

Effects of Parent-Mediated Joint Book Reading on the Early Language Development of Toddlers and Preschoolers

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The effects of a number of shared reading characteristics on the oral (expressive) and comprehension (receptive) language development of young children were examined in 21 studies. The 21 studies included 1,275 toddlers and young children 12 to 42 months of age. Eleven characteristics commonly found in descriptions of joint, shared, or dialogic book reading episodes were identified and coded in each of the 21 studies. The expressive language outcome measures included spontaneous verbalizations, MLU, verbal production, and expressive vocabulary. The receptive language outcome measures included receptive vocabulary, receptive language, and language comprehension. Results showed that 9 of the 11 shared reading characteristics had medium effects on children's total expressive and receptive language scores. The most effective characteristics encouraged children's engagement and active participation in shared reading episodes. Implications for practice are described.

Most children become interested in books early in life. Their early interests tend to focus on exploration of the textures and pictures in a book (Pierrousakos & DeLoache, 2003). Many young children are encouraged to explore books by an adult, and these early experiences often lead to interactions between an adult and child that become a joint reading activity (Karras & Braungart-Ricker, 2005). This synthesis examines research on the characteristics of shared book reading activities between adults and young children 12 to 42 months of age. Identification of which characteristics matter most is important because shared book reading experiences have been found to influence later acquisition of language and literacy skills (e.g., Bus, van IJzendoorn, & Pellegrini, 1995; Scarborough & Dobrich, 1994; Sénéchal & LeFevre, 2001).

Whitehurst et al. (1988), Justice and Kaderavck (2002) as well as others (e.g., Bus, Belsky, Van IJzendoorn, & Crnic, 1997), have proposed characteristics of reading experiences which are considered important for promoting oral and comprehension language development in young children. Table 1 includes the definitions of 11 characteristics of reading experiences which are frequently mentioned as important, and which were the focus of analysis in this synthesis. The characteristics include adult behaviors used during a reading

episode such as commenting on the story, imitating what the child says, praising what the child says, asking open-ended questions, etc.

This research synthesis has two purposes. The first is to examine the characteristics of books and book reading experiences that contribute to young children's language development. The second is to examine the variables that might moderate the effects of the shared book reading experience.

This synthesis was conducted using a characteristics and consequences framework (Dunst, Trivette, & Cutspec, 2007)

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for *unbundling* (Lipsey, 1993) and *unpacking* and *disentangling* (Dunst & Trivette, 2009) which characteristics under which conditions are related to the largest sizes of effect for increases in child language outcomes. This type of practice-based research synthesis goes beyond assessing either efficacy or effectiveness (Flay et al., 2005) to identifying the active ingredients of an intervention or practice that are associated with observed or measured effects.

SEARCH STRATEGY

Studies were identified using *infant, toddler, or preschooler AND book reading OR shared reading OR shared book reading OR sharing book reading OR joint reading OR joint book reading OR dialogic book reading OR dialogic reading OR storybook reading* as search terms. Psychological Abstract (PsycInfo), Education Resource Information Center (ERIC), MEDLINE, and Academic Search Premier were searched for studies. The searches were supplemented by a Google Scholar search and a search of an extensive Endnote Library maintained by the Puckett Institute. We also conducted Social Science Citation Index author (e.g., G. Whitehurst, C. Lonigan) searches to locate additional studies. Hand searches were conducted of the reference sections of all studies and other relevant sources to be sure no studies were missed.

Studies were included if they investigated one or more of the characteristics of book reading or book exploration that involved children 12 to 37 months old. Studies were included that presented correlations between the shared reading characteristics and either oral (expressive) or comprehension (receptive) language outcomes. Studies were excluded if the characteristics of the book reading experience were not the focus of analysis or insufficient information was provided to code characteristics that were associated with the outcomes. Too few studies were located that included other than oral and comprehension outcomes to be included in this synthesis.

SEARCH RESULTS

Twenty-one studies were located in 17 reports. Table 2 includes selected characteristics of the study participants. The 21 studies included more than 1,275 participants. The majority of children were between 14 and 37 months of age. Fifty-three percent of the participants were male. Thirteen studies were conducted with typically developing children. All but four of the studies indicated that the child's mother was the adult interacting with the child. The average number of years of formal education for the mothers was 14.

Table 3 shows the characteristics of the studies that constituted the focus of analysis and the characteristics of the book reading session. Six of the studies were experimental studies, five of which focused on training adults to use spe-

cific types of book reading interactions. Of the seven non-experimental studies that were post-test only studies, only one involved training the adults in how to read a book to a child (Huebner, 2000a). There were three longitudinal studies and one pre-test/post-test study. The length of time spent in a reading session ranged from 5 to 15 minutes.

Tables 4 and 5 show which of the 11 characteristics constituting the focus of analysis were evaluated in individual studies. Three of the 21 studies (DeBaryshe, 1995; Laakso, Poikkeus, Eklund, & Lyytinen, 2004; Lyytinen, Laakso, & Poikkeus, 1998) examined only one characteristic. The reading characteristic used most frequently was the use of open-ended questions (17 out of 21 studies) followed by positive feedback (12 of the 21 studies).

Table 6 shows the outcomes measures that were used in each study and the effect sizes for characteristics included in each study. The effect size used to assess the association between the characteristics and the outcomes in the studies was a weighted average correlation (Rosenthal, 1994) and the 95% confidence interval of the correlation. A confidence interval not including zero indicates that the average effect size statistically differs from zero at the .05 level (Hedges, 1994).

A variety of measures (standardized test, parent report, and observation rating systems) were used to assess child oral (expressive) or comprehension (receptive) language outcomes. The most commonly used measures were the: *Peabody Picture Vocabulary Test* (Dunn & Dunn, 1997), *Illinois Test of Psycholinguistic Abilities* (Kirk, McCarthy, & Kirk, 1968), *MacArthur Communicative Development Inventory* (Fenson et al., 1993), and *Expressive One-Word Picture Vocabulary Test* (Gardner, 1990). Five studies coded children's outcomes from video recorded sessions. Three outcome measures were the focus of analysis: Total language scores (expressive and receptive combined), expressive (oral) language scores, and receptive (comprehension) language scores.

SYNTHESIS FINDINGS

The effects of the characteristics of the reading interaction on the language outcomes are shown on Table 7.

Total Language Scores

The first six characteristics of the book reading experiences on Table 7 have a medium effect on the overall language development of young children. Relating the book's contents to a child's own experiences and positive parent feedback during the reading episode were most strongly related to the total language scores, followed by the use of expansions, following the child's interests, and asking open-ended questions. All of the other characteristics except attention getting were also related to the total language scores. The effect sizes were all statistically significant and small to medium.

Expressive Language Scores

The pattern of relationships between the reading characteristics and expressive language outcomes were similar to the pattern described above with the exception of one characteristic. Following up a child's comments with a question had a stronger effect on the expressive language score than on the total language score (.43 vs. .27).

Receptive Language Scores

For receptive language outcomes, the number of effect sizes available for analysis was much smaller than for expressive language development. The effects of three characteristics—the use of positive feedback, commenting, and correction—had small to medium effect sizes of .25, .33, and .33 respectively, on receptive language outcomes. Although these three average effect sizes were statistically significant, the lower bounds of the other six effect sizes include zero so that caution is warranted in terms of making too much out of the results for receptive language.

Moderators

Table 8 shows the findings for the moderators of the effectiveness of the reading experiences. The examination of these findings reveals that the average effect size between the characteristics and outcomes were statistically significant regardless of the moderators as indicated by the fact that none of the lower bounds of the confidence intervals included zero. Close inspection of the average effects show that certain moderators are particularly important. The major findings from these analyses are that the longer the reading session, the use of novel books, and the more books that were read with a child, the larger the effect sizes. The effects for type of training suggest that it takes only a minimal amount of training (less than an hour) for adults to learn shared reading skills that affect children's language development and that the type of training (individual, group, or video) does not appear to differently influence the language outcomes. Additionally, mother's age does not moderate these results.

DISCUSSION

Findings showed that early expressive language development was facilitated by joint reading strategies that engaged, supported, and promoted children's active participation in the book reading opportunities. Relating the story to the child's own experiences, providing positive feedback to a child during book reading, expanding on a child's comments, asking the child open-ended questions, and following the child's interests while interacting with books all encouraged a child's participation in the shared reading activities. The longer a child stayed engaged in the book reading episode, and the more an adult encouraged the child's active participation by expanding on what a child says or by asking open-ended questions, the greater the effect the reading experience

had on the child's language development.

The results suggest that the shared book reading techniques that proved most important are rather easy to teach to parents and can be taught using either face-to-face individual and group trainings; as well as individual training with video tapes. When using shared book reading strategies with young children, the effects are enhanced when the episodes last more than 5 minutes and more than a few books are read. However, it is important to remember that when a child's interest in the book starts to fade, it is best to try another book or terminate the episode.

The implications of this synthesis for practice are straightforward. Reading with children using strategies that encourage and reinforce their active participation are likely to enhance their expressive language development. Specifically, when a young child is provided reading opportunities with an adult who follows the child's lead, relates the reading material to the child's own experiences, expands on what the child says, asks open-ended questions, and follows the child's interest, the language development of the child will likely be enhanced. The opportunity to interact with an adult while exploring a book should provide a child the kind of experiences that expand his or her expressive language and help him and her become familiar with books and the enjoyment of reading.

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Table 1
Definitions of the Characteristics of Reading Interactions

Reading Interaction Characteristic	Definition
Attention getting	Gains the child's attention (e.g., "Look here")
Labeling	Names an object, its properties or an ongoing action
Commenting	Makes general talk that does not include labeling
Imitation	Repeats what the child says
Relates to child's experience	Connects a picture or event in the book with the child's experience
Correction	Uses corrective comments such as "No, it is a dog"
Positive feedback	Uses praises or comments such as "That's right"
Open-ended questions	Evokes speech from the child which goes beyond yes/no answers
Expansions	Statements go beyond labeling or commenting, or statements expand on what the child is talking about
Follows-up with questions	Follows up the child's comments or answers with a question
Follows child's interests	Follows the child's interest. For example, lets the child pick the book or "reads" the pages the child wants to read

Table 2
Selected Characteristics of the Study Participants

Study	Child Participants					Adult Participants		Location of reading episodes
	Sample size	Mean age (Months)	Gender		Population description	Mother education (Mean years)	Intervener relationship to child	
			Male	Female				
Arnold et al. (1994)								
Group 1 (Direct)	23	28	NR ^a	NR	Typically developing	15	Mother	Home
Group 2 (Video)	14	30	NR	NR	Typically developing	15	Mother	Home
Control	27	28	NR	NR	Typically developing	15	Mother	Home
Blake et al. (2006)								
Group 1 (younger)	26	15	15	11	Typically developing	14	Mother, Father	Home
Group 2 (older)	27	27	14	13	Typically developing	14	Mother	
Bus et al. (1997)	92	18	92	0	Typically developing	NR	Mother, Father	Research center
Cronan et al. (1996, 1999)								
Group 1 (High)	83	28	42	41	Low SES	12	Mother	Home
Group 2 (Low)	73	28	43	30	Low SES	12	Mother	Home
Control	69	28	36	33	Low SES	12	Mother	Home
DeBaryshe (1995) (Study 2)	56	38	30	26	Typically developing	13	Mother	Home
Deckner (2002)	55	27	26	29	Typically developing	16	Mother	Research center
Deckner et al. (2006)								
Fletcher et al. (2008)	87	24	44	43	Moderate to mild delay	NA	Caregiver	Research center
Haynes & Saunders (1998)	20	24	NR	NR	Typically developing	16	Mother	Research center
Huebner (2000a)	61	31	26	35	Typically developing	12	Mother	Home
Huebner (2000b)	88	29	56	32	Typically developing	16	Mother	Home
Huebner & Meltzoff (2005)	120	28	57	63	Typically developing	15	Parents	Public library or home
Laakso et al. (2004)								
Group 1 (At-risk)	74	36	39	35	One or both parents reading disabled	14	Mother	Research center
Control	82	36	44	38	No familial reading risk	14	Mother	Research center
Lim & Cole (2002)	11	36	5	6	Typically developing	15	Mother	Home
Control	10	37	4	6				
Lyytinen et al. (1998)	108	14, 25 ^b	62	46	Typically developing	16	Mother	Home
Potter & Haynes (2000)	20	25	10	10	Typically developing	12	Mother	Community setting
Valdez-Menchaca & Whitehurst (1992)								
Group	10	34	8	12	Low linguistic	10	Graduate student	Day care center
Control	10	17	11	11	Low linguistic	10		Day care center
Whitehurst et al. (1988)	29	28	15	15	Typically developing	15	Mother	Research center

^a Not reported

^b Actual age

Table 3
Selected Features of the Book Reading Episodes

Study	Design	# of books read during study (Mean)	Length of time of study (Weeks)	Length of reading session during study (Mean minutes)	Novel vs. familiar books	Type of books	Training Sessions	
							Type	Length (Hours)
Arnold et al. (1994) Group 1 (Direct)	Experimental-control Post-test comparison	11	4	NR	Familiar	Picture books – text not specified	In person, individual training	8/10
Group 2 (Video)	Experimental-control Post-test comparison	15	NR ^a	NR	Familiar	Picture books – text not specified	Video training	3/4
Blake et al. (2006) (older)	Two groups Post-test	1	2	5	Familiar	Picture books – text not specified	No training	NR
Blake et al. (2006) (younger)	Two groups Post-test	1	2	5	Familiar	Picture books – text not specified	No training	NR
Bus et al. (1997)	One group Post-test	1	24	5	Mostly novel	Picture books – text not specified	No training	NR
Cronan et al. (1996, 1999) (High Intervention group)	Experimental-control post-test comparison	NR	18	10	NR	NR	In person, individual training	9
(Low Intervention group)	Experimental-control Post-test comparison	NR	3	12	NR	NR	In person, individual training	3
DeBaryshe (1995) (Study 2)	One group Post-test	NR	NR	NR	NR	NR	No training	NR
Deckner (2002) Deckner et al. (2006)	One group longitudinal	4	NR	10	Both	Picture books – text not specified	No training	NR
Fletcher et al. (2008)	One group Post-test	1	NR	2	NR	Picture books – text not specified	No training	NR
Haynes & Saunders (1998)	One group post-test	1	NR	NR	Both	NR	No training	NR
Huebner (2000a)	One group post-test	NR	6	NR	NR	NR	In person, small group training	2
Huebner (2000b)	Experimental-control Post-test comparison	NR	6	10	NR	NR	In person, small group training	2
Huebner & Meltzoff (2005)	One group pre post-test comparison	NR	8	10	NR	NR	In person, small group training	2
Laakso et al. (2004)	One group longitudinal	2	120	5	Novel	Picture books with text	No training	NR
Lim & Cole (2002)	Experimental-control Post-test comparison	NR	4	15	NR	Picture books – text not specified	In person, individual training	1
Lyytinen et al. (1998)	One group longitudinal	NR	40	NR	NR	NR	No training	NR
Potter & Haynes (2000)	One group post-test	4	NR	NR	NR	Pictures with text	No training	NR
Valdez-Menchaca & Whitehurst (1992)	Experimental-control post-test comparison	5	6-7	11	Familiar	Picture books with text	No training	NR
Whitehurst et al. (1988)	Experimental-control post-test comparison	NR	4	10	NR	NR	In person, individual training	4

^a Not reported

Table 4
Characteristics of Parental Behavior During the Reading Episodes

Study	Attention getting	Imitation	Expansions	Correction	Positive feedback	Relates to child's experience
Arnold et al. (1994) Video		X	X		X	
Arnold et al. (1994) Direct		X	X		X	
Blake et al. (2006) Younger	X	X		X	X	X
Blake et al. (2006) Older	X	X		X	X	X
Bus et al. (1997)	X			X	X	
Cronan et al. (1996, 1999) Low Intervention						
Cronan et al. (1996, 1999) High Intervention						
DeBaryshe (1995) (Study 2)						
Deckner (2002), Deckner et al. (2006)		X	X			
Fletcher et al. (2008)	X		X			
Haynes & Saunders (1998)	X			X	X	
Huebner (2000a)				X	X	
Huebner (2000b)		X	X		X	
Huebner & Meltzoff (2005)		X	X		X	
Laakso et al. (2004) At Risk						
Laakso et al. (2004) Group 2						
Lim & Cole (2002)			X			X
Lyytinen et al. (1998)						
Potter & Haynes (2000)	X			X	X	
Valdez-Menchaca & Whitehurst (1992)			X	X	X	
Whitehurst et al. (1988)		X	X	X	X	

Table 5
Characteristics of Parent Verbal and Nonverbal Behavior During the Reading Episodes

Study	Labeling	Commenting	Asking open-ended questions	Following up with questions	Following child's interests
Arnold et al. (1994) Video			X	X	X
Arnold et al. (1994) Direct			X	X	X
Blake et al. (2006) Younger	X	X	X		
Blake et al. (2006) Older	X	X	X		
Bus et al. (1997)	X	X	X		
Cronan et al. (1996, 1999) Low Intervention			X	X	
Cronan et al. (1996, 1999) High Intervention			X	X	
DeBaryshe (1995) (Study 2)					X
Deckner (2002)	X		X		X
Deckner et al. (2006)					
Fletcher et al. (2008)	X		X		
Haynes & Saunders (1998)	X	X	X		
Huebner (2000a)			X		
Huebner (2000b)			X		
Huebner & Meltzoff (2005)			X		X
Laakso et al. (2004) At Risk					X
Laakso et al. (2004) Control					X
Lim & Cole (2002)		X	X		X
Lyytinen et al. (1998)					X
Potter & Haynes (2000)	X	X	X		
Valdez-Menchaca & Whitehurst (1992)	X	X	X	X	
Whitehurst et al. (1988)	X	X	X		

Table 6
Correlations for Characteristics of Shared Reading Episodes Influencing Language Outcomes

Study	Tests Used	Outcome Measured	Practice Characteristics	Correlation
Arnold et al. (1994)	Expressive One-Word Picture Vocabulary Test (EOWPVT) Illinois Test of Psycholinguistic Abilities - Verbal Expression (ITPA-VE) Illinois Test of Psycholinguistic Abilities - Verbal Expression (ITPA-VE) Peabody Picture Vocabulary Test-Revised (PPVT-R)	Expressive language	Video training	.33
			Direct training	.29
		Expressive language	Video training	.32
			Receptive language	Video training
Blake et al. (2006) Younger sample	MacArthur Communicative Development Inventory (CDI)	Number of words produced (VOC)	Labels	-.21
			Comments	.04
			Questions	.09
			Imitations	-.10
			Attention-getting	.16
			Feedback	.17
			Relating	.19
		Mean length of utterance (MLU)	Labels	-.05
			Comments	.13
			Questions	.33
			Imitations	.10
			Attention- getting	-.11
			Feedback	-.02
			Relating	.49
Older sample	MacArthur Communicative Development Inventory (CDI)	Number of words produced (VOC)	Labels	-.51
			Comments	-.04
			Questions	.39
			Imitations	.39
			Attention- getting	.23
			Feedback	.12
			Relating	.42
		Mean length of utterance (MLU)	Labels	-.35
			Comments	.04
			Questions	.29
			Imitations	.05
			Attention- getting	.26
			Feedback	.12
			Relating	.32
Bus et al. (1997)	Video recording of reading session	Child Commenting (frequency count)	Commenting	.12
			Labeling	.05
			Questioning	.28
			Positive feedback	.18
			Correcting	.13
			Attention	-.03
		Child Initiating (frequency count)	Commenting	.02
			Labeling	.23
			Questioning	.16
			Positive feedback	.38
			Correcting	.24
			Attention	.11

Table 6, *continued*

Study	Tests Used	Outcome Measured	Practice Characteristics	Correlation
Bus et al. (1997), <i>continued</i>	Child Labeling (frequency count)		Commenting	.27
			Labeling	.30
			Questioning	.62
			Positive feedback	.70
			Correcting	.01
			Attention	.03
	Child Pointing (frequency count)		Commenting	.20
			Labeling	.27
			Questioning	.53
			Positive feedback	.66
			Correcting	.03
			Attention	.01
Cronan et al. (1996, 1999)	PRIMER Language Comprehension (Fenson, 1992)	Language comprehension	3 Hours training	.01
			9 Hours training	.17
DeBaryshe (1995) (Study 2)	Peabody Picture Vocabulary Test-Revised Expressive One-Word Picture Vocabulary Test Illinois Test of Psycholinguistic Abilities - Verbal Expression	Language skill — Composite sum of child's scores on the three instruments	Child interest	.22
Deckner (2002) Deckner et al. (2006)	Peabody Picture Vocabulary Test-III	Receptive language	Child interest	.04
	Expressive Vocabulary Test (Williams, 1997)	Expressive language	Meta-lingual	.15
Fletcher et al. (2008)	MacArthur Communicative Development Inventories— Short Form Version	Receptive language	Child interest	.40
			Meta-lingual	.33
			Questioning	.30
			Labeling	-.04
	Expressive language	Expansions	.04	
		Positive attending	-.27	
		Questioning	.24	
		Labeling	-.18	
Haynes & Saunders (1998)	Video recording of reading session	Spontaneous verbalizations	Expansions	.09
		Imitative verbalizations	Positive attending	-.20
Huebner (2000a)	MacArthur Vocabulary Checklist: Short Form Level II	Expressive language		.19
	Parent Interview	Average length of longest phrase		.23
Huebner (2000b)	Peabody Picture Vocabulary Test-Revised	Receptive vocabulary		.17
	Expressive One-Word Picture Vocabulary Test	Expressive vocabulary		.36
	Illinois Test of Psycholinguistic Abilities-Verbal Expressive	Ability to put ideas into words		.14
Huebner & Meltzoff (2005)	Audio recording of reading session	Verbosity		.10
		Grammatical maturity (language complexity)		.38
Laakso et al. (2004) At Risk sample	Boston Naming Test – Global Language Composite Score	Global language— 36 months	14m; child interest	.18
			24m; child interest	.15
Control sample	Boston Naming Test – Global Language Composite Score	Global language— 36 months	14m; child interest	.28
			24m; child interest	.21

Table 6, *continued*

Study	Tests Used	Outcome Measured	Practice Characteristics	Correlation
Lim & Cole (2002)	Video recording of reading session	MLU		.08
		Number of utterances		.72
		Number of unique words		.53
Lyytinen et al. (1998)	MacArthur Communicative Development Inventories- Infant-Finnish adaptation	Vocabulary comprehension - 14 months		.35
		Vocabulary production - 14 months		.35
		Symbolic gestures - 14 months		.30
	MacArthur Communicative Development Inventories- Toddler-Finnish adaptation	Vocabulary production - 24 months		.35
		Use of suffixes - 24 months		.25
		Maximum sentence Length - 24 months		.23
	Bayley Scales of Infant Development - II	Expressive language - 24 months		.10
Potter & Haynes (2000)	Video recording of reading session	Spontaneous verbalizations		.07
		Imitative verbalizations		.28
Valdez-Menchaca & Whitehurst (1992)	Peabody Picture Vocabulary Test-Revised	Receptive vocabulary		.55
	Expressive One-Word Picture Vocabulary Test	Verbal production		.54
	Illinois Test of Psycholinguistic Abilities	Verbal expression		.72
Whitehurst et al. (1988)	Illinois Test of Psycholinguistic Abilities	Verbal expressive language		.59
	Expressive One-Word Picture Vocabulary Test	Expressive vocabulary		.42
	Peabody Picture Vocabulary Test-Revised	Receptive vocabulary		.28
	Follow up (9 months)	Verbal expressive language		.33
	Expressive One-Word Picture Vocabulary Test	Expressive vocabulary		.32
	Peabody Picture Vocabulary Test-Revised	Receptive vocabulary		.00

Table 7

Average Weighted Effect Sizes Between the Reading Characteristics and the Oral (Expressive) and Comprehension (Receptive) Language Outcomes

Reading Characteristics	Language Development								
	Total			Expressive			Receptive		
	<i>N</i> ^a	Average	95% CI	<i>N</i> ^a	Average	95% CI	<i>N</i> ^a	Average	95% CI
Relates to child's experience	7	.48	.36-.60	7	.48	.36-.60	—	—	—
Positive feedback	32	.40	.36-.44	27	.42	.38-.47	5	.22	.10-.34
Expansions	25	.33	.28-.37	18	.38	.32-.43	7	.16	.07-.26
Open-ended questions	43	.33	.29-.36	33	.39	.35-.42	10	.16	.09-.23
Follows child's interests	18	.33	.28-.38	15	.35	.29-.41	3	.21	.07-.36
Commenting	24	.32	.26-.38	21	.32	.26-.38	3	.33	.12-.53
Correction	19	.29	.22-.35	16	.28	.21-.35	3	.33	.12-.53
Imitation	21	.28	.23-.33	16	.32	.26-.38	5	.15	.03-.26
Follows-up with questions	9	.27	.20-.34	5	.43	.33-.54	4	.15	.06-.24
Labeling	27	.20	.15-.25	21	.22	.16-.28	6	.13	.01-.24
Attention getting	14	.00	-.07-.07	13	.04	-.04-.11	1	-.27	—

^aNumber of effect sizes.

Table 8
Average Weighted Effect Sizes for the Participant and Book Reading Episode Moderators on the Effects of Shared Reading

Moderators	Number of Effect Sizes	Average Effect Sizes	95% CI
<i>Child Participants</i>			
Typically Developing	90	.29	.26-.31
At-Risk	15	.11	.06-.16
<i>Mother's Education</i>			
12 years or less	9	.26	.18-.33
More than 12 years	64	.25	.21-.28
<i>Length of Training</i>			
Less than 1 hour	7	.39	.30-.48
2 hours	7	.28	.21-.34
3 or more hours	8	.20	.12-.28
<i>Type of Training</i>			
Video	3	.29	.17-.43
Individual	12	.28	.21-.35
Group	7	.28	.21-.34
Not specified	83	.25	.22-.27
<i>Length of Reading Session</i>			
5 minutes or less	64	.23	.21-.26
6-10 minutes	16	.27	.22-.33
11 or more minutes	7	.39	.30-.48
<i>Number of Books Read</i>			
1-2	66	.23	.20-.26
3-10	9	.38	.28-.47
11 or more	4	.29	.18-.41
<i>Book Familiarity</i>			
Novel	28	.32	.28-.35
Familiar	35	.22	.16-.27
Both familiar and novel	6	.24	.13-.36