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Maternal Language During Book-Sharing: Wordless Verses Print

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MATERNAL LANGUAGE DURING BOOK-SHARING:

WORDLESS VERSES PRINT

by

Jessica Nielsen

A plan B report in partial fulfillment of the
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of

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ABSTRACT

Maternal Language During Book-Sharing:

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by

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Studies have shown that maternal book reading strategies in the toddler years impact language and emergent literacy in the preschool years (Roberts, Jurgens, & Burchinal, 2005). The use of complex vocabulary and linguistic input has been shown to be associated with better language and literacy outcomes for children. Fifty-six mother-child dyads took part in a 15-minute free play activity during which time they were asked to read books and play with toys. The children were between 21 and 29 months of age. Interactions were orthographically transcribed and coded using Systematic Analysis of Language Transcripts (SALT). Each mother's language input to her child was analyzed for responsiveness. Correlations were examined between maternal responsiveness and child language productivity. Results indicated that, in the context of reading wordless books, mothers were more responsive to their children than in the context of books that contained text, and maternal responsiveness was moderately to highly correlated with child language productivity.

(28 pages)

Public Abstract
Maternal Language During Book-Sharing: Wordless Book verses Print
Jessica Nielsen

The importance of adult linguistic responsiveness in facilitating language development in young children is well documented (e.g. Cross & Morris, 1980; Snow, 1994; Tamis-LeMonda, Bornstein, & Baumwell, 2001; Yoder, Warren, McCathern, & Leew, 1998). Research has shown that the use of responsive language by parents in the context of play is associated with greater child language productivity (Girolametto, Hoaken, Weitzman, & van Lieshout, 2000). Rocissano and Yatchmink (1983) found that when mother-child dyads utilized more joint attention, the toddlers demonstrated higher language skills and syntax abilities. Research has also shown that parent-child shared book reading contexts can be very beneficial environments for preschool aged children, as well as children with speech and/or language disorders, and can promote linguistic growth (Kaderavek & Justice, 2002). Parent-child shared book reading environments can be highly facilitative in vocabulary development, conversational participation, and emergent literacy knowledge. Findings suggest that parental behavior analyses during parent-child shared reading interactions with children who are delayed in language, impact the child's engagement in the interaction (Kaderavek & Justice, 2002).

A total of 56 mother-child dyads participated in the study and were recruited from early intervention programs in the state of Utah. Dyads were given two books to use during the interaction, one wordless and one containing print. Mother-child dyads participated in a 15-minute interaction with books and toys in their home. The interaction was video recorded for later analysis. The verbal exchanges that occurred during the interactions were transcribed orthographically and coded for parental responsiveness using procedures and software from the Systematic Analysis of Language Transcripts (SALT; Miller, 2006).

The results indicated that the mothers were more responsive to children in the wordless book sharing context than the printed book sharing context. Parents were equally directive in both contexts. Maternal responsiveness was moderately to highly correlated with child linguistic productivity measured using mean length of utterance, number of total words, and number of different words in both contexts, highlighting the importance of maternal responsivity for facilitating linguistic productivity in young children with language delays or who are at-risk for developing a language delay.

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Jessica Nielsen

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INTRODUCTION

Linguistic responsiveness has been described as when an adult engages in and maintains a conversation with a child that follows the child's lead, allows the child to interact, or that responds to the child's topic and communicative intents. Linguistic responsiveness also includes labeling, imitating, expanding, and modeling semantic and syntactic forms of language (Girolametto & Weitzman, 2002; Girolametto, Hoaken, Weitzman, & van Lieshout, 2000). The importance of adult linguistic responsiveness in facilitating language development in young children is well documented (e.g. Cross & Morris, 1980; Snow, 1994; Tamis-LeMonda, Bornstein, & Baumwell, 2001; Yoder, Warren, McCathern, & Leew, 1998). Research shows that the use of responsive language input is associated with greater child language productivity, which includes mean length utterance (MLU), and number of different words (NDW) used by children (Girolametto, Hoaken, Weitzman, & van Lieshout, 2000).

Rocissano and Yatchmink (1983) found that when mother-child dyads utilized more joint attention the toddlers had higher language skills and syntax abilities. Donahue and Pearl (1995) suggest that a child's conversational strategies tend to reflect that of their mother's. Therefore, when mothers use more complex sentences, their children use more complex sentences.

Research shows that parent-child book reading may promote linguistic growth in preschool children in general, and in children with speech and language delays in particular (Kaderavek & Justice, 2002). The parent-child book reading environment provides dyads with a controlled context with a known topic for learning (van Kleeck, Gillam, Hamilton, & McGrath, 1997). There is a large correlation between early book

reading and later developed literacy and language skills (Bus, van IJzendoorn, & Pellegrini, 1995). Parent-child book reading interactions have been shown to facilitate vocabulary development, conversational participation, and emergent literacy knowledge in children when tailored to the specific language capabilities of the child (Kaderavek & Justice, 2002).

Findings suggest that parental behavior during parent-child book reading interactions with children who are delayed in language, impacts the child's engagement in the interaction (Kaderavek & Justice, 2002). Van Kleeck and her colleagues (1997) argue that a child's later developed abstract language abilities are related to the parent's book reading style in their preschool years. They found that children who showed the greatest increase in abstract language over a period of time, had parents that used more labeling, locating, describing characteristics and scenes, recalling of previous information, as well as reasoning, problem solving, and making of predictions during their parent-child book reading interaction (van Kleeck, Gillam, Hamilton, & McGrath, 1997).

Parent responsivity and child language productivity may differ according to the context under which interactions occur. Girolametto and Weitzman (2002) examined language productivity toddlers and preschoolers between the ages of 17 and 53 months of age, interacting with their childcare providers in two different contexts: playing with play dough and adult-child book reading. Children were observed to talk more and use more complex vocabulary in the play dough context than in the book reading context. Similarly, caregivers used more interaction-promoting strategies (e.g., encouraging turn taking, asking questions) and language modeling (e.g., expansions) in the play dough

context than in the adult-child book reading context. Language modeling by childcare providers was positively correlated with child language productivity.

In a similar study, parental input to children with developmental disabilities was examined as they interacted with their children during toy-play, and while engaged in parent-child book reading activities. Findings suggested that language input directed to children with language delays tended to be more directive and not as "responsive" during the parent-child book reading activity, and more interaction-promoting during the play activity (Girolametto, Hoaken, Weitzman, & van Lieshout, 2000). These studies and others support the practices of speech-language pathologists who attempt to facilitate language development in less structured, more realistic or naturalistic learning environments (Kaderavek & Justice, 2002), and have led to the development of a number of parent training programs designed to increase linguistic responsiveness (Klein & Briggs, 1987; Weistuch & Lewis, 1985). Parents and caregivers may be more naturally inclined to be more responsive to young children in less structured contexts (eg., play) than in those surrounding more formal interactions such as in parent-child book reading contexts. However, given the importance of linguistic scaffolding and responsivity in promoting language growth, particularly for children with delays, it is important for parents to be linguistically responsive in book sharing contexts as early as possible. It may be that some book sharing contexts lend themselves more readily to the kinds of maternal responsivity that research has shown parents to use in unstructured, free-play activities. For example, wordless books may more closely mirror play contexts because there is no prescribed linguistic information or content that caregivers must follow. While the pictures are suggestive of the direction the story may take, the final story is the result

of the interaction between the parent, the child, and the pictures in the book. In books containing print, parents may feel constrained to read the words and follow the prescribed story line, which may inhibit their responsiveness to children's linguistic input. Parents may feel compelled to "cover the content" in the book, rather than allow for tangential linguistic interactions that often occur during unstructured activities resulting in more directive than responsive behaviors.

To date, no study has examined the potential differences in parental responsivity and child language productivity in wordless versus printed book sharing contexts, specifically for children with developmental delays.

Purpose

The purpose of this study was to examine maternal responsiveness and the use of imitations, expansions and directives, and child language productivity, which we defined as mean length utterance (MLU), number of total words (NTW), and number of different words (NDW) across two book sharing contexts (wordless books, books containing print) for young children with language impairment.

Hypothesis

Based on research that suggests less structured interactions are associated with greater parent responsivity and child linguistic input, we hypothesized that mothers would be more responsive to children during wordless book sharing than when sharing books that contain print. Our hypothesis is based on the notion that parents may feel constrained by "print," whereas in wordless books parents are free to elaborate and interact with their children. Research suggests that the likelihood that a child will learn new vocabulary from parent-child book reading depends on parental support and

language facilitation strategies (Mol, Bus, de Jong, & Smeets, 2008). Thus, we predicted that higher levels of responsivity on the part of the parent would be associated with greater linguistic productivity on the part of the child.

Research Questions

1. Is there a difference in maternal responsiveness as a function of book-sharing context (wordless, print)?
2. Do mothers use more directives in one book-sharing context than the other?
3. Is there a relationship between maternal responsiveness and child language productivity?

METHOD

Participants

A total of 56 mother-child dyads participated in this study. Dyads were recruited from early intervention programs in the Ogden and Jordan Utah school districts. To qualify for early intervention in the State of Utah, a child must exhibit delays in one or more of the following areas: physical development, vision or hearing, feeding or dressing, social and emotional development, communication and language learning, problem solving, and play skills (Utah Department of Health, 2009). In order to ensure that children included in the study did not present with developmental delays that were likely a result of intellectual deficit, children who scored lower than 2 standard deviations below the mean on the Preschool Language Scale-4 (PLS-4; Zimmerman, Steiner, & Pond, 2002) were excluded from the study. Further, because we were interested in the interactions that involved children with potential language delays, children whose scores were greater than a standard score of 81 on the PLS-4 were excluded due to being within normal limits. Children who participated in this study were between the ages of 21-29 months; the mean age being 25.2 months. The mothers' ages ranged from 18-52 years of age. There were 43 male and 13 female children participants. Descriptive data for mother and child characteristics can be found in Tables 1 and 2.

Mother-child dyads came from a wide range of socioeconomic backgrounds. Income levels ranged from $5,000 to $170,000, with the mean household income being $65,636 dollars. The participants who considered themselves white or Caucasian were 91%; 1.8 % were American Indian or Alaska native; 3.6 % were Hispanic or Latino; and 3.6 % described themselves as "other race."

Mothers' education levels were obtained through a survey collected during the home interview. Maternal education ranged from completion of 6th grade to a completion of a bachelor's degree and beyond. The average level of education was two years of college.

Table 1. Maximums, minimums, and means for mother and child characteristics.

	Minimum	Maximum	Mean
Child age	21.8	29.1	25.2
Maternal age	18	52	31.96
Household income in dollars	5,000	170,000	65,909

Table 2. Frequencies and percentages for child characteristics.

		Frequency	Percentage
Gender	Male	43	76.8
	Female	13	23.2
Race	White	51	91.1
	American Indian or Alaska Native	1	1.8
	Hispanic/Latino	2	3.6
	Other Race	2	3.6

General Procedures

The PLS-4 (Zimmerman, Steiner, & Pond, 2002), a quantitative measure of general language ability, was administered to all of the participating children. Mother-child dyads participated in a 15-minute recorded video sample consisting of interactions with books and toys. Assessments were conducted in the child's home and video-interactions were collected. Dyads were given two books to use during the interaction.

One book contained printed words (The Very Hungry Caterpillar; Carle, 1969) and the other was wordless (Carl's Afternoon in the Park; Day, 1991).

Verbalizations made during each interaction were orthographically transcribed using procedures and software from the Systematic Analysis of Language Transcripts (SALT; Miller, 2006). After an interaction was transcribed by a "primary transcriber," a "secondary transcriber" checked the transcript for errors. After the transcriptions were corrected, codes for contingent responses (i.e. expansions, imitations) and directives were added. Prior to the coding of the transcripts, reliability between coders was accomplished by two transcription coders separately coding transcripts until they achieved an average 95% reliability on at least four consecutive transcript codes.

Transcript codes, definitions, and specific examples for each are shown in Table 3. Directives, defined as a command for an action, were coded as [D]. Common directives noted from the transcript included: "Turn the page," "Sit down," "Come here," and "Look at the apple." Imitations were coded when the mother directly imitated an utterance produced by her child and were coded [I]. An imitation was coded if it was produced immediately after the child used the word or if the mother used the word within the next three utterances she produced. Examples of imitations found in the transcript include: Child: "Ruff," Mother: "Ruff;" and Child: "Hole," Mother: "Yeah, hole". Expansions were coded when the mother restated and expanded upon a child's utterance (most often in a complete sentence) and were coded as [E]. An expansion was coded if produced within 3 utterances after the child's use of the word or utterance. Expansion examples used by mothers in the videos include: Child: "Hole," Mother: "Yes, there is a hole in the page;" and Child: "Dog," Mother: "Yes, that dog is like our dog that you like

to play with". Responsive utterances were a combination of imitations, expansions, and any other utterances the mothers made that were directly related to the child's previous utterance; responsive utterances were coded as [RV]. Utterances that mothers used that were not coded as imitation or expansions, but were coded as responsive utterances, include the following examples: Child: "Cookie," Mother: "No, that is cake;" Child: "No," Mother: "Oh, you don't want to keep reading?;" and Child: "Doggie," Mother: "Oh, is he mean or nice?"

Table 3. Definitions of codes.

CODE	**DEFINITION**	**EXAMPLES**
[RV] Responsivity	Child produced utterance, parent responds to the content of the utterance for up to 3 utterances immediately following the child utterance, but does not repeat the child's utterance RV is coded when the child's response was unintelligible ONLY when *either* the mother seemed to understand what her child said and responded accordingly OR when the mother may not have understood, but still clearly responded as though she understood. Occasionally sign was used by the children and mothers and was coded as though it was a verbal response.	C: Cookie M: No, that's a cake. C: No M: Oh you don't want to read this book? M: What's this? C: Doggie M: What color is it? C: Turn page M: Okay, that's a good idea C: Doggie M: Oh, is he nice or mean? C: Dog M: yeah you are right
[I] Imitation	Mother imitates exactly what child said and/or imitates and makes a simple addition on what child says for up to 3 utterances immediately following child's utterance. Mother's expansion does not make a complete sentence. Sound effects, ("quack", "yum", "num num", and "ruff") can be coded as	C: Sun M: Sun C: Hole M: Yeah, hole C: Page M: Turn page C: Strawberry M: Eat strawberry

	imitations.	
[E] Expansion	Mother restates and expands the child's utterance (most often in a complete sentence) for up to 3 utterances immediately following child's utterance. Mother restates child's utterance and can add simple adjectives or words, add more information that goes beyond a simple elaboration, and/or add a new idea to child's concept.	C: Want cookie M: You want a cookie? C: Hole M: Yes, there is a hole in that page C: Ball M: That's a blue ball C: Dog M: That dog is like our dog that you like to play with C: Sun M: I see the sun, it's big and sits high in the sky
[D] Directive	Mother tells child what to do and/or directs child's attention. "No" is coded as a directive when it is used to direct the child's behavior. Parallel talk does not constitute an instance of "directive." -Example:"Turn the page" (in reference to what the mother is currently doing) Questions do not constitute an instance of "directive". -Example: "Can you say book?" "Do you want to sit down?" Comments about what both the mother and her child should do, do not constitute an instance of "directive". -Example: "Let's read this book" "We should turn the page"	"Look", "Put it in", "Come here", "Say sun", "Listen", "Sit down", "Turn the page"

RESULTS

The first aim of the study was to determine whether there were differences in maternal responsiveness as a function of book-sharing context (wordless, print). The second aim was to determine whether mothers used more directives in one book-sharing context than the other. Lastly, we wanted to explore the relationship between maternal responsiveness, imitations and expansions and child language productivity (MLU, NTW, NDW).

Paired-samples t tests were conducted to evaluate whether mothers were more responsive in wordless or print book sharing contexts. Findings are presented in Table 4. The results indicated that the mean maternal responsivity in the wordless book sharing context (M = 10.64, SD = 11.83) was significantly greater than the mean maternal responsivity in the printed book sharing context (M = 6.19, SD = 8.28), ($t(53) = 3.29$, $p < .05$). Paired-samples t tests were conducted to evaluate whether mothers were more directive in wordless or print book sharing contexts. The findings are presented in Table 4. The results indicated that the mean use of directives in the wordless book sharing context (M = 8.96, SD = 8.85) was not significantly different from the mean use of directives in the printed book sharing context (M = 8.61, SD = 8.44), ($t(53) = .35$, $p = .73$).

Pearson Product Moment Correlations were calculated to examine the relationship between maternal responsiveness, imitations and expansions, and child language productivity (MLU, NTW, NDW). The results of these correlational analyses are presented in Tables 5 and 6 for the wordless book and the book containing print respectively. Findings revealed that maternal responsiveness was moderately to highly

correlated with child MLU ($r = .42$, $p < .05$), NTW ($r = .80$, $p < .05$), and NDW ($r = .77$, $p < .05$) in wordless contexts and highly correlated with child NTW ($r = .71$, $p < .05$) and NDW ($r = .84$, $p < .05$) in printed contexts.

Table 4. Means, SDs, and p-values for maternal responsivity and directive use.

	Responsivity			Directives		
	Mean	SD	p-value	Mean	SD	p-value
Wordless	10.64	11.83	3.29 .002**	8.96	8.85	.35 .73
Printed	6.19	8.28		8.61	8.44	

*p< .05; **p< .01

Results revealed a small, but significant correlation between mother imitations and child MLU ($r = .31$, $p = .02$), and moderate correlations between mother imitations and child NTW ($r = .68$, $p < .001$), and NDW ($r = .62$, $p <.001$) in wordless book contexts. There was a small, but significant correlation between mother imitations and child MLU ($r = .26$, $p = .04$), and large correlations between mother imitations and child NTW ($r = .81$, $p <.001$) and NDW ($r = .77$, $p < .001$) in printed book contexts. There was a small, but significant correlation among mother expansions and child MLU ($r = .38$, $p < .02$), and large correlations among mother expansions and child NTW ($r = .73$, $p < .01$), and NDW ($r = .72$, $p < .01$) in wordless book contexts. There was a small, but significant relationship between mother expansions and child MLU ($r = .31$, $p < .01$), and large relationships between mother expansions and NDW ($r = .80$, $p < .01$), NTW ($r = .71$, $p < .01$) in printed contexts.

Paired-samples t tests were conducted to evaluate the children's output variable in wordless and print book sharing contexts. The findings are presented in Table 7. The results indicated that while the mean MLU (M = 1.10, SD = .15) and mean DNW (M = 7.64, SD = 8.32) in the wordless book sharing context was not significantly different from the mean MLU (M = 1.07, SD = .16), ($t(56) = 1.25$, $p = .22$) and mean NDW (M = 6.27, SD = 7.38), ($t(76) = 1.56$, $p = .12$) in the printed book sharing context, the mean NTW was significantly higher in the wordless book context (M = 23.77, SD = 28.35) when compared to the printed book sharing context (M = 17.48, SD = 21.43), ($t(76) = 2.34$, $p = .02$).

Table 5. Pearson Product Moment Correlation variables from wordless book.

	Child MLU	Child NDW	Child NTW
Maternal Imitations	.311 .018*	.624 .001**	.682 .001**
Maternal Expansions	.381 .003**	.724 .001**	.731 .001**
Maternal Responsiveness	.421 .001**	.773 .001**	.808 .001**

*p< .05; **p< .01

Table 6. Pearson Product Moment Correlation variables from book containing print.

	Child MLU	Child NDW	Child NTW
Maternal Imitations	.258 .041*	.768 .001**	.805 .001**
Maternal Expansions	.314 .012*	.795 .001**	.707 .001**
Maternal Responsiveness	.24 .048*	.84 .001**	.71 .001**

*p< .05; **p< .01

Table 7. Means, SDs, and p-values for child MLU, NDW, and NTW.

	Wordless Mean (SD)	Print Mean (SD)	p-value
Child MLU	1.10 (.15)	1.07 (.16)	.217
Child NDW	7.64 (8.32)	6.27 (7.38)	.122
Child NTW	23.77 (28.35)	17.48 (21.43)	.021*

*$p < .05$; **$p < .01$

DISCUSSION

The first purpose of the study was to determine whether differences were found in maternal responsiveness between two book-sharing contexts: wordless verses print. Girolametto and Weitzman (2002) suggest that parents and caregivers may naturally respond to children differently in differing contexts. In their study, Girolametto and Weitzman (2002) found that in the context of play, caregivers used more instances of imitation, labeling, expansions, and extensions as well as other language promoting strategies than they did during a parent-child book reading context. These responsive language techniques (e.g., imitation and expansion) are some of the strategies used by speech-language pathologists in early intervention programs. These strategies are also among those that speech-language pathologists use in their parent training programs designed to increase the linguistic responsiveness used by parents (Klein & Briggs, 1987; Weistuch & Lewis, 1985). In addition, research suggests that parent-child book reading contexts can be positive learning environments for children—especially for those children with speech and/or language disorders—and that exposure to story book interactions can promote linguistic growth (Kaderavek & Justice, 2002).

Thus, we posed the theory that wordless picture books may stand as a bridge between the context of play in which parents may be more responsive with their language, and the context of shared book reading containing "print" in which parents may be less responsive with their language. The results of our study indicated that the mean maternal responsivity in the wordless book sharing context was significantly greater than the mean maternal responsivity in the printed book sharing context. Reasons for this difference may be numerous, but one hypothesis is that parents may feel constrained by

the text in books, and therefore feel inhibited from parting from the story line, regardless of the child's level of language comprehension or the child's interests. While watching the mothers interact with their children during the videos in this study, the authors noted that when there was no text to read (during the wordless book portion of the videos), mothers tended to let their children take the lead on how fast or slow the book experience lasted. The mothers tended to talk about what the child was looking at and respond to what the child said; the child was the guide rather than the text.

Mothers using more responsive language with their children in the context of wordless books, suggests that speech-language pathologists may want to use wordless books as a tool for intervention. When teaching parents to use language promoting and language responsive strategies, speech-language pathologists can teach the transfer of skills already being used by the parents in certain contexts, rather than teaching parents foreign techniques. This may empower the parents. They can feel that they are already doing things right; they are just encouraged to do more of it and in different contexts.

The second aim of this study was to determine whether directives were used more frequently by mothers in one book-sharing context than the other. The results of this study indicated that the mean use of directives in the wordless book sharing context was not significantly different from the mean use of directives in the printed book sharing context. In both contexts a seemingly high number of directives were used. This information was consistent with research indicating that children with developmental disabilities tend to receive input that is more directive rather than responsive (Girolametto, Hoaken, Weitzman & van Lieshout, 2000). It is possible, that early on, parents may need to be more directive, particularly with children with language delays,

because they may not naturally provide parents with utterances that they can "respond" to. That is, parents of children with language delays in this study were equally likely to use directives, perhaps for the purpose of trying to "elicit" utterances and linguistic input from their children, in both book sharing contexts. This did not seem to hinder the use of responsive and expansive language techniques used in the wordless book sharing context.

Lastly, we wanted to explore the association between maternal responsiveness, including imitations and expansions and child language productivity (MLU, NTW, NDW). Research suggests that the use of responsive language input is associated with greater child language productivity, which includes mean length utterance (MLU) and number of different words (NDW) (Girolametto, Hoaken, Weitzman & van Lieshout, 2000). Researchers Girolametto and Weitzman, in their 2002 study, found that not only did the caregivers use more interaction promoting and language modeling strategies during play, but that the children also produced higher levels of language productivity in the same context. This suggests that there may be a relationship between maternal responsivity and child productivity.

This study examined the relationship between maternal responsiveness, imitations and expansions and child language productivity, specifically child MLU, NTW, and NDW. Findings revealed that maternal responsiveness was moderately to highly correlated with child MLU, NTW, and NDW in wordless contexts, and highly correlated with child NTW and NDW in printed contexts. In both contexts, there was a small, but significant, correlation between the mother's use of imitations and expansions and the child's MLU. In both contexts there was also a moderate to a large correlation between the mother's use of imitations and expansions and the child's NTW and NDW. So,

regardless of context (wordless book verses book containing print), maternal responsiveness was related to higher child language productivity, and the maternal use of imitations and expansions was related to more *total* words and *different* words that the child utilized during book reading contexts. When examining the output variables of the children in the two contexts, results indicated that while the children's MLU and NDW was not significantly different in either context, the NTW or *total* words that the children used was significantly higher in the wordless book context when compared to the book context containing print; there was more child talk during the wordless book interaction.

These results suggest that wordless books can be used as a tool to bridge between maternal responsive language and other language promoting strategies that are naturally occurring in play contexts to those linguistic promoting, print rich, parent-child book reading contexts. The use of wordless books could have important implications when working with diverse parents of children with language impairments.

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VITAE

Jessica Nielsen

CAREER OBJECTIVE

To obtain an position as a speech-language pathologist

EDUCATION:

B.S. in Communicative Disorders and Deaf Education, Utah State University, Logan, Utah. (May 2010) GPA: 3.93. M.S. in Speech-Language Pathology, Utah State University, Logan, Utah (expected May 2012). Current Graduate GPA: 3.83.

CLINICAL EXPERIENCE:

Pediatric practicum: articulation, language, hearing screenings, outpatient evaluations: Estimated clock hours: 200 hours. Adult practicum: dysarthria, TBI, CVA, dysphasia, and severe communication impairment: Estimated clock hours: 180 hours.

RESEARCH AND LEADERSHIP EXPERIENCE

Member of Utah Regional Leadership Education in Neurodevelopmental Disabilities (URLEND): Future Leaders in Speech-Language Pathology and Audiology, August 2010 to present. Completed over 325 observation and participation hours in didactic, clinical, and research. Presenter of Oral Presentation, American Speech Hearing Association (ASHA), Nov 2010. Presented on mother-child interactions in two different contexts: wordless books verse books containing print. Presenter at Poster Presentation, Utah Conference of Undergraduate Research (UCUR), fall 2009, National Conference of Undergraduate Research (NCUR), Spring 2010. Research assessor, UTELL-P2 Research Project for Early Intervention Research Institute, Dec 2008- Jun 2010. Conducted home visits and administered assessments and questionnaires.