



LENA Measurements of Parent Outcomes in Language Facilitation During Storybook Reading with Preschool Children who are DHH

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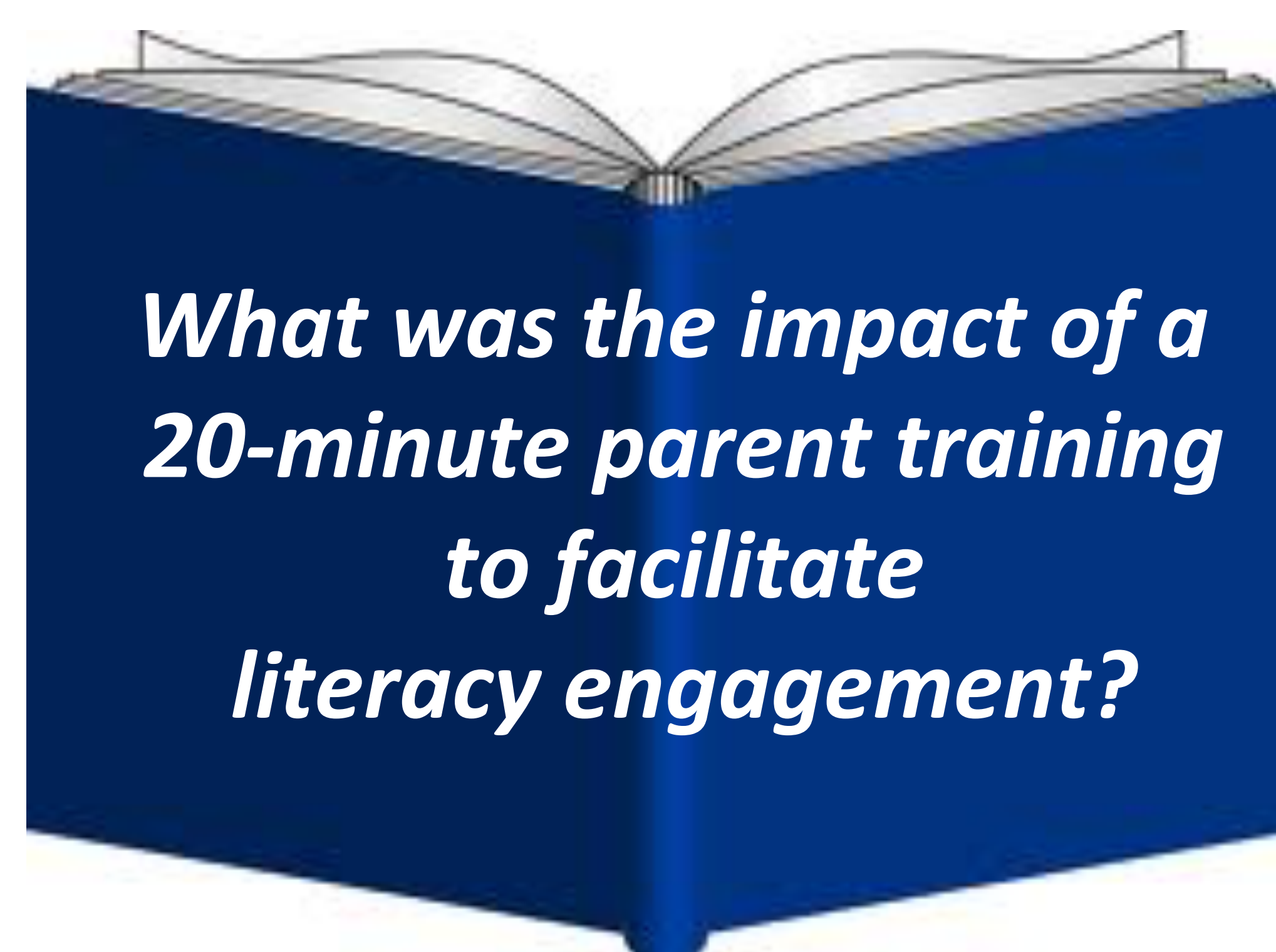
Introduction

Age-appropriate foundations for literacy development are universally regarded as priorities in early childhood special education. Children who are deaf or hard of hearing are at risk for language and literacy delays. Parent-child storybook reading provides opportunities for enriched language and reading comprehension interactions and promotes literacy development within the natural home routine.

Many parents read with their children and enjoy the shared storybook engagement that comes with a nightly reading ritual. However, many parents are unsure about how to utilize effective reading strategies to maximize literacy growth in their preschool children who are DHH. This study explored the impact on effective strategies during storybook reading when parents engaged in a 20-minute training session.

Driving Principles

- Children who are DHH benefit from substantive and meaningful exposure to language and literacy activities to promote expressive and receptive language development and literacy foundations.
- Reading time at home should not become a 'therapy session' or place stressful requirements on the child.
- Questions posed during storybook reading should empower the child to think creatively and feel confident that there are no wrong answers when exploring storybook possibilities.
- Parents can have a powerful impact on early literacy experiences during shared reading opportunities in the home.



Study Description

Single-subject design

Participants: 4 families

Activity: Parent-child storybook reading - 15 minute segments

Data collected using Language Environment Analysis (LENA)

All sessions transcribed

Materials

LENA recording unit



Parents provided with five children's books to use during the study period and then keep as a token of appreciation for study participation

- *Pancakes for Breakfast* by Tomie dePaola
- *Good Night Gorilla* by Peggy Rathmann
- *The Umbrella* by Jan Brett
- *Lion and the Mouse* by Jerry Pinkney
- *A Ball for Daisy* by Chris Raschka



Encouraging child engagement during storybook reading can empower the child to explore literacy possibilities and increase opportunities for critical thinking and expanded language

Procedures

Baseline

- Parents trained in using the LENA recording unit
- Parent-child storybook reading was recorded to obtain typical literacy interactions.
- No training or specific study information was provided.

Intervention

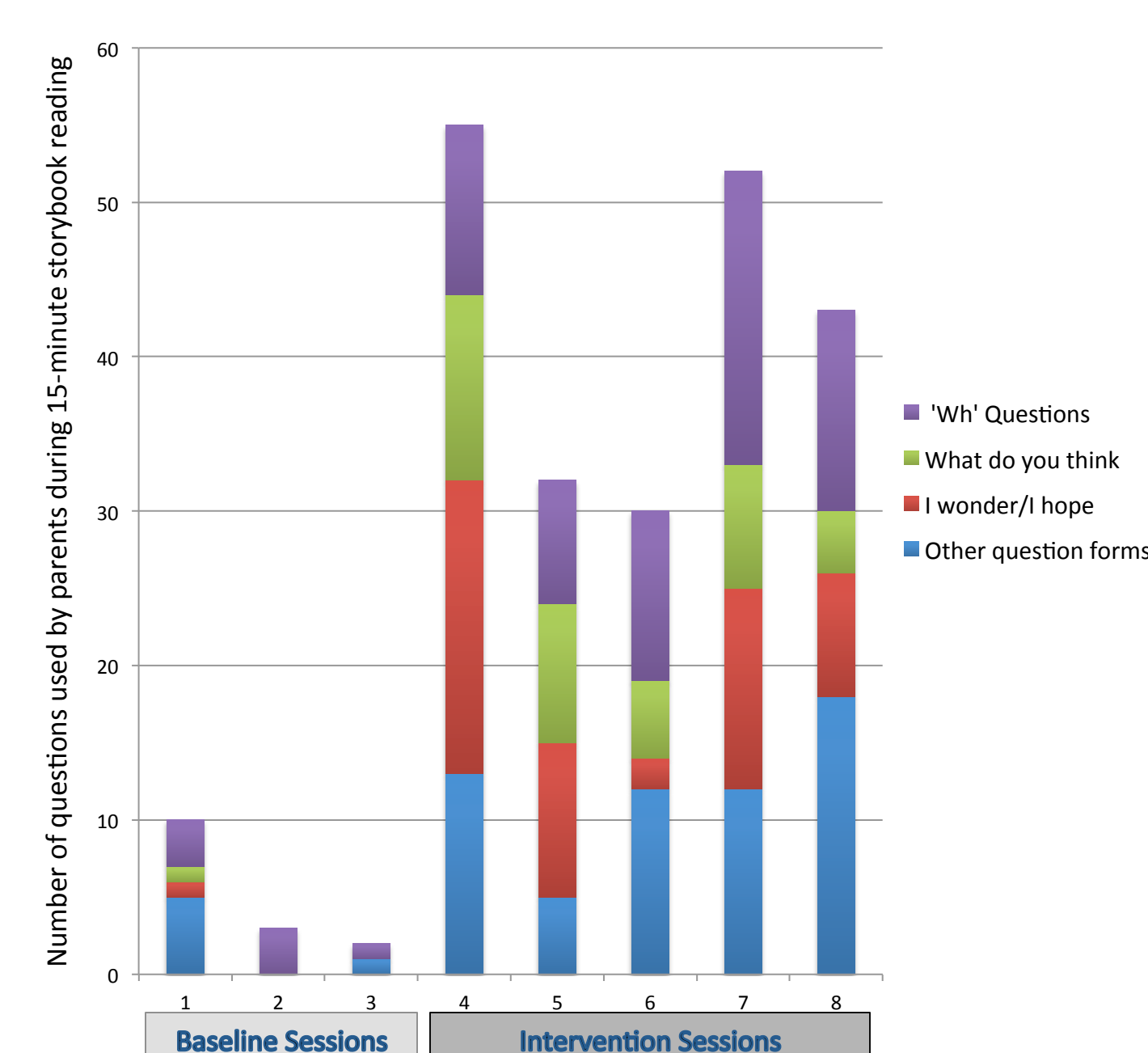
Parents participated in a 20-minute training to discuss effective strategies for:

- Prompting comprehension questions
 - 'Wh' questions
 - Critical thinking (e.g., I wonder . . . I think . . . I hope . . .)
 - "What do you think . . ."
 - Other question forms (e.g., How many . . . Does he . . .)
- Identifying opportunities to emphasize phonemic awareness
- Utilizing effective wait time
- Encouraging increased child response in parent-child utterance ratio

Parents also received a copy of *Put Reading First: A Parent Guide* by National Institute for Literacy to reinforce early literacy priorities

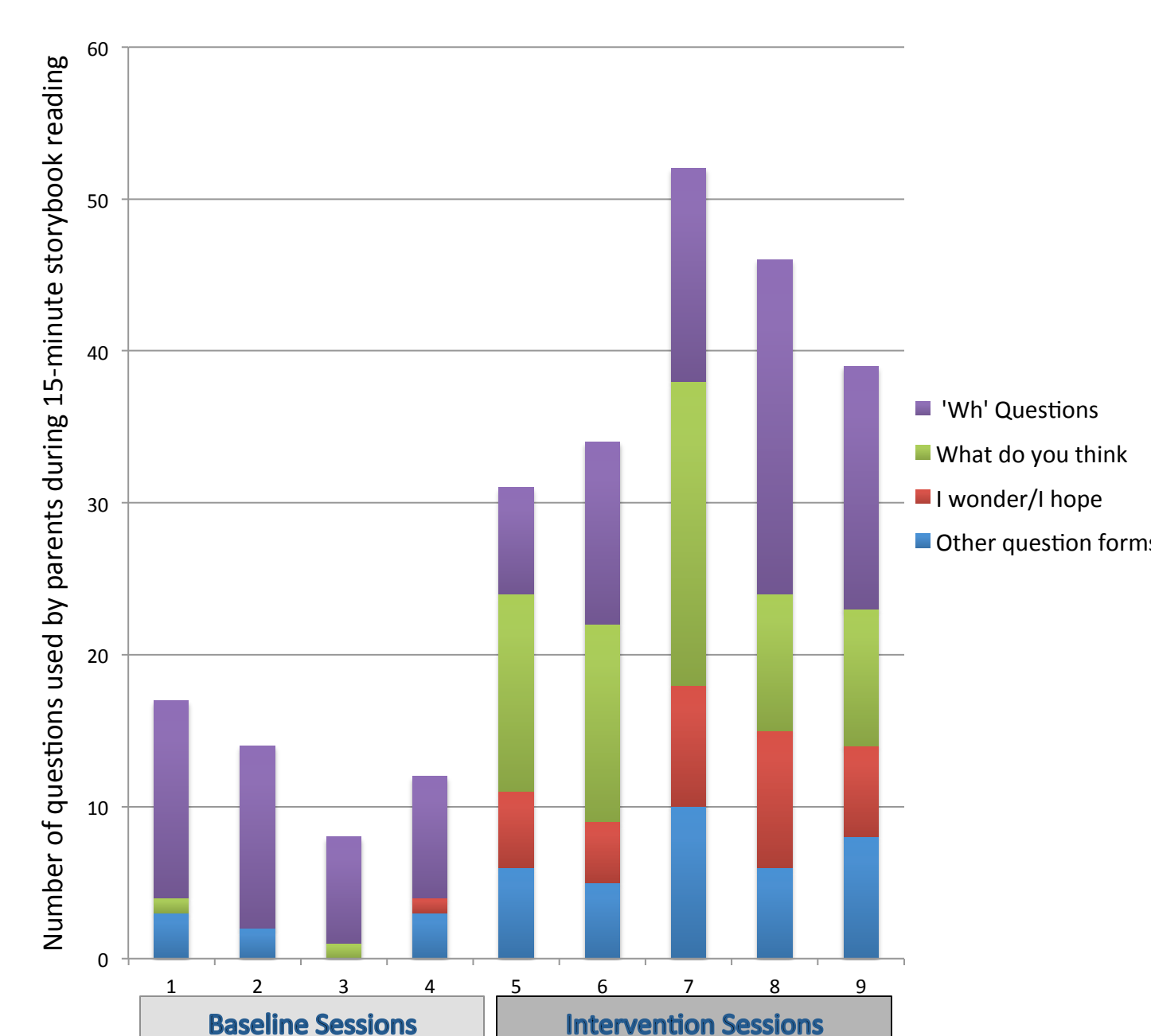
Parent Feedback

	Was the training information helpful to you? If so, please describe the information that was most beneficial.	Do you believe that using the strategies was beneficial to your child? If so, please provide an example of your child's response to the storybook reading.	Were there any strategies that were unclear or that more support would have been helpful to have more support?	Please let us know if you have any additional feedback or comments. (Thank you again for your participation!)
Family #1	Yes- I really loved the idea of asking I wish, I feel, I hope and I wonder and so did he! It was so fun making up songs and it is always a great reminder to wait, wait! (so hard!)	Yes- it gave both my children a sense of control over the story. It really helped keeping him stay engaged longer!	I personally like to look through a book before I read/ talk about the book with my kids. I tried to wing it with the wordless books, lets just say the results were silly!	(Thank you so much for the awesome books and for letting us be apart of the study!)
Family #2	Yes- it was a good reminder. I think you get in a routine on teaching sounds and recognition of letters that you forget to make it fun and a bonding experience.	Yes- he seems to want to know what will happen next. He is asking more questions about the story itself, and seems to be more interested in reading.	No	(No Response)
Family #3	Yes- it was helpful. You gave me some better ideas to implement that allowed my child and I to imagine and talk about so much more than just the story that the author implied.	Yes- when she wanted to participate, she added a lot of "extra" language and fun to the books. Also with the picture books that had no words she opened up quicker with an imagined story. But with the word books she still expects me to "tell" her the story or read the book.	No	My older children also enjoyed the non word books. They got some pretty good storytelling going with each other!



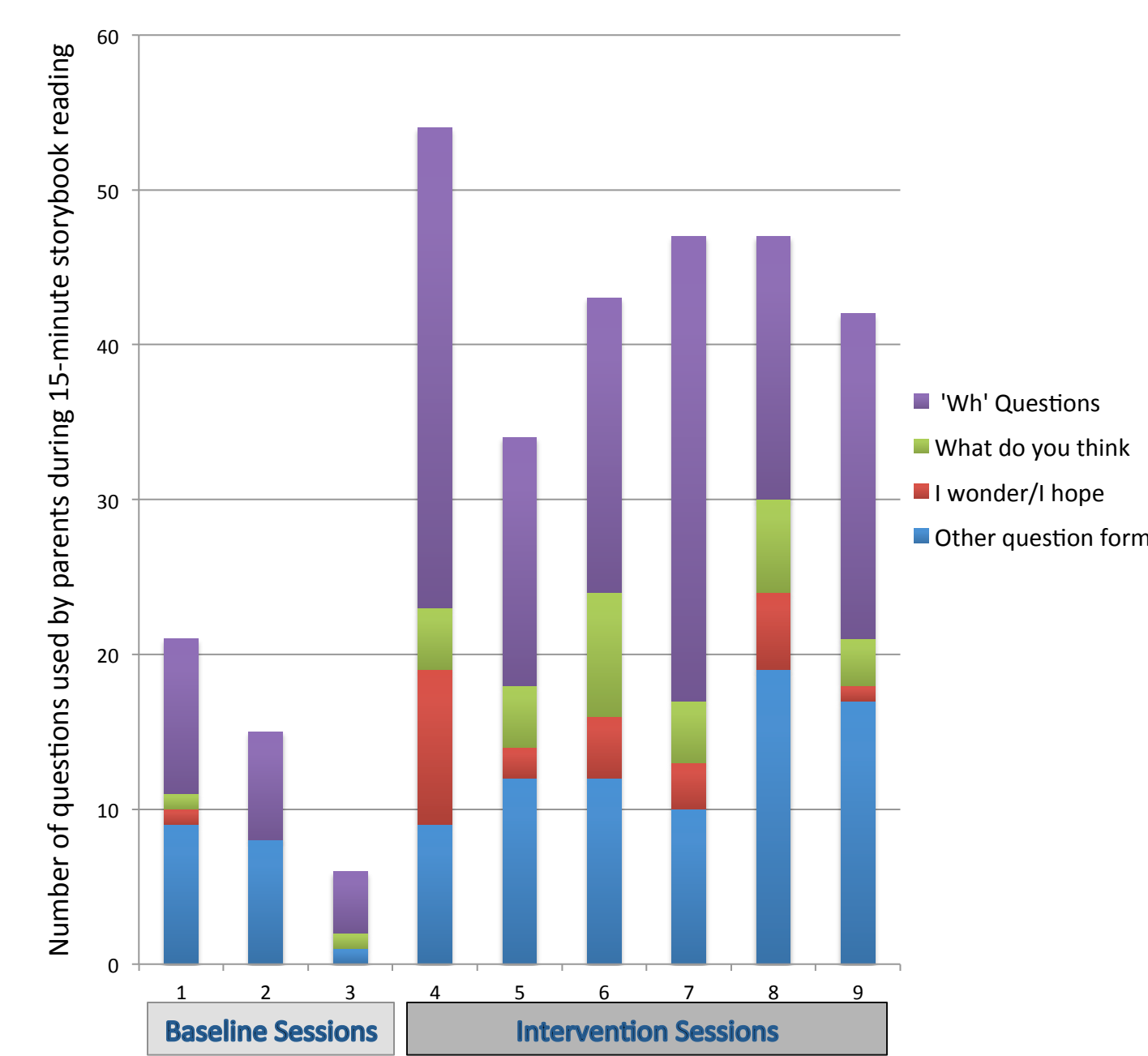
Family 1

- Substantial increase in child engagement from baseline to intervention
 - Average 5 questions/session at baseline
 - Average 42 questions/session at intervention
- Intervention sessions included:
 - Sabotage ("he took the keys to climb the trees? . . . Oh, you're right, he took the keys to open the gate")
 - Expansion (child: "the dress"; parent: "yes, a pink dress with a clean, white apron").



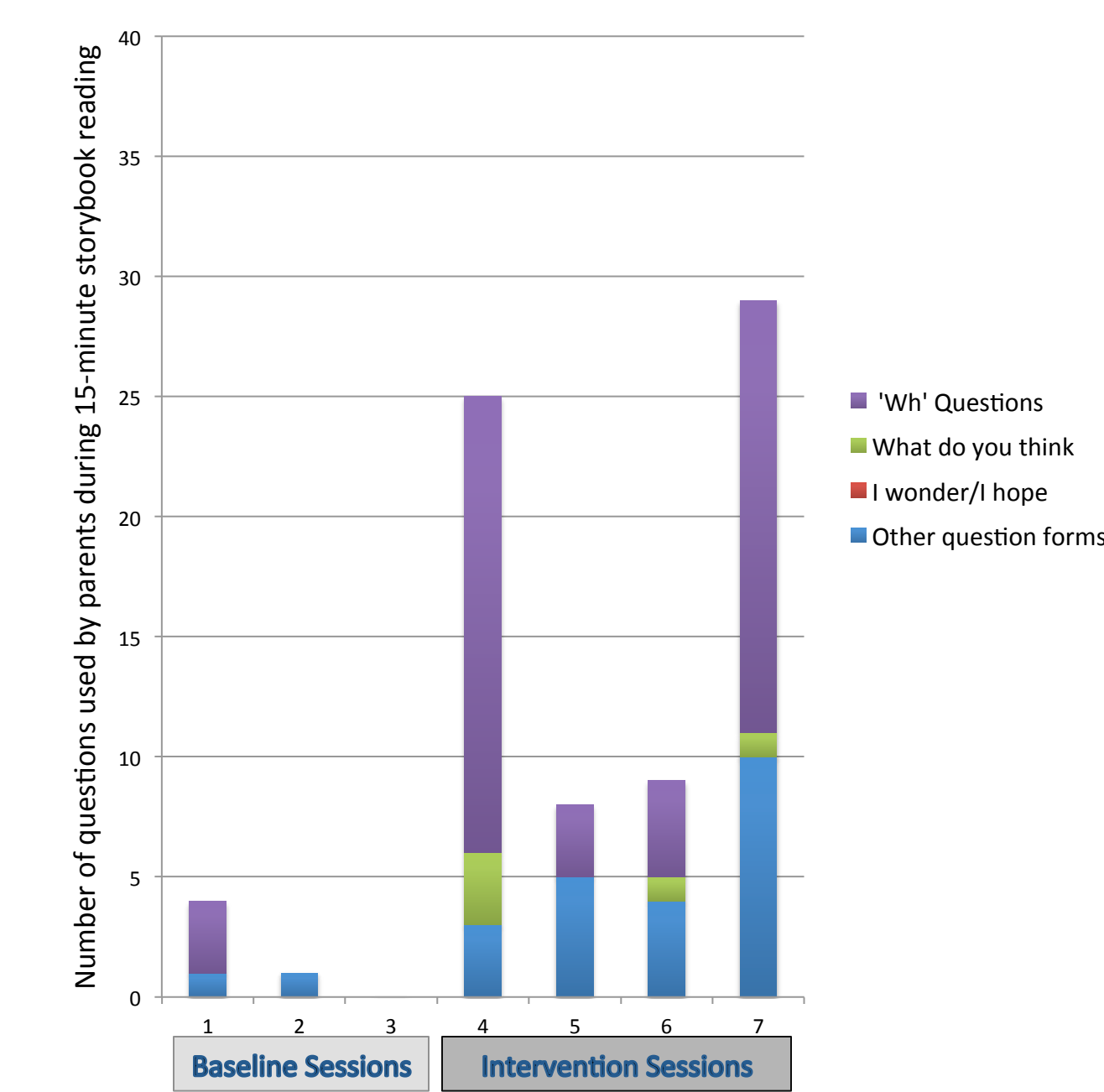
Family 2

- Primarily used 'wh' questions at baseline
- Substantial increase in asking child "what do you think?" at intervention, resulting in greater child engagement in the story
 - Average 13 questions/session at baseline
 - Average 40 questions/session at intervention
- Began using phonemic awareness prompts at intervention



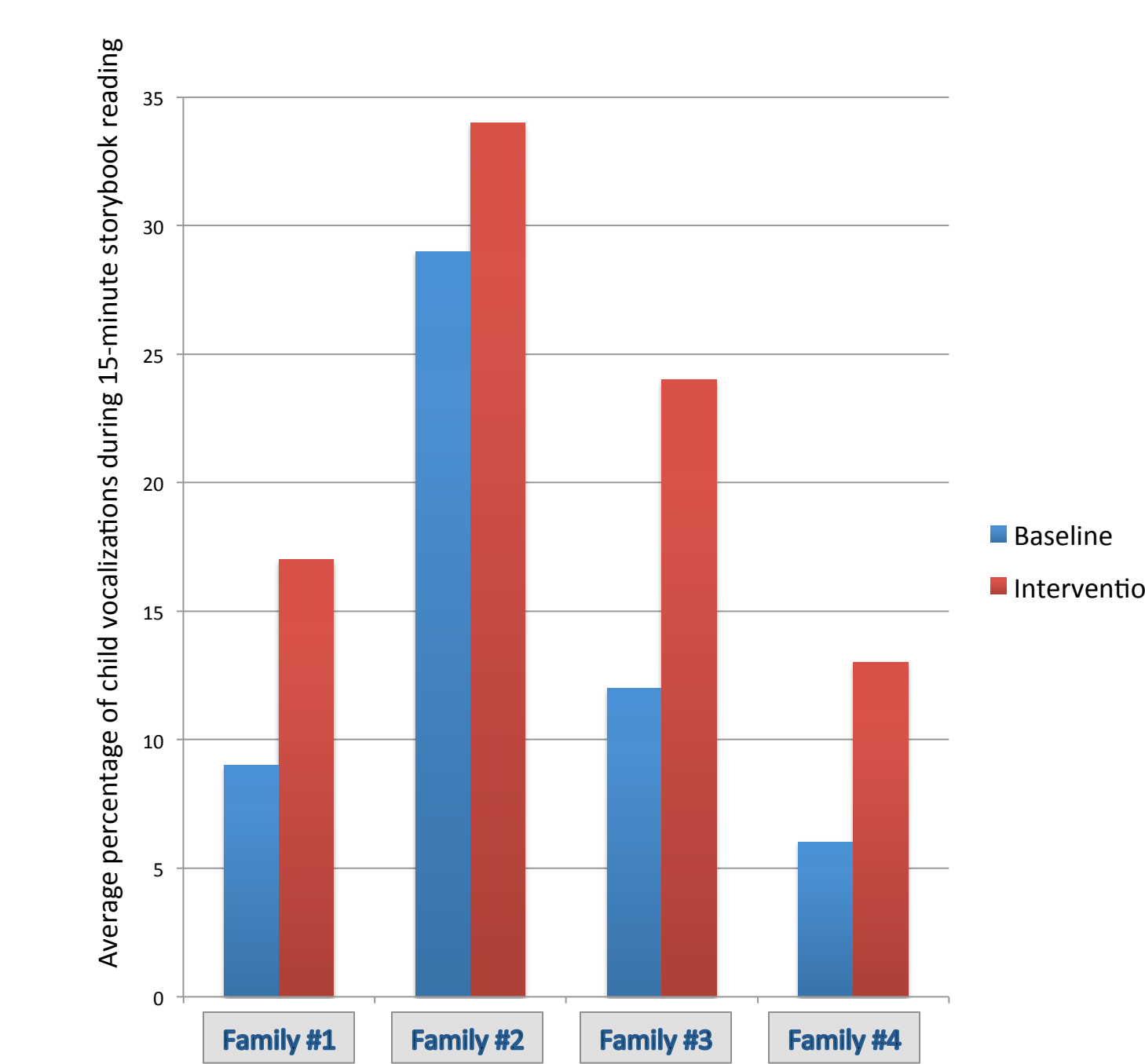
Family 3

- Parent-child interaction at intervention was much more playful than interaction seen at baseline
- Increased use of conversational prompts
 - Average 14 questions/session at baseline
 - Average 44 questions/session at intervention



Family 4

- Very little child engagement during storybook reading at baseline
 - Average of 1.5 questions/session at baseline
 - Average of 18 questions/session at intervention
- Parent included singing during storybook reading at intervention
- Increased emphasis on phonemic awareness



Percent Increase in Child Vocalizations

- All four families showed an increase in the number of child words spoken during the 15-minute story book reading period from baseline to intervention.