Once Upon A Time: Teaching Preservice Educators Dialogic Reading Strategies

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ABSTRACT

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This study investigated the effects of instruction on the retention and application of dialogic reading (DR) strategies by undergraduate students in a Child Studies program. Thirty-eight participants, enrolled in the same field placement course, were assigned to one of three groups. The first group received only in-class instruction on DR strategies. The other two groups received the same in-class instruction and additionally engaged in observation and reflection; one group observed and reflected on a teacher's use of DR in a video, while the second group observed and reflected on their own use of DR practices, after having recorded themselves reading to a child. The pretest and posttest measures were participants' responses to a hypothetical bookreading scenario. These responses were transcribed and scored for the number of different DR strategies mentioned (diversity of DR strategies), the number of examples given (frequency of DR strategies), and a ratio of the two variables (i.e., examples/diversity). Mixed ANOVA analyses showed a significant effect of group and time for each of these variables. Post hoc tests indicated that the group receiving only in-class instruction scored significantly lower than the two observation groups on all three dependent variables. However, there was no significant difference between the self-observation group and the teacher-observation group on all three variables. The implications of the findings for teaching DR are discussed.

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Chapter 1: Review of the Literature

Nationally, over half of all Canadian children of preschool age are now in some form of non-parental childcare (Statistics Canada, 2011) and the rate has been increasing over the last two decades. The rise has been accompanied by growing attention to the critical role of childcare and preschool programs in children's development in various domains, including language and emergent literacy (Peth-Pierce, 2001). In fact, early childhood centers provide a naturalistic context for the facilitation of children's skills in these areas (Girolametto et al., 2007). Yet, studies have shown that a limited number of classrooms demonstrate the kinds of instructional interactions associated with children's language learning and emergent literacy. For instance, Justice et al. (2008) found that in 135 preschool classrooms, few educators provided early literacy instruction that was explicit, systematic, and purposeful. Given that rich language experiences have been shown to prepare both typically and atypically developing children for later success in reading and writing (Snow & Dickinson, 1991), it would benefit future early childhood practitioners to know how to foster language and literacy prior to entering the field. One way of doing so is to read books with children in engaging and stimulating ways.

In the present study, undergraduate students preparing to work with children in educational and other settings were taught a set of book reading strategies that have been shown to foster preschoolers' language. *What Works Clearinghouse* (WWC) (2006) has distinguished book reading strategies used with young children based on the degree of participation of the child. WWC defines *shared book reading* as an adult reading aloud without requiring extensive interactions from children; *interactive shared book reading* as an adult reading while using a variety of techniques to engage children in the text; and *dialogic reading* as the adult and the child(ren) gradually switching roles during reading so that the child becomes the storyteller while

the adult functions as an active listener and questioner. Here, I use the term *dialogic reading* (DR) to indicate the two more interactive reading types. However, given that the terms proposed by WWC are often used interchangeably in the literature, I also use the other terms to retain the terminology of different authors, and for readability.

The study will contrast three approaches to teaching preservice undergraduate students[1] DR strategies: one involving in-class instruction, one on in-class instruction and self-observation, and one involving in-class instruction and educator observation. In the following sections, the rationale for DR and for training preservice educators in DR will be discussed and the literature on DR will be reviewed. More specifically, studies of DR and its impact on children, and studies of the effects of DR instruction on parents and teachers, will be discussed. Review of these findings will be followed by the aims and hypotheses of the present study.

Theoretical Basis of DR and Key Concepts

The Importance of Language for Later Literacy

Emergent literacy involves the skills, knowledge, and attitudes that are developmental precursors to conventional forms of reading and writing (Lonigan & Whitehurst, 1998). These include oral language (e.g., vocabulary), phonological awareness (e.g., knowing that the word *ball* begins with the /b/) sound, knowledge of graphemes (e.g., alphabet knowledge), grapheme-phoneme correspondence (e.g., knowing that the letter *b* makes the sound /b/), and print concepts (e.g., writing one's name) (Whitehurst et al., 1999). There is evidence that these skills are related to reading and writing, including but not limited to oral language. Many studies have demonstrated relationships between oral language levels and later reading proficiency for

[1] The students are referred to here as preservice educators, given that they are eligible to work as educators in childcare settings upon graduation, if they complete certain courses. Alternative paths to becoming an educator include college-level instruction in early childhood education.

typically developing children, as well as for children with reading or language delays. Researchers have shown that children who enter kindergarten with under-developed language and emergent literacy skills are more likely than their higher-achieving peers to exhibit immediate and long-term difficulties in reading development (NICHD Early Child Care Research Network [ECCRN], 2005). Longitudinal studies of children with language delays find low attainments in reading and spelling when the children are followed up at 7 or 8 years of age (Bishop & Adams, 1990), and a far greater likelihood of reading difficulties compared to their peers (Catts, 2001). In a similar vein, Scarborough (1989) studied children as preschoolers and as second graders and concluded that general language deficits were responsible for low reading achievement. Based on such studies, one might predict that a child who has significantly delayed language skills in the preschool period will be at high risk for later reading difficulties.

Another issue addressed in research is the components of reading that oral language impacts. While there is evidence that children who struggle with phonemic awareness have significant difficulty acquiring phonic word-attack skills, oral language appears to be important for reading comprehension (Lonigan & Whitehurst, 1998). As Cain and Oakhill (2007) claim, "not only are oral language skills linked to the code-related skills that help word reading to develop, but they also provide the foundation for the development of the more-advanced language skills needed for comprehension" (p. 31). The importance of oral language to reading is also reflected in the "simple view of reading" (Gough & Tunmer, 1986). According to this view, reading is a product of decoding and linguistic comprehension (R= D x C) and cannot be achieved with either alone.

Keeping in mind that language has a profound impact on children's preparedness for school and future academic success, children typically enter school with a wide range of background knowledge and language ability, attributable in part to home experiences and socio-

economic status (SES) (Whitehurst et. al., 1994). The resulting gap in academic ability persists or grows throughout the school experience (Fielding et. al., 2007). An early and intensive focus on language and early literacy skills can build a foundation for later learning.

The Importance of Early Childhood Educators Supporting Language

The childcare environment, for children up until the age of 5, has been described in terms of two principal factors: instructional quality and instructional environment (Howes et al., 2008). Instructional quality includes the ways in which caregivers manage the classroom, relate to the children, and instruct children. Instructional environment refers to the physical environment and organization of the classroom. While instructional environment indirectly affects child outcomes, instructional quality has direct effects on child outcomes (NICHD ECCRN, 2002). In fact, instructional quality is a strong predictor of student achievement (Howes, 1997; NICHD ECCRN, 2002), surpassing the physical environment of the classroom. A meta-analysis of sixteen published studies (Fukkink & Lont, 2007) found that teachers with more education, particularly in the early education field, had higher quality programs and provided children with better personal care. That is, they appeared to be more sensitive, more involved with children, and had more knowledge of developmentally appropriate practice.

Strategies that have been shown to be effective in promoting children's early literacy development include fostering children's understanding of print concepts (Girolametto et al., 2007; Hargrave & Sénéchal, 2000), arranging the classroom environment so that children have the opportunity to interact with books and other print material (Neuman & Roskos, 1997), providing opportunities for children to experiment with writing (Lonigan & Whitehurst, 1998), familiarizing children with letters of the alphabet and their corresponding sounds (Adams, 1990), involving children in activities that promote phonological awareness (Griffin, Snow, & Burns, 1998), and reading aloud to children in an interactive style (Dickinson & Smith, 1994; Hargrave

& Sénéchal, 2000). Amongst these strategies, many researchers agree that reading aloud to children in an interactive style is an important teaching strategy for promoting children's early literacy development across multiple domains (Gormley & Ruhl, 2005; Hargrave & Sénéchal, 2000; Whitehurst et al., 1994; Whitehurst & Lonigan, 1998). This strategy is strongly grounded in social-interactionist theories of language acquisition.

Social-interactionist theorists claim that language is gradually acquired through frequent verbal interactions with responsive partners. A number of studies have shown the positive developmental impacts of adult use of responsive conversational input to children, such as open-ended questions, expansions, and advanced linguistic models (Vasilyeva, Huttenlocher, & Waterfall, 2006; Wasik, Bond, & Hindman, 2006). In these studies, preschool educators were trained on specific language-facilitation techniques. The techniques were applied in informal and formal interactions in the classroom context, including during center time, storybook reading, and mealtime, and their use correlated with accelerated language outcomes in preschool children (Dickinson & Brady, 2006; Girolametto & Weitzman, 2002; Justice et al., 2008; Wasik, Bond, & Hindman, 2006).

Dialogic Reading

Definition, rationale, and principles. DR, developed by Whitehurst and colleagues, is a program of shared-reading that involves several changes to the way that adults, parents, and teachers typically read books to children. The central focus is a shift in roles between the child and the adult. Instead of a situation where the adult reads and the child simply listens, in DR the child is actively involved and gradually learns to become the storyteller.

The adult's role is thus to (1) encourage the child to participate, (2) provide feedback to the child, and (3) adapt her/his reading style to the children's growing linguistic abilities (Hargrave & Sénéchal, 2000). To elaborate, first, the adult uses evocative techniques to assist the

child in using language, such as asking open-ended questions, rather than simply pointing at words or at pictures. Second, the adult gives feedback by restating or adding information to what the child has said, praising, or rectifying a statement. Third, the adult modifies her/his reading style as the child matures. The goal is to provide children with opportunities to express themselves, to build upon existing language, and to witness language-rich models.

DR is based on the assumption that practice in using language, feedback regarding language, and appropriately scaffolded adult-child interactions in the context of book reading facilitate young children's language development (Whitehurst et al., 1988). Indeed, Vygotsky proposed that adult-child interactions provide opportunities for children to learn new ways of thinking and acquire problem-solving skills (Girolametto et al., 2012). Vygotsky views learning as a gradual process that is achieved through mediated practice and social interaction with adults, later to be internalized and consolidated. He proposes the concept of the child's zone of proximal development (ZPD), which is the area where the adult, or more experienced peers, should give the most sensitive instruction or guidance. This allows the child to develop skills he will internalize, and then use on his own. Within the ZPD, adults or peers can provide structural support that helps children learn, which is referred to as scaffolding (Girolametto et al., 2012).

Bruner, like Vygotsky, emphasized the social nature of learning, describing the changing role of children who are scaffolded from listener to active participant (Wood, Bruner, & Ross, 1976). In addition, Rogoff (1990) points out that teaching in the ZPD does not need to be explicit. She emphasizes *guided participation*, whereby adults or more skilled peers engage with children in a collaborative process of shared understanding and problem solving. When applied to book reading, scaffolding consists of the adult fine-tuning her or his reading to increase the child's verbalizations over time. For example, an adult might shift from asking literal questions to asking questions that require higher levels of abstraction. Rogoff (1990) proposes that shared book

reading allows for "cultural variation in ... the means by which children achieve a shared understanding with those who serve as their guides and companions" as the guide can use a variety of strategies: "explanation, discussion, provision of expert models, joint participation, active observation, and arrangement of children's roles" (p. 22).

Shared storybook reading, along with its collaborative processes, also serves as a natural context for discussing social-cognitive events, such as interpersonal relationships, character motives and behavior, conflict resolution, and emotions (Huitt & Dawson, 2011). It is also an ideal context for promoting literacy and language development. Substantial research, reviewed next, has indicated that DR supports children's language and emergent literacy skills.

Effect of dialogic reading on children.

Effect of DR on children from high/middle SES background. A number of studies have reported a stable and robust relation between DR and children's vocabulary (Frijters, Barron, & Brunello, 2000; Sénéchal, 2006; Sénéchal & LeFevre, 1996; Whitehurst et al.,1988). Sixteen studies were analyzed by Mol et al. (2008) to investigate the impact of parent-child DR on children's vocabulary in comparison to reading with a less interactive role for the child. The authors found a moderate overall mean effect size. This suggests parents not only need to expose children to stories to promote language development, but they also need to be actively involved by eliciting verbal responses to the story. Thus, the quality of book reading is as important for language development as its frequency. On the other hand, Mol et al. reported that DR with older children (4-5 year olds) was not as effective as with younger age groups (2-3 year olds). The authors inferred that perhaps older children prefer to initiate dialogue when they do not understand story content or want to comment, rather than be prompted by adults. However, there is no empirical evidence that supports this claim.

Amongst the studies analyzed by Mol et al. (2008), Arnold et al. (1994) and Whitehurst (1988) found that not only vocabulary but other aspects of children's expressive language skills improved as well. These findings suggest that instructing adults in DR can enhance expressive language skills in children from middle and high SES groups significantly.

Sénéchal, Pagan and Lever (2008) further examined the contribution of interactive shared reading to children's vocabulary, morphology, syntax, and narrative production. A total of 106 four-year old children and their parents participated. The results corroborated other research findings that report a positive relation between interactive forms of shared reading and children's vocabulary. A positive relation between shared reading and children's morphological knowledge was also found, perhaps because reading aloud to children exposes them to more complex linguistic forms. A third finding showed a relationship between shared reading and children's syntax knowledge, mediated by parent literacy. The authors speculated that this might be because parents who read more also use more syntactically complex language. However, contrary to the researchers' hypotheses, shared reading was not associated with children's narrative skills.

In a follow-up intervention study, however, Lever and Sénéchal (2010) found positive effects of shared reading on narrative ability. Participants were forty 5- and 6-year-olds who were assigned either to an interactive shared reading group or to an 8-week phoneme awareness program. Results demonstrated that children in the shared reading group told better-structured stories in comparison to the alternate treatment group. According to the researchers, a logical structure is the most important component of a narrative because it allows conveyance of the meaning and plot of the story. Second, the children in the shared reading group made greater gains in expressive vocabulary and referred to characters and objects more clearly than children in the alternate treatment group. This study lends support to the idea that interactive shared reading plays a role in the development of narrative skills.

Effect of DR on children from low SES background. In 2005, Boyd et al. reported that about 20 percent of children in the U.S. entering kindergarten did not yet have the necessary social and emotional skills to be "ready" for school. Of children in very low-income families, as many as 30 percent did not have the necessary skills. Ninio (1980) found that low SES mothers were less likely than middle-class mothers to engage in a number of potentially instructive behaviors during story time. Adams (1990) estimated that a typical middle-class child who enjoys 30 minutes of storybook reading per day over the preschool years enters first grade with 1000 to 1700 hours of one-on-one picture book reading, whereas a child from a low-income family averages 25 hours (as cited in Whitehurst et al., 1994, p. 679). For these reasons, numerous studies have investigated the effects of DR on children from low-income families.

Valdez-Menchaca and Whitehurst (1992) led a study in Mexico with twenty 2-year-olds from low-income backgrounds. In the intervention group, a doctoral student read to children individually using DR techniques over a seven-week period. The comparison group was given individual arts and crafts instruction by the same student. Results show that the DR intervention yielded significant gains in children's expressive and receptive language skills as measured by standardized language tests. Further, children in the experimental group produced longer and more complex sentences and a greater variety of nouns and verbs than children in the control group. Thus, the researchers demonstrated that DR can have a significant impact on the language skills of children from low-income families.

Although the previous study presented interesting results, the "teacher" was an advanced doctoral student, whereas in actual practice, early educators or parents would read to children. To further investigate DR by parents and teachers, Whitehurst et al. (1994) randomly assigned 3-year-olds ($N = 73$) from low-income families to one of three conditions: daycare reading, daycare plus home reading, and a control group. Children were read to in groups and adult readers

(teachers and parents) were trained in DR using the videotape training method and role-play with trainers. Parents received books to read to their children at home. Teachers were asked to engage in shared reading sessions daily for 10 minutes per reading group, for a period of six weeks. Following the intervention, children in the DR conditions scored significantly higher than the control group on an expressive vocabulary test, with children in the daycare plus home condition score outperforming those in the daycare only condition. Six months after the intervention, the results were maintained. Again, this study showed the positive effects of DR on children from low-income families.

An additional study conducted by Lonigan and Whitehurst (1998) was designed to replicate the findings of Whitehurst et al. (1994) with a more disadvantaged group. A total of 114 three- and four-year-olds from low-income families were recruited and randomly assigned to one of four groups: school reading, home reading, school plus home reading, and a no treatment control group. The study went on for six weeks and teachers and parents were trained through a videotape, as in Whitehurst et al. (1994).

Results revealed a significant impact of a DR intervention on children's expressive language abilities. Children in the intervention conditions scored significantly higher at posttest on an expressive vocabulary test than those in the control condition. No significant difference was seen between the three intervention conditions. An intervention effect was also found on a standardized language test and measures drawn from language samples (e.g., mean length of utterance, semantic complexity). On these, the children in the three intervention conditions scored significantly higher than children in the control condition at posttest. Moreover, children in the home-only condition scored significantly higher on the language test than children in the other conditions. The authors speculated that the school-based group reading interactions may not have been sufficient to produce broad improvements in children's oral language skills, while at home,

parents might have been better able to tailor their use of questions and feedback to their children's interests and abilities. Overall, however, both parent- and teacher-led DR had positive effects on children's language skills.

A more recent study investigated the effects of DR on the inclusion of evaluative devices in narratives of children from low-income families (Zevenbergen, Whitehurst, & Zevenbergen, 2003). Evaluative devices emphasize aspects of the story and direct the listener's attention to what the narrator believes is important in the story. Participants consisted of 123 four-year-old children enrolled in Head Start, randomly assigned to an intervention or control group. The intervention group received a 30-week shared reading program at school and at home, while controls received a 16-week phonemic awareness program at school. Parents and teachers in the intervention group were trained in DR through videotape and role-play. The control group participated in the regular Head Start curriculum. The children's narratives were coded for inclusion of evaluative devices (e.g., explicit references to a character's frame of mind or emotional state, quoting the speech of characters, using emphasizing comments). Results indicated that the intervention had a significant effect on children's inclusion of these devices in their narratives. Indeed, children in the intervention program appear to have gained specific narrative skills through their shared-reading experiences. Overall, this study demonstrated that preschool interventions, such as DR, can have a significant impact upon the school-readiness skills of children from low-income families

Effect of DR on children with developmental disabilities and language delays. Over the years, an increasing number of children with developmental disabilities are being integrated into 'regular' classrooms because of philosophical trends that advocate inclusive programming for children with handicaps and in light of evidence that inclusion is beneficial for promoting peer interaction and favorable outcomes in language and cognitive development (as reviewed in

Girolametto et al., 2000). A study by Crain-Thoreson and Dale (1999) suggests that DR holds promise as a language intervention procedure for children with language delays. They compared the effects of DR on adult and child language over 8 weeks. Thirty-two children with mild to moderate language delays were randomly assigned to one of three groups: parent instruction with one-on-one shared book reading; staff instruction (teacher, librarian, teacher's aid, school nurse) with one-on-one shared book reading; and staff instruction only on group reading. Both parents and staff changed their reading styles in response to the intervention and became more responsive to children. The intervention did not have an effect on vocabulary growth but the children did use more language during story time and showed gains in expressive language. Overall, the more adults used DR, the more children's linguistic performance during story time improved from pre- to posttest.

Similarly, Hargrave and Sénéchal (2000) examined the effects of storybook reading on the vocabulary acquisition of 36 preschool children who had poor expressive vocabulary skills The children were randomly assigned to either a non-interactive storybook reading condition or DR condition. Results of the study revealed that children in the DR condition made significantly greater gains in language. Also, though the intervention lasted only four weeks, the children from the DR group had an average increase in expressive vocabulary that would normally occur in four months, which shows the positive effects of the intervention.

DR seems to have a positive impact on children with autism as well. Mucchetti (2013) conducted a study with four minimally-verbal children with autism, ages five to six. Teachers used adapted shared reading strategies with the children, including specific strategies for increasing child engagement. All four children showed increases in engagement during shared reading and gains on story comprehension questions after intervention. In summary, this study

and the others reviewed above provide evidence that DR can be effective for children with mild to severe disabilities.

Importance and impact of teaching DR to educators. After having reviewed the positive impacts of DR on children from various backgrounds, one can easily support its inclusion within early childhood settings. High-quality early childhood education programs have potential for supporting later success, particularly if they place a strong emphasis on language development. Thus, early childhood educators need knowledge about language and how to help children develop language and literacy skills. Unfortunately, a review of the literature shows that often educators have not had the opportunity to build the knowledge they need. For instance, Justice et al. (2008) examined the quality of language and early literacy instruction in 135 publicly funded preschool classrooms serving at-risk 4-year-old students. They found that few teachers used evidence-based strategies associated with language development (e.g., open-ended questions, repeating children's utterances, modeling advanced vocabulary). In the Canadian context, low rates of "language support" have also been reported (Bouchard et al., 2010; Girolametto & Weitzman, 2002; Girolametto et al., 2000).

In comparison with these findings, Green, Peterson and Lewis (2006) found more encouraging results. Their study assessed the extent to which early childhood educators engage children in literacy-building activities, as well as the educator characteristics associated with the promotion of early literacy activities. One hundred and eighty early childhood educators completed a survey assessing how often they engage children in specific activities. A clear majority of educators reported that they not only talk to children about books they have read together (68.9%), but also ask children questions during and after reading (74.4%). Also, the majority reported that they provide frequent opportunities for children to interact with books and other print materials and teach children print concepts (63.3%), and engage children in

recognizing and naming letters of the alphabet (over 90%). A sizable majority (78.9%) also reported making frequent attempts to teach children the sounds that are associated with the letters of the alphabet.

Although these numbers are high, a sizeable minority of educators (over 20%) rarely engaged children in literacy-based activities, and 8% reported never asking children questions about the books, either during or after book reading. In terms of educator characteristics, those who perceived that they had received adequate instruction in how to teach children basic literacy skills were more likely to engage children in frequent language and literacy activities. Simply having received some training in how to teach children to read was not enough, as it did not predict greater efforts to promote children's literacy skills. These results imply that educators must be confident in the level of instruction they have received so they can make efforts to promote certain literacy-based activities. Hence, more opportunities for training could increase educator confidence and feelings of readiness. These training opportunities are discussed below.

DR techniques. The DR techniques, described above with reference to previous studies, are captured by the acronyms CROWD and PEER, which summarize the techniques and help adults remember them. CROWD stands for: completion, recall, open-ended questions, wh-questions, and distancing. PEER stands for: prompt, evaluation, expansion, and repetition. These techniques are described more fully in the Method section and provided in Appendix A. Two sets of guidelines have been developed for implementing DR: one set for reading with children 2-3 years of age, and another for reading with children 4-5 years of age. Across both groups, the end goal is the same: encouraging the child to become the teller of the story over time (Arnold et al., 1994). DR techniques for children aged 4-5 differ from those for younger children in that the types of questions asked of children are more challenging, in keeping with the premise that input should be attuned to children's verbal language skills.

Teaching adults to use DR through video observation. Whitehurst et al. (1988), developers of DR, created videotapes to teach parents and teachers DR techniques and to make DR readily available. For parents, the videotape package consists of two videotapes, each 15 to 20 minutes long: one focusing on reading to 2-3 year olds and the other focusing on reading to 4-5 year-olds. A similar set of two videotapes was developed to teach educators the techniques. All videotapes explain the DR techniques, show adults applying them while reading to children, and then quiz the viewer on the techniques.

The effects of the parental videotape training package were evaluated by Arnold et al. (1994). Mothers were randomly assigned to receive no training, traditional direct training, or the videotape training. Traditional direct training involved explaining the techniques to mothers, demonstrating the techniques, giving mothers opportunities to practice the techniques with the experimenter, and giving mothers direct feedback on the practice. Interestingly, greater gains were found in 2-year-olds' receptive and expressive vocabulary when their parents were taught DR by videotape, than when the parents were taught techniques individually by a trainer. The authors suggested that the finding could be attributed to Bandura's social learning theory (1977). Briefly, his theory posits that people learn from one another, via observation, imitation, and modeling. Thus, the relative advantage of the videotape training over direct training may have been due to the modeling of parent-child reading interactions in the videotape training.

Videotape training has also been tested in combination with role-playing. In Crain-Thoreson and Dale (1999), parents and staff members (teacher, librarian, teacher's aid, school nurse) from five different schools viewed a videotape describing effective book reading strategies, saw a demonstration, had an opportunity to ask questions, and practiced in a role-playing exercise. In response to the intervention, both parents and staff changed their shared book reading style, and all changes were consistent with the goals of the instructional program. Parents

and staff became more responsive to children by slowing down, decreasing their verbatim reading and information statements, and increasing their questions and expansions of children's utterances. It was observed that staff members, possibly due to their experience, used an interaction style that was slightly more consistent with the goals of the intervention, but the amount of change from pre- to posttest did not differ between the groups, indicating that parents and staff benefited to a similar extent from the instruction.

Observing and Reflecting with the Aid of Video

The studies reviewed above show that researchers of DR have used video effectively to teach DR strategies to adults. These findings were influential in deciding the instructional methods used in the present study. Over the past decade, researchers of teacher education have also demonstrated increasing interest in using video as a tool to improve teacher learning and practice (Borko, 2004; Sherin, 2004; Seidel et al., 2005). Sherin (2004) discusses the advantages of using video in an educational setting. According to her research, video allows one to enter the world of the classroom without having to be in the position of teaching in the moment. Thus, one does not have to respond with the immediacy required when in the 'live' classroom, allowing time to reflect on concepts or actions. Furthermore, viewing videos can open up the possibility of learning new pedagogical strategies and being inspired by the way other educators are teaching. Finally, video provides educators the opportunity to engage in analyses of classroom practice "and invites teachers to develop expertise in new kinds of practices" (p.23).

Sherin and Dyer (2013) conducted a meta-analysis on 108 articles published between 2008 and 2013 relating to video-based instructional programs for teachers. The evidence showed that video can promote changes in how teachers think about what happens in the classroom. Video of both expert practice and more typical instructional practice were found to support learning. Similarly, self-observation and reflection, as well as observing others, was found to

promote learning. These video-based programs included the use of real classroom videos, and opportunities for teachers to learn from more expert "others", as well as to work independently and with peers.

Dieker et al. (2009) studied the impact of video modeling on teachers' knowledge of early reading instruction. Teachers were assigned to either a control or treatment group. The control group had text-based versions of the professional development, while the treatment group watched videos of other teachers' classrooms. One of the participating teachers expressed the power of watching video by stating, "It wasn't until I watched the video that I really understood the strategy. I thought I understood it before, but I really didn't. A picture's worth a thousand words!" (p.188). It was found that teachers in the treatment group were more likely to use the teaching practices that were modeled in the videos than teachers in the control group who learned the same practices through text.

Most of the instructional programs that use video to illustrate learning and practice present teachers with videos from other teachers' classrooms. Seidel et al. (2005) conducted a study in which they compared the experiences of teachers who watched video from their own classroom with teachers who watched video from someone else's classroom. They found that teachers who watched their own videos found the experience to be more stimulating and reported that the program had greater potential for supporting their learning and instructional practices. Thus, Seidel et al. (2005) concluded self-viewing to be more influential than viewing and analyzing others' lessons. In fact, teachers watching and reflecting on their own practices allows them to situate their exploration of teaching and learning in a familiar and motivating environment, as opposed to watching videos of unknown teachers' classrooms. Further, the video can capture elements of instructional interactions that the educator might not notice in the midst of carrying out a lesson or activity.

Video has been used for many years now to support teacher learning, and it appears to be a useful tool for helping teachers learn to notice the ways in which instruction and practice happen. Video captures enough to allow teachers to reflect on others' practices, or perhaps even better, on their own practices. In either case, as Santagata et al. (2007) state, using video affords educators with the opportunities to develop their professional judgment as they reason about the complex nature of teaching. Finally, because it is recorded, educators can view a video many times to see noteworthy events that they may not have noticed previously.

Blomberg et al. (2013) support the importance of video in education and state that the preparation of prospective teachers is not as grounded in practice as the preparation for many other fields. As a result, beginning teachers struggle in the classroom. In order to better prepare preservice teachers, learning needs to be grounded in practice. Based on the research showing that video successfully bridges university learning and knowledge application in school, Blomberg et al. suggest that classroom video can be a powerful technological tool for focusing preservice teacher education on practice.

The Present Study

The literature reviewed above highlights three key assumptions that underlie this research project: quality teaching plays a significant role in children's language and early literacy development; language and literacy teaching requires both content knowledge and skill in applying that knowledge; and DR instruction, as conceptualized by Whitehurst and colleagues, offers an opportunity to develop both knowledge about and skills in interactive reading for preservice educators.

The study used an experimental design and participants were assigned to one of three groups: in-class instruction on DR + self-observation, in-class instruction on DR + educator observation, and in-class instruction on DR only. The first hypothesis is that all preservice

educators will benefit from brief training in DR. This is based on results of studies with in-service teachers and parents (Crain-Thoreson & Dale, 1999; Dale et al., 1996; Koh & Neuman, 2009; Valdez-Menchaca & Whitehurst, 1992). More specifically, it is predicted that following instruction, and when presented with a hypothetical scenario, preservice educators will report a greater diversity of strategies for bookreading, and will also be able to generate examples of the strategies (i.e., give examples of what they might actually say while reading to a child).

Second, it is hypothesized that although all groups will benefit from the DR training, the group engaging in the in-class instruction and self-observation (DRI + SO) will benefit more than a group engaging in the in-class instruction and educator observation (DRI + EO). This is supported by research concluding that self-viewing is more influential than viewing and analyzing others' lessons because it allows one to delve into deeper reflection (Seidel et al., 2005). Video-based self-observation has shown positive results in preservice teacher education as well as in the ongoing learning of experienced teachers (Sherin & van Es, 2005).

Third, it is expected that both observation groups will benefit more than the group engaging in DR in-class instruction alone (DRI). The latter prediction is based on previous research demonstrating the greater positive effects of active learning compared to coursework alone (Bufkin & Bryde, 1996; Koh & Neuman, 2009; Neuman & Wright, 2010; Neuman & Cunningham, 2009; Zaslow et al., 2010), and views of professional development that emphasize the application of knowledge in practice (Koh & Neuman, 2009; Landry et al., 2009; Yelland, 2000).

Chapter 2: Method

Design

This study used an experimental design with assignment of participants to one of three groups: in-class instruction on DR + self-observation of DR (DRI + SO group); in-class

instruction on DR + educator observation of DR (DRI + EO group); and in-class instruction on DR (DRI). Participants were assessed at pretest and posttest using the same procedures in all three groups.

Participants

The participants in this study were 38 students from Concordia University enrolled in an undergraduate program in Child Studies. This is a 90-credit program that explores child development, socialization, and education, focusing primarily on children from ages 2 across 12. The program is designed to prepare students for careers working with children (e.g., childcare educator, integration aide) or graduate studies in related fields (Concordia University, 2014). All participating students were enrolled in the same course, Child Studies Field Experience I (EDUC 374), and had completed at least 30 credits in the program. Students enrolled in EDUC 374 routinely complete a half-day per week field placement in childcare centers or other settings for a period of 12 weeks, in addition to attending classes weekly and completing course assignments. Student participation in the study was voluntary, as described immediately below.

Recruitment and Consent

After having received approval from the University Human Research Ethics Committee, I visited the students' class at the regularly scheduled time and explained the study and rights of research participants with the aid of PowerPoint visuals. Next, letters of consent were distributed, any questions by students about the study or consent forms were answered, and signed consent forms were collected. The class instructor was present for the explanation of the project but left the room during the consent process to minimize any pressure students might feel to participate.

On a separate sheet accompanying the consent, students were also asked whether they met the following two criteria for study participation: able to work with one child aged 3 to 5 years old (see Procedures and Measures) and willing to complete an observation assignment associated

with the study. Twenty students met the selection criteria. These students were randomly assigned to one of the treatment groups: (1) in-class instruction on DR + self-observation or (2) in-class instruction on DR + educator observation. However, two students were unable to work with a child in the timeframe given, and were therefore placed in the educator observation group.

Eighteen more students did not meet the original selection criteria, but consented to participate by completing the pretest and posttests and submit their work, and were thus assigned to a final group: (3) in-class instruction on DR. These students completed a different observation assignment on child self-esteem, assigned by the course instructor. Given that the assignment of group was only partially random, the three groups were compared on several demographic variables to assess potential between-group differences (see Preliminary Analyses). Finally, three students in the class elected not to participate in the study; they participated in instruction and in-class activities (i.e., pre- and posttests), but did not submit their work to the researcher.

For students in the group that required working directly with a child (DRI + SO group), consent was also required from the child's parent or legal guardian. I provided an information letter and consent form that included a clause about optional videotaping and/or audiotaping, which was given to the participants the day they were assigned to their groups.

Procedures and Measures

Piloting. About three weeks prior to beginning the study, the in-class instruction was piloted with a group of five students (four undergraduates and one graduate student). All five had majored or were currently majoring in one of the following: Child Studies, Education, or Psychology. The instructional activities were tested and observations of students' responses to the activities were noted. The pilot also served to refine the pretest and posttest measures. As a result of the pilot, minor modifications were made to the content of the in-class instruction and the wording of the pre- and posttest prompts.

Pretest. Participants were asked to fill-out a one-page demographic questionnaire, in order to gain some insight regarding the sample and to be able to compare the groups. They reported their age, sex, and the number of semesters they had completed. They then gave their grade point average (GPA) on a scale of 0 to 8, representing the minimum and maximal GPA at the University where the research took place (see question 4 in Appendix B). They were also asked to indicate the number of course credits they had taken on a scale of 0 to 90, with 90 as the number of credits required for graduation (see question 5 in Appendix B). They were then invited to specify whether or not they were presently working in a childcare environment, as well as if they had worked in a childcare setting in the past. Finally, they were asked to self-evaluate their knowledge of strategies to support children's language and literacy development, ranging from "I am not confident" to "I am awesome at this".

The pre- and posttest measures were participants' responses to a written prompt asking that they describe the approach they would use in reading a children's book to a child of preschool age. All students were randomly assigned to one of two children's books: *Franklin in the Dark* or *Franklin and the Thunderstorm*. These books were selected because they are age-appropriate, and model a complete narrative: they each clearly indicate a setting, characters, an initiating event (that is, one that sets other key events in motion), a central problem, and its resolution. The books, written by the same author, and published by the same company, were also highly comparable in length, size, and in the nature and number of the illustrations.

The written prompt was as follows: *"Imagine you are an educator in a daycare and have the opportunity to read to just one child. You have a Franklin book at hand. Tell us the approach you would take to reading this story to the child. Be as specific as possible in* ***identifying*** *and* ***explaining*** *your strategies. Tell us what you might do and say* ***from start to finish.*** *You can make notes in the book if you want to, using the sticky sheets we have provided. If you want us to pay*

attention to these notes, leave them in the book."

Students were given a total of half an hour to read through the book and write a response to the prompt. As indicated above, they had the option of writing on large (4" x 6") and lined sticky sheets, and/or on regular 8.5" x11" sheets. Their responses served as the pretest.

Treatment and comparison group assignment. The 38 students who consented to be part of the study were randomly assigned to one of the three groups, taking into account students' ability to work with a child, as described in Recruitment and Consent. This placed 18 students in the comparison group, 10 in the educator observation group, and 10 in the self-observation group. These groups remained unchanged throughout the study.

In-class instruction. Following the pretest, all students were given instruction on DR. The instruction was partly based on a commercially-published program called "Read Together, Talk Together" (RTTT; Pearson Early Learning, 2002), developed by Whitehurst. This program presents the rationale for DR and the DR techniques described in the literature review and Appendix A. It includes content for teachers and parents on building vocabulary, enriching and expanding children's language and emergent literacy skills as they read books, and involving children as active participants to ensure language development. It also includes storybooks, each of which comes with a booklet containing recall questions, prompts, and vocabulary words the teacher can use as a guide, but these booklets were not used in the present study.

For the purposes of this study, instructional content was developed based on excerpts from the RTTT manual and the research literature. The 1-hour teaching session was prepared in conjunction with my thesis supervisor and taught by me. The session used a lecture, a few minutes of video examples (without any structured observation), and role-play format. It was supported by a PowerPoint (made available to students) on the principles of DR and videotapes available in the public domain (Connect Modules, 2011) that illustrate key DR strategies

(CROWD, PEER). The role-play consisted in pairing up students and having them practice reading a book to one another, as if they were reading to a child. For the role-play, each pair was randomly assigned a book from the RTTT kit. The books assigned to dyads were recorded, given that in later phases of the study, students in the self-observation group (DRI + SO) were asked to read a different book from the RTTT kit to a child.

Intervention. The students from the DRI + SO group were, as noted just above, lent a book from the RTTT kit. They were asked to read the book to a child using the DR techniques they had learned. The storybook reading task was expected to take approximately 15 minutes. The students were asked to video or audiorecord themselves engaging with the child in the storybook reading situation (the course instructor felt that parents would be more hesitant to consent to their child's participation if the recordings were to be collected; therefore, only the students had access to the recordings). Following the activity, students were asked to review the recording on their own and to reflect on their own DR session by filling out a self-observation form (see Appendix C). The observation form was adapted from Connect Modules, the source of the online videos that were used for instructional purposes.

The students in the DRI + EO group were not asked to practice with a child (I did, however, encourage students to practice once the posttest was complete as a learning exercise). Instead, the participants in the DRI + EO group were sent videotaped models of educators reading to children using DR. These consisted of one educator reading a book to a single small group of preschoolers using all the DR strategies. Participants were asked to identify DR techniques present in the video with the aid of an observation form (see Appendix D) and to explain their responses. Basically, they watched a video of a teacher reading to children and assessed her reading style by identifying and justifying the presence or absence of the CROWD and PEER strategies, as well as the components for introducing (e.g., reading the title of the book

while pointing to the title) and closing (e.g., asking a question relating the story to the children's lives) the book reading activity. Students in the two observation groups also summarized their observations in writing, as requested by the course instructor, but these data were not analyzed. The students in the DRI group did not take part in DR activities and completed an unrelated observation assignment provided by their course instructor, as described in the Recruitment and Consent section.

Posttest. Posttest assessment was conducted two weeks after the pretest. The same two children's books were used and the students were asked to respond to the same written prompt as at pretest. However, if the student had been assigned *Franklin in the Dark* at pretest, then *Franklin and the Thunderstorm* was assigned at posttest. Students also had to self-evaluate their knowledge on strategies to support children's language and literacy development, which was also a question that they had responded to in the demographic questionnaire at pretest (see question 10 in Appendix B). Once the posttest was completed, the class instructor allowed me to thank the students who participated in the study.

Transcription. I trained an upper-level undergraduate student in the supervisor's lab to assist with transcription and coding. To ensure confidentiality and blinding, students were randomly assigned a participant number from 1 to 38 by the supervisor. Their responses at pre- and posttest were transferred from the handwritten notes and stickies to Word documents: half by me and the other half by the research assistant.

Coding. The coding system that was used (see Appendix E) was based on the Dialogic Reading Observation Form (DROF) (Huebner & Joye, 2004), a measure developed to evaluate one-on-one shared reading sessions. Huebner and Joye (2004) report good interrater reliability. The DROF includes 11 categories, capturing an individual's reading style, such as "adult uses a questioning style that prompts talking" and "adult teaches new words". In the present study,

students' responses to the hypothetical scenario of reading a book to a child were scored according to these categories, with the addition of 2 categories (see Appendix E for all categories; 12 and 13 are the additions).

For coding, the assistant and I discussed the categories as well as their definitions, followed by jointly coding the responses of pilot participants, blinded for group and time (pre- or posttest). Discrepancies in scoring were identified and rules for scoring were further refined. The assistant and I then scored the responses of the 38 study participants, randomly distributing the pretests and posttests between us. Thus, I scored a total of 38 transcripts, and the assistant scored the other 38.

From the DROF, three scores were calculated and served as the dependent variables for the analyses. The first was the diversity of strategies used, which shows the variety of DR strategies participants reported they would use when reading a book. The second score was the number of relevant examples given, which demonstrates participants' ability to apply the DR strategies. The third score was the ratio of numbers of examples given to the diversity of strategies, which shows increases in examples as diversity rises.

Each coder (the assistant and I) then independently scored 25% of each other's transcripts. Cohen's kappas were calculated to establish reliability. The results were as follows: diversity of strategies *kappa* = 0.88, number of examples given *kappa* = 0.85, indicating excellent agreement. I then reviewed all disagreements and made minor adjustments to the coding as needed.

Chapter 3: Results

Preliminary Analyses

Participant characteristics. Prior to the intervention, participants filled out a demographics questionnaire as described in the Methods section. The groups were compared to

rule out any significant differences in their ages, number of semesters completed, their grade point average (GPA), the number of credits completed, and their current and past work experience in a childcare environment (see Appendix B). Groups were compared using an ANOVA, and as Table 1 shows, no significant differences were found amongst them.

Table 1

Participants' Demographic Characteristics

Characteristics	DRI *M (SD)*	DRI + EO *M (SD)*	DRI + SO *M (SD)*	*F* (2, 35)	*p*
Age	23.83 (3.00)	22.70 (1.64)	24.10 (2.92)	.80	.458
Semesters Completed	4.33 (2.35)	3.80 (1.80)	4.15 (1.06)	.24	.788
GPA	5.78 (0.81)	6.20 (2.15)	6.20 (0.79)	.52	.607
Credits	2.89 (1.08)	2.20 (1.03)	2.20 (0.63)	2.39	.107
Works in childcare environment	1.83 (0.38)	1.90 (0.32)	1.80 (0.42)	.18	.833
Worked in childcare in past	1.33 (0.485)	1.60 (0.516)	1.30 (0.483)	1.19	.316

Note. M = mean, SD = standard deviation. For GPA and credit values, see Appendix B. For work experience, 1 = no experience, 2 = experience

Pretest scores. Equivalence between groups on the pretest dependent variables (DVs) was assessed using a series of one-way ANOVAs. No significant differences were found between groups for the diversity of strategies used, F (2, 35) = 0.57, p = 0.568, or the number of examples provided, F (2, 35) = 2.62, p = 0.087. However, there was a significant main effect of ratio of examples to diversity of strategies, F (2, 35) = 3.38, $p < 0.05$ (0.045). The means for each group on the pretest measures are provided in Table 2.

Table 2
Diversity of Strategies, Number of Examples, and Ratio Scores by Group at Pretest

Pretest measures	DRI *M* (*SD*)	DRI + EO *M* (*SD*)	DRI + SO *M* (*SD*)
Diversity of strategies	4.44 (1.46)	4.70 (0.82)	4.10 (1.20)
Number of examples	12.67 (4.03)	11.30 (3.65)	9.30 (3.20)
Ratio of examples to diversity of strategies	3.05 (0.94)	2.43 (0.80)	2.29 (0.56)

Note. M = mean, SD = standard deviation.

Effects of books. An ANOVA was conducted on pretest means with books as the independent factor in order to rule out any book effects. A second ANOVA was conducted on posttest means. The results were nonsignificant indicating that the books did not affect the DVs at pretest or posttest.

Main Analyses

Table 3 displays the means and standard deviations for posttest measures of diversity of strategies, number of examples, and ratio of examples to diversity of strategies by group.

Table 3

Diversity of Strategies, Number of Examples, and Ratio Scores by Group at Posttest

Posttest measures	DRI *M* (*SD*)	DRI + EO *M* (*SD*)	DRI + SO *M* (*SD*)
Diversity of strategies	4.28 (1.60)	7.00 (1.63)	8.10 (1.79)
Number of examples	9.50 (4.33)	19.60 (5.68)	22.60 (7.79)
Ratio of examples to diversity of strategies	2.27 (0.83)	2.87 (0.87)	2.84 (0.92)

Note. M = mean, SD = standard deviation.

Prior to the analyses, the assumptions for mixed ANOVA of normality, homogeneity of variance, and homogeneity of covariance were tested. For diversity of strategies, the Shapiro-Wilk statistic was significant for the DRI + EO (p = .008) and DRI + SO (p = 0.028) groups, indicating a non-

normal distribution. However, analysis of skew and kurtosis statistics demonstrated the violations were not serious in either group. Given that homogeneity of variance and covariance assumptions were met, I proceeded with the mixed ANOVA with group (DRI, DRI + EO, DRI + SO) as a between-subjects variable and time of test (pretest and posttest) as a within-subjects variable. For the number of examples, the normality, variance, and covariance assumptions were met in all three groups, and again, mixed ANOVA was conducted. In the case of the ratio variable, the assumption of homogeneity of covariance was not met. Therefore, repeated measure analyses were conducted separately by group, instead of mixed ANOVA. The results for each DV follow.

The mixed ANOVA revealed a significant main effect of time on the diversity of strategies used, F (1, 35) = 115.52, $p < .001$, $\eta_p^2 = .767$, as well as a main effect of group, F (2, 35) = 6.75, $p = 0.003$, $\eta_p^2 = .278$. These main effects were qualified by an interaction between time and group, F (2, 35) = 46.56, $p < .001$, $\eta_p^2 = .727$. This interaction is depicted in Figure 1. Post hoc tests were conducted to evaluate differences among the groups. The Bonferroni adjustment was used for all comparisons to control for Type I error. The DRI group mean for the diversity of strategies was significantly different from the group mean of the DRI + EO group ($p < .001$), as well as the DRI + SO group ($p < .001$). However, contrary to predictions, the DRI + EO and DRI + SO groups were not significantly different from one another ($p > 0.05$).

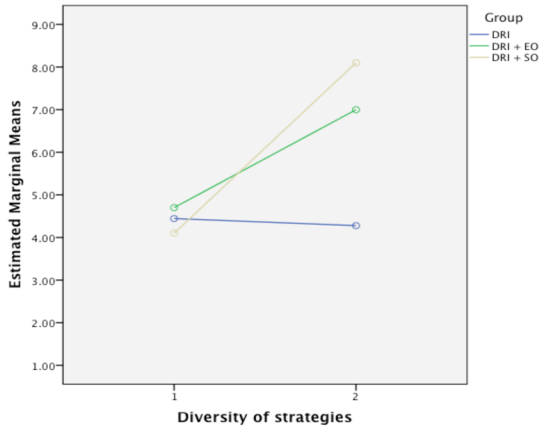

Figure 1. Interaction between time and group on the diversity of strategies used

For the number of examples used, a significant main effect of time was also found, F (1, 35) = 86.39, $p < .001$, $\eta_p^2 = .712$. There was also a main effect of group, F (2, 35) = 5.18, p = 0.011, $\eta_p^2 = .228$. These main effects were qualified by an interaction between time and group, F (2, 35) = 64.09, $p < .001$, $\eta_p^2 = .786$. This interaction is depicted in Figure 2. When the DRI group was compared to the DRI + EO group using a Bonferroni adjusted post hoc test, the result bordered on a statistically significant value (p = 0.052). The DRI group mean was significantly below the DRI + SO group (p = 0.026). The DRI + EO and DRI + SO groups were not significantly different from one another ($p > 0.05$).

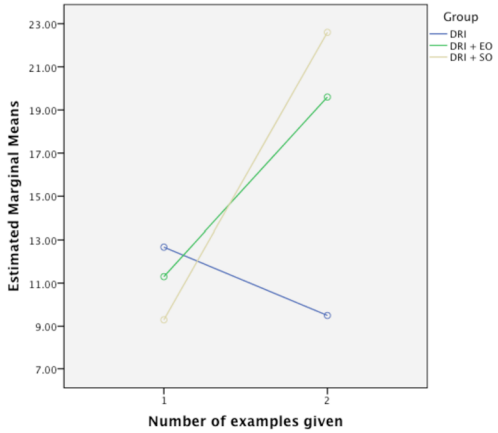

Figure 2. Interaction between the time and group on the number of relevant examples used

Repeated measures analyses on the ratio of examples to diversity of strategies were conducted for each group separately. The means are portrayed in Table 4. As the means show, the ratio decreased significantly for the DRI group from pretest to posttest ($p < .001$), but increased significantly for both the DRI + EO (p = 0.002) and DRI + SO groups (p = .005).

Table 4

Ratio of examples to diversity of strategies by group

	DRI *M (SD)*	DRI + EO *M (SD)*	DRI + SO *M (SD)*
Pretest	3.05 (0.94)	2.43 (0.80)	2.29 (0.56)
Posttest	2.27 (0.83)	2.87 (0.87)	2.84 (0.92)

Note. M = mean, SD = standard deviation.

Further Analyses

Self-evaluation. In order to examine self-evaluation of their knowledge on strategies to support children's language and literacy development, a mixed ANOVA was conducted with groups (DRI, DRI + EO, DRI + SO) as a between-subjects variable and time of test (pretest and posttest) as a within-subjects variable. Prior to the analysis, the assumptions for mixed ANOVA of normality, homogeneity of variance, and homogeneity of covariance were tested and met. The mixed ANOVA revealed a significant main effect of time on the self-evaluation of strategy knowledge, F (1, 35) = 8.50, p = .006, η_p^2 = .195. No significant main effect of group was found, F (2, 35) = 2.22, p = 0.123, η_p^2 = .113, and no interaction was found between self-evaluation of strategy knowledge and group. The means for each group on the pretest and posttest measures are provided in Table 5.

Table 5

Self-evaluation of strategy knowledge by group

	DRI M (*SD*)	DRI + EO M (*SD*)	DRI + SO M (*SD*)
Pretest	2.78 (0.73)	3.00 (0.67)	2.80 (0.42)
Posttest	2.83 (0.64)	3.50 (0.53)	3.30 (0.58)

Note. M = mean, SD = standard deviation.

Strategies with greatest increase. In order to assess the strategies with the greatest increase after instruction, I first summed every strategy mention for each group at pretest and posttest. From these summed scores, I subtracted the pretest from posttest and identified the five strategies with the largest increase. For example, the total mentions of strategy "completion" for the DRI + SO group was 1 at pretest and 12 at posttest, a difference of 11 mentions. Figure 3 visually depicts the top strategies with the largest gain by group. Table 6 shows the number of mentions at pretest and posttest for the top five strategies.

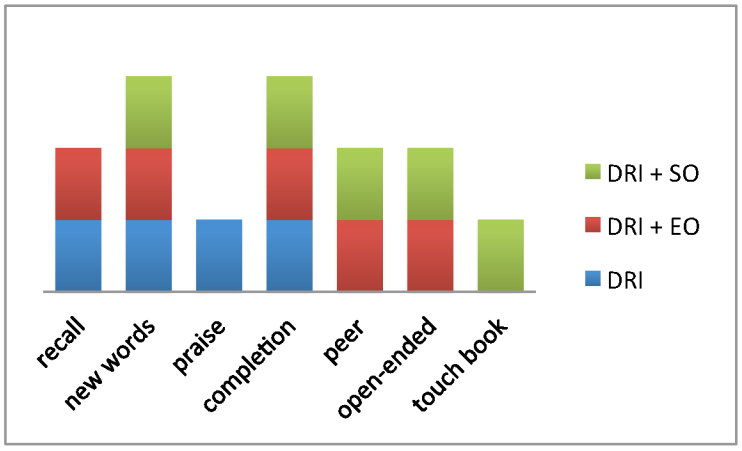

Figure 3. The top five strategies by group with the largest increase from pretest to posttest. *Note.* Only 4 strategies increased from pre to posttest in the DRI Group; the others stayed the same or decreased.

Table 6

Number of mentions at pretest and posttest for the top five strategies

Strategies	DRI		DRI + EO		DRI + SO	
	Pretest	*Posttest*	*Pretest*	*Posttest*	*Pretest*	*Posttest*
Recall	3	5	0	7		
New words	1	7	3	10	4	12
Praise	0	1				
Completion	1	2	0	9	1	12
PEER strategy			0	6	0	6
Open-ended questions			5	11	1	10
Allows child to touch book					0	3

Chapter 4: Discussion

This study investigated the effects of instruction on undergraduate students' knowledge of dialogic reading strategies. Participants were 38 students enrolled in a Child Studies program in an Education department. They were referred to throughout the present study as preservice educators, given that they are eligible to work as educators in childcare settings upon graduation (assuming they complete essential courses).

To recapitulate briefly, DR involves several changes to the ways that adults read books to children. The central focus is a shift in roles between the child and the adult, so that the child is actively involved and gradually learns to become the storyteller. The adult's role is to encourage the child to participate, to provide feedback to the child, and to adapt the reading style to the child's linguistic abilities. These strategies have been shown to have positive effects on the language of preschoolers from high, middle, and low SES backgrounds, as well as for older children with delayed language (Boyd et al., 2005; Frijters, Barron, & Brunello, 2000; Girolametto et al., 2000; Sénéchal, 2006; Sénéchal & LeFevre, 1996; Whitehurst et al., 1988; Zevenbergen, Whitehurst, & Zevenbergen, 2003). However, not all adults use strategies like these spontaneously with children. In the present study, I was therefore interested in teaching DR to preservice educators and in determining whether some ways of instructing them would lead to greater gains in knowledge than others. The instructional methods were developed based on past studies of teaching DR to adults and studies of professional development with teachers or educators using video observation.

One group received in-class instruction on DR during a course associated with a field placement in early childhood settings. A second group received the same in-class instruction but was also asked to observe an educator using DR strategies (on digital video) and to note the

strategies used and examples of the strategy use with the aid of an observation form (DRI + EO). In the third group, participants received the same in-class instruction and were asked to read the book to a child using the DR techniques they had learned. The students were asked to video or audiorecord themselves engaging with the child in the storybook reading situation. Following the activity, students were asked to review the recording independently and to reflect on their own DR session by filling out a self-observation form (DRI + SO).

Immediately before and two weeks after the instructional period, the pretest and posttest measures were administered. These consisted of parallel hypothetical bookreading scenarios to which students had to respond in class. Students were presented with a children's book and asked to elaborate the approach they would use in reading the book to a child of preschool age. Students were given half an hour to read the book and to elaborate their approach in writing. A brief summary of the findings from the pre and posttests is provided below, followed by discussion of the strengths and limitations of the study and directions for future research.

Summary of Results

Responses to the hypothetical bookreading scenario were analyzed in terms of the diversity of DR strategies mentioned and the number of examples given. The findings are reviewed in light of the study's hypotheses. First, separate analyses of variance (mixed ANOVAs) on (a) diversity of strategies and (b) number of examples revealed a significant effect of time and of group. Given that each of these two variables also interacted significantly with group, posthoc tests were conducted. These showed that each of the observation groups (DRI + EO and DRI + SO) outperformed the comparison group (DRI group) on diversity of strategies and on the examples, in accord with my hypothesis. However, no significant differences were found between the DRI + EO and DRI + SO groups. Results were nonetheless in the expected direction,

with higher means for the DRI + SO group than for the DRI + EO group on both diversity and examples given (see Table 3).

The lack of significant differences between these groups was contrary to my hypotheses. I originally predicted that educators might benefit more from self-observation because watching and reflecting on their own practices allows them to situate their exploration of teaching and learning in a familiar and motivating environment (Seidel, 2005). Similarly, Sherin (2009) suggests that educators who explore their own teaching through observation and reflection develop changes in attitudes, allowing them to experience new levels of self-awareness. However, educator observation appeared to be as effective in the present study. One possible explanation for the lack of differences is educator experience. Preservice educators probably have less experience self-observing and might therefore be less able to learn from their own performance. A second and related possibility is that preservice educators are able to learn better from more "expert" educators. Self-observation in this study required that participants try out DR (so they had recorded material to observe), but preservice educators might benefit from expert models using DR strategies. Finally, while both observation groups showed gains, it should be noted that their observations were limited. If they had engaged in observation of multiple DR sessions over time, the improvements might have been greater, whereas multiple observations of the self might have allowed them to delve into more reflection and to subsequently adapt their DR strategies.

The results for the ratio of examples to diversity of strategies were also informative. Although group comparisons were not conducted with ANOVA because of differences in covariance across the groups, repeated measure analyses showed that the ratio score for the comparison group decreased significantly from pretest to posttest. In contrast, it increased significantly for both observation groups. A ratio score increase showed that participants

generated a greater number of examples for the strategies they named at posttest than they did at pretest. A ratio score decrease meant that participants were generating fewer examples for the strategies they named at posttest. These findings suggest that the groups that engaged in observation learned DR strategies and applied them effectively as shown by their ability to come up with examples of what they might actually say to children during bookreading. On the other hand, the group that received only the in-class instruction did not show greater diversity of strategies at posttest, and produced even fewer relevant examples than they had at pretest. They thus did not display an overall increase in the DR strategies or increase the number of examples for the strategies they already knew. The contrast with the treatment groups emphasizes the importance of engaging students in observation, where they can analyze classroom practice and reflect upon it (Sherin, 2004).

Participants were also asked to self-evaluate their knowledge on strategies to support children's language and literacy development, ranging from “I am not confident” to “I am awesome at this” (see question 10 in Appendix B) prior to pretest and at the time of the posttest. The mean on this dependent variable was higher at posttest than it was at pretest for all three groups, showing that, on average, all participants felt they had a better understanding of strategies to support children’s language and literacy development. This is an interesting finding given that the scores of the participants in the comparison group did not improve. These participants learned what DR was and learned about new strategies during the in-class instruction, which could have led them to believe they knew more than they did initially, impacting their self-evaluation scores. However, not only did their scores not improve, but they also, in some cases, decreased.

Originally, the comparison group was not part of the study design; only the two observation groups were expected. However, given that a number of students were not eligible for the observation groups (i.e., they were not able to read to a child during the period of the

study, or chose not to participate), the group was created to allow all students to participate in some way.

While it was hypothesized that the comparison group would benefit somewhat from instruction, their scores did not increase. These findings could be due to the nature of the instruction, a lack of motivation on students' part, or the absence of review and practice in the pretest to posttest period. The last issue is elaborated in the following section.

The strategies with the greatest increase from pretest to posttest were analyzed and scored for each group. From these scores, I extracted the five top strategies with the largest increase. It is noteworthy that the comparison group did show increases in some categories, though they decreased or stayed the same in most, leading to the overall lack of change. All three groups overlapped in terms of growth on the completion strategy and the teaching of new words. This could be due to the simple and explicit nature of these strategies (i.e., prompting children to complete a sentence or defining new words). Both observation groups overlapped on the use of open-ended questions and the PEER strategy (i.e., sequence of prompt, evaluate, expand, repeat). This finding is interesting because both of these strategies require one to reflect on the content of the story before applying them. The self-observation group was the only with gains in “allows child to touch the book”, probably because they had the chance to physically apply this strategy with the child they read to. Finally, the comparison group was the only group that increased on “praise”. However, although the percent increase was high, the frequency of use was still very low.

Limitations and Future Directions

There are a number of limitations of the current study which are important to discuss. First, the sample size of participants was small due to the inclusion of a single class of undergraduate students. Although conducting the study in a single class might have contributed

to the similarity of the sample (i.e., no pretest differences on a demographic questionnaire), the small sample size limited the power for the analyses. In addition, it is important to keep in mind that participant assignment was only partially random. The students who met the selection criteria were randomly assigned to one of the treatment groups, while the remaining students were assigned to the comparison group. As previously mentioned, the degree of motivation associated with self-selection could have impacted the results. Further, it is possible that the comparison group did not perform well simply because they did not have to revisit the material on their own, and possibly just forgot what they learned. The design could have been improved by giving the comparison group a review exercise to complete between pretest and posttest, so that the time they spent on the material would be about the same as the observation groups. However, for the present study, the comparison participants might not have consented if the demands had increased, since by opting out of the present study, they opted in to an alternative observation (on children's self-esteem).

A second addition to design that could be implemented in future studies would be a practice-only group. This would allow one to examine the effects of practice alone, vs. the practice that went along with self-observation in the DR + SO group. Another interesting avenue might be to conduct multiple observations of the self. Due to the nature and schedule of the class in which I conducted my study, participants were only able to read to a child and self-observe once, which was not necessarily enough to gain expertise.

Although the methodology of the study provided informative data, future studies would also benefit from including direct observation of the preservice educator reading to a child. Further, it would be useful to see if the educator sustains the dialogic reading strategies learned after a period of time. Also, a valuable element that could be added to similar future studies would be to take into account how and what the child responds. The interaction between the

educator and the child could influence the strategies used and retained. It is also important to keep in mind that the DR activity was done with in the SO group with only one child, whereas in a typical childcare center, storybook reading usually involves a small group of children. Nonetheless, working with a single child gives preservice educators an opportunity to practice without having to manage an entire group.

Contribution and Practical Implications

From a methodological point of view, the study makes a significant contribution. Although the limits of a hypothetical scenario were identified in the preceding section, the scenario and carefully-selected, parallel books worked out well and these measures were sufficiently sensitive to detect group differences. This is a strength of this study. Scenarios like these could also be a useful teaching tool for instructors of preservice educators.

The study contributes in other ways to the growing literature of effective instructional approaches with preservice educators. Although researchers have reviewed video-based in-service and preservice teacher instruction, to the best of my knowledge none have contrasted self- and educator-observation with preservice educators. In this sense, the study provides a novel design and findings that instructors of preservice educators can draw on to design learning environments that correspond with their teaching objectives. The study provides good evidence that video combined with structured observation has positive effects on the learning of preservice educators, specifically the learning of DR. Consistent with past studies of parents and teachers learning DR through video and other means, preservice educators appear to benefit from even short exposure to models and limited amounts of observation.

Observation is an important part of learning how to teach. Much of what beginner educators need to be aware of cannot be learned solely in the university class. Observation in this case presented an opportunity for students to get close to a real-life interactive reading situation.

However, observation cannot be done without a purpose. In this study, the teaching and learning goals were first established, allowing observation to be integrated effectively. Through purposeful observation, educators can reflect and make decisions, important processes at every stage of an educator's career.

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Appendix A
Dialogic Reading Techniques

Working with 4-5 year olds:

CROWD stands for the five kinds of questions (prompts) asked by adults when reading to children. The questions are as follows:

1. *Completion.* These are fill-in the-blank questions which encourage the child to listen to and use language (e.g., "When little boys and girls are thirsty, they drink _____.")
2. *Recall.* These are questions where the child is asked details about what happens in the story. This builds a sense of story and helps the child recall details (e.g., "What happened after little red riding hood met the big bad wolf?")
3. *Open-ended.* These are statements to encourage the child to speak and provide an opportunity to use language (e.g., "How about you tell me what's going on in this picture?")
4. *Wh-prompts.* These are the "what", "where", "when" and why" questions which help to build the child's vocabulary, discuss the setting of the story, and consider the causes of events (e.g., "Why didn't Leni go to school today?")
5. *Distancing.* This focuses on asking questions that relate something in the story to the child's life. It helps the child make connections between books and life, as well as provides an opportunity for the child to use language (e.g., "Do you brush your teeth in the morning like Susie did?")

The PEER sequence, below, provides steps to follow in asking questions and responding to a child during reading. This sequence can be used with almost anything that is read to children. It is as follows:

1. *Prompt.* The adult should prompt the child to label objects in the book and talk about the story. It helps in focusing the child's attention, engaging him/her in the story, helps the child understand plot, and builds vocabulary (e.g., "What's that?", *pointing to a picture*)
2. *Evaluate.* The adult should praise the child's correct responses and offer alternative answers for incorrect responses. Corrections should be given in a constructive way.
3. *Expand.* This consists in repeating what the child has said and adding information to it. This encourages the child to say a little more than he would naturally and it helps build vocabulary (e.g., If the child were to say "that's a vegetable!", the adult might say, "Yes, that is a vegetable. It's a cucumber! Can you say "cucumber'?")
4. *Repeat.* Here, the adult encourages the child to repeat the expanded or correct response (e.g., "Can you say that word, "cucumber"?).

Appendix B
Demographic Questionnaire

Name: _____

Instructions: Please provide a response for each of the following questions:

1. What is your age? _____

2. What is your sex? Male ☐ Female ☐

3. How long have you been in the Child Studies program (# **semesters completed**): _____

4. What is your grade point average (GPA)?

< 1.6 ☐ 1.7-2.0 ☐ 2.1-2.4 ☐ 2.5-2.8 ☐ 2.9-3.1 ☐ 3.2-3.5 ☐ 3.6 – 3.9 ☐ 4.0-4.3 ☐

[coded from 1 to 8 in increasing order]

5. How many credits have you completed in the program?

< 30 ☐ 30-45 ☐ 45-60 ☐ 60-75 ☐ 75-90 ☐

[coded from 1 to 5 in increasing order]

6. Did you complete a DEC in Early Childhood Education? Yes ☐ No ☐

7. Do you have any children: Yes ☐ No ☐

   If yes, how many: _____ Age(s) of the child(ren) :_____

8. Do you presently work in a childcare environment, **other than** your field experience?
   Yes ☐ No ☐

   If yes, in what kind of environment (*e.g., daycare, preschool, other*)?
   _____

9. Have you worked in a childcare environment in the past**, other than** your field experience?
   Yes ☐ No ☐

   If yes, in what kind of environment (*e.g., daycare, preschool, other*)?
   _____

10. How would you rate your knowledge on strategies to support children's language and literacy development?

- ☐ I am not at all confident in this area of knowledge
- ☐ I have some knowledge, but don't feel I am competent
- ☐ I am probably competent at this but could afford to learn more
- ☐ I feel confident in my competence
- ☐ I am simply awesome at this!

Appendix C
Observation Form for Self-Observation
Adapted from Connect Modules (2011)

Instructions

1. First, take the book assigned to you for dialogic reading and find a time you can read to a child using dialogic reading practices.

2. While you are reading to the child, either videotape or audio record yourself.

3. After the dialogic reading, look at or listen to your recording and complete the following observation form.

4. Finally, add any other observations you feel are important in the Extra Notes sections.

Your Name: _____

Title of the book: _____

Date of Dialogic Reading Session: _____

Age of the child: _____

Introducing the book	
Title of the book I said the title of the book to the child before I began the read-aloud.	YES □ NO □
Author of the book I told the child who the author of the book was before I began the read-aloud.	YES □ NO □
Asks a question to build children's interest I asked the child at least one question before I began to read the book to build the children's interest in the story.	YES □ NO □
Reading the book	
Make a tally mark in the box <u>each time</u> you observe a CROWD prompt being used and paraphrase or write word-for-word the prompt you used.	
Completion I created an incomplete sentence to prompt the child to come up with the appropriate response (i.e. fill-in-the-blank). (Ex: *To open the mailbox Sam will need to use a ___.)*	

Recall I asked a question designed to help children remember key elements of the story (Ex: *Can you remember what happened to Sam and Ellen on the way to the mailbox?*)
Open-Ended I asked a question or made a statement that required the child to describe part of the story in his/her own words beyond just a "yes" or "no" response. (Ex: *Tell me what you think is happening in this picture.)*
Wh-questions I asked a question about the story that begins with what, where, who, or why. (Ex: *What kind of shoes is Sam wearing?)*
Distancing I helped the child make connections between events that happen in the story to those that occur in his/her own life. (Ex: *Sam is big enough to go by herself to get the mail. What do you do all by yourself to help Mom or Dad?*)
Extra notes:
Make a tally mark in the box <u>each time</u> you observe a PEER prompt being used and paraphrase or write word-for-word the prompt you observed.
PEER Sequence (Prompt-Evaluation-Expansion-Repetition) I used a CROWD prompt, then evaluated and expanded on the children's responses, and then repeated the prompt to provide another opportunity for the children to respond. The PEER sequence should always be done in this order.
Extra notes:

Closing the book	
Asks a Question to Maintain Children's Interest After finishing the book, the reader asks the children at least one question to maintain their interest in the story. (*Ex: Which do you like better, caterpillars or butterflies? Why?*)	YES □ NO □
Asks a Distancing Question to Connect to Children's Lives After finishing the book, the reader asks the children at least one question that relates the story to their everyday lives (*Ex: How do you feel when you eat too much food at dinner?*)	YES □ NO □
Extra notes:	

Appendix D
Observation Form for Educator Observation
Adapted from Connect Modules (2011)

Instructions

1. Watch the video segment: Introducing the Book- Carrot Soup. Then, watch the segment again and identify the book introduction practices you observe (with a yes or no) using the "Introducing the Book" section of the form below.

2. Next, watch: Reading the Book- Carrot Soup. Then, watch it again and identify the dialogic reading practices you observe using the "Reading the Book" section of the form below. Every time you observe a prompt being used, paraphrase or write word-for-word what the educator said in the corresponding box.

3. Lastly, watch: Closing the Book- Carrot Soup. Then, watch the segment again and identify the book closure practices you observe using the "Closing the Book" section of the form below.

4. Finally, add any other observations you feel are important in the Extra Notes sections.

Introducing the book	
Title of the book The reader says the title of the book to the children before beginning the read-aloud.	YES □ NO □
Author of the book The reader tells the children who the author of the book is before beginning the read-aloud.	YES □ NO □
Asks a question to build children's interest The reader asks the children at least one question before beginning to read the book to build the children's interest in the story.	YES □ NO □
Reading the book	
Make a tally mark in the box <u>each time</u> you observe a CROWD prompt being used and paraphrase or write word-for-word the prompt you observed.	
Completion The reader creates an incomplete sentence to prompt the children to come up with the appropriate response (i.e. fill-in-the-blank). (Ex: *To open the mailbox Sam will need to use a ___.)*	
Recall The reader asks a question designed to help children remember key elements of the story (Ex: *Can you remember what happened to Sam and*	

Ellen on the way to the mailbox?)
Open-Ended The reader asks a question or makes a statement that requires children to describe part of the story in their own words beyond just a "yes" or "no" response. (Ex: *Tell me what you think is happening in this picture.)*
Wh-questions The reader asks a question about the story that begins with what, where, who, or why. (Ex: *What kind of shoes is Sam wearing?)*
Distancing The reader helps children make connections between events that happen in the story to those that occur in their own lives. (Ex: *Sam is big enough to go by herself to get the mail. What do you do all by yourself to help Mom or Dad?*)
Extra notes:
Make a tally mark in the box <u>each time</u> you observe a PEER prompt being used and paraphrase or write word-for-word the prompt you observed.
PEER Sequence (Prompt-Evaluation-Expansion-Repetition) The reader uses a CROWD prompt, then evaluates and expands on the children's responses, and then repeats the prompt to provide another opportunity for the children to respond. The PEER sequence should always be done in this order.
Extra notes:
Closing the book
Asks a Question to Maintain Children's Interest After finishing the book, the reader asks the children at least one question to maintain their interest in the story. (*Ex: Which do you like better, caterpillars or butterflies? Why?*) YES □ NO □
Asks a Distancing Question to Connect to Children's Lives After finishing the book, the reader asks the children at least one question that relates the story to their everyday lives (*Ex: How do you feel when you eat too much food at dinner?*) YES □ NO □

Appendix E
Coding Scheme
Adapted from Huebner & Joye (2004)

Participant code: _____

Tally the statements of the preservice educators according to the following categories (see definitions below table). If a statement does not fit in any category, record as other.

	Reading Strategies	**Participant mentions the strategy by name** *(e.g. "introduce", "praise")*	**Participant gives an example of strategy named in column B** *(Regardless of whether it corresponds or not)*	**Number of examples given**	**Participant's example corresponds to the name**
Item 1	**Introduces** the book				
Item 2	**Praises** or affirms child's contributions				
Item 3	Allows child to **turn pages,** hold or touch book				
Item 4	Teaches **new words**				
Item 5	Uses **completion prompts**				
Item 6	Uses questions that involve **recall**				

Item 7	Uses a **questioning style** that prompts talking *(uses the words "ask", "question", "interrogate")*				
Item 8	Uses **open-ended prompts**				
Item 9	Uses **distancing** prompts				
Item 10	**Closes** the book				
Item 11	**Other** *- Acting out* *- Distancing comment* *- Pointing while labeling* *- Draws attention to + describes pictures*				
Item 12	**Refers to non specific questions**				
Item 13	**Prompt, evaluate, expand, repeat (PEER strategy)**				

General procedures

- Introduction and closing **trumps** other categories. For example, if the reader asks a question about the cover, it would be coded as part of the introduction, rather than as a particular question type.

- If C = 1, then D =1

- If B = 0, then E= 0 (if reader does not name the strategy, one cannot assess the strategy name/example correspondence)

- For unspecified questions: if B=1, then the rest is N/A (as these require specificity)

Definitions for Reading Style Items

- **INTRODUCES**

Adult introduces the book reading activity: Before beginning the reading session, the adult says the title of the book, and the name of the author. The adult asks the child a question to build the child's interest in the story. The question could be of any type and thus might overlap with other categories.

- **PRAISES**

Adult praises or affirms child's contributions: In addition to obvious praise (e.g., yeah! Pinata, that's right!) count repetitions that affirm what the child says in this category. Repetitions indicate to the child that he/she is understood is valuable, understood, and/or correct. The difference between affirmations (to be counted in this category) and repetitions that ask for clarification (not to be counted in this category) is carried the speaker's intonation (e.g., C: He's big. Teacher: He is big! = praise/affirmation; C: He big. Teacher: He's a bug? =Request for clarification). Praise can as simply a repetition of a one-word phrase, if it sounds like the adult is repeating to encourage the child's participation in the story (e.g., C: balloons; Teacher: balloons!!). Praise/affirmation is not a frequently occurring behavior in shared reading.

- **TURN PAGES, HOLD, TOUCH**

Adult allows child to turn pages, hold or touch book: The adult gives the child the option of holding the book or turning the pages. If the child reaches over to turn or touch the book the adult does not stop him/her.

- **TEACHES**

Adult teaches new words: Score this if an adult pauses to explain a novel word by giving a definition or use and follows the definition by asking the child to repeat the word (e.g., Can you say escalator?). Teaching occurs also in response to a child's question (e.g., what's maple? That's a kind of tree). Teaching does not occur very frequently**.**

- **COMPLETION PROMPTS**

Adult reads story and ask fill-in-the blank questions. This encourages the child to listen and to use language effectively. For example, "something went bump, and that made us _____."

- **RECALL PROMPTS**

Adult asks questions that require the child to remember aspects of the book, which builds a sense of story. For example, “Can you remember some of the things that happened to Leni when she went to school?”

- **OPEN-ENDED PROMPTS**

Adult reads story while using statements that encourage the child to respond in his or her own words Adult reads book without asking for child’s input (e.g., “Now that I told you what happened on this page, it’s your turn to tell me what happens next. Tell me about this page.”).

- **QUESTIONING PROMPTS TALKING**

Adult uses a questioning style that prompts talking: Questions that prompt talking about the story or related world knowledge include what, when, and why questions. Sometimes the answer is obvious (e.g., what’s that?”); other times the questions will draw on the child’s imagination or experience (“where do you think he’s going?” or “what do you like to take with you in the bathtub?”). Questions such as: “what else do you see on this page?” are considered part of a questioning style also.

- **DISTANCING PROMPTS**

Adult asks questions that relate something in the story to the child’s life. It helps the child make connections between books and life, as well as provides an opportunity for the child to use language. For example, “Did you ever play in the snow like Henry did?”

- **CLOSING THE BOOK**

Adult closes the book reading activity: Asks at least one question to maintain interest in the story once the story is finished. Also asks the child at least one question that relates the story to the child’s everyday life.