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Contexts for Facilitating Emergent Literacy in Typically Developing Preschoolers.

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ABSTRACT

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The purpose of this study was to investigate if there is an additive benefit in training Emergent Literacy (EL) skills with typically developing preschoolers using a combined intervention approach, Dialogic Reading (DR) plus classroom Phonological Awareness (CL), than a single intervention approach providing only DR training.

The study consisted of 8 preschoolers (5 DR+CL, 3 DR). The classroom PA training was conducted 3 times a week for 5 weeks for 20 minutes, using play-based activities. The DR training programs were held once a week for 5 weeks for 90 minutes teaching strategies that could be used in the home environment.

The combined treatment group, DR + CL, demonstrated significant gains in pre-post performance on one of the pre-literacy test measures. The DR group alone demonstrated a pre-post difference that approached significance on one of the pre-literacy measures. No significant differences were obtained between the groups on the other test measures.

DEDICATION

This thesis is dedicated to Matt, my husband and best friend. Your love and support carries my through everything I do; and to my Lord and Savior, Jesus Christ, my life is nothing without you.

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CHAPTER 1

REVIEW OF THE LITERATURE

Introduction

Emergent literacy is a topic of inquiry that has gained widespread interest from a variety of early childhood professionals due to its relationship to the development of oral language and later written language skills (Crone & Whitehurst, 1999; Hecht & Close, 2002) and, consequently, its effect on children's later academic performance (Roth & Baden, 2001).

Several studies have investigated different contexts for facilitating various aspects of emergent literacy skills in young children. The various contexts that have been examined include classroom intervention using teachers or speech-language pathologists, (Whitehurst et al., 1994; Whitehurst & Lonigan, 1998; Yopp & Yopp, 2000) home programs using parents (Crain-Thoreson & Dale, 1999; Cronan, Cruz, Arriaga, & Sarkin, 1996; Justice & Ezell, 2000; Senechal, LeFevre, Hudson, & Lawson, 1996), and computer programs (Erickson, Foster, Foster, & Torgesen, 1992). Results have been promising in demonstrating that a variety of contexts can be used to facilitate children's emergent literacy skills. Further research has examined different domains of emergent literacy including language abilities, such as vocabulary, syntax, narrative skills, and conceptual knowledge (Whitehurst & Lonigan); print awareness (Dickinson & Snow, 1987; Goodman, 1986; Justice & Ezell; Mason, 1980); alphabetic knowledge (Byrne & Fielding-Barnsley, 1993; Kaminski & Good, 1996; Stevenson & Newman, 1986); and phonological awareness, such as rhyme, sound identification, segmentation, and blending (Ball, 1997; Byrne & Fielding-Barnsley, 1991; Gillon, 2000; Lane, Pullen, Eisele, & Jordan, 2002; Yopp & Yopp, 2000). Findings from these studies again generally demonstrate that different aspects of children's emergent literacy skills can be facilitated. Collectively, these studies reveal that a

wide spectrum of skills that comprise emergent literacy can be facilitated through a variety of contexts. This chapter will discuss the literature relevant to the training contexts and emergent literacy skills that were examined. The chapter will be organized into three sections: (1) an introduction to emergent literacy; (2) two domains of emergent literacy; and (3) contexts for facilitating emergent literacy. At the end of each section, the trends and gaps in the literature will be discussed in relation to the purpose of this thesis.

Introduction to Emergent Literacy

Emergent literacy (EL) can be defined as a child's growing consciousness of print knowledge and an increase of understanding in the functions of literacy (Roth & Baden, 2001). Roth and Baden state that EL prepares children for the more formal literacy instruction that begins in the early elementary years. The researchers also explain that, different from what some individuals believe, EL develops from children's exposure to surroundings where literacy is a strong component, and in the absence of any formal instruction. However, it is important to note that child characteristics may also affect the outcome of EL skills (Nelson, Benner, & Gonzalez, 2003). EL departs from other perspectives on reading development in proposing that there is no clear distinction between reading and pre-reading skills (Whitehurst & Lonigan, 1998). Whitehurst and Lonigan also address the difference between emergent literacy and more traditional approaches stating that traditional approaches often view writing skills as secondary components to reading skills, whereas the emergent literacy concept claims that the development of reading, writing, and oral language occurs "concurrently and interdependently" early on by exposure to social interactions that involve literacy related components (Whitehurst & Lonigan,

p.849). These early experiences are positively correlated with the child's success in school achievement (Roth & Baden).

EL is comprised of several skills that enhance the child's understanding of the world of print. Several studies have implemented these skills into the child's environment to measure their effectiveness on academic performance. These skills, which will be discussed in further detail, include: phonological awareness, alphabetic knowledge, print awareness, and language development.

Phonological Awareness

According to Ball (1997), phonological awareness (PA) can be defined as a child's awareness that spoken words are made up of sound segments that are smaller than the syllable. PA skills have been identified as having the strongest relationship with literacy development than any other skill in the child's earliest school years (Roth & Baden, 2001). Byrne and Fielding-Barnsley (1991) investigated the effects of PA intervention in 126 preschoolers. Pretest measures, including verbal facility and book and print conversions, were measured using standardized testing. The preschooler's knowledge of the 26 letters and their corresponding sounds, rhyme recognition, and identification of phonemes was evaluated. The children were placed in either an experimental group receiving 12 weeks of training focusing on 9 phonemes, or a control group that did not receive any PA training. Posttest measures revealed that the children who received the PA training made greater gains when compared to pretest measures. The improvements were noted in phoneme identification and word recognition.

Ball (1997) also conducted a study reviewing the relationship between PA and early reading skills. The investigation used follow-up data from a previous study conducted by Ball

and Blachman (1991). The original study included 90 urban kindergarteners who were divided into three groups: 1) a PA intervention group that received PA and letter-sound training, 2) a language activities control group that received the same letter-sound training, but language activities were used instead of PA activities, and 3) a control group that received no intervention. The PA training group and the language activities group met outside of the classroom for 20 minutes of training, 4 times a week for 7 weeks. At the end of the training period, the children who received the PA intervention made greater gains than both control groups in the areas of phoneme awareness, reading of phonetically regular words, and success of early spellings. Several children (n=38) identified at the beginning of the study as having low letter-sound knowledge were revisited the following year. Posttest measures revealed that the first-graders who had previously received the PA training demonstrated higher performances on word recognition tasks and reading decoding measures than their first grade classmates who did not receive intervention.

Gillon (2000) conducted a study to investigate the efficacy of a PA program used with children who had spoken language impairment (SLI) as well as expressive phonological, syntactic, and semantic difficulties. The children with SLI participated in one of the following three groups: 1) an integrated PA intervention program, 2) a more common intervention control program focusing on articulation and language skills, and 3) a minimal intervention program that received minimal training focusing on the improvement of speech production. Gillon found that the children who received the PA training made greater improvements in their PA skills and reading achievement than those students who received other types of intervention. Regardless of the children's delays before participating in the PA intervention, the findings revealed that the children with SLI matched in performance with the typically developing children at posttest

assessment. Gillon also found that the PA training resulted in improvement of the children's speech articulation.

Alphabetic Knowledge

In order for a child to read, the ability to transfer units of print into units of sound must be intact. Keeping with this same idea, in order for a child to write, the ability to transfer units of sound into units of print must also be intact. Therefore, alphabetic knowledge is essential in learning to read and write (Whitehurst & Lonigan, 1998). Upon entry into school, alphabetic knowledge is identified as one of the strongest indicators of reading success (Stevenson & Newman, 1986). Kamhi, Allen, and Catts (2001) stated that the importance of letter identification has been somewhat neglected due to the attention the PA instruction has received. Similar to PA skills, the researchers also claimed that alphabetic knowledge predicts reading ability.

The literature reveals several reading programs that include letter recognition instruction. For example, teachers introduce the alphabetic letters in a systematic pattern, usually in the order of the alphabet song with presentation of the uppercase letters before the lowercase letters (Kamhi et al., 2001). Other reading programs, such as *Road to the Code* (Blachman, Ball, Black, & Tangel, 2000), use a combination of letter frequency and sound-letter transparency to introduce the alphabet.

Kamhi et al. (2001) suggest that in terms of actually teaching alphabetic knowledge, multisensory approaches are supported. These include, having children trace the letters, feel the letters, recognize them from a group of other letters, listen to the names of the letters, and say the letter names out loud. Fun activities such as fishing for letters, writing letters in cornmeal,

making cookie letters can also be implemented into the child's environment. Regardless of the activity, Kamhi et al. encourage caretakers to repeat these activities until alphabetic naming is automatic.

Kaminski and Good (1996) also assert that a strong relationship exists between the knowledge of letter names and the development of early reading skills. These researchers state that although instruction of letter naming alone may not improve literacy development, a correlation may exist between letter naming and PA skills, proving that children may benefit from instruction of both essential skills. Another indicator the researchers point out is that letter-naming fluency may also lead to later success in reading, which suggests that a child who does well with letter naming also has the cognitive skills that are necessary for reading success, generalized memory, and rapid naming (Kaminski & Good).

Byrne and Fielding-Barnsley (1993) found in their 1-year follow-up study that children who had participated in a 12-week phonemic awareness program had advanced significantly in alphabetic knowledge when retested the following year. Most importantly, the authors found that the increase in alphabetic knowledge became a positive predictor of literacy development.

Print Awareness

Print awareness can be defined as a child's ability to identify the form and function of print, as well as the relationship between written and oral language (Goodman, 1986; Justice & Ezell, 2001; Mason, 1980; Snow, 1983;). According to Justice and Ezell, print awareness is another key element in a young child's emergent literacy development. Several researchers agree with this notion in supporting that it is extremely important for a child to understand and recognize what print is, what its function is, and how it relates to speech and reading

development (Dickinson & Snow, 1987; Goodman, 1986; Heibert, 1981; Justice & Ezell; Mason, 1980) in order to lay the foundation for children to benefit from literacy instruction.

In their discussion of print awareness, Whitehurst and Lonigan (1998) include Clay's (1979) explanation that books are arranged according to a set of standards that even a person who could not read could understand. For example, in English books, the print is arranged from left-to-right and top-to-bottom on each page. Also, the direction of the print travels from front to back and across the pages. The other standards of print include the differences between the print and pictures, the spacing used between each word, and the punctuation within and at the end of each sentence. Clay also claimed that understanding these rules assists in the child's reading success.

Unfortunately, print awareness has received less attention in the developmental literature than some of the other emergent literacy skills, such as phonological awareness. This however, is not an indication that print awareness is not important in the literacy acquisition process.

Language Development

Several components of children's language are said to be important at different times in the process of literacy development (Whitehurst & Lonigan, 1998). For example, Whitehurst and Lonigan write that the literacy process begins with vocabulary. Initially, the child starts by transferring codes into meaning, followed by decoding letters into sounds, and then translating those sounds into individual words. In the beginning, the child might start by sounding out /k/…/ae/…/t/. Different from adult readers, children do not see these sounds combined as the word "cat," instead they only see the 3 individual sounds.

Yopp (1992) stated that most children enter kindergarten with a large vocabulary and a sufficient amount of syntax. Additionally, the children also have the ability to pronounce most of their phonemes clearly. However, the meaning of language is usually what is lacking. Whitehurst and Lonigan (1998) state that even in its beginning stages, reading is a process that is encouraged by the ability to extract meaning. Therefore, a relationship between word and meaning must exist in order for successful reading to occur. Whitehurst and Lonigan discussed several studies (Bishop & Adams, 1990; Butler, Marsh, Sheppard, & Sheppard, 1985; Pikulski & Tobin, 1989; Share, Jorm, MacLean & Matthews, 1984) that suggest a longitudinal connection between oral language and later reading achievement. The researchers also noted other studies (Mason, 1992; Snow, Barnes, Chandler, Hemphill, & Goodman, 1991; Whitehurst, 1996) that indicate that children's semantic and syntactic skills play a greater role later in reading success when the child begins to read for meaning rather than sounding out the individual words.

In summary, several studies have been conducted that examined intervention involving either a single aspect of emergent literacy or a combination of EL skills. However, researchers have yet to examine a wide spectrum of EL skills as part of an intervention study.

Domains of Emergent literacy

Whitehurst and Lonigan (1998) projected that the components of emergent literacy can be explained by looking at "two interdependent sets of skills and processes" called *outside-in* and *inside-out* (p.854). This model was created in order to explain how the components of EL develop, affect each other, and lead to the expansion of reading and writing. Both outside-in and inside-out processes are essential to reading development. The authors explain their importance further by stating that the two domains complement each other and work simultaneously in those

readers who are reading well (Whitehurst & Lonigan). Each of these domains of EL will be discussed below.

Inside-Out Processes

Whitehurst and Lonigan (1998) explain that the components of inside-out processes represent the child's understanding of the rules for transferring the writing they are attempting to read into the appropriate sounds. The authors further explained that if a child reads a particular sentence, the ability to decode the letters of the sentence into the corresponding phonological representations will depend on the child's ability to recognize the letters, sounds, relationship between the letter and sounds, grammar, punctuation, and cognitive strategies to actually read the sentence correctly. These steps are what make up the inside-out processes. Researchers have used several different types of activities to teach children inside-out skills. For example, Justice and Ezell (2000) taught parents how to use print referencing behaviors during shared book reading. The authors explained to the parents that by helping their children focus on the print that made up the words of the story, they would be encouraging their children's interactions with print during the shared reading time.

Other studies have focused on phonemic awareness to teach children inside-out skills (Ball, 1997; Hetch & Close, 2002; Yopp & Yopp, 2000). For instance, teaching children to sound out the individual units, or phonemes, is an example of an inside-out skill. However, with all these skills intact, it is possible for a child to read a sentence correctly but still not understand the meaning of the sentence. This leads us to the outside-in processes.

Outside-In Processes

According to Whitehurst and Lonigan (1998), the outside-in (O-I) components represent the children's understanding of the context in which the writing they are attempting to read occurs. Therefore, the O-I processes assist the child in the missing semantic and contextual knowledge that cannot be revealed by the inside-out (I-O) processes alone. The O-I processes allow the child to understand the concepts used in the sentence and contexts in which they occur.

The O-I processes, just like I-O processes, are frequently examined in current research regarding the enhancement of EL skills. For instance, several researchers have encouraged parents to use different strategies to teach children the meaning context of the words used in the story (Crain-Thoreson & Dale, 1999; Hockenberger, Golstein, & Hass, 1999; Lonigan & Whitehurst, 1998). Some of these strategies include, pausing for the child to ask questions, commenting on the literacy content, asking open-ended questions, etc.

To summarize, both the I-O and O-I processes are important for enhancing EL skills in children. Although several studies have examined these domains in their EL activities, information is lacking on the comparative effectiveness of one or the other domain or the potential additive benefits of addressing both domains.

Contexts for Facilitating Emergent Literacy

Research has revealed that children who have greater EL skills also have greater success in reading achievement (Ball, 1997; Justice & Ezell, 2001; Roth & Baden, 2001; Whitehurst & Lonigan, 1998). Different contexts have been used in facilitating children's EL skills, including classroom activities and shared storybook reading approaches. Studies that have examined different contexts for facilitating EL skills will be reviewed in the following sections.

Specifically, contexts that use shared storybook reading approaches and classroom instructional activities will be discussed.

Shared Storybook Reading Approaches

One context for facilitating EL skills has been in the use of interactive storybook reading approaches. Studies have been conducted that included parents, teachers, or both in facilitating children's EL skills using a shared storybook reading approach.

Parent-child book reading activities have been identified as having a strong influence on children's language, literacy, and academic performances (Ezell, Justice, & Parsons, 2000). Ezell, Justice, and Parsons examined the efficacy of a parent-child reading program that was created to increase EL skills in preschoolers who had communicative disorders. The program, which lasted for 5 weeks, included four parents and their children. Pre- and posttest measures were used to assess EL skills; specifically, print concepts and receptive and expressive alphabet knowledge. A parent satisfaction level was also incorporated in the posttest measures. The program was held in the evening at a university clinic after working hours. Pretesting and orientation were conducted during the first session. One-hour training sessions were held over the next 3 weeks and the final session was used for obtaining posttest measures. The parent training classes involved 30-minutes of instruction followed by 30-minutes of individualized reading practice sessions. The parents received two new books each week and were asked to conduct home-based reading sessions 4 times a week. At the end of the 5-week period, the researchers found that the program positively affected the children's knowledge of print and indicated that 3 of the 4 children made significant improvements by gaining five more print concepts over the 5-week program. The results also revealed that the program stimulated the

children's knowledge of print and book reading concepts. Additionally, the parents reported that the program was beneficial for both themselves and their children.

Justice and Ezell (2000) examined the efficacy of a home-based reading program for enhancing children's print-referencing behaviors, as well as their print and word awareness. The study included 28 parents and their typically developing 4-year-old children. The investigation placed each dyad into either a control group or experimental group. Pre- and posttest measures included a collection of shared reading sessions for each dyad and an early literacy assessment was administered to each child. A brief 15-minute training session was held after the pretest sessions. The parents participating in the experimental group were trained on 5 print referencing behaviors and were encouraged to implement these behaviors into the shared book reading experiences. The behaviors included: 1) comments about print, 2) questions about print, 3) requests about print, 4) pointing to print, and 5) tracking the print. The control group received the same training session; however, they were encouraged not to implement the strategies and continue reading to their children the way they normally did. The parents were instructed to read two books each week over a 4-week period. Posttest measures revealed that parents in the experimental group significantly increased their use of verbal and nonverbal references to print. The researchers also found that the intervention greatly enhanced the children's early literacy skills in several different areas of both print and word awareness.

One storybook reading approach that has been widely studied has been dialogic reading (Whitehurst & Lonigan, 1998). Whitehurst and Lonigan write that dialogic reading (DR) is an intervention that incorporates several strategies that change the typical way adults read to children. In this process, instead of the adult reading and the child listening, the adult and child switch roles. For instance, the adult becomes the active listener, while the child becomes the

story-teller. The child's narrative is enhanced by the parent asking questions, adding prompts, and increasing information about the story. The parent also consistently encourages the child through praises, repetitions, and expansions of the child's utterances, which leads to more challenging questions.

In recent years there has been an increasing amount of interest in incorporating EL skills into the preschool and kindergarten classroom (Whitehurst et al., 1999). One study (Box & Aldridge, 1993) investigating the outcomes of incorporating DR intervention in a Head Start program, found that beginning kindergarten children who were identified as having low levels of EL skills had generalized in their new skills by the end of kindergarten. Three groups of 24 4-year old Head Start children were examined to see whether or not participation in shared reading experiences would affect EL skills. The results indicated that the children who participated in 8 weeks of shared reading experiences with their teacher positively differed in their mean averages on print knowledge compared to other classmates who did not receive the intervention. The researchers concluded that shared reading experiences can make a difference in a relatively short amount of time.

Lonigan and Whitehurst (1998) conducted a study involving both parents and teachers to enhance EL skills in 3 to 4 year old children. The children who participated in the study were identified using standardized testing as having significantly low oral language skills. The participants were randomly assigned to 1 of 4 conditions: 1) control group receiving no treatment, 2) a school condition where a small group of children were read to by their teachers, 3) a home condition where children were read to by their parents and, 4) a home plus school based reading condition. Both parents and teachers were trained by instructional videotape explaining the specific strategies of DR. The children who were assigned to receiving

intervention by their teachers participated in shared reading sessions daily for approximately 10 minutes. Parents of the children in the third and fourth groups were instructed to read to their children daily as well. Teachers and parents of the two conditions were also asked to keep daily logs of their experiences. At the end of the 6-week period, posttest measures indicated that both teachers and parents in all three conditions produced positive changes in the development of oral language skills using DR. The authors also stated that the stronger gains were made in vocabulary development for the children who received the intervention at home.

Another study investigated the effects of a DR program on both children and adults. The participants in the study included 32 language delayed children and their parents and/or adult staff member. Crain-Thoreson and Dale (1999) randomly assigned the children to one of three groups: 1) parent instruction with one-on-one shared book reading, 2) staff instruction with one-on-one shared book reading, and 3) staff instruction without one-on-one shared book reading; control group. The children were given standardized tests on vocabulary and were videotaped during the shared book experiences before and after the 8-week program. Parents and staff participated in two 1 ½ hour sessions that were 4 weeks apart. The training sessions included information on DR strategies and the DR videotape (Whitehurst & Lonigan, 1998). During the 8-week program, the children assigned to either a parent or staff group participated in a one-on-one shared book experience at least 4 times a week. When the 8 weeks had ended, the researchers found that both parents and staff demonstrated appropriate changes in their reading style after they had received the DR training. Children in all 3 groups spoke more, produced longer utterances and more different words, and participated more in the shared book reading activities. Also, the amount of change in the children's performance was positively related to the amount of change in the adult behavior.

Whitehurst et al. (1994) examined the outcomes of emergent literacy intervention at several Head Start programs. Several classrooms of 4-year-old children who attended Head Start programs were randomly assigned to either an intervention condition, which received DR training, or a control condition, which received the regular Head Start curriculum. Standardized tests were used to obtain pre-and posttest measures. Both parents and teachers were trained in DR strategies by video instruction that was introduced before the intervention began, followed by short role-playing activities. Children who were placed in the intervention group participated in DR activities at home and in the classroom. The classroom activities occurred 3 to 5 times a week in small groups. The intervention at home involved one-on-one reading with the same books that were used in the classroom intervention. At the conclusion of the study, the findings revealed that the children who received intervention significantly improved in the areas of language, writing, linguistic awareness, and print concepts. The improvements for language were exceptional, but only for those children whose caregivers were actively involved in the home portion of the program. With regard to linguistic performance, the children's ability to identify the first letter of words and first sound of words showed remarkable gains.

In summary, research has identified the effectiveness of shared reading programs in the school and home environment as an outside-in process to facilitate specific EL skills, such as print awareness or vocabulary. Further, many of the studies reported that greater gains were achieved in the home-based programs with the parents as the intervention agents. An important empirical question remains whether parents could be trained to use an interactive storybook reading approach to enhance a broader range of EL skills including phonological awareness, print awareness, oral language, and alphabetic knowledge.

Classroom Activities

Another context that can be used for training EL skills is in the classroom. According to Yopp and Yopp (2000), educators have been searching for guidance regarding how to provide instruction of PA skills in the classroom. Teachers have questioned how to develop these activities, how to provide the appropriate instruction, and how to implement the instruction throughout the day. Yopp and Yopp write that these activities can be incorporated and facilitated in several different ways. Several authors agree that the PA activities should be held 2-3 days a week lasting anywhere from 10-30 minutes over a period of 3 weeks to 2 years (Brady & Moats, 1998; Yopp & Yopp). Yopp (1992) indicated that these activities should be playful enough to maintain the children's interest. The activities should be both social and interactive and lead the children to ask questions and experiment with the words and language. Some authors believe that the activities should include songs, chants, nursery rhymes, story books, and games to increase the children's sensitivity to sounds (Adams & Bruck, 1995; Beck & Juel, 1995).

PA instruction should not take the place of other types of more formal instruction, such as vocabulary, syntax, comprehension, writing, etc. However, the instruction should be deliberate, and educators who are providing the instruction should have a clear goal in mind (Yopp & Yopp, 2000). These activities can be used to expose literacy to early readers but should be thought of as a much broader aspect of literacy development (Yopp, 1992).

According to Yopp and Yopp (2000), activities that target PA skills can be used in the following categories (1) sound/syllable matching; (2) sound/syllable isolation; (3) sound/syllable blending; (4) sound/syllable segmentation; and (5) rhyming. The authors provide sample activities that can be used with each of these categories. The following brief descriptions are examples adapted from Yopp and Yopp, and Yopp (1992).

Sound/Syllable Matching.

To promote sound awareness, children may be presented with various pictures or objects in which they are asked to identify which objects begin with a particular sound, such as /b/.

Sound/Syllable Isolation.

To encourage thoughts about the sounds of the word, children may be asked to identify the first sound in the word *carrot*.

Sound/Syllable Blending.

To teach the individual sounds of the word, the children may be asked to blend together the isolated sounds to produce the word. An example would be *c-a-t.*

Sound/Syllable Addition or Substitution.

To teach the concept of adding sounds and replacing sounds, educators may use songs to enhance the children's learning. An example would be "The Name Game Song." For instance, the children's names could be used, "Karen, Karen, Bo Baren, Banana Fanna Fo Faren, Fe Fi Mo Maren, Karen!"

Sound/Syllable Segmentation.

This task, although more challenging, can also increase children's sensitivity to the sounds in words. With this activity, children may be asked to separate the word "bake" into its individual sounds to form /b/-/e/- /k/. Iteration can also be used to enhance this activity by repeating the first sound as in kkkkkkite.

Rhyming.

Several different rhyming activities can be taken from books, songs, games, etc. One source that easily elicits rhyming is the song, "Down by the Bay," which encourages the child to create new lyrics that rhyme.

PA in the Classroom

Several researchers have looked specifically at PA training in the classroom and its effectiveness in improving children's EL skills. One study (Lundberg, Frost, & Peterson, 1998) examined 253 Danish preschoolers who received PA training in their classrooms for 8 months. The participants were divided into two groups; 1) an experimental group consisting of 98 children and 2) a control group consisting of 155 children. The experimental group received training on rhyming, segmentation, phoneme identification at the beginning of words, and prosody. The control group was pre-and posttested just as the experimental group, but did not receive any PA training. The results from the study indicated positive effects on particular PA skills specifically; rhyming, manipulation, and segmentation. The authors also found that the PA training led to improvements in reading and spelling up to a Grade 2 level. These results also

encourage that PA skills can be positively facilitated in a classroom setting with young preschool children.

A follow-up study from Ball and Blachman (1991) examined 90 kindergarteners who were randomly assigned to one of three groups; 1) a PA intervention group that received PA and letter sounds instruction, 2) a language activities control group that received the same letter sound instruction, but language activities were used in place of the PA activities, and 3) a no intervention group; control. Groups 1 and 2 met for 20 minutes, 4 times a week. At the end of the study, the PA group showed greater improvement in phoneme awareness, reading, and spelling.

Therefore, many researchers suggest that classroom teachers provide the students with language motivation that exceeds the regular activities of speaking and listening. Teachers are encouraged to go beyond the ordinary curriculum to facilitate PA skills (Yopp, 1992).

To summarize, studies have demonstrated that classroom activities that focus on inside-out processes and teach PA skills were effective in increasing children's phonological awareness skills. It is not known, however, if classroom activities in conjunction with a parent shared reading program will result in even greater gains in children's EL skills.

Conclusion

A number of studies have been conducted that demonstrate that specific EL skills can be facilitated through different contexts (home and classroom), using different intervention strategies (shared storybook reading and PA classroom activities) that address both the outside-in and inside-out processes. However, the studies are limited to examining only a narrow aspect of EL skills within a specific intervention context. The combined effect of different intervention contexts across a broader range of EL skills is not known.

This investigation will describe two different contexts for facilitating EL skills, as well as two different instructional strategies. Specifically, the investigation will focus on the effectiveness of PA training in the preschool classroom (inside-out processes) and DR reading strategies in the home (outside-in processes). Therefore, the purpose of this study is to determine if there is an additive benefit in facilitating children's EL skills through classroom PA activities plus DR strategies in the home versus DR training only. Further, a wide range of children's EL skills will be examined across oral language, phonological and print awareness, and alphabetic knowledge. The specific questions proposed in this study are as follows: (1) Is there a difference in children's EL skills when training is provided on O-I processes only (DR) versus when training is provided on O-I plus I-O processes (DR + CL)? (2) Can training across a broader spectrum of EL skills (PA, AK, PA, OL) using either an O-I approach or an O-I + I-O approach result in an increase in children's pre-literacy, speech, and language measures?

CHAPTER 2

METHODS

In this study, two groups of typically developing children from a Title 1 preschool classroom participated in a study that investigated whether the effectiveness of PA training in a classroom was enhanced by a DR program implemented in their home environment. One group of preschoolers received classroom PA training and participated in the DR program. The second group of children also participated in the DR program but did not receive the classroom PA training.

Participants

Selection of participants for this study was based on several inclusionary criteria that were extracted from a case history completed by the parents. These criteria included: (1) normal hearing, based on parental and teacher report; (2) enrollment in a full-time preschool program; and (3) English was the native language, and the children resided in a monolingual English-speaking home.

Based on these inclusionary criteria, 8 children and their parents participated in the study. Five children (4 girls; 1 boy) participated in both the PA classroom activities and the DR program. Three children (3 boys) participated in the DR program but did not receive the PA instruction. The mean age of the children was 5.0 (range = 4.6 to 5.5).

Parents were asked to complete a section of the case history form that provided demographic information. Assignment of the socioeconomic status (SES) levels was derived on the basis of Eilers et al. (1993). See Appendix A. SES levels range from a score of 1 to 5, with

1 translating to both parents received a college degree, and 5 in which the single parent did not complete high school. The predominant SES level of the participants in this study was 3 or 4, which translates as at least one parent completed high school, but college was not attempted, or some college attempted, but no college degree was awarded. Most of the parents in the study worked as blue or white-collar workers in non-management positions. Characteristics of the participants, along with assigned SES levels, are summarized in Table 1.

Table 1
Participant Characteristics

Subject	Age	Gender	SES Level	HSQ
1	5,2	M	4	NS
2	5,5	M	3	NS
3	5,0	M	2	S
4	5,0	F	3	S
5	4,4	F	3	NS
6	5,5	F	4	NS
7	4,8	F	1	NS
8	4,6	M	4	NS

Home Screening Questionnaire

Parents were also asked to complete the Home Screening Questionnaire (Frankenburg & Coons, 1986). This questionnaire includes questions regarding the home environment; specifically, language opportunities, organization and schedule of the home, punishment, toys, and family activities (Whitehurst & Lonigan, 1998). After completion, the questionnaires were scored by the author and the child's home environment received either a score of "non-suspect" or "suspect." A score of 41 or below identifies children who are "suspect" for developmental delays because of influences in their environment. If a home environment receives a "suspect"

rating, then the child is considered "at risk" for language and learning problems based on his/her home environmental characteristics.

Early Childhood Environmental Rating Scale

Team leaders completed the Early Childhood Environmental Rating Scale (ECERS); (Harms & Clifford, 1980) in the preschool classroom at the beginning of the study. ECERS is a rating scale that assesses the environment, curriculum, teaching behaviors, and interactions between the teacher and the child. When completed, the ECERS scale was scored by the team leaders. The scores of the ECERS scale range from 1 to 7, with 7 being the highest possible score. The preschool classroom that was used in the study received high markings (between 6 and 7) in all tested areas. A score of at least 5.0 corresponds to an appropriate environment for learning; therefore, this classroom exceeded the score for a developmentally suitable classroom.

Experimental Design

A pretest-posttest design with two experimental groups was used in this study. The first experimental group was formed by assigning 5 preschoolers to a group receiving both the classroom PA training and the DR program. The second group was constructed by assigning the 3 remaining preschoolers to participate in the DR program without receiving the classroom PA training. Both groups and the control case were pre-and posttested in the same manner and at the same time during the study. The bivalent independent variable was intervention and included two values: Classroom PA training + DR program versus the DR program alone. The dependent variables included the child assessment measures, which included their performance on the

various standardized and non-standardized tests that assessed pre-literacy skills, language, and speech. A summary of the areas assessed and the dependent variables can be viewed in Table 2.

Table 2
Child Areas Assessed With Dependent Variables

Areas Assessed	Assessment Measures
Speech	Goldman-Fristoe Test of Articulation-2: Percentile Rank Established Reliability Measure
Receptive Language	Peabody Picture Vocabulary Test-III: Standard score Established Reliability Measure
Language	Language Sample: Total number of words (TNW) Total number of different words (TDW) Mean length utterance (MLU) Percent correct use of bound morphemes
Pre-literacy	Phonological Awareness Literacy Screening-Pre-Kindergarten: Raw score Screening Measure
Phonological Awareness	Phonological Awareness Literacy-Pre-Kindergarten: Raw Score Preschool Comprehensive Test of Phonological and Print Processing: Raw score Experimental Version-In print

Procedures

Class Project

This study was conducted as part of a semester-long class project with 23 graduate students in speech-language pathology, their professor in the course, and a second professor from the Department of Human Development and Learning who collaborated on the project. The students were assigned to several different responsibilities in order to complete their course assignments and carry out the study. For example, some students were assigned to administer the pretest battery, while others were assigned to create weekly handouts for the DR program. A complete list of the students' responsibilities is summarized in Table 3.

Table 3
Student Responsibilities

Task	Description
Demonstration Videos	Students created demonstration videos that incorporated several DR strategies that were shown to the parents during the weekly meetings.
Role Play Activities	Students role played the DR strategies to enhance the parents' understanding during the weekly meetings.
Weekly Handouts	Students created weekly handouts that were given to the parents. The handout provided information regarding the focused strategy for that week, plus any information that was covered the previous week.
Initial Testing	Students administered the pretest battery to the preschoolers.
Final Testing	Students administered the posttest battery to the preschoolers.
Video recorders (Initial Readings)	Students video recorded the parents reading to their child at the beginning of the study.
Video recorders (Final Readings)	Students video recorded the parents reading to their child at the end of the study.
Child care provider	Students provided childcare during the weekly meetings in a neighboring classroom.
Snack provider	Students provided various snacks and drinks for the parents for each weekly meeting.
Initial report writing	Students received the data from the pretest and created an initial report that was sent home to each parent.
Final report writing	Students received the data from the posttest and created a final report that was sent home to each parent. The final report included a comparison of the initial testing scores and the final testing scores.

Pretest/Posttest

After the participants were selected, pretest data were collected over a period of two weeks. Graduate students enrolled in the class who were assigned to collect the pretest data were trained on the testing procedures. The Phonological Awareness Literacy Screening-Pre-Kindergarden (PALS-Pre-K) (Invernizzi, Sullivan, & Meier, 2001), Goldman-Fristoe Test of Articulation-2 (GFTA-2) (Goldman & Fristoe, 2000), Peabody Picture Vocabulary Test-III

(PPVT-III) (Dunn & Dunn, 1997), Preschool Comprehensive Test of Phonological and Print Processing (P-CTOPPP) (Lonigan, Wagner, Torgesen, & Rashotte, in press) were administered.

In addition to these tests, a 20-minute language sample was also collected from each child. To elicit the sample, a standardized set of toys was used that included a Fisher Price farm set that was used with the boys and a Fisher Price dollhouse that was used with the girls. Each language sample was analyzed using the *Systematic Analysis of Language Transcripts (SALT)* (Miller & Chapman, 2000). At the end of the 5-week study, posttest measures were collected using the same test battery and procedures. Table 4 describes the links between the diagnostic measures and the corresponding PA skills that were taught in the classroom and/or in the DR approach.

Table 4
PA Skills Trained and Diagnostic Measures

Test	Skills Trained
PALS-Pre-K	Rhyming Sound Matching
P-CTOPPP	Rhyming Sound/Syllable matching Sound/Syllable isolation Sound/Syllable blending Sound/Syllable segmentation Sound/Syllable addition or substitution

Parents participating in the study were video recorded reading to their child during the pretest and posttest periods. Parents were asked to read to their child as they ordinarily did at home. Two books that were not part of the DR training program were used in a counterbalanced manner so that half of the parents read the book, *Fortunately* (Charlip, 1993) first, and half read

the book, *When I Am Old With You* (Johnson, 1990) first. In the posttest, the parents read the book that was not read in the pretest session.

Classroom PA Activities

The classroom PA activities were conducted by the author with the preschool class for 5 weeks with 20-minute sessions held 3 times a week. The 3 children who did not receive the PA training were escorted to the neighboring preschool classroom during the 20-minute session. The sessions included a variety of fun, play-based phonological awareness activities including rhyming, sound/syllable matching, sound/syllable isolation, sound/syllable blending, sound/syllable addition or substitution, and sound/syllable segmentation. The purpose of the activities was to enhance the preschooler's awareness of sounds in spoken words. These activities were derived from several sources including children's music, games, and literature. The preschoolers participated with the author by listening, answering questions, playing games, singing, etc. The activities began with earlier developing skills, like matching and rhyming, and moved to more advance skills. The activities and the skills targeted can be found in Appendix B. The schedule of activities can be viewed in Appendix C.

DR Program

The purpose of the DR program was to teach several different strategies that parents could use when reading to their children. The weekly meetings were held for five weeks in the evening in a preschool classroom and were led by the two professors involved in the project and two graduate students who served as team leaders for the class project. Each meeting lasted approximately 90 minutes with one 15-minute break where parents could enjoy snacks and

drinks. Childcare was provided by two other graduate students in a neighboring preschool classroom. During the meetings, parents received instructional handouts providing information on the focused skill for that week. Each strategy was supplemented by an instructional video, role-play demonstration, and a question and answer period. At the end of each meeting, parents received a book and a set of corresponding toys that accompanied the book. The books and toys were used to further facilitate the learned strategy. The families kept the books and toys that were sent home each week.

Selection of Book and Toys

The selection of books was based on the literature and previous studies that used various books to facilitate specific phonological awareness, print awareness, and alphabetic knowledge skills (Crain-Thoreson & Dale, 1999; Yopp & Yopp, 2000). The selection of the toys was based on the graduate students' comments and suggestions during an in-class activity in which the students were paired in groups and read each book. After reading the books, the students discussed what types of toys would supplement learning for each book. A list of the books, the PA skill that was addressed in each book and the corresponding toy are included in Table 5.

Table 5
Weekly Books with Corresponding Toys

Week	Book	PA Skill	Toy
1	"Cock-a-doodle-moo"	Sound Substitution; Rhyming	Set of plastic farm animals
2	"The Hungry Thing"	Rhyming; Sound Substitution	Set of plastic food
3	"The Cow that Went Oink"	Sound Awareness, Rhyming	No new toy; parents could use farm animals again
4	"The Disappearing Alphabet"	Print Awareness, Rhyming	Set of plastic alphabet letters
5	"Henny Penny"	Incorporation of all PA skills	No new toy; parents could use farm animals again

Weekly Reading Logs

Parents were asked to complete weekly reading logs each week to track the number of times the book was read, frequency and types of questions asked, and number of times toys were used to extend play activities related to the book. To view the weekly reading logs, see Appendix D.

Data Analysis

Statistical analyses were completed using *Statistica* (2000) to analyze pre and post variable outcomes. The two groups were analyzed using a two-way ANOVA with repeated measures between groups. Pre and post measures were summarized by the mean and standard deviation. Probability levels below 0.05 revealed significant differences between the two groups.

Reliability

Reliability was performed on both pre-and posttest data in the administration and scoring of the test battery. Reliability was also conducted on more than half of the language samples in which 20% of the transcripts were re-transcribed. Agreement between the transcribers reached 90% or greater.

CHAPTER 3

RESULTS

The purpose of this study was to determine if there is an additive benefit in facilitating children's EL skills through classroom PA activities (CL) plus DR strategies in the home versus DR training only. Both the CL and DR training incorporated a range of EL skills in which outcomes were assessed along of wide spectrum of basic language abilities, pre-literacy skills, and PA abilities. The results will be addressed in terms of: (1) descriptive analysis of the test results for the control and experimental groups, and (2) the change in the dependent variables between and within the two experimental groups (2 x 2 Analysis of Variance (ANOVA)).

Descriptive Analysis

Descriptive statistics were used to describe the two groups at pre-and posttest. A composite score for the P-CTOPPP and PALS-Pre-K was determined by adding together the raw scores of each subtest. Standard scores were determined for the PPVT-III. Percentile ranks were used for the GFTA-2. Mean scores were calculated for MLU, NDW, and TNW.

Pretest/Posttest

Pre-and posttest means and standard deviations for each group on each test are summarized in Table 6. Notice that the DR group scored lower than the DR + CL group on the P-CTOPPP, PALS-Pre-K, PPVT-III, and GFTA-2 on the pretest battery. The DR group scored higher than the DR + CL group on TNW, and both groups scored relatively the same on MLU and NDW during pretests. On posttests, the DR group again scored lower than the DR + CL

group on the P-CTOPPP, PALS-Pre-K, and GFTA-2. The DR group scored higher than the DR + CL group on the TNW and NDW, and both groups scored relatively the same on the PPVT-III and MLU measures at posttest.

Table 6
Descriptive Statistics for Pretest/Posttest Measures

Variable	Group	Number of Children	Pretest Mean	Pretest Standard Deviation	Posttest Mean	Posttest Standard Deviation
P-CTOPPP	DR	3	60.4a	11.6	77.7a	8.7
P-CTOPPP	DR + CL	5	74.2a	4.9	81.3a	8.0
PALS-PRE-K	DR	3	77.1a	11.2	90.1a	9.3
PALS-PRE-K	DR + CL	5	88.9a	5.7	92.9a	2.2
PPVT-111	DR	3	101.0b	3.0	106.0b	5.6
PPVT-111	DR +CL	5	110.6b	11.5	105.0b	5.8
GFTA-2	DR	3	50.7d	34.5	41.0d	21.8
GFTA-2	DR +CL	5	76.0d	14.7	80.0d	12.8
MLU	DR	3	4.3c	.73	4.7c	.85
MLU	DR +CL	5	4.2c	.52	4.9c	.94
TNW	DR	3	605.7c	120.8	535.3c	81.1
TNW	DR + CL	5	471.6c	88.4	475.0c	150.4
NDW	DR	3	175.3c	15.9	174.7c	8.73
NDW	DR + CL	5	175.4c	28.1	164.0c	25.5
% Bound Morphemes	DR	3	100.0d	_____	100.0d	_____
% Bound Morphemes	DR + CL	5	100.0d	_____	100.0d	_____

a = Raw Score b = Standard Score c = Mean Score d = Percentages
* Ceiling for P-CTOPPP = 130
* Ceiling for PALS-Pre-K = 131

Statistical Analysis with ANOVA

The five test measures were analyzed using a 2-way ANOVA with fixed effects. The variables were described between and within the two groups. The results will be discussed for each test measure.

PALS-Pre-K

Table 7 summarizes the ANOVA for the PALS-Pre-K. As indicated in Table 7, there was no significant difference between groups on this measure (F = 2.340111, p = .176952). There was a main effect for pre and posttest measures (F = .25.04774, p = .002441); however, an interaction was also observed (F = .7.11629, p = .037143) indicating that there was a significant group by test effect. Therefore, it is not possible to interpret the main effect. The results of a post hoc analysis (Table 8) did not reveal a significant difference between the two groups (p=.17), but there was a significant difference from pre to post measures (p=.002), as summarized in Table 9.

Table 7
PALS-Pre-K

1=Group 2=PrePost	df	MS	df Error	MS error	F	p-level
1	1	199.8375	6	85.39667	2.34011	.176952
2	1	269.6640	6	10.76600	25.04774	.002441*
12	1	76.6140	6	10.76600	7.11629	.037143*

Table 8
Post Hoc Analysis/ Group

Group	(1) 83.60000	(2) 90.90000
DR = 1 DR + CL = 2	.177149	.177149

Table 9
Post Hoc Analysis/ Pre-Post

Pre-Post	(1) 83.01000	(2) 91.49000
DR = 1 DR + CL = 2	.002270*	.002270*

In order to further explain the interaction effect, a t-test (see Table 10) was conducted between groups on pre-test performance. The results of this test showed that there was a significant difference between the groups on pre-test performance (p=.001718), and there was no difference between groups on posttest performance. The significant difference between groups at pre-test performance accounts for the interaction, but unfortunately was in the wrong direction.

Table 10
t-test Between Groups on Pretest Performance

Variable	Mean	Std.Dv.	N	Diff.	Std.Dv.	df	p
Group	100.6	.517	8	16.13	9.28	7	.0017*
Pretest PALS	84.4	9.60					

To further describe the performance of the DR group, another t-test was conducted (see Table 11) to examine the differences in pre-post scores in the DR group only. This test was

conducted on the DR group alone because of the group's greater gain in scores from pre to posttest. The results from the t-test revealed a difference that approached significance (p=.061627).

Table 11
t-test Between DR Group Only

Variables	Mean	Std.Dv.	N	Diff.	Std.Dv.	df	p
Pretest PALS	77.1	11.23	3	-13.00	5.86	2	.061
Posttest PALS	90.1	9.31					

The results from the t-tests account for the interaction that was observed in the children's performance on the PALS-Pre-K. As just noted, the DR group and DR + CL group were significantly different at pretest and not significantly different at posttest. Therefore, we cannot judge the relative treatment effect. However, the DR intervention alone appeared to be very robust as demonstrated by the fact that differences in pre and posttest performance approached significance even with a small (n) and large standard deviations. Figure 1 summarizes the individual children's performances on the PALS-Pre-K.

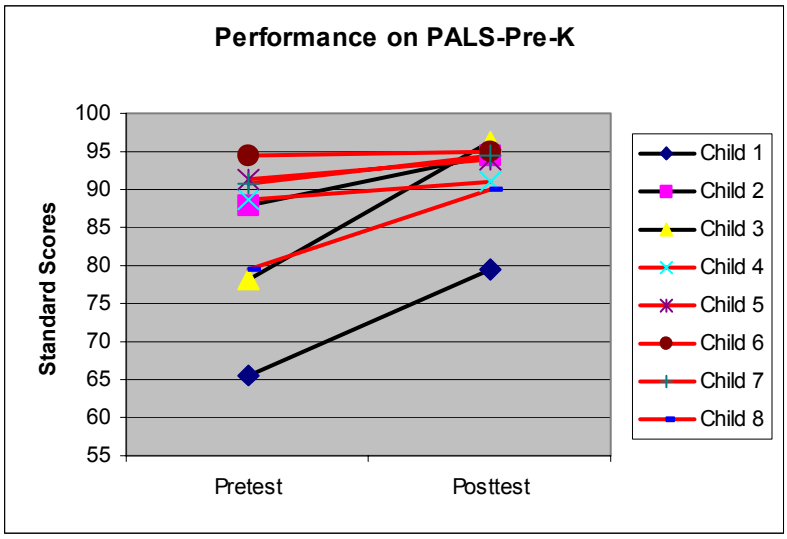

FIGURE 1. Preschooler's Pre and Posttest Performance on PALS-Pre-K

As noted in Figure 1, the DR group (numbers 1, 2, and 3 highlighted in black lines) scored significantly lower during pretest as compared to the DR + CL group (numbers 4, 5, 6, 7, and 8 highlighted in red lines). However, the DR group made large gains at posttest, which is identified in the second t-test that revealed an approaching significant difference between pre and posttests.

P-CTOPPP

Table 12 summarizes the ANOVA for the P-CTOPPP. As indicated in Table 12, there was no significant difference between groups on this measure ($F = 3.80996$, $p = .098797$). There was, however, a significant difference for the pre-and posttest measures ($F = 10.47712$, $p = .017757$). A post hoc test was performed (see Tables 13 and 14) and revealed that there was no significant difference between the two groups ($p=.09$), but there was a significant difference for the DR + CL group from pre-to posttest ($p=.01$).

Table 12
P-CTOPPP

1=Group 2=PrePost	Df	MS	df Error	MS error	F	p-level
1	1	285.5802	6	74.95622	3.80996	.098797
2	1	562.4282	6	53.68156	10.47712	.017757*
12	1	97.0282	6	53.68156	1.80728	.227409

Table 13
Post Hoc Analysis/ Group

Group	(1) 69.03333	(2) 77.76000
DR =1 DR + CL = 2	.098967	.098967

Table 14
Post Hoc Analysis/ Pre-Post

Pre-Post	(1) 67.27333	(2) 79.52000
DR =1 DR + CL = 2	.015739*	.015739*

Figure 2 summarizes the children's individual performances on the P-CTOPPP.

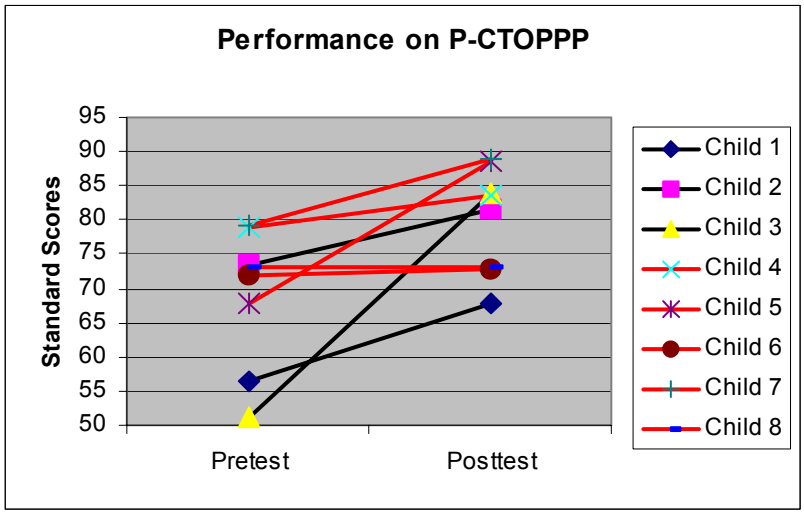

FIGURE 2. Preschooler's Pre and Post Performance on P-CTOPPP

As noted in Figure 2, although not statistically tested, the DR group (numbers 1, 2, and 3 highlighted in black lines) scored lower during pretest as compared to the DR + CL group (numbers 4, 5, 6, 7, and 8 highlighted in red lines). Again, as it was previously mentioned, there was no significant difference between the two groups at posttest (p=.09), but there was a significant difference for the combined intervention group from pre-to posttest (p=.01).

PPVT-III

Table 15 summarizes the ANOVA for the PPVT-III. As indicated, there was no significant difference between groups for this measure (F =1.104687, p = .333717). No main effect (F = .005464, p = .943477) or interaction (F= 1.705410, p= .239413) was observed within the groups for pretest or posttest data.

Table 15
PPVT-III

1=Group 2=PrePost	df	MS	df Error	MS error	F	p-level
1	1	69.3375	6	62.76667	1.104687	.333717
2	1	.3375	6	61.76667	.005464	.943477
12	1	105.3375	6	61.76667	1.705410	.239413

GFTA-2

Table 16 summarizes the ANOVA for the GFTA-2. As indicated, there was only an approaching significant difference between groups for this measure (F = 5.135432, p = .064005). No main effect (F = .562111, p = .481763) or interaction (F = 3.269580, p = .120576) was observed within the groups for the pretest and posttest data

Table 16
GFTA-2

1=Group 2=PrePost	df	MS	df Error	MS error	F	p-level
1	1	3880.104	6	755.5555	5.135432	.064005
2	1	30.104	6	53.5556	.562111	.481763
12	1	175.104	6	53.5556	3.269580	.120576

MLU

Table 17 summarizes the ANOVA for the mean length of utterances (MLU). As indicated, there was no significant difference between groups for this measure (F = .028318, p = .871892). No main effect (F = 4.182906, p = .086815) or interaction (F = .587076, p = .472610) was observed within the groups for pretest and posttest data

Table 17
MLU

1=Group 2=PrePost	df	MS	df Error	MS error	F	p-level
1	1	.25420	6	.897662	.028318	.871892
2	1	1.219800	6	.291616	4.182906	.086815
12	1	.171200	6	.291616	.587076	.472610

TNW

Table 18 summarizes the ANOVA for the total number of words (TNW). As indicated in this table, there was no significant difference between groups for this measure ($F = 2.694401$, $p = .151810$.) No main effect ($F = .295776$, $p = .606145$) or interaction ($F = .358927$, $p = .571015$) was observed within the groups for pretest and posttest data.

Table 18
TNW

1=Group 2=PrePost	df	MS	df Error	MS error	F	p-level
1	1	35429.40	6	13149.27	2.694401	.151810
2	1	4200.07	6	14200.16	.295776	.606145
12	1	5096.82	6	14200.16	.358927	.571015

NDW

Table 19 summarizes the ANOVA for the number of different words (NDW). As indicated in this table, there was no significant difference between groups for this measure (F =

.168110, p = .696035). No main effect (F = .306414, p = .599893) or interaction (F = .242440, p = .639946) was observed within the groups for pretest and posttest data

Table 19
NDW

1=Group 2=PrePost	df	MS	df Error	MS error	F	p-level
1	1	105.3375	6	626.6000	.168110	.696035
2	1	136.5042	6	445.4889	.306414	.599893
12	1	108.0042	6	445.4889	.242440	.639946

Summary

1. Is there a difference in children's EL skills when training is provided on O-I processes only (DR) versus when training is provided on O-I plus I-O processes (DR + CL)?

   With respect to performance on the PALS-Pre-K, "no". Although relative treatment performance of DR + CL is impossible to judge compared to DR only because the children's pretest performance in the two groups was not equivalent on this test measure. It is interesting to note, however, that the DR group's performance on PALS-Pre-K approached statistical significance at posttest. With respect to the P-CTOPPP, the answer is also "no". There was, however, a significant difference for the DR + CL group from pre-to posttest ($p=.01$).

2. Can training across a broader spectrum of EL skills (PA, AK, PA, OL) using either an O-I approach or an O-I + I-O approach result in an increase in children's pre-literacy, speech, and language measures?

   No. Both groups of children demonstrated gains in posttest scores, with the DR + CL group demonstrating significant gains on the P-CTOPPP, which assessed phonological awareness, alphabet knowledge, and print awareness skills (see number 1 above). However, there were no significant gains observed in the measures of oral language (i.e., MLU, NDW, TNW), speech (i.e., GFTA-2), or receptive vocabulary (i.e., PPVT-III). This finding validates the intervention that was provided in that the children learned what was trained (i.e., inside-out skills of phonological and print awareness) regardless of the training context (classroom or home).

CHAPTER 4

DISCUSSION

The purpose of this study was to determine if there is an additive benefit in facilitating children's EL skills through classroom PA activities (CL) plus DR strategies in the home versus DR training only. The typically developing children who received the intervention received a range of training on various pre-literacy and language skills that were measured along a broad spectrum of PA abilities. Both groups of children demonstrated improvement in posttest scores on the tests that assessed phonological awareness, alphabet knowledge, and print awareness skills. The DR + CL group demonstrated significant gains in these skills as measured by the P-CTOPPP. However, no significant gains were observed in the measures of oral language (i.e., MLU, NDW, TNW), speech (i.e., GFTA-2), or receptive vocabulary (i.e., PPVT-III). The remainder of this chapter will discuss the findings in relation to the previous research, both theoretical and clinical implications, and areas for future research.

Comparison of Previous Research to Present Study

Several interesting findings were discovered in this study in relation to the children's significant gains in posttest measures involving phonological awareness, print awareness, and alphabetic knowledge in comparison to previous studies. The primary finding of this study that there was an increase in the preschoolers' phonological sensitivity corresponds to previous findings in the area of PA training where significant improvements in PA skills at posttest were observed (Ball, 1997; Ball & Blachman, 1991; Byrne & Fielding-Barnsley, 1991; Gillon, 2000; Lundenberg et al., 1998). This finding also demonstrates the robustness of intervention programs that focus on PA skills. Regardless of the specific aspects of PA that were trained or

the context or methods used to train those skills, the children benefited from the intervention in a relatively short period of time. A difference between the current findings and those of previous research is that the significant difference only occurred in the combined intervention group on the P-CTOPPP, although the children's posttest performance on the PALS-Pre-K in the DR group approached significance.

The range of the intervention period is quite diverse across studies with several authors suggesting that the PA intervention should be held 2-3 days a week lasting anywhere from 10-30 minutes over a period of 3 weeks to 2 years (Brady & Moats, 1998; Yopp & Yopp, 2000). However, this study and other studies, (Ball & Blachman, 1991; Byrne & Fielding-Barnsley, 1991) have discovered that the shorter intervention programs, only lasting 5-12 weeks, can be extremely effective in facilitating PA skills. For instance, several studies have demonstrated comparable outcomes to those studies that lasted nearly 8 months (Lundenberg et al., 1998). In this study, children received 5 hours of classroom intervention, which corresponds to the intervention time reported by Byrne and Fielding-Barnsley in which the children received 6 hours of classroom intervention. The results from this study, however, must be interpreted in light of the combined intervention. That is, 5 of the children received 5 hours of classroom intervention in addition to the 5-week home intervention that occurred with their parents.

The size of the sample used in this study also brings up an interesting point when compared to other studies. Previous studies (Ball & Blachman, 1991; Bryne & Fielding-Barnsley, 1991; Lundenberg et al., 1998) included a greater number of participants (N= 90-253) in their PA training investigations, whereas the current study had a very limited sample (N= 8). Therefore, this small sample size might be a factor in the lack of statistical significance on the test batteries other than the P-CTOPPP for the combined intervention group.

With regard to the lack of significance on other test measures, the current findings suggest that the preschoolers learned the skills on which they were trained. In this study, not only did the weekly classroom intervention focus on PA skills, but the enhanced DR program, which is a training context used to facilitate outside-in processes, was also used to teach phonological awareness, alphabetic knowledge, and print awareness; which are the inside-out processes. Therefore, the study essentially combined the two processes together to facilitate PA skills. As a consequence, it is not surprising that the significant gains were obtained in the areas of phonological awareness, print awareness, and alphabetic knowledge because those were the specific areas that were trained in both intervention contexts. Although not statistically significant, both groups, regardless of group assignment, demonstrated higher posttest scores in the areas that were targeted. This finding provides validity for the intervention program.

Another interesting component in this study involves the socioeconomic status of the families and their preschoolers who participated in the study. Although several studies have been conducted in the area of PA training, few have included at-risk preschool age children. Lonigan (2003) summarized findings from several studies in which children from economically disadvantaged homes are considered to be at-risk for later literacy difficulties. Lonigan reported that these studies have shown that children who are at-risk for later reading difficulties perform lower on many EL skills than those children who are not at-risk for later literacy difficulties. Further significance of these findings is linked to results reported by Lonigan et al. (1998) that the differences between children from low SES families and children from high SES families was most significant during the ages of 3-5, a critical period just before the children began kindergarten. In the current study, most of the children came from low to mid SES level families, as indicated by the SES level ratings falling between 3 and 4 on the SES assignment

scale (Eilers et al., 1993). Concurrent with the findings summarized by Lonigan (2003), the children in the current study scored lower on the same test measures than preschoolers from high SES backgrounds from the same area preschools that were reported in a similar study by Phelps (2003). The results from Phelps did not reveal significant improvements in PA skills at posttest because the preschoolers initially began at high pretest performances allowing them little room for improvement. In the current study; however, the preschoolers from lower SES families ended with much higher posttest scores than posttest. Therefore, the findings from the current investigation provide additional support for the probable benefit of PA training with at-risk children.

The results from this study extend the findings from the few studies that have examined the intervention effects with younger preschool-aged children (Byrne & Fielding Barnsley, 1991; Lundenberg et al., 1998). Although there is extensive evidence that intervention is effective in increasing children's phonological sensitivity, the majority of the studies included older children who were in the first grade or older (Lonigan, 2003). Lonigan identified 55 studies of phonological intervention with children in preschool and kindergarten. However, only 6 of the 55 studies primarily included children who were at the preschool age. The outcomes of these studies and others maintain that the preschool age children significantly benefit from PA training. For instance, Roth and Baden (2001) support the notion of PA intervention in the earliest years. Lundenberg et al. further agree by claiming that PA can be positively facilitated in even the youngest of children. These studies support the downward scaling of intervention to younger children. Earlier intervention supports the current focus on prevention rather than remediation (US Department of Education, 2002). Given the performance gap at age 3 to 5 years

that was noted above between children in low and high SES groups, the need for early intervention, especially with this population, is significant.

A final interesting factor regarding this study and other investigations was the use of parent involvement in facilitating their child's emergent literacy skills. Similar to other studies, this study was able to effectively incorporate parents as intervention agents (Crain-Thoreson & Dale, 1999; Ezell, Justice, & Parsons, 2000; Justice & Ezell, 2000; Whitehurst & Lonigan, 1998). By teaching the parents several different strategies that they could use with their children, the parents were able to transform themselves into the role of an interventionist. These strategies allowed the parents to influence and encourage literacy related events with their children at home, in the car, at the park, etc. As it was mentioned before, several studies support the use of parents serving as the facilitator of these EL skills. Further, many of the studies reported that greater gains were achieved in the home-based programs with the parents as the intervention agents. This is consistent with the current findings in that the children's posttest performance in the DR only group approached significance even with a small n (n=3) and large standard deviations.

Limitations to the Study

There are some important limitations to the study that should be noted. First, it is difficult to achieve statistical significance when working with a very small sample (N=8) and with unequal groups (DR = 3; DR + CL= 5). Another limitation is that different individuals administered pre-and posttest measures to the children, which may have contributed to the non-significant outcomes on the oral language measures. A final limitation to the study that should be noted is that one of the measures used in the assessments is an experimental measure. The P-

CTOPPP may have not been sensitive enough to capture adequate changes in the preschoolers' skills in 5 weeks. Examiners noted that the children tired more quickly and it was more difficult to maintain the children's attention to the test.

Theoretical Implications

An interesting theoretical implication that is revealed through this study revolves around the theory of Whitehurst and Lonigan (1998) who claimed that the developmentally earlier skills (outside-in skills) might be more beneficial to train first than the later developing inside-out skills. The results from this study however, demonstrate that the preschoolers benefited from the enhanced DR program that focused primarily on the inside-out processes. Therefore, one can assume that one process does not necessarily have to be trained before the other with typically developing 4 year-old children. For example, this study demonstrated that using an enhanced DR approach, which has been a traditional context for training outside-in processes, can be used to facilitate phonological awareness, alphabetic knowledge, and print awareness, which are inside-out processes.

Another interesting implication of these results is that the participants in the study only improved in the areas that were trained regardless of group assignment. This notion follows closely with Lonigan's (2003) proposal that the domains of EL (oral language, print knowledge, and phonological processing) are modular, as illustrated in Figure 3. According to this model, training phonological sensitivity skills has a direct influence on children's decoding skills, whereas oral language skills have an impact on reading comprehension. However, vocabulary, as part of oral language skills, may be influential in the acquisition of phonological sensitivity, which is related to decoding. According to Lonigan, studies have demonstrated that a preschool

oral language intervention program resulted in an increase of phonological sensitivity. In contrast, a preschool intervention program that focused on phonological sensitivity did not reveal an increase in oral language skills, thus supporting the modularity of these skills.

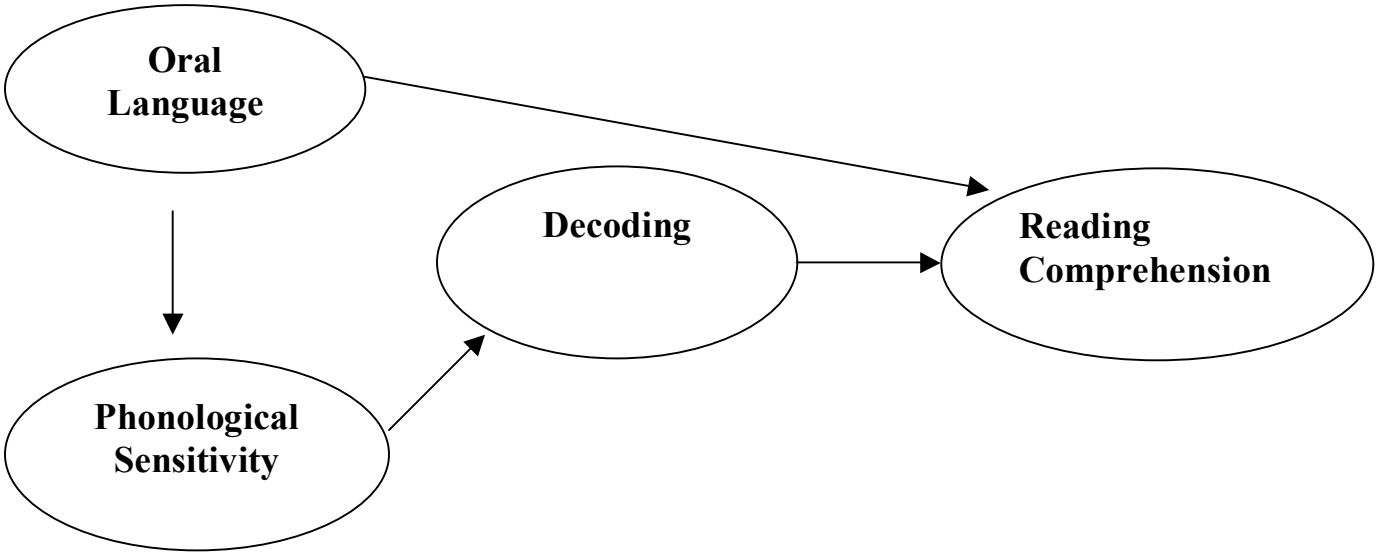

Figure 3. "Model of the Role of Oral Language and Phonological Sensitivity in Reading" (Lonigan, 2003)

Again, the findings from this investigation lend further support for this modular model of EL skills in that training of PA skills resulted in increased phonological sensitivity and not oral language skills. These results were obtained regardless of the training context (home versus classroom) or intervention agent (parent versus clinician).

Clinical Implications

This study revealed several important clinical implications that address assessment, intervention, and intervention agents. First, this study demonstrated that parents can be taught to facilitate their children's phonological sensitivity through shared storybook activities at home after receiving focused, short-term training. This finding is especially noteworthy given the lower SES status of the families who participated in the study and the expressed concerns and lack of reading skills of some of the parents. The fact that children made gains in pre-literacy skills in either parent-directed or clinician-directed intervention activities suggest that parents may be a more cost-effective way to facilitate these skills in children who are at-risk for later reading difficulties.

One important finding from this study that might be useful in future parent trainings is to give parents weekly focused feedback on the density of questions asked during each reading. Based on the results of this study, it seems that instructing parents to ask at least 10 questions per book is beneficial. However, it is equally important to limit the number of questions asked to less than 25 questions per book in order to prevent children from "tuning out".

Finally, the results from this study also support the potential of parents to become literacy mentors in leading future DR programs with other families. This finding is based on the "Trainer of Trainers" model that has been used in the professional development of teachers (cf.,Williams & Coutinho, 2003). In regard to this model, after parents are trained through a DR program, they can then become the trainers themselves by starting their own programs in their communities, churches, work environments, etc. With regard to assessment of pre-literacy skills, SLP's need to consider what to assess, how to assess, and when to assess these skills in young children. In this study, two different test measures were used to assess pre-literacy skills, the P-

CTOPPP and the PALS-Pre-K. Although the P-CTOPPP assessed more areas than the PALS-Pre-K, it appeared to be more demanding for the preschoolers. However, because it assessed more areas, it was able to generate more information about the participants than the PALS-Pre-K. On the other hand, the PALS-Pre-K was more user-friendly and the children seemed to enjoy and perform at a higher level with the PALS-Pre-K than the P-CTOPPP. Although there are several newer test instruments available, few include downward versions appropriate for the preschool-aged population (Justice & Pullen, 2003). SLP's, therefore, may need to develop their own assessment measures or use a combination of tests to obtain a thorough and in-depth assessment of a child's pre-literacy skills.

Finally, the results from this study suggest that clinicians need to monitor pre-literacy skills over a longer period of time. Several studies have followed their participants for longer than 5 weeks in order to further encourage PA skills (Brady & Moats, 1998; Yopp & Yopp, 2000). This study, only lasting 5 weeks, may have revealed different results if the preschoolers' skills were assessed over a longer period of time. Further, the test measures used may not have been sensitive enough to capture the changes in emergent literacy skills over the short period of time.

Future Research

Future research in the area of PA is greatly warranted. The remainder of this chapter will focus on the areas for future research in the following areas: (1) comparison of approaches; (2) quasi-experimental designs; (3) different sample characteristics and (4) intervention agents.

Comparison of Approaches

As noted in this study, both DR plus PA intervention approaches were used to facilitate EL skills. An interesting future investigation would be to explore the differences between the traditional DR approach, the enhanced DR approach, and PA classroom programs and their effectiveness in the acquisition of EL skills.

Quasi-Experimental Designs

A greater number of participants is necessary in order to provide sufficient statistical power to identify differences between and within groups. Although statistically significant pre-post test results were obtained for the DR + CL group on the PCTOPPP with the small sample size examined in this study, no between group differences were found. The presence of a control group would also lead to a better examination of the independent variable under investigation.

Different Sample Characteristics

This study consisted of typically developing children from families who fell within the low to mid SES level categories. Additional information in the area of PA performance and acquisition may be learned from selecting participants who are developing atypically, particularly children who have language and/or phonological impairments (Nelson et al., 2003).

Also, more information may be obtained if families were included from a range of SES levels, as well as children from different cultural populations.

Intervention Agents

Trained graduate students and their professors served as the intervention agents and trainers for the classroom and DR activities in this study. An important question posed for future research involves the investigation of the possible benefits of using parents as trainers of other parents in the DR approach, which could provide intervention in practical, cost effective ways. Another interesting comparison would be the effectiveness of teachers versus SLP's for classroom intervention activities.

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APPENDICES

Appendix A
SES Assignment

SES LEVEL	EDUCATION	WORK	FAMILY
5 (LSES)	High school not completed	Unskilled worker	Single parent, unstable family
4	At least 1 parent completed high school, college not attempted	Blue collar employment	
3 (MSES)	Some college completed, but no college degree	Transitional white collar-non management position	
2	1 parent has a college degree	White collar, middle management, teachers, nurses, midscale proprietors	Two-parent home
1	Both parents have a college degree	Professional or high-level management	Stable, two parent home

SES Assignment, adapted from Eilers et al. (1993).

Appendix B
PA Activities

Phonological Awareness Classroom Activities
A. Lynn Williams, 2002

Practical applications that can easily be used in the classroom with all children to facilitate children's speech and language abilities with a specific emphasis on phonological awareness skills are described in the attached pages. I think these types of classroom activities will be particularly useful in helping children develop some pre-literacy skills. I have looked over several resources to find activities that I think will be useful and fun for children in a classroom setting. These activities are playful and engaging while deliberately focusing the children's attention on the sound structure of language. These activities come from children's literature, music, and children's games. This type of less formal classroom activities facilitates phonological awareness, as well as subsequent reading and spelling achievement.

Phonological awareness is the awareness of the sound structure of language. It includes the ability to (1) identify and create rhyming words; (2) count syllables; (3) match words by initial or final sounds; (4) isolate a sound in a word; (5) blend individual sounds to form a word; (6) substitute sounds in a word; and (7) segment a word into its constituent soundsBelow are some activities that I have taken from different resources (Roth & Baden, 2001; Yopp, 1992; Yopp & Yopp, 2000) that can be used to facilitate phonological awareness for each of the phonological awareness skills listed above. The more playful, game-like, and amusing the activity, the better. These activities can be used in the classroom for about 15-20 minutes a day. The activities described below are categorized according to the specific phonological awareness skill Sound Matching/Sound Identification Activities

- A simple song, such as the following lyrics song to the tune of "Jimmy Cracked Corn and I Don't Care", can be used to identify a word with a targeted sound. In the example below, the sound of the letter /d/ is sung, not the letter name.
  Who has a /d/ word to share with us?
  Who has a /d/ word to share with us?
  Who has a /d/ word to share with us?
  It must start with the /d/ sound!
  The class sings together, then the teacher calls on individual children to volunteer words that begin with the /d/ sound. If a child said "dog", the class would sing:
  Dog is the word that starts with /d/
  Dog is the word that starts with /d/
  Dog is the word that starts with /d/
  Dog starts with the /d/ sound.

- Find your partners
  Distribute picture cards to each child so that each card can be matched with another that begins (or ends) with the same sound. Tell the children that once you give the signal, they are each to circulate and find a classmate whose card shares the same sound in the targeted position.

- Scavenger Hunt

Organize children into teams of about three. Give each team a bag or box that has on it a letter or picture of an object that begins with that letter. For example, one team has a bag with the letter M on it and a picture of a monkey; another team gets a bag with the letter S on it and a picture of a snake. Children are then set off on a scavenger hunt to find objects in the classroom that begin with their target sound. Children with the bag that has the letter P on it may find a pencil, pen, and paper to put in their bag. Give the children enough time and support to be successful, then bring them together to state their target sound and share their objects. Then they may return their objects, trade bags, and repeat the activity.

- Old MacDonald Had a Farm

  In the previous activities, the children were told the individual sound and then asked to identify which of a number of words began with the sound or to generate their own examples. Children may also be asked to perform the reverse – given a word and asked to tell what sound occurs at the beginning, middle, or end of the word. The following song encourages students to think about sounds in words. A single sound may be emphasized through the entire song, or each verse may focus on a different sound, as in the lyrics below sung to "Old MacDonald Had a Farm":

  What's the sound that starts these words:
  Turtle, time, and teeth?
  (wait for a response from the children)
  /t/ is the sound that starts these words:
  Turtle, time, and teeth.
  With a /t/, /t/ here, and a /t/, /t/ there,
  Here a /t/, there a /t/, everywhere a /t/, /t/.
  /t/ is the sound that starts these words:
  Turtle, time, and teeth!
  What's the sound that starts these words:
  Chicken, chin, and cheek?
  (wait for a response from the children)
  /ch/ is the sound that starts these words:
  Chicken, chin, and cheek.
  With a /ch/, /ch/ here, and a /ch/, /ch/ there,
  Here a /ch /, there a /ch/, everywhere a /ch/, /ch/.
  /ch/ is the sound that starts these words:
  Chicken, chin, and cheek!
  What's the sound that starts these words:
  Daddy, duck, and deep?
  (wait for a response from the children)
  /d/ is the sound that starts these words:
  Daddy, duck, and deep.
  With a /d/, /d/ here, and a /d/, /d/ there,
  Here a /d/, there a /d/, everywhere a /d/, /d/.
  /d/ is the sound that starts these words:
  Daddy, duck, and deep!

  Examples for focusing on middle and final sounds is as follows:

Medial:
What's the sound in the middle of these words:
Leaf and deep and meat?
(wait for a response from the children)
/ee/ is the sound in the middle of these words:
Leaf and deep and meat.
With a /ee/, /ee/ here, and a /ee/, /ee/ there,
Here a /ee/, there a /ee/, everywhere a /ee/, /ee/.
/e/ is the sound in the middle of these words:
Leaf and deep and meat!
Final:
What's the sound at the end of these words:
Duck and cake and beak?
(wait for a response from the children)
/k/ is the sound at the end of these words:
Duck and cake and beak.
With a /k/, /k/ here, and a /k/, /k/ there,
Here a /k/, there a /k/, everywhere a /k/, /k/.
/k/ is the sound at the end of these words:
Duck and cake and beak!

Rhyming Activities

- The Hungry Thing
  The Hungry Thing by Jan Slepian and Ann Seidler is a story about a creature that asks townspeople for food by pointing to a sign on his chest that says FEED ME. When the townspeople aks what he would like to eat, he repsonds, "Schmancakes!" The townspeople are flustered and attempt to determine what schmancakdes are. After wise men and a cook offer ideas, a little boy declares that "Schmancakes sounds like fancakes sound like pancakes to me!" and the townspeople feed him some. The Hungry Thing asks for more and more food and each time the people try to identify what he wants.

  Nonsense rhyming words are clues to what the Hungry Thing wants to eat. The townspeople—and the listener—must think of rhyming foods in order to make sense of the Hungry Thing's requests. As you read this book aloud, encourage the children to make predictions. The Hungry thing wants feetloaf. What can that be? Pause before the little boy in the story concludes that "feetloaf sounds like beetloaf sounds like (pause) meatloaf to me!" Allw the children to make guesses before you read "meatloaf".

  After reading the book, pull out a lunchbag and announce how hungry you are. Look into the bag and tell the children what you have for lunch today. "Ah! Mogurt! I love mogurt!" Encourage the children to guess what mogurt is. Once they have figured out that mogurt is yogurt, take it out of the bag to show them and ask them how they knew. Repeat this with three or four other food items you have in the lunchbag.

Next, provide the children with paperbags, paper, and markers (or magazines with pictures of food) so they can create their own lunchbags full of food. After they draw or select and cut out their favorite foods and put them in the bag, have each child sit with a partner and provide "clues" about what his or her bag contains. "I have a piece of nizza". The partner's task is to determine what "nizza" is.

You may also create a center with plastic foods and lunchbags. Children will play with these items, retelling the story and creating rhymes as they have their peers guess what they have in their bags.

You may also wish to follow a reading of the story with placing a FEED ME sign around your neck. Distribute cards with pictures of foods and begin making requests using nonsense rhymes: "Feed me the nandwich." The child who holds the picture of the food you request brings it to you where you pretend to gobble it up. Give volunteers the opportunity to be the Hungry Thing as well.

The *Hungry Thing Returns* and *The Hungry Thing Goes to a Restaurant* are two additional books by the authors that follow the same pattern. Read these at a later time and include menus and food trays at a center so children may engage in play with these items, too.

- Twenty Kids Have Hats
  The book *Ten Cats Have Hats* by Jean Marzollo is a counting book of rhymes: "One bear has a chair, but I have a hat. Two ducks have trucks, but I have a hat." Read the book aloud to the children, and invite predictions. "Five pigs have …." The children may respond with wigs or twigs or figs. Ask the children how they made their guesses. "Why did you guess wigs/twigs/figs?" Prompt the children to listen for rhymes as you read further. Continue to encourage predictions.

  After sharing the book, create a class big book about students who have hats. Each child selects a number, dictates to an adult a rhyme that follows the pattern in the book, and then illustrates the rhyme. For example, Alison may be responsible for "one", Sam is responsible for "two", and Nora is responsible for "three". Alison might say, "One dog has a frog, but I have a hat" and illustrate a dog with a frog. Then each child paints a picture of him/herself wearing a hat. Compile the book from one to however many children you have.

- The Ants Go Marching
  The song, "The Ants Go Marching" is an excellent rhyming song. Once children catch onto the pattern, they may create their own verses. While marching in a line, children sing the following:
  The ants go marching one by one,
  Hurrah! Hurrah!
  The ants go marching one by one,
  Hurrah! Hurrah!
  The ants go marching one by one
  The little one stops to have some fun,
  And they all go down to the ground,

To get out of the sun.
Boom! Boom! Boom!
The song continues with the ants marching two by two, three by three, and so on with any appropriate corresponding rhyme. Each time the group sings, "the little one stops to ….", a different child may propose a rhyming lyric and everyone mimics the action. Then they all can march lower and lower, bending over, as they "go down to the ground …."

- Down by the Bay
  "Down by the Bay" is another good rhyming song that offers children the opportunity to create their own lyrics. After learning verses such as "did you ever see a whale with a polka dot tail?" and "Did you ever see llamas eating their pajamas?" children create their own verses such as "Did you ever see a shark strolling in the park?"

Sound Addition or Substitution Activities

Adding or substituting sounds in words in familiar songs may also help children begin to focus on the sounds that make up their speech.

- Someone's in the kitchen with Dinah
  "Fe-Fi-Fiddly-i-o" can become "Be-Bi-biddly-i-o" or "Ke-Ki-Kiddly-i-o" and so on. Children may insert consonant sounds, blends, or diphthongs, as follows (sung according to the lyrics "Someone's in the kitchen with Dinah"):
  I have a song that we can sing
  I have a song that we can sing
  I have a song that we can sing
  It goes something like this:
  Fe-Fi-Fiddly-i-o
  Fe-Fi-Fiddly-i-o-o-o-o
  Fe-Fi-Fiddly-i-oooooo
  Now try it with the /z/ sound!
  Ze-Zi-Ziddly-i-o
  Ze-Zi-Ziddly-i-o-o-o-o
  Ze-Zi-Ziddly-i-ooooo
  Now try it with the /br/ sound!
  Bre-Bri-Briddly-i-o
  Bre-Bri-Briddly-i-o-o-o-o
  Bre-Bri-Briddly-i-ooooo
  Now try it with the /ch/ sound
  Che-Chi-chiddly-i-o
  Che-Chi-chiddly-i-o-o-o-o
  Che-Chi-chiddly-i-ooooo
  Che-Chi-chiddly-i-o!

The same type of substitutions may be done with the "ee-igh, ee-igh, oh! Sections in "Old MacDonald Had a Farm". For example, "ee-igh, ee-igh, oh!" may be sung as "Bee-bigh, bee-bigh, boh!" or "See-sigh, see-sigh, soh!", etc.

- The Name Game Song
  The Name Game song is an excellent way to practice sound substitution skills with the names of the students in a class. ("Let's do Donna, Donna Donna Bo Bonna, Banana Fanna fo Fonna, Fe fi Mo Monna, Donna.").

- Sound of the Day
  The teacher may ask children to select a "sound of the day" (e.g., /t/) and then say each of the children's names with that sound in place of the first sound. Peter will be called "Teter", Billy will be called "Tilly", and "Judy" will be called "Tudy". The teacher may take attendance this way and may want to encourage each child to experiment with saying his or her classmates' names with the sound of the day.

- Cock-a-doodle-moo!
  In the book *Cock-a-doodle-moo*! By Bernard Most, a rooster wakes up one morning to discover that he cannot crow above a whisper and the farm animals keep sleeping. "Z-z-z-cheep" snore the chicks; "Z-z-z-quack" snore the ducks. The rooster tries to teach the cow to cock-a-doodle-doo so that she can wake up the farm animals. The cow struggles with this task, substituting phonemes in many ways. She says, "Mock-a-moodle-moo!" and "Rock-a-poodle-moo!". The farm animals wake up with a laugh: "Oink-ha!" "Quack-ha!", "meow-ha!" etc.

  After reading the story, think about farm animals not mentioned. How would the author have a goat snore? A sheep snore? How would an awakening horse sound? Reread each of the ways that the cow tried to crow. Have your students think of other ways to say "cock-a-doodle-doo". You may want to write some of their ideas on chart paper or on the chalkboard, adding letters to the phonemic awareness activity. Write "cock-a-doodle-doo", erase the initial letters, and replace them with letters suggested by the children.

  Then think of other alterations. What if the situation were changed and the pig tried to teach the cow to oink? What might the cow's attempts at oinking sound like?

  Place plastic farm animals at a center. Leave the book at the center, too. The children will retell the story and play with sounds as they manipulate the animals.

Sound/Syllable Blending Activities

Blending requires children to manipulate individual sounds by combining them to form a word. Given a series of isolated sounds (e.g., /b/ - /a/ - /t/), children blend them together (e.g., "bat").

- What am I thinking of?

In this activity, the teacher tells the class s/he is thinking of an animal, for example (any category may be used; even correlated with a current unit or instructional theme). The teacher then gives them a cue – the separate sounds in the word. If the teacher was thinking of a cow, s/he tells the class that the animal is a "/k/ - /ow/", articulating each of the sounds separately. The children, then must blend the sounds together to discover the animal the teacher has in mind.

To increase motivation, the teacher may use picture cards and face them away from the children, give the segmented clue, then turn the picture around once the children have guessed. Or, the teacher may make use of a toy box or grab bag, peeking inside and saying, "I see a toy /d/ - /u/ - /k/ in here. Who knows what I see?"

- If you think you know this word, shout it out!
  Changing the lyrics to the song "If you're happy and you know it, clap your hands!", can provide another sound blending activity:
  If you think you know this word, shout it out!
  If you think you know this word, shout it out!
  If you think you know this word,
  Then tell me what you've hear,
  If you think you know this word, shout it out!
  (teacher says a segmented word such as /k/-/a/-/t/, and children respond by saying the blended word)

  The verse can be repeated several times with different words. Eventually, individual children will be able to contribute the segmented sounds for their peers to blend.

- Clap, Clap, Clap Your Hands
  In this example, we modify "Clap, clap, clap your hands" to encourage blending syllables. The first two verses are traditional, followed by an adaptation.
  Clap, clap, clap your hands,
  Clap your hands together.
  Clap, clap, clap your hands,
  Clap your hands together.
  Snap, snap, snap your fingers.
  Snap your fingers together.
  Snap, snap, snap your fingers.
  Snap your fingers together.
  Say, say, say these parts.
  Say these parts together.
  Say, say, say these parts,
  Say these parts together:
  Teacher: moun (pause) tain (children respond, "mountain!")
  Teacher: love (pause) ly (children respond, "lovely!")
  Teacher: un (pause) der (children respond, "under!")
  Teacher: tea (pause) cher (children respond, "teacher!")

Sound/Syllable Segmentation Activities

Segmenting the sounds in a word is one of the more difficult phonological awareness tasks and it is highly related to later success in decoding words. Segmenting refers to the act of isolating the sounds in a spoken word. One activity to begin working with is to have children segment just the first sound in a word. Iteration, or sound repetition activities may be useful. For example, when singing "Pop Goes the Weasel," the teacher may encourage the children to sing "P-p-p-p-p-POP goes the weasel!" for the final line in the song. This iterating technique may be used with children's names, too. For example, Catherine may be said as "C-C-C-Catherine" or Joe may be said as "J-J-J-Joe". Sounds may be drawn out and exaggerated as a way to draw attention to them. Linda becomes "Lllllll-inda", Sam becomes "Sssssss-am".

- Listen, Listen, to My Word
  Children who are successful at each of the preceding activities may be able to successfully perform a complete segmentation task in which each sound in a spoken word is separated from the others. Singing to the tune, "Twinkle, Twinkle, Little Star", the following lyrics require children to segment entire words:
  Listen, listen
  To my word
  Then tell me all the sounds you heard: race
  (slowly)
  /r/ is one sound
  /a/ is two
  /s/ is last in race
  It's true.
  Listen, listen
  To my word
  Then tell me all the sounds you heard: coat
  (slowly)
  /k/ is one sound
  /o/ is two
  /t/ is last in coat
  It's true.
  Thanks for listening
  To my words
  And telling all the sounds you heard!
  It's best to use words with no more than three sounds. You can adapt the lyrics for only 2 sounds:
  Listen, listen
  To my word
  Then tell me all the sounds you heard: go
  (slowly)
  /g/ is one sound
  /o/ is two
  And that is all in go

It's true.

The above activities focused on segmenting individual sounds, but children can also segment words into syllables. Segmenting words into syllables is an easier task than segmenting words into sounds. Below are activities with syllable manipulation:

- How many syllables in a name?
  Read the story *Tikki Tikki Tembo* by Arlene Mosel about a pair of Chinese brothers, oe of whom has a very long name ("Tikki tikki Tembo No Sa Rembo chari Bari ruchi Pip Peri Pembo") and the other of whom has a very short name ("Chang"). After reading and discussing the story, encourage your students to say the two boys' names. Say them again and this time clap with each syllable that is said. Tikki Tikki Tembo's name will have 21 claps. Chang's name will receive one clap.

  Even if you don't have access to this book, you can have the students try clapping the syllables in their own names. As a group, say each child's name and clap as you separate the syllables. "Erica" would be said "Er" (with a clap)-"i" (clap)- "ca" (clap). "Richard" would be said with two claps. Further develop the activity by placing colored pieces of paper in a pocket chart as you say each syllable in a particular child's name. Point to each piece of paper as you say each syllable. Later, let children work at tables to glue the appropriate number of colored pieces on a piece of drawing paper to represent the number of syllables in their names. For example, Erica takes three pieces of colored paper from a pile and glues them side by side at the top of a piece of drawing paper. Afterwards, children move around the room with their papers in hand and group themselves with others who have the same number of colored pieces glued on the drawing paper. Ask each child in a group to say his/her name. Encourage all students to say the syllables as each name is slowly said. Comment that they do, indeed, each have the target number of syllables (Yes! Jack, Nick, Sam, and Lee each have one beat! Let's go to our next group. Let's say their names, etc.). Develop a bar graph reflecting the number of students that have a given number of syllables in their names.

  As a follow-up activity, you may wish to use clapping when taking attendance for several days, clapping the number of syllables as you call each child's name. And at dismissal time you may clap once and anyone with a one-syllable name may leave. Clap twice and students with two-syllable names may leave, etc.

  Later share the story *Tingo Tango Mango Tree* by Marcia Vaughan in which an iguana is named Sombala Bombala Rombala Roh, a flamingo is named Kokio Loki Mokio Koh, a parrot is named dillaby Dallaby Doh, a turtle is named Nanaba Panaba Tanaba Goh, and a bat is named Bitteo Biteo.

- Humpty Dumpty
  This familiar nursery rhyme can be used in a syllable blending activity. Each child should have about five separate cubes of the type that can be snapped together. Recite the nursery

rhyme. Tell the children that Humpty Dumpty broke and that you have some broken words, too. Ask them if they can help to put the words back together again. Say the parts of a word (e.g., "Pop-si-cle") and ask the children to repeat the parts by picking up a cube for each part they say. In this example, the children pick up three cubes, one at a time. Then they snap the cubes together, saying each part and then the entire word. Are they able to help Humpty Dumpty? Repeat the process reciting the poem and then asking the children to put together a new "broken word".

- Teacher, May We?
  Adapted from the game "Mother May I?", students line up some distance away and face you. Give directions that require children to count the number of syllables in a word such as, "You may jump the number of times as there are syllables (beat or chunks) in the word bunny. Students respond, "Teacher, may we?" With your affirmative response, the children say "Bun—ny" and each child moves two jumps forward. Alter the number of syllables in the words you provide, moving from one syllable words ("good") to four or more syllables ("motorcycle") and vary the types of movement the students may make (e.g., take small steps, giant steps, skip). The first student to reach you may give the directions on the next round.

- Going on a Word Hunt
  Read *We're going on a Bear Hunt* by Michael Rosen. Then suggest to the children that you go on a word hunt. Have children sit on the floor with their feet together and their knees bent up. Everyone slaps their toes, then slaps their knees with the beat of the chant. Keep the rhythm going throughout the chant. The teach begins and the students echo.

Teacher:	Going	on a	word	hunt!
	Slap toes	slap knees	slap toes	slap knees
Children:	Going	on a	word	hunt!
	Slap toes	slap knees	slap toes	slap knees
Teacher:	What's	this	word?	
	Slap toes	slap knees	slap toes	slap knees
Children:	What's	this	word?	
	Slap toes	slap knees	slap toes	slap knees
Teacher:	/m/	(pause)	/ap/	
	Slap toes	slap knees	slap toes	slap knees
Children:	/m/	(pause)	/ap/	
	Slap toes	slap knees	slap toes	slap knees
Together:	mmmmmmmmmmmmmmmmmap			map!
	Slap toes	slap knees	slap toes	slap knees

  Use single syllable words such as light, six, man, van, no, zoo, fist. It is also recommended that you use words that begin with continuant sounds (e.g., /f/, /l/, /m/, /n/, /r/, /s/, /v/, /y/, /z/, /th/, /sh/, and vowels) so that they can be elongated as hands are sliding from the toes to the knees for the final part of the chant.

- Make a word

Select a rime unit, such as "at" to focus upon. Have a card with the letters "at" written on it. In a bag have letter cards that may serve as the onset for this family. A child draws a card from the bag. The class says the sound of the letter drawn, blends it with the "at" and determines whether or not a real word is made. Students give a thumbs up or thumbs down.

General Recommendations for Phonological Awareness Activities

- There should be a sense of playfulness and fun as the children engage in these activities. The activities should help develop positive feelings toward learning. Drill and rote memorization should be avoided.
- The activities should be used in group settings that encourage interaction among the children. Language play is most appropriate in a social setting.
- Encourage children's curiosity about language and their experimentation with it. Children's attempts at manipulating language should be responded to positively and enthusiastically.
- Allow for and be prepared for individual differences in children's abilities to catch on to these phonological awareness activities. Some children will catch on quickly, others will show an emerging understanding of the relationship between the sounds in the activities and their use in speech, and still others will find the activities completely nonsensical, but delightful.
- These activities do not serve as diagnostic tools so judgments about individual children's abilities should be avoided. Make the tone of the activities fun and informal rather than evaluative.
- Written words, or letters, may be used with these activities. Attaching the visual symbols to the oral activities results in greater gains in phonological awareness.

Appendix C
Schedule of Activities

March 2003

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10 **Sound Matching** "Jimmy cracked corn and I don't care" Find your partner	11 **Rhyming** "The Hungry Thing" Lunchbag	12 **Sound Substitution** "Someone's in the kitchen with Dinah" Name game song	13	14	15
16	17 **Blending** "What am I thinking of?" Clap your hands	18 **Segmentation** "Listen, listen to my word" Humpty Dumpty	19 **Sound Matching** Old MacDonald had a farm	20	21	22
23 30	24 **Rhyming** "The Hungry Thing Returns" - menus and food trays	25 **Segmentation** Teacher, May we? Make a word	26 **Blending** "If you know this word, shout it out!" Clap, Clap, Clap…	27	28	29

April 2003

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	31 **Segmentation** How many syllables in a name? ("Tikki Tikki Tembo")	1 **Substitution** "Cock-a-doodle-moo" - alternations (other farm animals; pig teaches cow to oink)	2 **Matching** Scavenger Hunt (initial and final sounds) Old MacDonald had a farm	3	4	5
6	7 **Segmentation** Iteration/Sound Repetition (Pop Goes the Weasel; children's names)	8 **Rhyming** "The Hungry Thing Goes to a Restaurant" - menus and food trays	9 **Substitution** "I like to eat apples and banana **Segmentation** "Tingo Tango Mango Tree"	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26

Appendix D

Weekly Logs

Cock-A-Doodle-Moo Week 1

	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday
Please indicate the number of times you read the book each day	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times
Please indicate the types of CROWD questions you asked each day	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions
How often did you ask questions during each reading?	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.
Did you use toys after reading? **Did play with the toys extend your child's language and play with the story?**	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N

Let us know what worked or didn't work with this week's reading activity.

Give us any comments about reading activity that you think are useful to know.

What questions do you have about the shared reading activity for this week?

The Hungry Thing Week 2

	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday
Please indicate the number of times you read the book each day	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times
Please indicate the types of CROWD questions you asked each day	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions
How often did you ask questions during each reading?	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.
Did you use toys after reading? **Did play with the toys extend your child's language and play with the story?**	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N

Let us know what worked or didn't work with this week's reading activity.

Give us any comments about reading activity that you think are useful to know.

What questions do you have about the shared reading activity for this week?

The Cow That Went Oink Week 3

	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday
Please indicate the number of times you read the book each day	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times
Please indicate the types of CROWD questions you asked each day	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions
How often did you ask questions during each reading?	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.
Did you use toys after reading? **Did play with the toys extend your child's language and play with the story?**	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N

Let us know what worked or didn't work with this week's reading activity.

Give us any comments about reading activity that you think are useful to know.

What questions do you have about the shared reading activity for this week?

What PA skills did you use: Identify/create rhyming words; Match words by initial/final sounds; Isolate a sound in a word; Delete a sound in a word; Substitute sounds in a word; Count syllables in a word; Segment a word into sounds. Which were hard/easy?

The Disappearing Alphabet Week 4

	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday
Please indicate the number of times you read the book each day	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times
Please indicate the types of CROWD questions you asked each day	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletio n **R**ecall **O**pen-ended **W**h-ques. **D**istancin g questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions
How often did you ask questions during each reading?	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.
Did you use toys after reading? **Did play with the toys extend your child's language and play with the story?**	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N

Let us know what worked or didn't work with this week's reading activity.

Give us any comments about reading activity that you think are useful to know.

What questions do you have about the shared reading activity for this week?

What PA skills did you use: Identify/create rhyming words; Match words by initial/final sounds; Isolate a sound in a word; Delete a sound in a word; Substitute sounds in a word; Count syllables in a word; Segment a word into sounds. Which were hard/easy?

Henny Penny Week 5

	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday
Please indicate the number of times you read the book each day	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times	1-2 times 3-4 times 4-5 times
Please indicate the types of CROWD questions you asked each day	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletio n **R**ecall **O**pen-ended **W**h-ques. **D**istancin g questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions	**C**ompletion **R**ecall **O**pen-ended **W**h-ques. **D**istancing questions
How often did you ask questions during each reading?	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.	4-5 ques. 6-9 ques. 7-10 ques.
Did you use toys after reading? **Did play with the toys extend your child's language and play with the story?**	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N	Use toys? Y/N Extend language play? Y/N

Let us know what worked or didn't work with this week's reading activity.

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VITA

KAREN WILHJELM

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