Studying the Effect Dialogic Reading has on Family Members' Verbal Interactions During Shared Reading

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The effect dialogic reading training has on the verbal interactions of family members and their "at risk" preschool children was studied. There were significant differences at the time of the post-test between family members who received dialogic reading training and the group that participated in the preschool's traditional family time. Family members who received training in dialogic reading utilized questioning, yes/no questions, labeled pictures, provided feedback, and expanded on their children's ideas significantly more often. Family members who participated in the dialogic reading training also had significantly more verbal interactions with their children and their children shared in the reading experience significantly more than the traditional family time group.

Parents' involvement in their children's process of learning to read begins at birth. Therefore, partnering with parents and caregivers to encourage reading to and with their young children is essential for children's successful acquisition of reading skills (Doyle & Bramwell, 2006). Storybook reading, which is a common practice of parents, provides gains in young children's oral language and vocabulary (Isbell, Sobol, Lindauer, & Lowrance, 2004). Regular storybook reading encourages increased sentence complexity, reading comprehension, and positive attitudes about reading (Silvern, 1985). Because of this, the use of storybook reading can be especially effective in teaching English Language Learners new vocabulary (Collins, 2005).

Parents' participation in shared reading, an interactive form of storybook reading, is positively related to young children's language development at four-years-old and also helps predict language competence (Umek, Podlesek & Fekonja, 2005). In their meta-analysis on joint parent-child book reading, Bus, van IJzendoorn, and Pellegrini (1995) concluded that parent-child reading is related to language growth, emergent literacy, and reading achievement.

Dialogic reading, a form of shared reading, can be used to increase young children's expressive vocabulary. It focuses on adults sharing the book reading experience with children. The aim is to shift the interaction and conversation from being adult-led to child-led. Dialogic reading techniques focus on open-ended questions and expanding on children's comments and ideas regarding the book being shared. The program is based on encouraging children's participation, providing feedback, and adjusting verbal interactions based on children's ability (Arnold, Lonigan, Whitehurst, & Epstein, 1994).

Researchers conducting a meta-analysis on read-aloud interventions found that reading aloud results in significant, positive effects on children's language, phonological awareness, print concepts, comprehension, and vocabulary outcomes. They conclude that incorporating extended child–adult dialogue and questioning, as done in dialogic reading, is a valuable practice (Swanson, Vaughn, Wanzek, Petscher, Heckert, Cavanaugh, & Tackett, 2011).

Dialogic reading focuses on expanding young children's expressive vocabulary through questioning. Expressive vocabulary is directly related to acquiring print vocabulary. Expressive vocabulary skills are a prerequisite for proficient reading because they are required for a child to comprehend the text being read (Morgan & Meier, 2008). Poor oral vocabulary skills negatively affect children's reading skills (Morgan & Meier, 2008). This is important because young children's oral language skills are accurate predictors of later reading success (Farkas & Beron, 2004).

Children in lower socioeconomic (SES) classes are at a distinct disadvantage when learning to read. They go to the library less often, are read to less, are talked to less, and have fewer words than middle and upper-class children (Evans, 2004). Families from low socio-economic states have been found to put less of a priority on home literacy than more affluent families (Marvin & Mirenda, 1993). Children classified as "at risk" have been found to have deficits in storytelling compared to their middle-income peers (Peterson, 1994). As sited in Arnold, et al. (1994), low-SES mothers are less likely to label object attributes and actions and initiate reading interactions using "where" or "what" questions. They are also less responsive to changes in their children's language abilities and adjust their own language less than high-SES mothers (Valdez-Menchaca, 1990). Farkas & Beron (2004) found that mother's education and social class influenced children's later reading success. However, parent involvement in reading can overcome limitations due to economic, ethnic, and educational backgrounds to help improve children's reading ability (Arnold, Zeljo, Doctoroff, & Ortiz, 2008).

Dialogic reading can be used to provide both shared book interactions between parents and children and to build vocabulary. Vocabulary acquisition is essential to children's success in reading. Children who are classified as "at risk" often struggle with acquiring the vocabulary needed for school success. Children who are English language learners or are of low socioeconomic status are at more risk of not making proficient vocabulary gains than their English speaking more affluent peers (Jalongo & Sobolak, 2011). Dialogic reading has the potential of increasing reading skills for children who are learning English as a second language (Chow, McBride-Chang, & Cheung, 2010).

Scaffolding children's vocabulary development helps to increase vocabulary (Blewitt, Rump, Shealy, & Cook, 2009). Scaffolding is when an adult provides support to a child to accomplish a task that he or she couldn't do independently. As a child's skills grow, the adult reduces the amount of support provided until the child can accomplish the task independently (Wood, Bruner, & Ross, 1976). Scaffolding questions asked while reading storybooks is also beneficial for young children's language acquisition (Blewitt, et al., 2009).

Scaffolding language development includes beginning with simple questioning, labeling, and commenting. This helps children learn simple words and their meanings. Once children have acquired basic vocabulary, parents can ask more complex questions and make connections with words the child already knows. "Pointing, labeling, asking simple questions, and repetition are all effective techniques for increasing preschoolers' receptive vocabulary. Parents who scaffold their child's book reading experience can

begin with simple techniques like labeling and pointing and move to detailed questioning as their child's knowledge of the word grows" (Strouse, 2011, p. 3).

Dialogic reading can be used by parents to teach young children language through questioning, providing feedback, and adjusting questions to children's developmental levels (Arnold, Lonigan, Whitehurst, & Epstein, 1994). Questions that encourage children to talk about pictures are more beneficial than asking questions that encourage children to take a more passive role such as by asking "yes/no" questions (Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchaca, & Caulfield, 1988). Parents should expand on their children's comments as their children's language proficiency increases. This progression in the types of questions asked and responses expected are important to encouraging language development (Scherer & Olswang, 1984). "Studies of social interaction between parents and young children have identified many ways in which everyday conversation supports the child's task of language learning. Among the most common examples are parents' use of expansions, repetitions, extensions, responses, and questions that follow the child's interest" (Huebner, 2000, p. 513).

Current Study

The current study was designed to determine if dialogic reading could be used to increase positive verbal interactions between family members and their young children classified as "at risk". Study participants had children enrolled in a public pre-school program designed for children ages 3 to 5 classified as "at risk" based on screening results of children's expressive and receptive language, fine and gross motor skills, and social / emotional and intellectual processing.

The school incorporates daily mandatory family involvement. Family members spend the first fifteen minutes of school reading aloud with their children before leaving the school each morning. This family involvement time was used to provide dialogic reading training to family members in the morning pre-school program 3 days a week.

Participants

A majority of the participants in the program were parents. However, a few other family members including grandparents, aunts, and uncles were involved in the program at times when a parent was not available to attend. A total of 40 families participated in the study. Family members whose children attend preschool in the morning participated in dialogic reading training. Family members whose children attend preschool in the afternoon participated in the traditional preschool Family Time, which consists of family members being asked to read aloud to their children with no other instruction.

Twenty-one families were in the morning dialogic reading group and 19 families participated in the afternoon traditional Family Time group. An initial survey was given to determine if there were any significant differences between the groups that might impact the results of the study or give one group an advantage over the other (Table 1). There were no significant differences between the two groups regarding education, home language, number of times a week children are read to at home, number of books in the home, number of times children visit the library, involvement in outside educational programs, or number of adults and children in the home. A majority of the families participating in the program (75% of the dialogic reading group and 67% of the traditional Family Time group) had a high school education or less, spoke Spanish in the home (75% of the dialogic reading group and 61% of the traditional Family Time group), and reported reading with their children at least four times a week (65% of the dialogic reading group and 56% of the traditional Family Time group).

Methods

Family members in the morning group were provided daily dialogic reading training three days a week every other week for 10 weeks. Every other Monday family members received 15 minutes of dialogic reading training focusing on the dialogic reading strategies CAR and 123. The CAR strategy, designed by Washington Research Institute, teaches family members to Comment and wait (provide a language model), Ask questions and wait (encourage interaction and reflection), and Respond and add more (build expressive language). This technique was taught for the first two weeks of training. The last three weeks focused on a technique designed by one of the authors called 1, 2 , 3 Tell Me What You See. This strategy asks the child to comment on what he or she sees (encourage expressive language), family members to teach new words (build vocabulary), and family members to connect the story to the child's life (connect to background knowledge).

Every other Tuesday, family members watched dialogic reading being modeled with the preschool class for 10-15 minutes. Every other Wednesday, family members received sample questions and a copy of the book being modeled in English or Spanish to help support their interactions with their children at home and school. Family members practiced dialogic reading with their children using the book being modeled that week in class on Wednesday and at home the following week.

All presentations and materials were in English and Spanish. Family members participating in the dialogic reading training were allowed to keep the copy of the book being studied each week of the intervention to encourage practice at home. In addition, both the dialogic reading and traditional Family Time groups of family members received a set of 5 random picture books in English and Spanish to be kept in the home to ensure equal access to literature.

Results

In order to see if there were any significant differences between family members' literacy interactions in the treatment and control groups, participants were videotaped for 7 minutes sharing a book with their children in the fall before the study began. Two trained undergraduate research assistants scored family members' literacy interactions with their children using the Adult – Child Interactive Reading Inventory (ACIRI) developed by Andrea DeBruin-Parecki. The ACIRI is an observational tool designed to assess parent / child interactions during storybook reading. The ACIRI measures both parent and child behaviors related to12 literacy behaviors in three categories of reading including: enhancing attention to text, promoting interactive reading / supporting comprehension, and using literacy strategies. Enhancing attention to text includes: maintaining physical proximity, sustaining interest and attention, holding the book and turning pages, and displaying a sense of audience. Promoting interactive reading and supporting comprehension includes: posing and soliciting questions, identifying and understanding pictures and words, relating content to personal experiences, and pausing to answer questions. Using literacy strategies includes: identifying visual clues, predicting what happens next, recalling information, and elaborating on ideas.

As seen in Table 2, there were no significant differences in family members' interactions with their children regarding enhancing attention to text, promoting interactive reading and comprehension, or using literacy strategies before the study began.

In order to see if there were any significant differences between family members' literacy interactions in the treatment and control groups

after the completion of the 10-week program, participants were again videotaped for 7 minutes sharing a book with their children. If family members or caregivers completed the book before 7 minutes had passed, they were asked to share another book.

The post-intervention videos containing the parent / child shared reading experiences were transcribed. This was done so that we could study the types of interactions family members had with their children during the shared reading experience. Pre-intervention videos were not transcribed due to the similarity between groups on all areas of the ACIRI prior to the start of the program. Two undergraduate assistants were trained to transcribe videos using HyperTRANSCRIBE. Transcription guidelines and conventions for this study were provided. Only extra-textual utterances were analyzed. Parts of the video including family members reading directly aloud from the story were not studied.

In order to determine reliability of transcription, a second undergraduate assistant independently transcribed 25% (10) of randomly selected videos (Miles & Huberman, 1994). Transcription reliability was 95.7%. Differences in tenses and word choice (e.g. "Put everything together" for "Mix everything together") accounted for a majority of the discrepancies.

The coding scheme for the transcriptions utilized a frequency count to determine the number of times behaviors that exemplify dialogic reading (e.g. use of open-ended questions, labeling, explanation, feedback, expansion) and behaviors that participants were encouraged to minimize (e.g. yes / no questions, directives) were exhibited by both groups of family members (Table 3). The coding scheme was similar to that used by Huebner (2000).

There were significant differences between groups regarding the number of times family members utilized questioning, yes/no questions, labeled pictures, provided feedback, and expanded on their children's ideas when the post-intervention transcripts were studied (Table 4).

After family member's and children's interactions were transcribed the number of lines of dialog attributed to each party, excluding lines reading directly from the book, was analyzed (Table 5). Family members who participated in the dialogic reading training had significantly more verbal interactions ($p < .01$) with their children than family members in the traditional Family Time group. Children in the dialogic reading group participated in the shared reading experience significantly more ($p < .01$) than children in the traditional Family Time group. Overall, children in the dialogic reading group were responsible for 38% of the conversation compared to 25% for children in the traditional Family Time group.

Discussion and Conclusion

The current study was designed to determine if dialogic reading could be used to positively increase the verbal interactions between family members and their "at risk" children in preschool during shared reading. There were significant differences at the time of the post-test between the group of family members who received dialogic reading training and the group that participated in the traditional Family Time regarding the number of times family members utilized questioning, yes/no questions, labeled pictures, provided feedback, and expanded on their children's ideas. Family members who participated in the dialogic reading training had significantly more verbal interactions ($p < .01$) and their children shared in the reading experience significantly more ($p < .01$) than family members and children in the traditional Family Time group. Overall, children in the dialogic reading group were responsible for 13% more of the conversation when speaking with their family members during shared reading. Children of families who received dialogic

reading training also participated in much longer conversations including 3 times as much child participation as the traditional Family Time group (Table 5). These findings support other studies that found that family members use of dialogic reading can be effective in increasing young children's vocabulary and expressive language (Hargrave & Sénéchal, 2000).

The family members who participated in the dialogic reading training had longer conversations with their children and participated in a significantly wider variety of literacy communication behaviors (questioning, expanding, providing feedback, etc.). Family members' discussions with their young children result in a wide variety of benefits. Test, Cunningham, & Lee (2010) find that "talking with young children encourages development in many areas: spoken language, early literacy, cognitive development, social skills, and emotional maturity" (p. 3). Family members' talking with their children about books or while reading provides opportunities for vocabulary development (Frijters, Barron, & Brunello, 2000) and exposure to new words (Tabors, Beals, & Weizman, 2001). This is important because vocabulary development is a fundamental part of children's acquisition of reading skills (National Institute of Child Health and Human Development, 2000; Farkas & Beron, 2004). Vocabulary knowledge is also directly related to children's reading comprehension (Hiebert & Kamil, 2005; Stahl & Nagy, 2006).

This study supports the finding that participation in shared reading using dialogic reading strategies can positively affect children's overall language development (Philips, Hayden & Norris, 2006; Shapiro, Anderson, & Anderson, 2002). This is especially important considering that language competence is an essential component to future school success (Wilde, & Sage, 2007). Children's discussions and interactions with parents around books greatly influence their motivation for reading when entering kindergarten. And, motivation for reading influences daily reading, which results in increased reading achievement (Sonnenschein & Munsterman, 2002). Therefore, it would seem as though the addition of dialogic reading strategies in preschool classrooms and in parent involvement programs would be of benefit to both families and children.

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Table 1

Characteristics of Parents in the Dialogic Reading and Traditional Family Time Groups

Item	Total Group (N = 38)	Dialogic Reading Group (N = 20)	Traditional Family Time Group (N = 18)
Education			
Less than high school	21%	25%	17%
Some high school	16%	15%	17%
High school	34%	35%	33%
Some college	24%	20%	28%
College graduate	5%	5%	5%
Language at Home			
English	24%	20%	28%
English and Spanish	26%	25%	28%
Spanish	42%	50%	33%
Other	8%	5%	11%
Read to Child			
Daily	16%	15%	17%
4-6 times per week	45%	50%	39%
2-3 times per week	26%	25%	27%
1 time or less	13%	10%	17%
Books in the Home			
0-2	8%	5%	11%
3-7	18%	25%	11%
8-10	24%	20%	28%
More than 10	50%	50%	50%
Visits to Library			
0 times a month	11%	5%	17%
1 time a month	33%	35%	33%
2 - 3 times a month	45%	55%	33%
4 + times a month	11%	5%	17%
Other Programs			
Daycare	0	0	0
Library Program	13%	5%	22%
Sunday School	3%	0	6%
None	84%	95%	72%

Table 1 cont.

Item	Total Group (N = 38)	Dialogic Reading Group (N = 20)	Traditional Family Time Group (N = 18)
Adults in the Home			
1	5%	5%	6%
2	61%	65%	55%
3	26%	20%	33%
4	8%	10%	6%
Children in Home			
1-2	53%	60%	44%
3-4	39%	30%	50%
5-6	8%	10%	6%

Table 2

ACIRI Pre- and Post-Test Means and Standard Deviations of the Interactions of Family Members from the Dialogic Reading and Traditional Family Time Groups

Item	M	SD	M	SD	M	SD	M	SD
Enhancing Attention to Text								
Maintaining physical proximity	.05	.22	.05	.23	.10	.30	.05	.23
Sustaining interest and attention	.62	.80	.26	.65	.71	1.19	.26	.56
Holding book and turning pages	.33	.57	.16	.37	.67*	.58	.05	.23
Displaying a sense of audience	.38	.59	.26	.45	.67*	.73	.11	.32
Promoting Interactive Reading								
Posing and soliciting questions	5.05	2.75	3.32	2.69	19.52*	11.62	5.53	5.33
Identifying pictures & words	3.86	2.74	2.89	2.28	2.90	2.72	4.63	3.90
Relating content to experiences	.67	1.02	.32	.58	.52	.98	.58	1.30
Pausing to answer questions	.76	1.30	.79	1.36	1.29	2.19	.37	.96
Using Literacy Strategies								
Identifying visual clues	1.10	1.18	2.00	1.97	.95	.97	.74	.87
Predicting what happens next	.14	.36	-	-	.19	.51	.05	.23
Recalling information	.05	.22	.05	.23	-	-	.05	.23
Elaborating on ideas	.10	.30	-	-	.71	2.17	-	-

Table 3

Category	Family Member's Action	Example
Questions	Asks questions such as who, what, where	"Where is the boy?"
Yes/No	Question asked to elicit a yes or no	"Is the boy in the house?"
Directives	Asks the child to do something	"Point to the house."
Labeling	Tells the child what an object is	"It's a ladder."
Explanation	Explains something in the picture	"He is climbing the ladder."
Feedback	Positive or negative reinforcement	"Good. He is climbing high."
Expansions	Expands on child's verbalization	"That is a cat. It's a big, black dog."
Completion Questions	Asks child a question he must complete	"The cat is in the . . .?"
Answers	Answers child's question	"That cat is called Siamese"
Connects to Experience	Connects story to child's life	"Do you remember when Daddy used the ladder to get our cat from the tree?

Table 4

Post Intervention Descriptive Statistics for Rate of Strategy Use by Both Groups of Family

	Dialogic Reading Group		Traditional Family Time Group	
Communication Behavior	**M**	**SD**	**M**	**SD**
Questioning	17.42*	10.11	3.44	4.02
Y/N Questions	.95*	1.43	.06	.24
Directives	.74	1.63	1.61	3.82
Labeling	2.11*	2.54	.05	.71
Explanation	2.16	4.57	.17	.51
Feedback	8.58*	6.54	2.44	2.94
Expansions	.95*	.97	.22	.55
Completion Questions	.26	.56	.11	.32
Answering Child's Question	1.42	3.96	.50	1.42
Connects to Experience	-	-	-	-

* $p < .01$

Table 5

T-Test Results for Number of Lines Spoken as Recorded on Transcriptions of Both Groups of Families

	Dialogic Reading Group		Traditional Family Time Group	
Number of Lines	**M**	**SD**	**M**	**SD**
Family Member	80.84*	30.84	41.28	17.74
Child	30.84*	14.53	10.17	11.11

* $p < .01$