post-test: C (1); R (3); O (3); D (2); = total of 9 (new prompts used: Recall, Open-ended, and Distancing)
- ****Even though the caregiver did not use the W prompt in the post-test, he/she still meets the criteria for mastery because he/she used at least two new prompts.

Example of someone who does NOT meet the criteria for mastery:
- Pre-test: C (2); W (2) = total of 4
- Post-test: C (3); W (4); D (2) = total of 9 (PROBLEM: only 1 new prompt used).

Example 2 of NOT meeting criteria for mastery:
- Pre-test: C (2); W (2) = total of 4
- Post-test: C (2); R (2); W (2); D (1) = total of 7 (PROBLEM: not enough total prompts used).

Rules for counting prompts:

1. Do not count repetitions (ex: Caregiver says, “What is that?” Child doesn’t respond, Caregiver repeats “What is that?” – You would count 1 Wh-prompt).
2. Prompts repeated at different times in the book can be counted (ex: PAGE 1 Caregiver says, “What is that?” PAGE 6 Caregiver repeats “What is that?” – You would count 2 Wh-prompts).
3. Count prompts even if the child doesn’t respond.
4. Do not count a single prompt as more than one type of prompt (ex: Do not count “What happened to the fish in the story?” as a Wh- and a Recall prompt. Guidelines for how to count prompts like this are listed below).
5. Only count parent-generated questions (there are some questions written into the book, don’t count these!)
6. Count all home-related questions (closed- and open-ended) and statements as distancing prompts.
7. Double questions (two questions asked consecutively without waiting for the child to respond) should be counted as two prompts.

Rules for counting specific prompts:

1. Completion: Caregiver uses a “fill-in-the-blank” type format (Ex: Parent: I kick the ____; Child: Ball!)}
2. **Recall:** Caregiver asks the child a question about something that has already happened in the story
   a. Recall takes priority over Wh- and Open-ended.
      i. Questions like “What happened to the fish in the story?” are counted as Recall because even though this is also a Wh- and open-ended question, Recall takes priority these two prompts.

3. **Open-ended:** Essentially just any open-ended question
   a. Open-ended takes priority over Wh-.
      i. Prompts like “Tell me what’s going on in this picture.” are counted as Open-ended because even though this is also a Wh- prompt, Open-ended takes priority.

4. **Wh-:** Caregiver asks any Wh- question (who, what, when, where, why, how)
   a. Exception: if the question qualifies as a recall or open-ended prompt

5. **Distancing:** Caregiver asks the child to relate the pictures or words in the book to experiences they’ve has outside of the book
   a. Distancing takes priority over open-ended
   b. Ex: Do you remember when we went to the park? Can you tell me about it?