INCREASING DUAL LANGUAGE LEARNING CHILDREN’S VOCABULARY: LEARNING FROM PEERS DURING SHARED BOOK READING

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By
Reiko Kawamura

Thesis Committee:
Barbara D. DeBaryshe, Chairperson
Katherine T. Ratliffe
Donna J. Grace
ABSTRACT

This multi-case study attempted to investigate how Dual Language Learning (DLL) children learn vocabulary words through shared book reading approached called dialogic reading. The study also examined potential peer-learning effects by comparing DLL children’s acquisition of book-related vocabulary when books were read to them in a one-on-one setting vs. in a small group setting with Native English Speaking (NES) peers. Four DLL and 8 NES children participated and took pre- and post- Target Vocabulary Test (TVT) that were created to assess target words from selected books. I used a crossover design in which all of the DLL children received two weeks of book reading in a single condition (the DLL child and one adult) and two weeks of reading in a paired condition (the DLL child, two NES peers, and one adult). Results indicated that as a group, children showed significant pre-to-post gains on the TVT. DLL children showed slightly larger gains in the single condition compared to the paired condition. When children’s book-reading interactions were considered, DLL and NES children showed similar rates of verbal and nonverbal behaviors except for proportions of unintelligible utterances and sentence completions. DLL children imitated more words than did NES children, whereas NES children were more likely to imitate sentences. Results suggest that one-on-one book reading may be more helpful for DLL children, at least in the initial stages of English language acquisition. Future research is needed to determine whether evidence of peer learning effects would be found if small group book reading sessions were designed to encourage DLL children to interact with their NES peers in addition to the adult reader.
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Increasing Dual language learning children’s vocabulary: learning from peers during shared-book reading

Introduction

Language is a crucial tool for human communication and interpersonal understanding. In school, much of students’ learning involves the use language. Imagine being a young child and hearing two or three different languages at home and/or school, even before having fully mastered a first language. This situation is likely to be challenging and confusing. However, in the United States, numbers of children are learning two or more languages at the same time. Children learning two languages simultaneously in the early years are called dual language learners (DLL) (Ballantyne, Sanderman, D’Emilio, & McLaughlin, 2008; Garcia, 2011; Leung, Silverman, Nandakumar, Qian, & Hines, 2011; U.S Department of Health & Human Service, 2010). Every year, more DLL children enroll in school and teachers need to understand and address the cultural and language variations within their classrooms. Due to differences in language exposure and prior experiences, DLL children tend to enter elementary school with lower levels of school readiness skills; although the performance gaps narrow over time, group differences remain evident well into most children’s elementary school years (Ballantyne et al., 2008). The purpose of this study is to examine positive and effective language development for DLL children. The goal is to eventually support DLL children and their school readiness.

According to U.S Department of Education, in 2009, 21% of children 5 to 17 years of age spoke a language other than English at home (National Center for Education Statistics, 2009; Vitiello, Downer, & Williford, 2011). Large numbers of DLL children enter Head Start programs every year as well. In 2008, 31% of children attending Head Start programs across the nation were DLL and Head Start families spoke over 140 different languages (Yanidan, 2009).
In 2011 in Hawai‘i, approximately 1,800 students enrolled in the Honolulu Community Action Program Head Start (HCAP); about 160 were DLL (Antonucci R., personal communication, August 23, 2011). DLL children are minorities in most classrooms, however their numbers are increasing every year (National Center for Education Statistics, 2009; Vitiello, Downer, & Williford, 2011, Yanidan, 2009). If schools require similar levels of school readiness for both DLL children and Native English Speaking (NES) children, alternative and additional language support maybe necessary for those with language difficulties. In another words, as the proportion of DLL children increases, schools must do more to support these children’s language learning needs(Ballantyne et al., 2008; Yanidan, 2009).

**Theoretical Framework**

How do young children learn a second language in school? Do they learn mostly from adults, especially their teachers? Is it possible for them to learn from peers? Vygotsky (1978) indicated that, “human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them” (p. 88). Vygotsky’s socio-cultural model is the primary theoretical framework in this study. His view suggests that humans use social and cultural contexts in their psychological functioning (Siegler & Alibali, 2005), and that cultural and psychological tools are used to learn and develop. Language is one of the key cultural tools individuals use to develop their thinking and interaction skills (Siegler & Alibali, 2005, Vygotsky, 1987). DLL children who are still learning their first and second languages need more language exchange and support from others than single language learners. In the course of social interactions, adults and peers who have higher language skills strengthen the language skills of DLL children. Vygotsky introduced the concept of the zone of proximal development (ZPD), which describes the gap between knowledge that children already have and
knowledge that they are able to acquire with another person’s assistance (Hogan & Tudge, 1999; Vygotky, 1978); he further suggested that learning and developing occur primarily with the assistance of others. Hogan and Tudge (1999) argued that the zone does not really exist but it is “created” by others who surround and support the one that is learning (p. 43). The ZPD is effective in learning when using knowledge or skills that the child already has, and expanding this knowledge incrementally by giving new examples, hints, modeling, explanations, and so on to the child. This concept is legitimated by studies of children who completed tasks better with another person’s support (Siegler & Alibabli, 2005; Hogan, & Tudge, 1999; Gauvain & Rogoff, 1989). In order to master and apply new knowledge independently, the support of the other is necessary. These studies, based on Vygotsky’s theory contributed to the construction of the current study to see if DLL children’s language development is better with assistance from others.

According to Tharp, Estrada, Dalton, and Yamauchi (2000), many educators and theorists favor the notion of socio-cultural theory in which learners in general are thought to build their own knowledge through interacting with others. Building on socio-cultural learning theory, Tharp and colleagues focused on learning that happens in particular activities and social contexts such as small-group activities with peers and teachers (2000). In this current study, I looked at language development in DLL children in the context of shared book reading with teacher and/or in small groups with a teacher and two peers. In reviewing the empirical literature for this study, I focused on research addressing effective language stimulation techniques and peer learning studies.

Research on Language Development
Roberts (2009) noted that language acquisition in a school setting is slightly different from language learning at home. In school, children are required to learn “academic language that is necessary for high levels of literacy learning and school achievement” (p.41). In addition, children develop new language at school through instructional opportunities with others in a structured learning setting. Roberts suggested that “group activities” (2009, p. 46) provide an effective opportunity for DLL children to interact with others and receive optimal English language exposure. Roberts and Neal (2004) conducted a study of instructional practices and DLL children’s literacy development. Two different interventions were implemented with 33 pre-school children over 16 weeks. One focused on comprehension of stories and vocabulary and the other focused on letters, phonological awareness, and rhyming. These interventions were delivered in small group settings (i.e., one adult and no more than 10 children) in order to increase explicit teacher-child interaction as well as child-child verbal interaction. At the end of the intervention, children in the comprehension focused group gained skills in the areas of English vocabulary, sequencing of stories and print concepts, whereas children in the letter focused group gained skills in the areas of writing letters and naming letters. This study suggested that small group activities are effective for DLL’s learning of literacy skills.

One of the important components of language development is vocabulary. Biemiller and Boote (2006) and Scarborough (2001) suggested that English vocabulary knowledge is one of the predictors of children’s confidence in using English and preparation for later school success. Roberts and Neal’s (2004) study above included a focus on vocabulary instruction in the comprehension-focused group. The group scored much better on the vocabulary test compared to the letter/rhyming focused group. The researchers found that selecting English target words to teach with detailed explanations and providing multiple exposures to the target words helped
DLL children gain English vocabulary. The study was relatively small, only focusing on Hmong and Spanish speaking children, however it showed that careful instruction does have an effect on DLL children’s vocabulary learning. In the study, all instruction intervention was implemented in small groups. Thus, in addition to the successful vocabulary instructions, small group format was another key element of vocabulary acquisition for young children.

According to Collin (2010), when teaching vocabulary, selecting target vocabulary to teach seems important and effective. She studied vocabulary learning through book reading, and her methods of choosing vocabulary words were unique. In her study, none of the target vocabulary words were selected from the books’ actual text, because children’s books contain less “sophisticated vocabulary” as well as less definable words (Collins, 2010, p. 88). Instead Collins chose words that were related to the story plot, and then introduced these words in the intervention several times. For example, instead of saying “bend low,” which may be stated in the book, a book reader introduced a target word “crouch” before or after reading, “bend low” (Collins, 2010). In the present study also, the investigator included target vocabulary words from the books as well as vocabulary that was not included in the text but was related to the specific stories.

What vocabulary words to choose was based on what words are useful for children to learn in school and/or at home. There was no word list that each child should know in the preschool setting. According to Beck, McKeown, and Kukan (2002), “[t]here is simply no basis for determining which words students should be learning at different grade levels” (p. 28). Regardless of whether the children are DLL or NES, they can acquire advanced words through structured instruction (Leung et al, 2011). The idea of the ZPD supports this concept because teachers can encourage children’s learning through teaching slightly above the level of the
children’s current level of vocabulary (Vygotsky, 1978). In order to decide what vocabulary words to implement in this study for DLL students, I used Beck, et al.’s queries regarding vocabulary (2002) as a reference:

- How generally useful is the word? Is it a word that students are likely to meet often in other text? Will it be of use to students in describing their own experiences?
- How does the word relate to other words, to ideas that students know or have been learning? Does it directly relate to some topic of study in the classroom? Or might it add a dimension to ideas that have been developed?
- What does the word bring to a text or situation? What role does the word play in communicating the meaning of the context in which it is used? (p. 29).

Dialogic reading is a method for addressing oral language skills in the context of small-group shared book reading (Arnold, Lonigan, Whitehurst, & Epstein, 1994; Blewitt, Rump, Shealy, & Cook, 2009; Roberts, 2008; Valdez-Menchaca & Whitehurst, 1992; Whitehurst et al., 1988; Whitehurst, et al., 1994). Dialogic reading includes child-directed conversation, in which a reader asks children questions related to the story with the goal of strengthening children’s vocabulary knowledge and language use. The reader can also go beyond the story to make connections to children's own experiences; this helps children use decontextualized language, the ability to talk about things that are not physically present.

According to Blewitt et al., (2009), dialogic reading strategies may include:

- pointing questions which include having children point to a certain picture,
- yes/no responses to have children distinguish whether the prompt is correct or wrong,
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- *wh-questions* that include what, where and who
- *distancing, prediction, how and why questions* that ask the children to compare, contrast, or make links to the child’s past experiences.
- *vocabulary scaffolding* to explain the meaning of new words that children encounter in the book.

Lower-level questions that are easier to answer include pointing questions and yes/no responses. Medium-level strategies include wh-questions. Finally, higher-level prompts include predictions and applications of the story to the child’s life (Blewitt et al., 2009). The reader selects a level of questions and prompts to use that match the child’s ability to answer. Thus, the reader would tend to use higher-level strategies with older or more linguistically advanced children, with concepts that are more familiar to the children, and with repeated readings of the same book.

Feedback and praise are important in dialogic reading; these strategies encourage children and help them feel a sense of competence in their learning (Blewitt et al., 2009; Valdez-Menchaca & Whitehurst, 1992; Whitehurst et al., 1988; Whitehurst et al., 1994). Feedback also enhances language development when this feedback includes not only praising what the child has said, but also extending what the child said and/or adding additional information (Whitehurst et al., 1994).

A final goal of dialogic reading is to help young children become storytellers (Whitehurst et al., 1988). In the process of a dialogic reading session, children get an opportunity to have an extended conversation about the story, to be an “active listener,” to take turns and initiate conversation (Tsybina & Eriks-Brophy, 2010, p. 540). Many studies show that dialogic reading
increases preschool children’s receptive and expressive vocabulary. Some of these studies are reviewed below.

**Studies of Dialogic Reading and Vocabulary Learning**

A study by Whitehurst et al. (1988) indicated that a group of children whose parents read books with a dialogic reading style improved both expressive and receptive vocabulary skill compared to a control group. Thirty middle- to upper-social economic status children (age range from 21-25 months) with typical language development were randomly assigned to one of two groups. Parents in both groups were asked to read to their children and audio taped their home story time for 4 weeks. Parents in the control group were given no additional instructions. Parents in the dialogic reading group were given two short training sessions. They were encouraged to use what-questions, description questions, open-ended questions, correction, feedback and expansion (Whitehurst et al., 1988). The posttests showed that experimental group used more repetition and conversation about the book compared to the control group. Also the posttest Expressive One-Word Picture Vocabulary Test (EOWPVT) and Illinois Test of Psycholinguistic Abilities (ITPA) data showed that those who received the dialogic reading sessions at home scored significantly higher than the control group ($p = .009$ and $p = .0005$) respectively. After nine months, EOWPVT and ITPA follow-up scores showed mean differences from the posttest, however these were no longer statistically significant.

This study raised questions from other researchers regarding vocabulary acquisition for more diverse preschoolers, such as low-income or DLL children. Also this study lacked the pretest stage to document the participants’ levels before starting the intervention.

Valdez-Menchaca and Whitehurst (1992) corrected the previous shortcomings and found similar results. Twenty children (aged from 27-35 months) were selected from a day-care center
in Mexico. All participants were from low-income families. Children were pretested and randomly assigned to the dialogic reading condition or to an attention control condition in which the children engaged with an adult in educational games. The same researcher led all the reading and control sessions. The researchers used similar dialogic reading strategies as Whitehurst et al. (1988): children received one-on-one dialogic reading intervention for six to seven weeks. The posttest showed higher vocabulary acquisition for the experimental group than the control group. Some of the shortcomings of this study were that the sample size was small and the intervention period was short. The control group did not receive any storybook reading, which makes it difficult to say whether the benefit to the experimental group was specifically due to the dialogic reading style, or whether any storybook style might have helped the experimental group improve vocabulary skills.

In order to show the direct, practical application in early education settings, Whitehurst et al. (1994) conducted another study of dialogic reading for English speaking children from low-income families who attended preschool. This time, they increased the number of participants and within the classrooms divided children into three groups--a control, a school reading group, and a home and school reading group (Whitehurst et al., 1994). A difference from the previous two studies of dialogic reading was that in addition to the book reading by parents in the home and school reading groups, part of the intervention occurred in a school setting and included reading sessions with the children’s regular teachers. The school and home-school groups read the same books in order to control for differences that could be due to book selection. The intervention continued for six weeks followed by posttest and follow-up tests six months later. Teachers were asked to read to the children daily for ten minutes in small groups of no more than five children.
The study found that overall the two experimental groups scored higher on both book-specific vocabulary and a standardized test of expressive vocabulary. The home and school group scored the highest on expressive vocabulary and there were no group differences on receptive vocabulary. This study again supported that dialogic reading is effective in vocabulary development and the dialogic reading by parents at home and teachers in the classroom is effective in vocabulary learning. Thus in order to enhance children’s vocabulary improvement, implementing dialogic reading into the classroom curriculum in addition to home story time can be helpful.

As these three studies found, dialogic reading can have a positive effect on young children’s vocabulary learning. Group size should be either one-on-one (Blewitt et al., 2009; Whitehurst et al., 1988; Whitehurst et al., 1992) or small groups, such as 2-3 children (Collin, 2010; Roberts, 2008; Whitehurst, et al., 1994) to be effective. In school settings, one-on-one may be too difficult to carry out. Because these studies focused on English speaking children, more studies are needed to understand whether dialogic reading is effective for DLL children in relationship to English language development.

**Dialogic Reading and DLL Children.** Since vocabulary knowledge is one of the predictors of later academic success (Biemiller, 2010; Blewitt et al., 2009), it is important for educators to understand the effectiveness of dialogic reading for DLL children and how it can be embedded in the curriculum.

Roberts (2008) conducted a study on the effects of storybook reading on DLL children’s vocabulary. Forty-four preschool children from low socioeconomic families participated. Half of them spoke Spanish at home and the other half spoke Hmong. Their mean age was slightly less than five years. The researchers selected target vocabulary words and created their own
books in English, Spanish and Hmong languages. Children in group one were read to by their parents in their native language at home and by their teachers in English at school, whereas those in group two were read books in English at home and at school. All of the DLL children’s receptive vocabulary skills were tested by the Peabody Picture Vocabulary Test third version (PPVT-III) and IDEA oral language proficiency test before and after the storybook sessions. Even though there were two groups, they used a crossover design so that all groups received both treatments by the end of the study (Roberts, 2008).

This study showed a possible advantage to reading in the child’s home language for English vocabulary acquisition. Both first and second session, the particular group read to in their home language at home and in English in school scored slightly higher than when they were read in English both at home and school. Everybody received both treatments either first or second session, so all groups increased their vocabulary skills in the post-test.

The difficulty parents had reading books in English compared to reading them in their native language may have affected DLL children’s performances on the posttest. Parents commented that they preferred reading in their native language rather in than English because coming up with questions and understanding and defining new vocabulary to the children while reading was much easier in their native language (Roberts, 2008).

Another study suggested that repeated exposure to certain target words helps DLL children learn more vocabulary (Collins, 2010). The participants were 42 males and 38 females. All of them were native Portuguese speaking four- to five-year-old children who were in a second language school setting (English). Books were carefully selected, such that the researchers selected unfamiliar books to remove the effects of prior knowledge. After six weeks, the experimental groups that received either intensive small group (two to three children)
dialogic reading in school only or that received small group dialogic reading at school and home
storybook reading scored higher on a target vocabulary test than did the control group who
received non-dialogic reading (Collins, 2010). This study showed the effectiveness of dialogic
reading on DLL children’s vocabulary learning, similar to the past studies of NES children’s
vocabulary development (Arnold et al., 1994; Whitehurst et al., 1988; Whitehurst et al., 1994).

A particular interest in the present study is the question of dialogic reading effectiveness
when both NES children and DLL children are in the same small group. If dialogic reading is
helpful for general vocabulary learning, there is a question to ask: Does combining DLL and
NES children in the small group dialogic reading positively enhance vocabulary knowledge for
both? To my knowledge, no studies have documented the differences or similarities between
how NES children and DLL children learn vocabulary through dialogic reading when they are in
same reading group. Furthermore, it would be interesting to know more about the interactions of
DLL children and NES children in reading sessions; this would provide clues about the
mechanisms of possible peer effects and learning.

**Peer Effects on Language Development**

In the present study, I am interested in looking at the effects of dialogic reading on DLL
children’s vocabulary learning with and without the presence of NES children. Even when they
attend schools in the U.S, some children may have multi-linguistic backgrounds. These DLL
children are likely to learn English because instruction, play-time, and other everyday routines
are usually conducted in English. Usually children prefer to use the language that is spoken in
school; thus if teachers or many children speak in English, DLL children will attempt to learn to
speak English in school regardless of their learning speed (Oller, Jarmnlowicz, Pearson, & Cobo-
Lewis, 2011). Oller et al. (2011) showed that DLL children learn vocabulary words in a similar
order as NES children do, so it is possible that DLL children may be able to “catch up” with NES children while learning together which Leung et al. (2011) called “closing the gap” (p. 425). Although there are only a few studies about peer effects on language acquisition in preschool settings, some well-designed studies suggest that peer effects can be quite strong.

Henry and Rickman (2007) looked at peer effects on children’s academic development over time. They measured children’s cognitive, pre-reading, expressive language, naming and counting skills at the beginning of the preschool year and the beginning of the kindergarten school year. Even after controlling for individual child characteristics, family background, and school resources, they found that an individual child’s development was significantly predicted by the average skills of their classroom peers. In other words, children benefit when they are in a classroom of children with strong early academic skills.

A similar study done two years later suggested that peers’ initial expressive language skills helped the receptive and expressive language development of other children (Mashburn, Justice, Downer, & Pianta, 2009). However they found different results. The researchers recruited 453 classrooms and selected four children from the each classroom, for a total of 1,812 preschool children. Children were observed for receptive and expressive language development. The researchers also measured characteristics of classrooms including the emotional support provided by the teachers using the Classroom Assessment Scoring System (CLASS) (Mashburn et al, 2009: CLASS, Pianta, La Paro, & Hamre, 2004).

They found that if children have high initial expressive language skills, they are more likely to gain receptive and expressive language skills from their advanced peers (Mashburn et al., 2009). Furthermore, those who were in the classroom with high CLASS were scores affected positively on receptive language and expressive language skills (Mashburn et al., 2009).
contradicts with other research (McGregor, 2000). They called this finding the Matthew effect (Mashburn et al., 2009). Even though the finding was small in magnitude, peer effects were significant for both receptive and expressive language development. Because these researchers did not implement any intervention in the classrooms, they were able to observe the natural setting to discover some peer effects in classrooms.

A third study showed how skilled children can be tutors for less skilled peers with only a small amount of teacher support. McGregor (2000) conducted a study of narrative skill development in English-speaking preschool children. The first two-stage studies indicated that children were able to gain narrative skills after hearing their peers’ story telling. Moreover, children were able to include conjunction words and vocabulary in the stories to make them more story-like than before the intervention. In the last stage of the study, the researchers set up two of the tutor and tutee pairs into an intervention group, and had each pair tell a story to other. In this stage, a clinician joined the group and asked questions to enhance more in depth understanding of the stories.

The findings showed that compared with the control group, both tutees increased their use of different elements of story telling. Also, as the author noted, tutors did not show any decline in their skills after interacting with their less advanced peer. This finding is important in relation to the present study, because it shows that there is little risk of declining development in tutors. It should be noted, however that the participants in the previous study were not DLL children. We do not know what effect different language use may have in relation to possible peer effects.

My study addressed differences in English vocabulary learning during dialogic reading for DLL children in a small group that includes NES children compared to reading with the
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teacher alone. I hypothesized that both DLL and NES children learn vocabulary through small-
group dialogic reading. I also hypothesized that DLL children would learn more target
vocabulary when peers are present during dialogic reading than when reading with an adult only.
If peers can positively influence DLL children’s vocabulary learning, it will benefit DLL
children if teachers create opportunities for cooperative peer learning in book-reading sessions.

Method

Participants

The study was implemented in classrooms of the Honolulu Community Action Program
Head Start Program (HCAP). Three classrooms came from the pool of nine sites that were
participating in an Early Reading First project through the University of Hawai‘i Center on the
Family. The intervention was held in a quiet area inside or outside where classroom teachers
could see the children. The author (myself) delivered all of the intervention sessions with either
one selected DLL child (single condition) or the same DLL child with one or two selected NES
children (paired condition).

Participants were four DLL children age 3 to 4 years and eight NES children age 3 to 4
years. This multiple case study allowed the investigator to closely look at peer effects and DLL
children’s vocabulary learning from dialogic reading. The DLL children were selected based on
scores from the Peabody Picture Vocabulary Test fourth edition (PPVT-IV) (Dunn & Dunn,
2007) and the Pre-IPT English Oral Language Proficiency Test fourth edition (Pre-IPT
Oral, 2010). Eligible DLL children had standard scores on the PPVT-IV of 78 or less (at or
below the 10th percentile), and Pre-IPT results of levels 1 or 2 (i.e., non-English speaking or
limited English speaking as determined by the test guidelines). Both tests were administered at
the beginning of the school year by a trained test administrator. Participants were also preferably
first year DLL children in the Head Start Program; their first language was different from English, English exposure at home was low according to parents’ reports; and their parents consented for their child to participate in the study. The selection of NES children was based on having a standard score on the PPVT-IV score of 90 or above (at or above the 25% percentile) and English was their first and only language, again based on parent report. From those children with consent who meet these criteria, we picked NES participants that the teacher reported were most interested in books and reading aloud. The goal was to select peers who would provide the most facilitative language role models. After selecting NES peers, DLL children were paired NES children, this pair-mapping strategy came from McGregor (2000). I paired with the lower language skilled DLL child and two high language skilled to create a reading group for the paired condition.

Materials

Four books were selected for use in the study. These books were chosen because they were suitable for dialogic reading, e.g., they included colored illustrations, did not have too much text, and contained vocabulary words that were expected to be novel to the most of the children (DeBaryshe & Gorecki, 2005). In particular, I looked for books that included illustrations of suitable vocabulary words and in which the illustrations clearly explained the plot. My intention was to select books that were unfamiliar to the children, in order to reduce internal validity challenges, i.e., to avoid children being exposed to the target vocabulary outside of my intervention sessions. However, I included one book that had already been used in the classroom. The reason was that there were a few new books that included all of the desirable characteristics for the purposes of the current study. The list of the books is included in Appendix A. Books were divided into two sets (see Procedures section for information about
counterbalancing). Four target vocabulary words were selected from each book (see Appendix A) including a combination of nouns, verbs, prepositions and adjectives. Target words were selected following the criteria suggest by Beck et al. (2002). Twelve of the target words were taken directly from the book text. An additional four words did not appear in the text but were related to the story and used in book-related discussions to enhance comprehension.

Dialogic reading scripts to guide the adults’ reading interactions were developed in advance (see Appendix B). The scripts looked similar to those used in a study of parents’ dialogic reading (DeBaryshe, 1987). Scripts were followed to ensure that (a) each child was exposed to similar interaction patterns including consistent use of dialogic reading strategies and exposure to target vocabulary words, (b) intervention conditions were distinct, and (c) both DLL and NES children received scaffolding appropriate to their level of English competence. Questions and comments were written for each book. Separate scripted content was directed to DLL vs. NES children. DLL children were given the same set of questions and comments for a particular book whether it was read in the single or group condition. When a book was read in the group condition, I also read a set of scripted questions and comments that were directed towards the NES peers.

The levels of questions varied across each book. Questions in the first part of the story were lower level, such as yes/no questions and questions based on pointing as a response. The numbers of prompts from each book ranged from 18 to 31 and comments ranged from 6 to 12. Additional prompts (two to six questions) were only harder and asked in the presence of NES children. One of the examples harder questions is, asking why something happened (i.e., Why did Peter to jump?). The purpose for the addition of prompts only in the paired condition was to retain attention and avoid disengaging NES children during the story. Some questions had to be
challenging for the NES children to maintain interests. Furthermore, readers have to repeatedly be exposed to target vocabulary during the sessions in order to optimize opportunity to learn the words.

Feedback could not be preplanned, because it must be responsive to what a child said and how he or she reacted to the story (DeBaryshe, 1987). Thus there was no feedback in the script. However in order to keep consistency on the feedback usage, some degree of control was necessary. Thus, every time a child made a comment or responded to a prompt, I attempted to give the child feedback, either praising, or commenting.

**Measures**

Parents provided informed consent and filled out a questionnaire that included demographic information (gender, ethnicity, income, family members, education, duration of living in the USA), frequency of book reading at home, and home language use (see Appendix C). Characteristics of parents and the family members and educational backgrounds need to be close to homogeneous. Because family factors may also affect the result of peer effect in dialogic reading intervention, understanding of children’s background information was important.

To select children eligible to be in the study, participants’ initial receptive vocabulary skills had been measured with the PPVT-IV and/or Pre-IPT administered by a trained tester from the University of Hawai‘i. The PPVT-IV is a norm-referenced measure of Standard English receptive vocabulary knowledge (Dunn & Dunn, 2007). There are A and B forms with PPVT-IV correlation of .84. Testers can give either test form first and the next test forma minimum of 6 months later. Test-retest reliability on the PPVT-IV for ages 4-5 ranged from .92 to .96 (Dunn & Dunn, 2007). PPVT-IV scores were used to select both DLL children and NES children. Their
PPVT-IV scores were the basis of selection, thus for NES children, the higher the score in the PPVT-IV, the more likely they were to be selected in the intervention pair group. Pre-IPT tests DLL children’s understanding and communication skills in English. They are divided into different group levels (A through E) and are questioned until a child cannot answer or answer, or answer incorrectly. Based on the highest level that the child attained, the language proficiency is calculated. The level that the child was able to answer would be the level of his/her English level, and it can be categorized into different three proficiency levels using a guidance chart on the manual, which range from 1 (Non-English speaking), 2 (Limited English speaking), to 3 (Fluent English Speaking) (Pre-IPT Oral, 2010). This test was only administered to DLL children.

**Target Vocabulary Test.** The Target Vocabulary Test A and B (TVT) was created and used as pre- and post-test measure of book-specific target vocabulary words. The TVT contained three types of items: receptive, expressive and transfer. All of the selected vocabulary words were assessed in each of these three modes. For the receptive language section, the child pointed to the correct picture out of four pictures from the book. Three out of four pictures from the book were foils that did not show the target vocabulary word but were selected from the same book. All the pictures should be selected from the book in order to prevent the children correctly picking the target word based on the familiarity of the picture. For the expressive language section of the test, I asked children to say the target vocabulary word. For example, if the target word was jumping the child was shown a picture of a girl jumping and was asked to describe what the girl in the picture was doing. Again, the stimulus pictures for the expressive items were taken from the book sets. Transfer items assessed whether children could apply the words they learned in a different content. Four pictures were selected (not from the book) and
the child pointed to the correct picture. Here children were not using familiarity of the pictures from the book but transferring the vocabulary knowledge from the book to different examples. The answer sheet is in Appendix D.

**Video Coding Software.** All reading sessions were videotaped and each interaction of a DLL child with the investigator or/and NES child was coded using software called INTERACT from Mangold International (Mangold Internaitonal GmbH, 2011). This software allowed coding multiple behaviors of each participant, including overlapping actions such as two people talking at the same time. Because I was primarily interested in the frequency of behaviors, I analyzed the number of target behaviors that occurred instead of duration of the each behavior.

The coding system definitions are included in Appendix E. The book-related speech of both DLL children and their peers were coded along two dimensions. The first dimension related to the spontaneity of the child’s behavior, and included five categories: response to questions, repetition/imitation, initiate, no answer, and other. A response was coded when the child answered a prompt I initiated. The accuracy of the response was not taken into consideration. Repetition/imitation was used when a child mimicked what another person did or said. Initiate meant that a child made a spontaneous comment or action. Other was used for miscellaneous behaviors including distractions, behavior management and other speech or behaviors not related to book reading conversations.

The second dimension related to language complexity and had six levels: gesture, unintelligible, vocalization, a single word, a phrase or a sentence. I coded an utterance as “unintelligible” if the word, phrase or sentence was not understandable. Gestures included nonverbal behaviors such as pointing, waving, or pantomime. If a child made a non-word sound that carried meaning, such as “mmmm” for good, this was coded as vocalization. Finally, single
word utterances, incomplete sentences, and full or multiple sentences were coded as word, phrase, or sentence, respectively.

A difference between a phrase and a sentence is that a sentence contains a noun, verb and other nouns or adjectives with a complete stop, whereas a phrase does not include verb. For example, if a child said, “It is like a rainbow,” The behavior would be coded as a sentence. On the other hand, “Running around the park,” would be considered as a phrase. If a child appeared to be saying a complete sentence that was not understandable from the middle to the end of the sentence, I coded the utterance as both “sentence” and “unintelligible.” Behaviors could happen simultaneously. For example, a child may initiate a sentence while she also points to the picture. In that situation, the behavior was coded as “initiate/gesture” and “initiate/sentence”. If a child made the same comment over and over, because the reader did not notice that the child was speaking, the utterance was coded as one behavior. On the other hand, if I interrupted or responded to a child’s attention, and the child then continued to repeat herself, the child’s utterance was coded as two behaviors (e.g., two “initiate sentence”). Examples of the coding are in Appendix E. When the child was stuttering while making a sentence to answer, the stuttering word, phrase, or sentence was still counted as one response, because there was her intention to supposedly interact with the person one time.

**Reliability.** Inter-rater reliability was calculated to determine the consistency of video coding between the investigator and another rater. For training, another rater coded one video together with the investigator, and two videos alone. Both raters discussed behaviors from the videos if there were discrepancies. After the second coder training, each person independently coded 6 videos, which was about 12.5% of the total videos in this study. Reliability scores were calculated using the intraclass correlation coefficient. According to Shrout and Fleiss (1979),
there are several ways to calculate the intraclass correlation coefficient (ICC), however researchers have to apply an appropriate formula in order to obtain accurate reliability. In this study, I used SPSS to compute reliability using the two-way mixed model for absolute measurement. This routine uses the formula $MS_{\text{Bet sub}} - MS_{\text{W/in sub}} / MS_{\text{Bet sub}} + (k-1) MS_{\text{W/in sub}}$ where $k$ is the number of raters (Bartko, 1966; Howell, 2002).

Intra-rater reliability on the video coding is shown below (Table 1). Most behaviors were coded with high reliability compared to the criterion level of .80. Three codes had unacceptable reliability (no answer, other, and vocalization) and were not included in the analysis of project results.

Table 1

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Response</th>
<th>Mimic</th>
<th>Initiate</th>
<th>Gesture</th>
<th>Unintelligible</th>
<th>Word</th>
<th>Phrase</th>
<th>Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC</td>
<td>.94</td>
<td>.78</td>
<td>.97</td>
<td>.97</td>
<td>.91</td>
<td>.94</td>
<td>.86</td>
<td>.97</td>
</tr>
</tbody>
</table>

Procedures

The dialogic reading intervention took 10-15 minutes per session, and occurred three times a week for a total of four to five weeks including pre and posttests. During the first two weeks (period 1), two DLL children received paired group intervention sessions and the other two DLL children received single group sessions. Paired group sessions included the investigator as a reader, the DLL child, and two peers; the three children remained the same throughout the study. Single group readings included the researcher and the DLL child. The investigator followed the prepared scripts when implementing the dialogic reading sessions.

Before and after each session, all of the participants took the TVT that was matched with the book set they heard. In order to avoid variability of the story level, I counter-balanced
the book sets. Half of the children started with book set A, and the other half started with book set B (see Appendix F for more detail).

The next two weeks (period 2) was the other way around. The two DLL children who received paired group dialogic reading session received single sessions, whereas the other DLL children received paired group sessions. Thus those who heard book set A during the first two weeks heard book set B, and vice versa. Again after the two weeks, all of the 12 children took TVT that corresponded to the book set they heard.

My role was to participate in the whole interventions. I assessed the pre- and post- to all of the children, and read books while videotaping using a tripod. Also I analyzed the TVT scores and coded children’s behaviors. My relationships with the children and their families were only from the research purpose background.

**Results**

**Fidelity.**

It was important to examine how accurately I followed the scripts during the book reading sessions. I watched each video and compared the reader’s interactions to the appropriate script. Each scripted prompt or comment was coded as “yes-given,” “paraphrased,” or “no-not given.” A paraphrase was defined as a prompt that did not direct follow the words written in the script but carried a highly similar meaning. For example, the actual script may say, “What did he want to show his mother and father?” but I asked “What did he show his mother and father?” Each paraphrase was counted as equivalent to a “yes-given” in computing fidelity. It is the same as following scripts because in the natural conversation, people do not usually follow the scripts but exchange language depending on the children’s behaviors, environment, and flow of the reading time.
Fidelity was calculated by taking the sum of yes-givens and paraphrases divided by the total possible prompts and comments from each script. The average fidelity scores across all 48 videos was 75%. In another word, the average of 75 percent of time, I followed the script.

**Target Vocabulary Difficult Across Books**

Children’s knowledge of words from the four books was compared to examine the word difficulty level across titles. Children’s pretest TVT scores for each book were compared using a multivariate ANOVA with the four pre-test scores as the multiple dependent variables. The test was non-significant, indicating that the target vocabulary from each book had similar difficulty levels ($n = 12, F (3,9) = 1.11, p = .394$). See Table 2 for descriptive statistics of the number of participants ($n$), means ($M$), and standard deviations ($SD$s). Furthermore, these results show that the target words were partially familiar to the participants, since they were able to answer some questions correctly.

Table 2

<table>
<thead>
<tr>
<th>Book</th>
<th>$n$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book 1 (set A)</td>
<td>12</td>
<td>7.2</td>
<td>3.16</td>
</tr>
<tr>
<td>Book 2 (set A)</td>
<td>12</td>
<td>7.9</td>
<td>3.18</td>
</tr>
<tr>
<td>Book 3 (set B)</td>
<td>12</td>
<td>8.0</td>
<td>1.91</td>
</tr>
<tr>
<td>Book 4 (set B)</td>
<td>12</td>
<td>7.8</td>
<td>2.82</td>
</tr>
</tbody>
</table>

**Changes in Vocabulary Knowledge**

**Vocabulary Growth in DLL and NES Children in Paired Reading Sessions.** Data from the TVT versions A and B were combined to create a single pre- and posttest vocabulary scores rather than considering versions A and B as separate tests. This reduced the number of dependent variables and increased the possible range and variance of the total score. Both TVT A and B were highly correlated, which argued in favor of combining the two versions into a
single score. This analysis helped me understand the effectiveness of book reading sessions in a small group. Change over time was tested using a repeated measures mixed model ANOVA with DLL vs. NES children as a between-subjects factor and time as the within-subject factor. Analysis revealed that exposure to book reading sessions in the paired condition had positive effect on learning target vocabulary words. Descriptive statistics on children’s pre- and post-test scores for paired condition are shown in Table 3. When looking at means of pre- and post-tests, NES children demonstrated greater vocabulary word knowledge on the TVT on both pre- and post-test than DLL children, ($M_{pre} = 18.2$ vs. $11.5$ and $22.0$ vs. $14.5$ at pre- and posttest, respectively).

Table 3

Comparison of TVT Scores from DLL and NES Children Pre- and Post-Tests in the Paired Condition

<table>
<thead>
<tr>
<th>Variables</th>
<th>$n$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre NES</td>
<td>8</td>
<td>18.2</td>
<td>2.66</td>
</tr>
<tr>
<td>Pre DLL</td>
<td>4</td>
<td>11.5</td>
<td>3.31</td>
</tr>
<tr>
<td>Post NES</td>
<td>8</td>
<td>22.0</td>
<td>1.51</td>
</tr>
<tr>
<td>Post DLL</td>
<td>4</td>
<td>14.5</td>
<td>6.56</td>
</tr>
</tbody>
</table>

Results indicated signified main effects for children’s group (DLL or NES) and time comparisons and no significant children’s group by time interaction. Collapsing across pre- and posttest, there was a significant difference in the scores of DLL and NES children ($n = 12$, $F(1,10) = 14.74$, $p = .003$). NES children had more knowledge about the target words than did the DLL children ($M_{pre} = 20.1$ and $13.0$, respectively). Results of the time effect ($n = 12$, $F(1,10) = 13.86$, $p = .004$) showed that on average, children scored 3.5 points higher at posttest ($pre M = 14.85$, $post M = 18.25$). The time by group interaction was not statistically significant, ($F(1, 10)$
which demonstrated that both DLL and NES children increased their target word knowledge about the same amount.

**Paired and Single Reading Sessions.** The averages of DLL children’s pre- and post-tests were calculated in the single and the paired conditions (See Figure 1 and Table 4). This analysis allowed comparison DLL children’s target vocabulary development during the two different conditions.

*Figure 1*

Pre- and Post-Test Vocabulary Scores for DLL Children in Single and Paired Reading Conditions.

![Graph showing vocabulary scores for single and paired conditions](image)

The results from two-way repeated measures ANOVA indicated a marginal significance in the condition comparison, and no significant main effects for time or the condition by time interaction. Figure 1 shows the means for target word knowledge in both conditions over time. Inferential statistics did not show a significant difference between pre- and post-test (pre- $M = 9.63$, post- $M = 14$, $F (1,3) = 1.39$, $p = .32$). The condition effect did not quite reach levels of conventional significance ($n = 4$, $F (1,3) = 7.03$, $p = .08$). However, with such a small sample size, there is very limited power for detecting group differences. Thus contrary to my hypothesis, DLL children did not show more vocabulary growth in the paired condition. In fact,
the means were in the opposite direction, with children showing a trend in the direction of higher scores in the single condition, averaging across the two assessment time points (paired $M$ = 10.63, single $M$ = 13.5). Although the mean gains were about 3 points in the paired condition and five points in the single condition, the condition by time interaction was not statistically significant ($F(1,3) = 3.93, p = .16$). By statistical convention, DLL children showed a similar amount of learning in both conditions.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single pre</td>
<td>4</td>
<td>7.75</td>
<td>4.99</td>
</tr>
<tr>
<td>Single post</td>
<td>4</td>
<td>13.5</td>
<td>5.45</td>
</tr>
<tr>
<td>Paired pre</td>
<td>4</td>
<td>11.5</td>
<td>3.32</td>
</tr>
<tr>
<td>Paired post</td>
<td>4</td>
<td>14.5</td>
<td>6.56</td>
</tr>
</tbody>
</table>

**Analysis of Knowledge Type.** DLL children’s scores were analyzed across word knowledge type (receptive, transferring, and expressive) using a two-way repeated measures ANOVA with time and word types were within subject factors (see Table 5). The purpose of this analysis was to examine and compare DLL children’s target vocabulary development and what types of words they learned better. There was a statistically marginal time effect, indicating that children had slightly higher total posttest scores (pre $M$ = 6.35, post $M$ = 9.33, $F(1,3) = 7.03, p = .08$). There was a significant main effect for word type ($F(2,2) = 55.77, p = .018$). Post-hoc Bonferroni tests indicated that children’s expressive knowledge scores ($M$ = 4.58) were lower than their receptive ($M$ = 9.5, $p = .004$) and transferring scores ($M$ = 9.5, $p = .034$). Finally, there was no time by word type interaction ($F(2,2) = .430, p = .70$). In other words, children showed similar gains for each word type over time.

Table 5
Comparisons of DLL Children Pre- and Post-Test Scores Divided into Three Word Types

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Receptive</td>
<td>4</td>
<td>7.55</td>
<td>1.50</td>
</tr>
<tr>
<td>Pre Transferring</td>
<td>4</td>
<td>8.25</td>
<td>4.03</td>
</tr>
<tr>
<td>Pre Expressive</td>
<td>4</td>
<td>3.25</td>
<td>2.87</td>
</tr>
<tr>
<td>Post Receptive</td>
<td>4</td>
<td>11.25</td>
<td>3.86</td>
</tr>
<tr>
<td>Post Transferring</td>
<td>4</td>
<td>11.25</td>
<td>3.59</td>
</tr>
<tr>
<td>Post Expressive</td>
<td>4</td>
<td>5.50</td>
<td>3.70</td>
</tr>
</tbody>
</table>

**Book-Reading Interactions**

Each book reading session was video recorded and the videos were analyzed through coding using the INTERACT package (Mangold Internaitonal GmbH, 2011). All of the classified behaviors: response, mimic, initiate, gesture, unintelligible, word, phrase, and sentence during the book reading sessions were coded and the total number of behaviors as well as the proportion of each behavioral category were computed for each child across six book reading-sessions. The reason for the use of proportions was to allow comparisons from one book reading session to the other book reading sessions. Because there were four different books and four different number of prompts and comments on scripts, as well as other variables such as features of each group and time of a session, it would be inaccurate to compare actual frequency numbers of behaviors; instead proportion showed more accuracy of comparisons.

**Book Reading Behavior of DLL vs. NES Children.** First, I ran a series of one-way ANOVAs to compare the behaviors of DLL and NES children. I compared both the total number of behaviors and proportions of behavior in each category.

Table 6

*Means, Standard Deviations, and F-tests on Behavioral Data for DLL and NES Children in the Paired Reading Condition*

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>F (1.10)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>NES</td>
<td>29.56</td>
<td>10.75</td>
<td>.268</td>
<td>.62</td>
</tr>
</tbody>
</table>
Total behaviors, response, mimic, initiate, gesture, word, and phrase did not have a sufficiently large $F$ to reject the null hypothesis. That is, there were no significant differences between DLL and NES children’s book reading behavioral outputs for both total behaviors and for the proportion of six of the eight discrete behaviors. Table 6 shows a significant difference behavior outputs under the unintelligible and sentence categories ($F(1,10) = 11.26, p = .007, F(1,10) = 11.19, p = .007$ respectively). DLL children had a higher proportion of unintelligible utterances whereas NES children used a higher proportion of sentences.

**Book-Reading Behavior Of DLL Children in The Single vs. Paired Conditions.** Next, I was interested to know each DLL child’s behaviors across the 6 single and 6 paired sessions. DLL children’s condition comparisons were calculated using a series of nine repeated measures ANOVAs. Table 7 shows the means and $SD$s of the each behavior. All means other than total behavior are expressed as proportions.

Table 7

<table>
<thead>
<tr>
<th></th>
<th>DLL</th>
<th>NES</th>
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<th>$p$</th>
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</thead>
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<td><strong>Unintelligible</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NES</td>
<td>.04</td>
<td>.00</td>
<td>1.62</td>
<td>.23</td>
</tr>
<tr>
<td>DLL</td>
<td>.00</td>
<td>.00</td>
<td>11.26*</td>
<td>.007</td>
</tr>
<tr>
<td><strong>Word</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NES</td>
<td>.24</td>
<td>.07</td>
<td>1.62</td>
<td>.23</td>
</tr>
<tr>
<td>DLL</td>
<td>.30</td>
<td>.08</td>
<td>11.19*</td>
<td>.007</td>
</tr>
<tr>
<td><strong>Phrase</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NES</td>
<td>.11</td>
<td>.03</td>
<td>.27</td>
<td>.87</td>
</tr>
<tr>
<td>DLL</td>
<td>.18</td>
<td>.08</td>
<td>11.19*</td>
<td>.007</td>
</tr>
</tbody>
</table>

*significant differences

---

**Comparisons of Behavior Outputs Between DLL Single and DLL Paired Conditions (n=4)**

<table>
<thead>
<tr>
<th></th>
<th>DLL</th>
<th>NES</th>
<th>$F$</th>
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</tr>
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<tr>
<td><strong>Response</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NES</td>
<td>.47</td>
<td>.11</td>
<td>1.41</td>
<td>.26</td>
</tr>
<tr>
<td>DLL</td>
<td>.49</td>
<td>.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mimic</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>NES</td>
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<td>.05</td>
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<tr>
<td>DLL</td>
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<td>.03</td>
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<td></td>
</tr>
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</tr>
<tr>
<td>NES</td>
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<tr>
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<td>DLL</td>
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<td>11.26*</td>
<td>.007</td>
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<tr>
<td>DLL</td>
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</tr>
<tr>
<td><strong>Word</strong></td>
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<tr>
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<tr>
<td>DLL</td>
<td>.11</td>
<td>.08</td>
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</tr>
<tr>
<td><strong>Sentence</strong></td>
<td></td>
<td></td>
<td>11.19*</td>
<td>.007</td>
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<td>NES</td>
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<tr>
<td>DLL</td>
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</tbody>
</table>
None of the statistical analyses showed significant differences in behaviors between DLL children in single and paired conditions, probably due to such a small sample size. Thus, I examined possible directions of the means of each behavior. Total behavior frequency scores tended to be shown more in the single condition, which may have been the opportunity for children to talk and interact with the reader in the single condition. Similarly, the mean proportion of response behaviors occurred more from the DLL children during the single conditions. On the other hand, mimicking and initiating behaviors were expressed more by DLL children during paired conditions. Other behaviors, such as gestures, or using words, phrases, and sentences showed almost the same mean proportions with both single and paired conditions.

**Mimicking Behaviors In the Paired Condition.** Mimic sub-group behaviors were analyzed for a more in depth understanding of peer interaction. “Mimic” was the only behavior for which I coded the person at whom the behavior was directed (i.e., whether the child was mimicking the adult, an NED peer or the DLL peer). Mimicking seems most likely to help me
understand peer effects. Even though there was no statistical significance in the rate of imitations by DLL children in the single vs. paired conditions, the overall means were in the direction of DLL children doing more imitating in the paired condition. Because it is important to know that the presence of peers may contribute to DLL children’s language development in the long run, I closely looked at mimicking behaviors in each sub-section and totaled the number of occurrences.

Table 8

*Frequency Comparison of Mimic Behaviors*

<table>
<thead>
<tr>
<th>Mimic</th>
<th>Frequency</th>
<th>DLL</th>
<th>NES</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Peer/DLL gesture</td>
<td>25</td>
<td>5</td>
<td>11/9=20</td>
</tr>
<tr>
<td>*Peer/DLL word</td>
<td>37</td>
<td>26</td>
<td>5/6=11</td>
</tr>
<tr>
<td>Peer/DLL phrase</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Peer/DLL sentence</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>*Reader gesture</td>
<td>24</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>*Reader word</td>
<td>23</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Reader phrase</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Reader sentence</td>
<td>13</td>
<td>0</td>
<td>13</td>
</tr>
</tbody>
</table>

Total mimic behavior of each type is shown in Table 8, and it also documents whether DLL or NES (two peers combined) mimicked the particular behavior. Some NES children imitated DLL children’s gestures (nine times) or words (six times), which may suggest that they acknowledged DLL children’s answers to the prompts.

I took two highest frequency numbers of mimicking behaviors in the levels of complexity of language, which were gestures and words from peers or myself. I computed a percentage of DLL children’s mimic peer’s word occurrence by dividing the total frequency of mimic peer’s words and numbers of DLL imitating peer’s word. It showed that 70% of time, DLL children imitated one of their peers’ words, including target vocabulary and other words in response to a
prompt. In the same way, the percentage of the mimic reader’s words was calculated. Also about 78% of time, DLL children repeated a word without being asked. The second highest frequency of mimic’s sub-section was for gestures. DLL children’ mimicked the reader’s gestures 58% of the time, compared to the 20% for DLL children mimicking peers’ gestures.

In summary, the overall pattern of results was that both DLL and NES children showed evidence of learning target vocabulary from dialogic reading. There was some evidence that DLL children learned more vocabulary when reading sessions occurred one-on-one with an adult. There were few differences in the interactions of DLL and NES children in the small group reading sessions.

**Discussion**

Vocabulary development in DLL children is important for school readiness, because vocabulary knowledge is one of the predictors of later school success (Biemiller & Boote, 2006). Studies have shown that small group activities assist children in learning English; small group activities focus on the individuals more than students in large groups (Arnold et al., 1994; Blewitt et al., 2009; Roberts, 2008; Roberts & Neal, 2004; Valdez-Menchaca & Whitehurst, 1992; Whitehurst et al., 1988; Whitehurst, et al., 1994). Moreover, small groups allow children to learn from each other by hearing what others say, and provide children with opportunities to ask the teacher questions. The sociocultural learning theory supports the idea of learning from others as it suggests that learning occurs in a social context (Vygotky, 1978). With this in mind, this study examined whether DLL children’s vocabulary knowledge would increase significantly from shared book reading sessions and interactions with NES children as compared to dialogic reading one-on-one with an adult.

**Vocabulary Development from Dialogic Reading Style.**
Target Word Learning Overtime. I looked at target vocabulary development in DLL children and NES through book reading in a small group setting. The results suggested that both NES and DLL children improved their target vocabulary knowledge after the shared book readings. DLL children gained about the same as NES children. This is an important point to address, because both groups learned from the book reading in the short period of time. This finding supported effectiveness of dialogic reading strategy in vocabulary learning (Valdez-Menchaca & Whitehurst, 1992; Whitehurst et al., 1988; Whitehurst et al., 1994).

DLL children gained a few points more in the single conditions compared to the paired conditions. The single condition was a slightly more effective setting for DLL children to learn target vocabulary words. Some dialogic reading studies suggested one-on-one dialogic reading to be effective (Whitehurst et al., 1988; Valdez-Menchaca & Whitehurst, 1992), whereas other studies found a small group to be effective (Whitehurst et al., 1994: Collins, 2010). It is difficult to compare the current with the past studies, because those studies did not compare small group and single conditions. Nevertheless, in order to effectively use dialogic reading style for vocabulary instruction, direct and focused instruction on the student in one-on-one conditions may benefit DLL children (Blewitt et al., 2009).

DLL children had more knowledge of receptive and transferring word types than expressive word type. It seemed more difficult for DLL children to say words than to recognize the word and to select correct pictures on TVT. Nevertheless children showed similar gains from pre to post across all of the word types.

Target Word and Scripts. Choosing target words and repeating them during book reading from scripts was effective in teaching vocabulary. This study focused on 12 target vocabulary words, and prompts were created in the scripts to repeat the vocabulary during the
book reading sessions. As Collins (2010) suggested, I chose both words from the texts and words related to the books. This was a good strategy, because some of children’s books had great illustrations but did not have many words or sophisticated vocabulary words in the text (Collins, 2010). Also preparation of scripts helped me carefully scaffold the meaning of each word, and ask questions regarding the target words. The scripts were designed to provide a variety of prompts and comments to scaffold the meaning of the words or ideas. Many studies showed that adults usually provide effective instructional scaffolding (Siegler, 2005; Gauvain & Rogoff, 1989; Blewitt et al., 2009). A previous study by Blewitt et al. (2009) showed that scaffolding by adults improved children’s vocabulary learning. In their study adults used “low demand” methods in the first and second, third and fifth book readings (p. 298), i.e. adults defined and explained vocabulary words for the children. Then on the fourth and sixth sessions, they asked “high demand” questions to develop children’s vocabulary understanding (Blewitt et al., 2009, p. 298). A similar progression of scaffolding methods was used in the current study; the first prompts directed at DLL children included explanations or easier questions such as “have you ever painted before?” Later, children were asked more difficult questions that involved a target word, such as “so what are Peter and his Dad going to do with the small chair?—(paint).” A difference of implementing the levels of demand of questions was that Blewitt et al. (2009) used lower demand questions and high demand questions in different book reading sessions. I used low demand in the first part of each session, and high demand questions toward the end of the same book session. Both DLL and NES children benefitted from this strategy through repetitive exposure to words in the different contexts. I provided unscripted feedback as children answered or spoke. As Blewitt et al., (2009) suggested providing feedback was a
significant method to provide encouragement and motivation for children participating in the book reading.

**Peer Interactions During the Book Reading**

I looked at peer interactions during the book readings, and potential peer learning from the interactions. Comparing each child’s behavioral outputs helped to understand how children participated and how they interacted with each other.

**DLL Children and NES Children Participation Differences.** In the paired condition, DLL and NES children showed similar behaviors during the book reading, although there were two behavior types that showed significant differences. DLL children tended to have more unintelligible utterances, whereas NES children said more sentences. I assume that DLL children tried to say a sentence, but the reader could not understand. On the other hand, NES children used more sentences to describe and responded to the prompts. If that is the case, DLL and NES children participated the same way but NES children used understandable due to their high language skills. This finding is important because during the book readings, DLL children showed willingness to speak out and describe pictures in the books. However their utterances were not understandable.

**Imitations in DLL Children.** Statistically speaking, DLL children participated similarly in both single and paired conditions. However because the sample size was very small, it is possible to talk about the direction of the means. DLL children tended to imitate either peers or the reader in the paired conditions. They repeated one of the peer’s or the reader’s word much more than other peers did. NES peers repeated the reader’s sentences more often. The words that DLL children repeated were usually the target words. Often, DLL children could not answer the prompt, and the other peer answered for her/him. Then DLL children subsequently repeated
what the peer said. These imitating behaviors may suggest that DLL children are relying on others to learn (Siegler & Alibabli, 2005). If that is the case, it is possible that peer learning can happen during the preschool years. Vygotsky (1978) suggested that children start to learn from social interactions from birth, however there was no specific information about when peer learning started (Hogan & Tudge, 1999). Peer learning studies at younger ages (five year-olds) have different findings. Some studies showed that peer learning occurred in children younger than kindergarten age, but further research is still needed in order to apply to larger population (Gauvain & Rogoff, 1993; McGregor, 2000).

Peer Interactions and Peer Learning. Small peer interactions happened in terms of mimicking. However the TVT scores did not show differences in target word development between groups. Peer interactions need quality to create collaborative learning (Siegler & Alibabli, 2005). As Vygotsky suggested, successful peer learning is due to individual characteristics as well as interpersonal relations (Vygotky, 1978, Hogan & Tudge, 1999). Hogan and Tudge (1999) stated “individuals bring their own uniqueness to any interaction” (p. 42). This was evident in the current study. Each paired condition had different behavioral outputs and post scores from each DLL child. One DLL child scored lower on the post-test after the paired sessions. During the sessions, this child was easily distracted by her peers, she did not participate verbally in the reading sessions because her peers answered most of the questions. Another DLL child was quieter in the paired conditions compared to the single condition. Contrary to the two examples above, a third DLL child talked more in the paired condition and appeared to enjoy being with her peers; the friendships developed with these peers in the classroom setting extended to the book readings. The fourth DLL child showed an interesting transfer of knowledge. This child remembered questions I had asked in an earlier reading...
session; she then played the role of teacher in a later session, asking these same questions of her NES peers and myself. These individual characteristics (i.e. being able to read together with other children) were not taken into account when I selected participants and may have affected each child’s learning in a unique way. The current study was too small to see the patterns of each DLL child’s behaviors, however it appears that two DLL children gained more from participating in the paired condition, while the others showed greater benefits from reading one-on-one.

To some extent, children’s characteristics were taken into consideration when selecting peers to be paired with each DLL child. Each NES child had strong language skills and teachers reported that they enjoyed book reading. However NES peers were not selected specifically for being able to collaboratively listen and learn from each other in shared book reading sessions. There was a NES child who seemed to try to assist a DLL child in paired condition. He waited for the DLL child to answer to a prompt because the prompt was directed to the DLL child. When the DLL child could not answer, the NES child responded for her, and she then mimicked his word. The same NES child corrected DLL child, when the DLL child said a wrong color, he corrected saying “no that is pink.” McGregor’s (2000), study suggested that children could benefit from tutoring others the same age through narrating stories and correcting the tutees’ retelling. Tutors did not receive training to be tutors, but feedback was provided through the examiner’s presence during the narrations. Tutors were able to positively influence others with the knowledge they already had. Some other peer learning studies suggested that children benefitted more when completing mathematical tasks with other peers (Gauvain & Rogoff, 1989; Saenz, Fuchs, & Fuchs, 2005). So it is possible for peer learning to occur, but little evidence of helpful peer interactions occurred under the conditions of my study. In my study, the task,
or/and individual participant characteristics were not effective enough to facilitate peer learning. Or, peer learning did not happen because children were not at the collaborative learning stage.

Future study is necessary to further explain this point.

**Limitations and Implications.**

There are several limitations to this research. This study included a very small number of participants thus it is difficult to see patterns of behaviors and generalize the results to a larger population. With only four DLL children and eight peers my sample had inadequate power to detect possible effects using parametric statistics, and estimates are likely to be biased (Gravetter & Wallnau, 2008). Furthermore, the intervention period was relatively short. Although other studies of dialogic reading have found effects in only one month (e.g., Whitehurst et al., 1988), results found in this study may not match the more typical effects of reading aloud over the course of a full school year. If children heard the target vocabulary outside the intervention, that would be a threat to internal validity. Because these words are used in everyday life, children may have heard these words at home or school. However it is difficult to stop children learning vocabulary through everyday experiences (Beck et al., 2002; Leung et al., 2011). If the children become used to the TVT A and B format, this familiarity with instrumentation is also a threat to internal validity and difficult to separate from a true effect of the intervention.

Another limitation is that the scripts were well organized but did not have the flexibility to expand on topics that the children initiated. I attempted to respond to every comment a child made; although this is a natural form of interaction it also introduced differences that could have counter-acted the intended scripted effects.

Finally, the scripts led to repetitive interactions. Each book was read three times and each time I used the same script, without varying the prompts. Children’s interest in listening to
the same books with the same scripts may have decreased over time. Motivation levels will affect children’s behaviors. A better strategy may have been to use different prompts with each reading, asking more difficult questions with repeated exposure. Furthermore, even though there were times when children initiated interesting points about the books, because of the scripts I needed to pause the idea and continue the story. If discussions were facilitated about an interesting point, conversation between peers might have happened and might have enhanced interaction and thinking development.

For future research, intervention strategies should focus more on fostering collaborative learning and interactions between NES and DLL during book reading. Scripts can be different across the book reading sessions, and include questions to encourage peer conversation during the book reading, such as “Andy thinks that Peter is not jealous, can you ask him why he thinks that way?” Or the children can retell the stories after hearing the same stories for a couple of times from a reader. This case, peer conversation will increase and peer learning observation is possible.

For educators, in order to teach preschoolers new vocabulary through dialogic reading, preparations are important. I recommend for teachers to choose words in advance from the books, and explain the word in the book reading before asking them difficult questions. In addition to teaching vocabulary, keeping flow of stories is important to understand the content of the book. Asking effective dialogic reading questions, children can enjoy new book and learn new vocabulary.

A reading group size is another method to consider. In preschool settings, one-on-one book reading may not be feasible, especially for those teachers with many children in a classroom. So a small group of only DLL children may be effective to start with the dialogic
reading group, instead of paring up NES children in the same group. As DLL children are comfortable with the style of reading, they can be paired with children with higher language skilled children. It may be possible that children can influence with each other to teach and learn what they know and what they do not know.

Even though there are certain limitations to the study, the results are useful in understanding aspects of DLL children’s learning English in school. Or teachers can support to provide more opportunity for DLL and NES children to communicate with each other to create collaborative learning.
References


INCREASING DUAL LANGUAGE LEARNING CHILDREN’S VOCABULARY


Appendix A

<table>
<thead>
<tr>
<th>Book Names and Authors</th>
<th>Target Vocabulary Words</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I</strong></td>
<td></td>
</tr>
<tr>
<td>Title: Pete the Cat</td>
<td>1. In (preposition)</td>
</tr>
<tr>
<td>Author: Eric Litwin</td>
<td>2. Pile (noun)</td>
</tr>
<tr>
<td></td>
<td>3. Puddle (noun)</td>
</tr>
<tr>
<td></td>
<td>4. Bucket (noun)</td>
</tr>
<tr>
<td><strong>II</strong></td>
<td></td>
</tr>
<tr>
<td>Title: Peter’s Chair</td>
<td>1. Pink (adjective)</td>
</tr>
<tr>
<td>Author: Ezra Jack Keats</td>
<td>2. Tall (adjective)</td>
</tr>
<tr>
<td></td>
<td>3. Overalls (noun)</td>
</tr>
<tr>
<td></td>
<td>4. Paint (verb)</td>
</tr>
<tr>
<td><strong>III</strong></td>
<td></td>
</tr>
<tr>
<td>Title: Whistle for Willie</td>
<td>1. Whistle (verb)</td>
</tr>
<tr>
<td>Author: Ezra Jack Keats</td>
<td>2. Dizzy (adjective)</td>
</tr>
<tr>
<td></td>
<td>3. Line (noun)</td>
</tr>
<tr>
<td></td>
<td>4. Shadow (noun)</td>
</tr>
<tr>
<td><strong>IV</strong></td>
<td></td>
</tr>
<tr>
<td>Title: Sometimes I like to Curl up a Ball</td>
<td>1. Curl-up (verb)</td>
</tr>
<tr>
<td>Author: Vicki Churchill</td>
<td>2. Brown (adjective)</td>
</tr>
<tr>
<td></td>
<td>3. Loud (adjective)</td>
</tr>
<tr>
<td></td>
<td>4. Paw (noun)</td>
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</table>

*List of 4 books and selected target vocabulary words.
Appendix B

I. Script for Pete the Cat by Eric Litwin

Target Vocabulary Words: **IN, PILE, PUDDLE, BUCKET**

**GREEN**: target vocabulary words. **RED**: Only to NES peers Q=question, C=comment

Title:

Pete the cat I love my white shoes.
Written by Eric Litwin

Q. What is this animal? What is he wearing?

Page 1.

Pete the cat was walking down the street in hit brand-new white shoes.

Q. What is this animal? What is he wearing?
C. They are really clean aren’t they.
Q. So what color are the shoes?

Pete loved his white shoes so much, he sang this song.

Q. Are you ready for the song?

Page 2.

I love my white shoes, I love my white shoes, I love my white shoes.

Q. What does Pete say he loves?

**Q. Why do you think he likes his shoes?**

**Q. Do you also like new shoes?**

Page 3.

Oh no! Pete stepped in a large pile of ...strawberries! What color did it turn his shoes?

C. Look at the picture of Pete’s feet. They are all **IN** the pile of strawberries, meaning they are inside not on the strawberries (show picture of IN)
Q. How much is a pile of something? A lot or a little?
Q. What do you think? What color?

C. **PILE** of something is a lot of something, like on this picture, a lot of strawberries. That is a **PILE** of something. So since Pete stepped **IN** a lot of strawberries, his shoes are not White anymore. (Shoe a picture of PILE)

Page 4.
RED. Did peter cry? Goodness, no! He kept walking along and singing his song.
(everything is cool)

*Q. What would you do if your new shoes got messy?*
C. Pete did not cry about his messy shoes, I wonder why.

Page 5.

“I love my red shoes, I love my red shoes, I love my red shoes”

Q. So now he likes his red ...?
*Q. Why did his shoes change the color?*

Page 6.

Oh no! Pete stepped in a large (Q)...of blueberries! What color did it turn his shoes?

Q. How did his shoes change color?
*Q. What happened?*
C. This time is a **PILE** of blueberries, I wonder what comes next.

Page 7.

BLUE! Did Pete cry? Goodness no! He kept walking along and singing his song.
(awesome).

Q. What was the first color of his shoes?
*Q. How did he get blue shoes?*
- **Because of the PILE of Blueberries.**

Page 8.

“I love my blue shoes, I love my blue shoes, I love my blue shoes”

Q. What is happening on this page?
Q. What is Pete holding?
*Q. What do you call the water that stays on the road after raining?*
- **PUDDLE**

Page 9.

Oh no! Pete Stepped…(IN)? a large…..(PUDDLE)? of… mud! What color did it turn his shoes?

Q. Why is there a **PUDDLE**?
Q. So what color Pete’s shoes will be?
Q. How would you feel if you stepped IN the puddle with the new shoes?

Page 10.

BROWN. Did Pete cry? Goodness, no! He kept walking along and singing his song.

Q. What song will he be singing?
C. He is not crying even after he stepped IN a mud PUDDLE.

Page 11.

“I love my brown shoes, I love my brown shoes, I love my brown shoes.”

Page 12.

Oh no! Pete steeped in a bucket of water… All the brown, and all the blue, and all the red were washed away.

Q. Can you point to a BUCKET? (Show a picture of bucket). What is inside the BUCKET?
Q. What would happen if your shoes go IN a BUCKET of water?

What color were his shoes again?

Q. Anybody wants to guess?

Page 13.

WHITE. But now they were WET. Did Pete cry? Goodness, no! He kept walking along and singing his song.

Q. So why are Pete’s shoes wet again?

Page 14.

“I love my wet shoes, I love my wet shoes, I love my wet shoes”

C. Look, it looks like they are making sound, squeak squeak.

Page 15.

The moral of Pete’s story is: No matter what you step in, keep walking along and singing your song….

Page 16.

Because it’s all good.
Q. So here is a question. Even if he stepped _IN PILES_ of things, such as strawberries, blueberries, _PUDDLE_ or a _BUCKET_ of water, was Peter happy or sad?

II. Script for Peter’s Chair by Ezra Jack Keats
Target Vocabulary Words: _PINK, PAINT, OVERALLS, TALL_

GREEN: target vocabulary words. RED: Only to NES peers

Title:

Peter’s Chair by Ezra Jack Keats

C. We are going to find out what Peter is going to do with the chair.

Page 1.

Peter stretched as high as he could. There! His tall building was finished.

Q. Point to Peter? What is he doing?
   - He is making a tower.
Q. Is his building _TALL_?
   - Yes
C. Tall means big, in this way (show with arms).
Q. Who likes to build a _TALL_ tower like Peter’s.
   - Me.
Q. What is he wearing in this picture?
C. This kind of clothes is called _OVERALLS_. _OVERALLS_ are loose pants all the way up to the shoulders, with straps. They are very comfortable. I used to wear that when I was younger.

Page 2.

CRASH! Down in came. “Shhhh!” called his mother. “You’ll have to play more quietly. Remember, we have a new baby in the house.”

Q. Who was talking to Peter?
Q. _Why does he have to play quietly?_
   - C. So his mom told him to play quietly because of a new baby.

Page 3.

Peter looked into his sister Susie’s room. His mother was fussing around the cradle. “That’s my cradle,” he thought, “and they painted in pink!”

Q. What color is it?
   - Pink
Q. Have you ever _PAINTED_ before? You can _PAINT_ using inks and paint brushes.
“Hi, Peter,” said his father. “Would you like to help paint sister’s high chair?” “It’s my high chair,” whispered Peter.

C. Oh, look Peter’s dad, he is wearing the similar clothes. **OVERALLS**.
Q. What is he doing?
   - Painting.
Q. High chairs are usually **TALL**. Whose high chair is that?
   - Used to be Peter’s but now is his sister’s.
Q. Look at Peter’s face, does he look happy?
   - No

*Q. Why isn’t he happy?*
*He is not happy because the high chair used to be his but it is not his anymore. His sister is going to use. That's why his dad is painting the chair into **PINK**.*

Page 5.

He saw his crib and muttered. “My crib. It’s painted pink too.” Not far away stood his old chair. “They didn't pain that yet!” Peter shouted.

Q. What was not **PAINTEDPINK** yet?
   - a chair.
Q. What do you think Peter is feeling?
   - Jealous

Page 6.

He picked it up and ran to his room.

Q. He is running to his room, I wonder what he is going to do with his chair? 
*Q. Why do you think he is taking the chair away from others?*
Q. He is still wearing **OVERALLS**.

Page 7.

“Let’s run away, Willie,” he said. Peter filled a shopping bag with cookies and dog biscuits. “We’ll take my blue chair, my toy crocodile and the picture of me when I was a baby.” Willie got his bone.

Q. What is he taking? Do you know where he is going?
They went outside and stood in front of his hose. “This is a good place, “ said Peter. He arranged his things very nicely and decided to sit in his chair for a while.

Q. Do you remember why he wanted to take his chair? 
   -He did not want his mom or dad to paint his old chair.
C. yes he did not want them to **PAINT** the chairlike the cradle.

*Q. Would you do the same thing if you were Peter?*

Page 9.

But he couldn’t fit in the chair. He was too big?

Q. Why doesn't Peter fit in the chair again?
   -Because he is too big.
Q. Do you have a chair like smaller than you? Yea he is **TALL** also compared to his sister, so the chair is too small for him.

Page 10.

His mother came to the window and called, “Won’t you come back to us, Peter dear? We have something very special for lunch.” Peter and Willie made believe they didn't hear. But Peter got an idea.

Q. What is his mom asking to do?
C. I wonder what his plan is…

Page 11.

Soon his mother saw signs that Peter was home. “That rascal is hiding behind the curtain,” she said happily.

Q. Do you see Peter? Where is he? He is hiding.

Page 12.

She moved the curtain away. But he wasn’t there!

Q. Do you see him? Where is he?

“Here I am,” shouted Peter.

C. He was hiding behind the couch!

Page 13.

Peter sat in a grown-up chair. His father sat next to him. “Daddy,” said Peter, “let’s paint the little chair pink for Susie.”
Q. Where did Peter sit?
   -Grown-up chair.
C. He is **TALL** now so he got to sit on the big chair.
Q. What are Peter and his dad going to do with the small chair?
   -Paint!
Q. Paint to what color?

Page 14.

I. And they did.

C. So it looks like he was jealous about his little sister using all of his things, such as the chair and others, and did not want his parents to **PAINT** them. But now, he looks happy. Both of them were wearing **OVERALLS**! Very cute.

Q. Do you know why he is happy to give and **PAINT** his old chair to his sister Susie?

III. Script for Whistle for Willie by Ezra Jack Keats

**Target Vocabulary Words**: **WHISTLE, DIZZY, LINE, SHADOW**

**GREEN**: target vocabulary words. **RED**: Only to NES peers

**Title:** Whistle For Willie

Q. Does anybody have a pet?
C. I wonder what the boy wants to do with his pet.

Page 1.

Oh, how Peter wished he could whistle!

Page 2.

He saw a boy playing with his dog. Whenever the boy whistled, the dog ran straight to him.

Q. What is to **WHISTLE**? Can you do it?
C. **WHISTLE** is an action when you make a sound with your lips or fingers in your mouth blowing air. Peter wishes if he could whistle. I wonder why.

Peter tried and tried to whistle, but he couldn't. So instead he began to turn himself around—around and around he whirled… faster and faster….

Q. So what is going on in this picture? What is Peter doing?
Q. When you whirl like Peter, do you know how you feel? You feel… **(DIZZY)**.
When he stopped everything turned down… and up… and up… and down… and around and around.

C. Wow look at Peter…
Q. Has anybody try whirling before? How did you feel again?
   -DIZZY
C. We can try to turn around a bit to see how you feel too! (first time reading)
C. When you feel DIZZY, everything seems going around or not in the right spot.

Page 4.

Peter saw his dog, Willie, coming. Quick as a wink, he hid an empty carton lying on the sidewalk.

Q. Oh oh..where is Peter? Can you point? What is he doing there?

“Wouldn't it be funny if I whistled?” Peter thought. “Willie would stop and look still around to see who it was” Peter tried again to whistle—but still he couldn’t. So Willie just walked on.

Q. Why did not Willie stop and say hello to Peter?
   -Because Peter could not WHISTLE.
Q. Was he able to WHISTLE so Willie would notice?

Page 5.

Peter got out of the carton and started home. On the way he took some colored chalk out of his pocket and drew a long, long line.

Q. What did he do with colored chalk?
   -Drew a long line
Q. Point to the LINE?
C. You make a LINE connecting two points together, like this (draw a line on the floor).

Page 6.

right up to his door. He stood there and tried to whistle again. He blew till his cheeks were tired. But nothing happened.

Q. Can you still see the LINE?

Q. What is he practicing again?
He went into his house and put on his father’s old hat to make himself feel more grown-up. He looked into the mirror to practice whistling. Still no ______ (whistle!).

**Q. Do you know why Peter put his father’s old hat?**
C. Peter thought if he became a grown-up, he could whistle!

Page 8.

When his mother saw what he was doing, Peter pretended that he was his father. He said, “I’ve come home early today, dear. Is Peter here?”

His mother answered, “Why no, he’s outside with Willie.” “Well, I’ll go out and look for them,” said Peter.

**Q. Look at Peter, who is he pretending to be? Do you know why?**
- He is playing.
C. He is playful. Remember he was going around and around and he got DIZZY from it? (Turn the page and show the “dizzy” picture)

Page 9.

First he walked along a crack in the sidewalk. Then he tried to run away from his shadow.

**Q. What is the black thing?**
C. SHADOW is a reflection of yourself on the ground. Your SHADOW always sticks to you. Can you (all) say SHADOW?

Page 10.

He jumped off his shadow, but when he landed they were together again. He came to the corner where he carton was, and who should he see but WILLIE!

**Q. Why did he jump?**
C. He wanted to separate his shadow. He is very playful, he is jumping, putting his dad’s hat, and he was also drawing a LINE on the road, remember?

Page 11.

Peter scrambled under the carton. He blew and blew and blew.

**Q. Wait. What is he trying to do?**
- He is trying to whistle!

Suddenly- out came a real… (whistle!) Willie stopped and look around to see who it was.

Page 12.

“IT’s me,” Peter shouted, and stood up. Willie raced straight to him.
Q. Did Willie come straight to Peter?...if so why?

Page 13.

Peter ran home to show his father and mother what he could do. They loved Peter’s whistling. So did Willie.

Q. What did he want to show his father and mother?
C. When you can do something, you want to show somebody right? You feel proud of yourself.

Page 14.

Peter’s mother asked him and Willie to go on an errand to the grocery store.
He whistled all the way there, and he whistled all the way home.

C. Now he is happy and he feels bigger!

IV. Script for Sometimes I like to curl up in a ball by Vicki Churchill and Charles Fuge
Target Vocabulary Words: **CURL-UP, BROWN, PAW, LOUD**

**GREEN**: target vocabulary words. **RED**: Only to NES peers
Title:

Sometimes I like to curl up in a ball

Q. Look at this picture, what is this animal doing?
Q. What color is this animal?
- Brown
C. This is a foot called **PAW**, two are called **paws** these are with claws like other animals.
C. We are finding out what he likes to do.

Page 1.

Sometimes I like to curl up in a ball, so no one can see me because I’m so small.

Q. What is he doing?
- Hiding
Q. Who likes to **CURL UP** to hide? Can you **CURL UP**? Who else can **CURL UP**?
- Cats, dogs, and other animals.
C. Even things can be **CURLED UP**, like hair. When he **CURL UP**, all of his **PAWS** were curled up too.

Page 2.

Sometimes I like to jump high as I can, to see how much noise I can make when I land.
C. So he likes to **CURL UP**, and next he likes to jump!
Q. After he lands, does it make a **LOUD** noise or soft noise?
Sometimes I like to scream ever so loud, not that I’m cross, I just like how it sounds.

Q. If he screams is it **LOUD** or quiet?  
- **LOUD**

*Q. Why does he even want to scream?*  
*He wants to know how **LOUD**.*

C. Lets find out what else he likes to do.

Sometimes I like to just walk round and round, I pigeon step, pigeon step, till I fall down.

Q. Have you ever walked like a pigeon? Where is he walking?  
C. Look at his **PAW**. Way up high!

Sometimes I like to stand still as a tree, and watch everyone rush around about me.

Q. What is going on in this picture?  
C. Look at tall tree!  
Q. Standing still. What does that mean? Is he being **LOUD** or quiet?

Sometimes I like to poke out my tongue, or make funny faces, now that be fun.

Q. Can you poke out your tongue to make a silly face?  
Q. On this picture (on the left bottom), His **PAWS** are wildly open! Can you do the same?  
Q. What color is his **PAW** (point to the brown part)  
- Brown

Sometimes I like to get in a real mess, with mud on my feet and my hands and my chest.

C. Look at this mess!  
Q. What color is the mud?  
- **BROWN**

Sometimes I like to run ever so fast,  
I sometimes come first, but I sometimes come last.
Q. Why do you think he is saying that he sometimes comes first but sometimes he comes last?
C. Maybe he is saying sometime in life, you do not always to get things first but that's ok.

Page 9.

But when the day ends and the sun starts to fall, Then I do what I do best of all, I find somewhere soft, somewhere cozy and small…

Page 9.

…And that's where I like to curl up in a ball.

C. Each of his PAW is curled up too.
Q. At night who likes to CURL UP?
Appendix C

Consent Form

Peer Effects on Dialogic Reading

Your child has been invited to be a part of our study on dialogic reading. This study is an extension of the HuiA'oMua Early Reading First program that is happening in your child’s Head Start classroom. A smaller number of children and families are being invited to help with this new study. Your child was selected because of his or her language background. Many children in Head Start speak a foreign language at home and are learning English in school. This study includes both children from English speaking homes and children who are dual language learners (DLL). The research will be conducted by Reiko Kawamura. Ms. Kawamura is a graduate student at the University of Hawai‘i. Please read the sections below before agreeing for your child to participate in the study.

Purpose:

The purpose of this study is to find effective methods to help children learn new vocabulary and strengthen their English language skills. Dialogic reading is a style of reading aloud that is used in your child’s Head Start classroom to support language development. We will look at the ways that children learn new words during dialogic reading, and compare the learning of DLL children and children who are native English speakers. We will also look at the role of peer influence by comparing how DLL children respond to book reading with and without their peers.

Procedure:

Your child will hear 4 different storybooks over the course of 4 weeks. Reiko Kawamura will read the books with your child, either one-on-one or in a group of three children. The reading will take about 15 minutes, 3 times per week and will happen during the regular Head Start day. While listening to the story, Reiko will introduce new vocabulary words and ask each child questions related to the stories. The storybook sessions will be videotaped and used to see how each child participates in the session and what kind of language he or she uses over time. At the beginning and the end of the intervention, your child will take a vocabulary word test. This test will take about 10 minutes. Your child will be asked to point to or describe pictures that show words and concepts covered in the storybooks. The expected duration of your child’s participation will be for 6 weeks.

Risks and Benefits:

Most children enjoy storybook reading and also enjoy small group learning time. It is possible that your child will learn new vocabulary related to the books we read and learn more about how to cooperate with their peers. We hope that this study will help educators understand more about how to support the English language learning of DLL children. We also hope this study will help educators understand how children learn from each other and how to make use of positive peer influences. There is no safety or healthy risks for your child associated with this study. If your child is shy or has difficulty participating in a reading session, he or she will not be pressured to talk.
Confidentiality:

All of the information that we collect in this study remains confidential. Family surveys, vocabulary test results, and videotapes are labeled using identification numbers only. No child or family names will be used in Ms. Kawamura’s graduate thesis or in any publications or reports based on this study. When the study is completed, consent forms will be shredded. With your permission, we would like to be able to show portions of the videotapes for educational purposes such as a training session for Head Start teacher or an educational conference.

Voluntary Participation:

Whether your child participates or not will not affect any other school activities in the Head Start Program. The participation is completely voluntary. Even after you sign in the consent form, you and your child can stop participating in the study anytime.

Contact:

The primary investigator for this study is Reiko Kawamura, graduate assistant at the Early Reading First (ERF) project in the University of Hawai‘i at Mānoa. Dr. Barbara DeBaryshe is the principal investigator of the larger ERF project. If you have question, please contact either Reiko Kawamura (reikok@hawaii.edu, 541-729-0543) or Barbara DeBaryshe (debarysh@hawaii.edu, 808-956-4140). Also if you have any question or concern regarding this study and would like to speak with someone other than the researchers, please contact the University of Hawai‘i Institutional Review Board, Biomed Building B104, 808-956-5007.

I have read the information above and understand that both my and my child’s participation of this study is voluntary and may stop at anytime.

- I give permission for my child and I to take part in the peer effects on dialogic reading study
  
  Yes  
  No

- I give permission for my child to be videotaped during the book reading sessions and for the researchers to use these videos in order to do the study
  
  Yes  
  No

- I give permission for the researchers to use short sections from the videos for educational purposes such as teacher training or conferences presentations
  
  Yes  
  No

__________________________   ___________________________   _____________
Your child’s name (print)    Parent or guardian’s full name (print)    Date

(If you cannot get answers to your questions or if you have comments or complaints about your treatment in this study, contact: Committee on Human Studies, University of Hawai‘i, 1960 East-West Road, B-104, Honolulu, HI 96822. Phone: (808) 956-5007.)
Family Demographic Survey

Peer effects on Dialogic Reading study

University of Hawai‘i at Mānoa

Child’s First Name: ___________________    ID #: __________________

ABOUT YOUR FAMILY:

1. Relationship to your child
   Parent/stepparent    Grandparent    Foster parent/guardian    Other ________

2. Your gender
   Male    Female

3. Family education background:
   a. My highest level of education is
      o Some elementary school
      o Finished elementary school
      o Some high school
      o High school diploma or GED
      o Some college or vocational school but not degree
      o Associate degree
      o Bachelor’s degree
      o Master’s degree
      o Doctorate degree
      o Other (please explain)
   b. Spouse’s highest level of education is
      o Some elementary school
      o Finished elementary school
      o Some high school
      o High school diploma or GED
      o Some college or vocational school but not degree
      o Associate degree
      o Bachelor’s degree
      o Master’s degree
      o Doctorate degree
4. Length of Living in the USA

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<th>3-4 years</th>
<th>more than 5 years</th>
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5. Ethnic Background:

a. I consider myself as a/an
   - Asian
   - Black
   - Caucasian
   - Hispanic
   - Middle Eastern
   - Pacific Islander
   - Other [please explain]

b. My spouse’s is
   - Asian
   - Black
   - Caucasian
   - Hispanic
   - Middle Eastern
   - Pacific Islander
   - Other [please explain]
6. Language Background:

What languages are spoken in your home?  

What languages does each of the people below speak with your child? Please fill out the table below. By “home language” we mean any language that is not English.

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1. Language Background:
   Which best describes your child’s skills in the English language:
   - Strong (Fluent, can understand and speak well for his or her age.)
   - Moderate (Can understand English fairly well but is limited in speaking English, but is making progress. Child’s English is good enough to get by at school.)
   - Beginning (Child is starting to understand English. Child has some English words and phrases but may not be able to communicate his or her ideas)
   - None (Child does not speak or understand English. In school he or she follows routines rather than understanding what people are saying.)
   - Comment_________________________________________________

2. Book Reading at Home:
   At home how often you or others in your household read aloud with your child?
   - Daily
   - 5-6 days per week
   - 3-4 days per week
   - 1-2 days per week
   - A few times per month,
   - Rarely
   - Comment_________________________________________________

   b. When your child is read to, what language is used?
      - All English
      - Most English
      - A mix of English and our native language
      - Mostly our native language

   c. The books you read to our child are written in what language(s)
      - All English
      - Most English
INCREASING DUAL LANGUAGE LEARNING CHILDREN’S VOCABULARY

- A mix of English and our native language
- Mostly our native language

Please add any other comments that help us understand the language environment of your home.
### TVT answer sheet Book set [A]

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Appendix E

DLL Interaction coding sheet.

Interactions of others can be coded below. After watching video clips, raters code how many times interactions with the reader, peers, or a DLL child occur. The investigator is interested in looking at differences in interaction of DLL children with and without peers during dialogic reading session.

1. Response to prompts verbally (R): a DLL child or peer(s) show interactions to each other through answering to questions that the reader asked.
   a. Within responses, there are six kinds of response, which is, unintelligible (R, V) (responding to a prompt but not utterances are difficult to understand), gesture (R, G) (responding to a prompt with movement of body, i.e. nodding), vocalization (R, V) (aww, oh, phew, hmmm etc.), a single word response (R, W) (cat, hot, mommy etc…), a phrase (R, P) (Like this, pink chair, tall building), or a sentence (R, S) (she is running, he is sleeping, It looks like a bunny etc…).

2. Repetition verbally (M): a DLL child or peer(s) show interaction to each other or with the reader through imitating what others did. Repetition of words and sounds, for example.
   a. Within repetition, there are five different repetitions that can be observed. A gesture (M, G) (Repeating somebody’s behavior or movement of the body), vocalization (M, V) (aww, oh, phew, wow etc…), a single word repetition (M, W) (rainbow!, mommy, not safe, etc…), a phrase repetition (M, P) (running fast! small cat, on the way home, etc…), or a sentence (He wants to go home, Something is hiding there etc…).
   b. Within repetition, who to repeat is also important. For the coding, repetition can be done as, a DLL repeats a DLL (gesture, vocalization, word, phrase, and sentence), a DLL repeats a peer (gesture, vocalization, word, phrase and sentence), a DLL repeats the reader (gesture, vocalization, word, phrase, and sentence), a peer repeats a DLL (gesture, vocalization, word, phrase, and sentence), a peer repeats a peer (gesture, vocalization, word, phrase, and sentence), or a peer repeats the reader (gesture, vocalization, word, phrase, and sentence).

3. Initiate verbally (I): a DLL child or peer(s) may introduce asking questions or favor to the reader or others.
   a. Within verbal produce, there are six different types. Unintelligible (I, U) (initiation of a word or sentence that utterances are difficult to understand), a gesture (I, G) (initiation of a conversation with a movement of body, i.e. pointing to a book), vocalization (I, V) (hmm.. woo, etc…), a single word (I, W), (look!, Dog!, auntie! etc…), a phrase initiate (I, P) (Tall tree! running fast!, etc…), or a sentence (I, S) (I see the cat!, What is the duck doing there?, etc…).

4. No answer (NO): a DLL child or peer(s) may not answer anything. Just sit there and do nothing to the questions or other activity.

5. Other (O): There may be occasion where interaction that cannot be categorized in any other coding. Behavioral or other disturbance can be in this category.
By using observational software, the researcher coded the behaviors. The coding keys are different from the keys above, because of the certain keys are already assigned to be used in the software. The coding was non-stop but when there are multiple behaviors happening simultaneously, the researcher went back to the video to code the other behavior(s) that was (were) not coded from the first coding session.

Child ID: ___________________ Group: single, pair, Date __________

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*When it is a single group, the peer parts will be empty.*
Example:

0.00 Reader: I have a book to read to you. Are you guys excited? I wonder if anybody knows this book. Have you seen this book peer 1? How about you peer 2 or you (to DLL child)?

Peer 1: No I have never seen it before.
Peer 2: I have!
DLL child: Nod
Reader: Ok sounds good, let’s start the story then!

0.30 Reader: Read, read read

Peer 2: Auntie look! It's a shark. What is he doing there?

Reader: It's a good question, what do you think peer 2? What do you thin peer 1? How about you (DLL child).

Peer 1: shrugging his shoulders.

DLL child: shark.

Reader: Yea this is a shark, swimming in the water.

1.00 Reader: read read read. Oh the shark is looking for a friend. What is friend? Do you have a friend?

Peer 1: I have friends!
Peer 2: I do too
Reader: How about you (DLL child).
DLL child: (Nod) I have.

1.30 Reader: You have? What?

Peer 1:friends!

DLL child: friends

Reader: Great! That's great everybody has friends. Friends are good to have. You can make friends in school, too. You three are all of my friends. Good friends like to play each other, share toys and read stories together right?!

2.00 Everybody: yea.
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*This chart explains the child’s ID number and when the child receives pair or single group condition, with what book set and TVT.*