Toward a theory of how young children learn to read in the ZPD: Implications for research and practice

Bradford B. Wiles

Thesis submitted to the faculty of Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Master of Science
In
Human Development

Victoria R. Fu, Ph.D., Chair
Mark J. Benson, Ph.D.
Jay A. Mancini, Ph.D.

April 24, 2008
Blacksburg, Virginia

Keywords: Emergent Literacy, Shared Reading, Zone of Proximal Development, Metacognition, Cognitive Development.

Toward a theory of how young children learn to read in the ZPD: Implications for research and practice

Bradford B. Wiles

ABSTRACT

The purpose of this position paper is to propose a comprehensive theoretical model of what can and does occur in the Zone of Proximal Development (ZPD) to extend thinking, learning and construction of meaning within a shared reading activity setting, including the development and emergence of language, literacy and social skills. By incorporating Lev Vygotsky's sociocultural perspective, Jean Piaget's dialectical learning, and the concepts of metacognition, mindfulness, and mind-mindedness, a model depicting the dynamics of a shared reading activity is proposed. Implications for research and practice are discussed, including suggestions for future research and ways to foster effective teaching practice.

Dedication

This paper is dedicated to the families, friends and communities of those who were injured or lost their lives at Virginia Tech on April 16, 2007. Your and our collective loss has helped me understand what it means to be a Hokie, and what it means to prevail.

Acknowledgements

"Let my inspiration flow, in token rhyme suggesting rhythm

That will not forsake me, till my tale is told and done" – Robert Hunter

This work could not have been accomplished without the help and guidance of my mentor and committee chair, Dr. Victoria Fu. Through her expert use of techniques outlined in this paper, we have co-constructed knowledge through a process of learning that will serve me well throughout my lifetime. Her patience with me has been remarkable. I thank you. I would also like to acknowledge Dr.'s Mark J. Benson and Jay A. Mancini for their encouragement of my efforts in writing, and volunteering their much-needed support. Dr. Benson has provided a keen eye for detail and promoted my thinking through mindful questioning and suggestions. I am grateful for his guidance and enthusiasm for my work. Dr. Mancini has been invaluable throughout this process, and even before he was a member of my committee he was an inspiration. Dr. Mancini, you demonstrate in a multitude of ways what I hope to become as a theorist, scholar, professor and mentor. I thank you.

To my mother and father, Don and Jeanette Wiles, I am forever indebted to you for your support and guidance throughout my lifetime. To my mom, who read "Katy and the Big Snow" and "Frog and Toad" to me as a young child, and has provided for and encouraged my education ever since, I thank you from the deepest regions of my heart. This paper in many ways reflects your efforts to facilitate my development through reading. To my dad, to whom I cannot ever talk enough, who read "The Black Stallion" with us, and who's son I will always remain, you have been inspirational in so many

ways. Words can only fail to express my undying gratitude to you for all that you are, have been, and will be to me. I love you both.

I would also like to thank my brother and closest friend, Dr. Kenton Broyhill Wiles, whose experience, insight, support and understanding of my graduate school experience have aided me more than he could know. It is truly a wonderful thing to have known your best friend for his whole life. Thank you, Kent. I trust that you know how much I love you. To your wife, and my friend, Dr. Natasha Wiles, I also express my gratitude for your friendship and counsel during my graduate career. Thank you, Tasha.

To my wife, confidant, and inspiration, Tara Renee Wiles, I would like to express my appreciation for your patience, love and kindness during this experience. For your understanding and support, I am eternally grateful. I love you. Anyone who knows me surely realizes how patient and special Tara is.

I would not be here at Virginia Tech without the love and support of my family, "Paw Paw" Wiles, Greg, Megan, Garrett and Grace Wiles, Whitney Wiles, Uncle Bill and Aunt Diane Elliot, Uncle Dick and Aunt Anne Broyhill, Mike Broyhill, Emily, Lizzie and Rives Elliot, Ted, Trina and Joan Pilonero and dear friends Kevin Schoenrock, Mike Stromberg, Steve Kaminski, Doug Cooper, Chris Fairchild, Carlton Steger, Max and Sharon Zimmerman, and Scott and Dawna McDowell and their son Alex.

Finally, to the late Ray and Thelma Broyhill please know that wherever I go and whatever I do I know that you are always with me. Sometimes I get to see you more clearly on top of Seven Mile Mountain, other times on the water in Nags Head. I see you everyday in the books I read, the words I write, the songs I sing and the places I go. I am forever grateful for all you have done for me.

"Inspiration, move me brightly. Light the song with sense and color, hold away despair. More than this I will not ask, faced with mysteries dark and vast. Statements just seem vain at last." – Robert Hunter

Table of Contents

Abstract……...…….ii

Dedication……...……iii

Acknowledgments…….……iv

Table of Contents…..……vi

List of Figures/Tables……....vii

INTRODUCTION……...……...…….……...…..……1

The Zone of Proximal Development……1

GUIDING PERSPECTIVES…….…….…….....5

Vygotsky's Sociocultural Perspective…….5

More Skilled Others…….……...7

Piaget's Dialectical Learning and Functional Invariants……...11

Metacognition and Theory of Mind……..…….13

Summary……..…..15

SHARED READING……17

Summary……...…….20

Shared Reading: An Example……...….21

Shared Reading Interventions……24

SHARED READING DYNAMICS…….……...….26

Adult's Contribution…….…….26

Child's Contribution…….….29

Joint Contributions……31

MODEL DISCUSSION…….…….…….....33

References…….....37

List of Figures

Figure 1: Shared Reading in the ZPD……16

INTRODUCTION

Cognitive development is an exciting and especially vibrant area of research in human development. Understanding what is happening in the young child's developing mind is crucial to researchers' ability to effectively and efficiently advance mental and interpersonal development across the lifespan. Development happens within and through the medium of culture, influencing and being influenced by the individuals within it. During development there are particular settings in which the milieu of rich interactions is especially relevant. One of these settings is in a shared reading activity setting, which allows for the opportunity of both cultural transmission and facilitation of children's cognitive and social development. It is an activity setting because it is an activity, but it occurs within a specified setting. The purpose of this position paper is to propose a comprehensive model of what can and does occur in the Zone of Proximal Development (ZPD) to extend thinking, learning and construction of meaning within a shared reading activity setting, including the development and emergence of language, literacy and social skills.

The Zone of Proximal Development

When investigating the relation between learning and development, Vygotsky (1978) developed the central tenet of his sociocultural perspective on cognitive development, the Zone of Proximal Development. Vygotsky defined the ZPD as "*the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving*

under adult guidance or in collaboration with more capable peers" (italics in original) (Vygotsky, 1978, p. 86). Vygotsky uses an example of two children who are both ten years old and, when measured on problem solving tasks independently of each other or adults, perform at the same level, which is their actual developmental level. However, under adult guidance, one child is able to deal with problems up to a twelve year old's level, and the other child up to a nine year old's level; these are their levels of potential development. While chronologically the same age, these children are distinctly different in their cognitive abilities. This distinction can only be assessed within the ZPD. What is today in the ZPD, that is the potential level of development, will become the actual level of development tomorrow (Vygotsky, 1978). Parent-child, teacher-child and child-child (as long as one of them is a more experienced peer) interactions all occur within the ZPD. The ZPD can be viewed as a mentoring approach to learning.

Understanding what occurs in the formation and organization of cognitive structures requires leveraging theories known to propose rich explanations of cognitive development. Because of the intrapersonal and interpersonal nature of the shared reading interaction, no one theory or perspective seems to encompass the complexities of this interaction. By taking the view of shared reading as an intervention, there is a need to understand the nuances of this activity. As such, this proposal begins by providing the theoretical underpinnings most relevant to the activity of shared reading.

Because of the importance of culture to human development, a presentation of the assumptions and tenets of Lev Vygotsky's sociocultural perspective follows. The ZPD is central to this perspective and is particularly relevant in the shared reading setting.

However, because of the intra-and-interpersonal nature of the dynamic, other theories also contribute to the understanding of cognitive development within this setting.

Jean Piaget's genetic epistemology, describing the origins of how we come to know what we know, informs cognitive development in many varying ways. However, of distinct importance is the individual cognitive development described by Piaget as dialectic learning (Piaget, 1952, as cited in Flavell, 1963). Combined with Vygotsky's perspective, these additional perspectives can provide us with both a roadmap and directions to understanding cognitive development and improve the likelihood of fulfilling potential development in the cognitive domain.

Additionally, to inform the shared reading activity there is a need to consider the concept of metacognition, commonly referred to as "thinking about thinking" (Flavell, 2000), and Theory of Mind (ToM) (Premack & Woodruff, 1978). Theory of Mind is the ability to predict and explain human behavior with reference to mental states (Dunn, 2000). For example, predicting how an individual will behave when one knows another's thoughts and desires, such as predicting that another will search (behavior) for an item when we know that the other desires (mental state) that item. This ability provides the foundation for successful navigation of social interactions, and the greater understanding of this ability can be instrumental in improving the quality of the developmental setting.

Among the central dynamics within the shared reading activity setting are intersubjectivity, mindfulness, and adult mind-mindedness. These dynamic processes inform and support a comprehensive view of the nature of interpersonal connections in a necessarily socially shared reading activity.

The above concepts and perspectives taken together can begin to build a comprehensive examination of what can and does occur in the ZPD to extend thinking, learning and construction of meaning within the shared reading activity setting. In summary, these perspectives and concepts; Vygotsky's sociocultural perspective, Piaget's dialectical learning and the concept of metacognition contribute to a more thorough view of what occurs in a shared reading activity.

GUIDING PERSPECTIVES

To understand what mechanisms are active within the domain of cognitive development in the shared reading activity setting, perspectives that inform and shape our understanding of cognitive development are useful. Vygotsky's (1978, 1987) sociocultural perspective is useful in framing this activity as a cultural and social development. Piaget's (1952, as cited in Flavell, 1963) perspective on individual cognitive development and Flavell's (1979) perspective on metacognition provide insight on extending thinking and learning in a shared reading activity setting.

Vygotsky's Sociocultural Perspective

Child development, according to Vygotsky (1978), is an active process whereby the child transforms socially shared processes into internal constructs. Children are immersed in culture and society and thereby construct knowledge based on experiences within this context. Vygotsky's sociocultural perspective, which informs research on parent-child and teacher-child interactions, includes a few assumptions about the nature of human development, briefly described here. For a more detailed review, see Miller (2000). Human nature, according to this perspective, is created within the cultural context. Context refers to both the overarching culture in which children live as well as the particular setting, such as shared reading, in which an activity takes place. Additionally, development consists of a series of quantitative changes and then undergoes a qualitative change. Language is a crucial aspect of development. Language, according

to Bruner (1985), is the major means by which we internalize thoughts. Vygotsky (1978) emphasized the importance of language development more than any other single factor in cognitive development. He theorized that children's speech takes on an intrapersonal function in addition to an interpersonal one. That is, when children have acquired language, they can use it not only to communicate with others, but also to direct their speech inward to guide their thoughts and behaviors. Finally, from the sociocultural perspective, making meaning of the world through social interactions seems to be the goal of the developing mind (Bruner, 1990). For sociocultural constructivists, making meaning often includes the social interaction of a more experienced adult or peer (Rogoff, 1990). Development can be seen as a co-constructive process and one in which a child can greatly benefit from interactions with an adult or more experienced peer. Accordingly, development allows for transmission of culturally appropriate solutions to problems as well as using culturally appropriate tools. Culturally appropriate tools include such things as language and mathematics, the inventions of society used to represent and make sense of the world (Rogoff & Morelli, 1989).

Within the sociocultural perspective one of the central concepts that informs adult-child interactions, especially learning cultural tools and culture, along with shared reading is the ZPD. Within the ZPD there is an emphasis on a more skilled peer or adult facilitating cognitive development. There are two similar but differing interpretations on this, Jerome Bruner's (Wood, Bruner and Ross, 1976) *scaffolding*, and Barbara Rogoff's (1990) *guided participation*. Additionally, Roland Tharp and Ronald Gallimore's (1988) *assisted performanc*e describes behaviors that occur within the ZPD during scaffolding and guided participation.

Because of the very nature of the ZPD, it follows that shared reading is a culturally valid activity, meaning that it is a commonly occurring activity within our culture. In the U.S. adults and children often read together (Bus, van IJzendorn and Pellegrini, 1995), and further understanding of what can, does and could occur in the ZPD within the shared reading activity setting provides an avenue for enriching the quality of such an interaction and promoting cognitive development. Parent-child book reading has been reported as "the single most important activity for developing the knowledge required for eventual success in reading" (Commission on Reading, National Academy of Education, 1985 as cited in Bus, van IJzendorn and Pellegrini, 1995, p. 2). Parents are thought to facilitate this process by scaffolding their interactions to the appropriate level for their children's skills (Ninio & Bruner, 1978). This process requires the knowledge of a more skilled other person in the ZPD. Children commonly rely on adults to guide them through the ZPD. As such, there is a need to provide training to parents, teachers and other adults to facilitate children's learning in the ZPD.

More Skilled Others

The ZPD is predicated on the existence of a participant in any given context being more skilled or experienced than another. This arrangement allows for the less experienced individual's potential to be realized through what is termed *scaffolding* (Wood, Bruner & Ross, 1976), *guided participation* (Rogoff, 1990). *Assisted performance* (Tharp and Gallimore, 1988) describes the overt behaviors of the more skilled or experienced other in the ZPD.

Scaffolding is a metaphor for what the more experienced or skilled other is doing in the ZPD. Scaffolding is a "process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (Wood, et al., 1976, p. 90). It is useful to think of the scaffolding metaphor, as Bruner later defined scaffolding, as intentional, temporary, and flexible structures built to match the learner's development (Bruner, 1986), much like actual scaffolds used in building and construction. Mancini, Bowen, & Martin, (2005) concur, with the first author noting that "a scaffold is not a process or function, but a structure or framework that supports process[es] and functions" (J. A. Mancini, personal communication, 3/31/2008). Scaffolding is a collaborative form of learning, with assistance from an adult, by which a child can achieve her potential development.

Guided participation is Barbara Rogoff's (1990) interpretation and application of what transpires in the ZPD between an adult and child. This perspective is more implicit than explicit, in that learning can happen through observation alone (Miller, 2000). Learning is a natural extension of involvement in tasks and/or problem solving with adults or more competent or more experienced peers. It is the opportunity to learn cultural practices through the navigation of everyday life with a more competent peer or an adult (Rogoff, 1990).

Tharp & Gallimore (1988) developed assisted performance as a method for educators to assist children's learning within the ZPD. This approach to instruction will be briefly described here (for a more in-depth description of assisted performance, see Tharp & Gallimore, 1988 and Gallimore & Tharp, 1990). This interpretation and active approach is organized and detailed for guiding teaching in the ZPD, The six emphasized

means of assisting performance are "*modeling, contingency managing, feeding back, instructing, questioning* and *cognitive structuring."* (Tharp & Gallimore, 1988, p. 44). While there may be other ways of assisting performance in the ZPD, Tharp and Gallimore have chosen these as the best defined and salient of the means for assisting performance. These means are described below:

Modeling. Modeling is "the process of offering behavior for imitation" (Gallimore & Tharp, 1990, p. 178). Modeling is a natural and powerful way of assisting performance, and is of particular relevance in the educational setting (Gallimore & Tharp, 1990).

Contingency managing. Contingency managing is assisting performance by arranging rewards and punishments according to behavior and the desirability of the behavior. There is an emphasis in Gallimore and Tharp's perspective that this strategy is not operant conditioning and that other theoretical perspectives can explain contingency managing. While effective in some domains, particularly when rewarding, praising and encouraging, contingency managing cannot elicit novel behaviors. Other means of assisted performance must be used (Gallimore & Tharp, 1990).

Feeding back. Feeding back to a learner regarding performance can be a powerful means of assistance. This action alone can lead a learner to considerable improvement in performance on a subsequent effort. "Providing for feedback is the most common and single most effective means of self-assistance" (Tharp & Gallimore, 1988, p. 54). However, feedback must be relative to a standard. Providing performance information is not feedback unless it is relative to this standard (Gallimore & Tharp, 1990).

Instructing. Instructing is the most ever-present means of assisting performance. However, Gallimore and Tharp note that it is rare to see instruction used to assist the performance of the next required act to move through the ZPD. Teachers can only be expected to assist performance via instruction if they take responsibility for the student's learning. Vygotsky's (1978) emphasis on the transition from interpersonal to intrapersonal speech is perhaps best exemplified by instructing. The instructing voice of a teacher becomes the self-instructing voice of the child in the transition from novice to expert (Gallimore & Tharp, 1990).

Questioning. Questioning provides a subtle, yet powerful means of assisting performance. Questions explicitly require both cognitive and linguistic responses. It is important to note that assessment questions, as opposed to those that assist, are only useful as a means of determining a child's location in the ZPD but are fruitful when used as a means for subsequent assisting. Assistance questions necessarily require a student to perform mental operations that the student would not otherwise have produced (Gallimore & Tharp, 1990).

Cognitive structuring. Cognitive structuring occurs when an adult provides a framework for thinking and acting. There are two types of cognitive structuring: Type I, structures for explanation; and Type II, structures for cognitive activity (Gallimore & Tharp, 1990, p. 182). Type I structures operate on an explanatory level to help a child understand the basics of a situation and thus allow them to be creative within the structure. Type II structures provide frameworks for learning in a more general sense than Type I's specificity (Gallimore & Tharp, 1990).

Summary

Taken together, these perspectives on what takes place in the ZPD can be useful for guiding our understanding of the shared reading activity setting. In this view, the ZPD in shared reading is an activity setting, and the means of assisted performance can be utilized within this context. However, guided participation and scaffolding occur within the ZPD, the strategies of assisted performance are the outward and observable behaviors present when an adult is scaffolding or engaged in guided participation. In summary, these approaches lend a valuable piece of both the current, as well as potential, understanding of the shared reading activity's interpersonal dynamics.

Piaget's Dialectical Learning and Functional Invariants

The functional invariants of *organization* and *adaptation* are the underlying structures and processes that are at work during learning (Miller, 2000). Piaget's concept of dialectical learning, learning by the resolution of opposing forces he termed equilibrium and disequilibrium, is central to cognitive development. This process occurs within the individual's mind and helps her to move through the processes of cognitive development. Within a shared reading context, both individuals engage in dialectical learning processes by taking in new information about the shared book, the environment, and the novel aspects of the dynamic interaction with an adult or more skilled other. Continually assessing the information available in the interaction is crucial to understanding another's intentions and desires.

In a shared reading context, the adult is continually assessing the child's responses, participation and engagement. Each of the assessments is then either fitted into the existing scheme (assimilated) or the existing scheme is reformed to accommodate the new information (accommodation). The child is also undergoing similar cognitive processes, assessing the adult's reactions, instructions, questions, cognitive structures, etc. These processes are always underlying the dynamic interaction in the shared reading setting particularly, and the ZPD generally.

Assessment is the hallmark of meaningful learning. Through the assessment process, adults and children can investigate what we know, want to know, and need to know for the interaction to be fruitful. Assessment's role in the shared reading context cannot be understated, it is necessary for the adult to assess the child's knowledge and beliefs, just as the child needs to assess his own progress, tactics, beliefs and skills.

In the adult's mind, assessment also contributes to the adult's understanding of the developmental level of the child. Effective assessment can lead to more effective methods of teaching in the ZPD. The adult who is continually assessing in a sensitive manner can then employ strategies for teaching that are a good fit with the developing child's needs. Further, the child needs to assess the adult's intentions and whether or not they have fulfilled their responsibilities within the demands of the interaction. The child uses the dialectical process to form theories about the possible meanings of the information gathered from the adult. The formation of naïve, or folk theories about others' mental states is known as a Theory of Mind (ToM) (Lillard, 1998).

Metacognition and Theory of Mind

Flowing from the ideas of Piaget, particularly those relating to the concept of conservation, came the concept of metacognition (Flavell, 1979). "Metacognition (cognition about cognition—hence the ''meta'') has been defined as any knowledge or cognitive activity that takes as its cognitive object, or that regulates, any aspect of any cognitive activity" (Flavell et al., 1993, p. 150). This research led researchers to investigate what children know about others' thoughts, feelings, beliefs and desires, in other words, their Theory of Mind (ToM) (Flavell, 2000). There is ample debate about whether theory of mind is truly a theory. However, this is not the subject of this position paper, for more in-depth coverage, please see Wellman, Cross & Watson (2001).

The foundation of development of a ToM is forming a shared understanding of what will occur in an interaction. This shared understanding is called *intersubjectivity* (Trevarthen and Hubley 1978). Rogoff et al. (1993) studied intersubjectivity in young children and found that over time, from 4-6 months to 6-7 months, adults and young children begin to engage in intersubjectivity with ease, where earlier it had been a much more conscious effort. Intersubjectivity sets the stage for relationship development.

Part of encouraging ToM development specifically, and cognitive development generally, is the use of a concept called *mindfulness*. Mindfulness as a concept is difficult to define; however, it is best conceptualized as a process of being able to draw novel distinctions, examine information from new perspectives, and being sensitive to context (Langer and Moldoveanu, 2000; Langer, 1993). Mindfulness is looking at the world in a creative way, not as it is, but all of the possibilities of what it could be.

Along with mindfulness, Elizabeth Meins' (1997) concept of mind-mindedness can improve the quality of the shared reading interaction. Mind-mindedness, defined by Meins as the propensity to treat one's child as an individual with a mind, has been demonstrated to be an important facet of maternal sensitivity that predicts both security of attachment and later ToM skills (Meins, Fernyhough, Fradley, & Tuckey, 2001; Meins et al., 2002; Meins et al., 2003). This important way of thinking can shape the adults' thinking about children, and help us think and act in ways that maximize children's development, and can be put to good use in a shared reading activity.

Both mindfulness and mind-mindedness can play an important role in children's cognitive development. Mindfulness allows for children and adults to be creative by leaving the possibilities regarding an object or event open to interpretation. Mind-mindedness, in turn, applies the concept of mindfulness to a parent or teacher, as a window into which either they see their child as merely a being with needs that must be met, or they see the child as having the possibility of a mind.

For the child to achieve potential gains in development within the ZPD in general and the shared reading activity in particular, metacognition is a required mental process on several levels. An effective adult will think about her own thinking when deciding which of the means of assisting and guiding the child will be most effective. Selecting a strategy for assisting the child involves several processes: The adult is both thinking about the adult's own thinking, as well as thinking about the child's thinking about his thoughts (Meins, 1997). This process is a higher level of metacognition, a mind-minded way of operating. Additionally, the adult is engaging in meta-strategy selection (Kuhn,

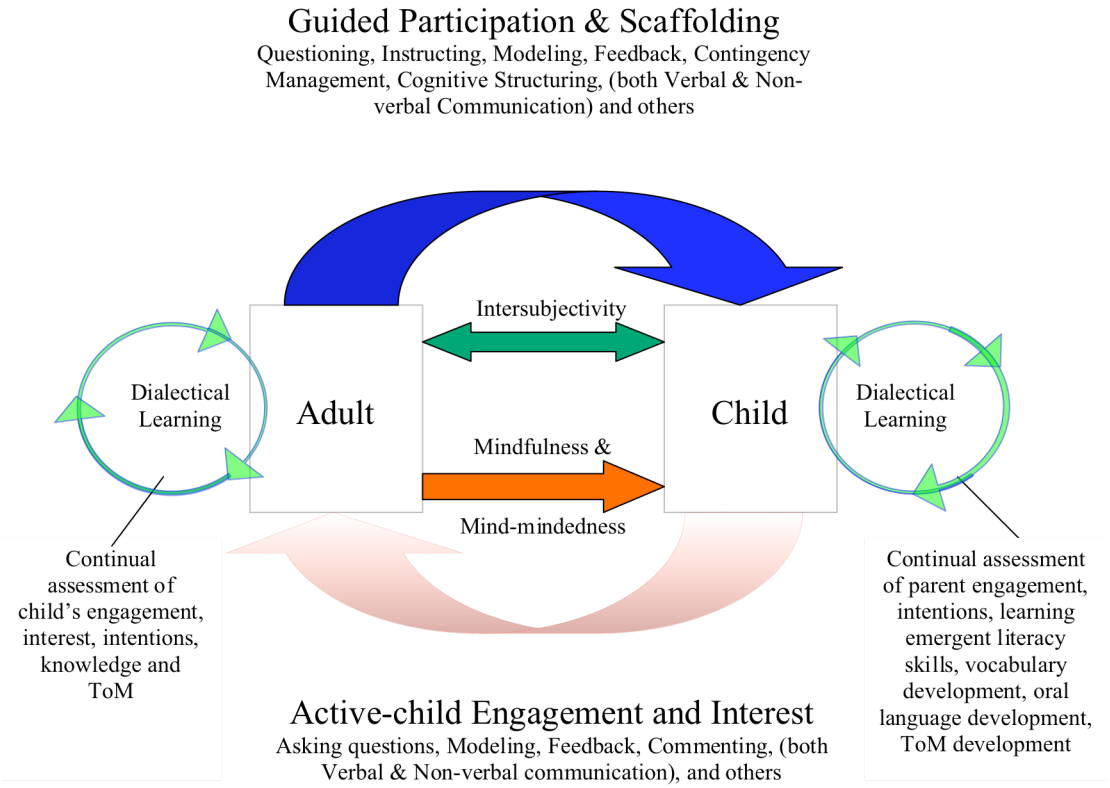
2000), thinking about which mental strategy he will employ to solve the challenge presented by the child.

Summary

Taken together, these perspectives provide a comprehensive view of the dynamic and complex processes at work in children's cognitive development. Each element of the perspectives builds and works in concert with the others, creating an overall framework for describing the developing child in a shared reading activity setting. Shared reading is necessarily social, requires the accommodation and assimilation of novel material, and provides useful platforms for not only understanding each other's minds (ToM) but also for contemplating their own (metacognition).

Figure 1

The Shared Reading Activity in the ZPD



SHARED READING

Shared reading, which is the act of reading a book together, is an activity that necessarily occurs within the ZPD. Shared book reading offers children opportunities to ask questions and "learn about books, language, characters, feelings, emotions, etc." (Evans, 1997, p. 2). Shared reading, from the Vygotskian point of view, is a cultural transmission opportunity (Wolf & Heath, 1992).

It is now considered common knowledge that parents should read to their children (Bergin, 2001). However, some children are never read to in the home (Adams, 1990). Increasing the frequency of shared reading in such homes is a challenge. However, quality of the interaction is an important part of the shared reading activity (Kassow, 2006). Cognitive gain occurs within sociocultural contexts, and major differences can and do exist in shared reading experiences of children (Leseman & de Jong, 1998). Because of the noted importance of the ZPD in cognitive development, there have also been calls to further research into areas of social-emotional and affective development (Chak, 2001).

Why investigate shared reading? Several studies have found a relationship between the frequency of shared reading in the home and language abilities in preschool (Sénéchal, 2000; Bergin, 2001). Additionally, studies have reported the in-home literacy environment accounting for as much as 18.5% of the variance in language abilities of 4-year-old children (Payne, Whitehurst & Angell, 1994).

Shared reading has been positively linked to a number of gains in children's cognition, including emergent literacy (Arnold et al., 1994; in Bus, van IJzendorn and

Pellegrini, 1995), oral language development (Lonigan & Whitehurst, 1998; Whitehurst, et al., 1994) and vocabulary development (Arnold et al., 1994; Robbins & Ehri, 1994 as cited in Al Otaiba, 2004; Zevenbergen, Whitehurst & Zevenbergen, 2003). In-home literacy development is chiefly related to a parent's socialization practices within the setting of the shared reading activity such as sensitivity to the child and contingency management (Serpell, et al. 2002). Additionally, young children's emergent literacy skills seem to be related to the overall quality of the parent-child interaction (Bergin, 2001).

Shared book reading and home literacy environments are often investigated quantitatively, by examining frequency of shared reading activities, number of children's books in the home, and frequency of library visits (Karrass, VanDeventer, & Braungart-Rieker, 2003). While there are valid reasons for investigation of shared reading in this manner, few studies have looked at shared reading with a qualitative or mixed-methods approach.

While the shared reading activity is linked to specific aspects of cognitive development, it is important to consider that these are all pieces of the more global concept of literacy. "*Emergent literacy* describes children in the process of becoming readers and writers, and stresses the continuous nature of literacy development" (Teale, 1987; Whitehurst & Lonigan, 1998; as cited in Kassow, 2006, p.2). Emergent literacy is defined as that "which involves the skills, knowledge, and attitudes that are developmental precursors to conventional forms of reading and writing" (italics in original), (Connor, Morrison & Slominski 2006, p.665). These researchers found that

preschool instruction in shared reading in small groups was more effective in producing gains in emergent literacy as opposed to whole-class instruction.

In the shared reading context, there are unique scaffolding and developmental opportunities to sound-out words in the text. Reading aloud helps children develop listening skills, attention to words, proper pronunciations and awareness of the power of language. As such, shared reading has been found to make positive contributions to development in phonemic awareness. "Phonemic awareness, or the awareness of the sound structure of words, is a metalinguistic skill important to the successful acquisition of reading and writing." (Ukrainetz, et. al, 2000, p. 331). Within the shared reading setting, children who are systematically taught to manipulate spoken phonemes, which are perceptually distinct units of sound, demonstrate significant gains in word recognition and spelling ability (NICHD, 2000). Along with phonemic awareness, shared reading provides opportunities for children to learn to identify letters in the text. Through identification of letters, adults can scaffold children's reading of texts, oral language development and vocabulary (NICHD, 2000). Phonemic awareness, letter recognition, and vocabulary development are pieces of the overall puzzle of written and oral language fluency that merge to form the multi-domain functions of literacy and language.

Literacy has been linked to several positive social outcomes, including decreased behavior problems (Doctoroff, Greer & Arnold, 2006). In another study of young children, Arnold (1997) showed that behavior problems were associated with poor emergent literacy skills, and disruptive children received less instruction from teachers. Emergent literacy, particularly after a shared reading exercise, has also been linked to increased social behavior skills (Zevenbergen, Whitehurst, & Zevenbergen, 2003). In

short, the impact of emergent literacy goes beyond merely phonemic awareness and text recognition and into overall academic and social-emotional development. Once again, the cultural and contextual aspect of shared reading seems to be important in more than just its impact on literacy.

Korat (2005) identified two separate components of emergent literacy, *contextual knowledge* and *non-contextual knowledge*. Contextual includes environmental print, literacy activities and awareness of print functions, while non-contextual contains text identification and phonemic awareness, among others. These two components make up the broader picture of emergent literacy, notably emphasizing letter naming and phonemic awareness in literacy development, while acknowledging the contextual setting.

Shared reading has also been shown to lead to improvements on ToM tasks, such as false-belief (Ruffman, Slade and Crowe, 2002). Other findings strongly indicate that shared reading provides opportunities for children to have conversations which reflect on others' mental states, as book characters are regularly presented in ways that foster thought about the goals, thoughts, and emotions that shape their actions (Adrian, Clemente and Villanueva, 2005).

Summary

Researchers need this theoretical framework to advance the fields of Human Development, Developmental Psychology and Early Childhood Education, among others. The theory as presented provides descriptions and pathways that can be then be targeted

for intervention, leading to effective impacts on children's cognitive and social development generally, and emergent literacy in particular.

Because the child contributes to the shared reading interaction in qualitatively different ways than the adult, much of the child's contribution in the shared reading activity is often overlooked. Because it is a *shared reading* activity, both of the individual participants provide equally relevant information. Adults are providing the tools necessary for literacy, oral language development and ToM development, whereas the child is providing the adult with stimulation, emotional connectivity, and information (to be used in subsequent discourse) about her own developmental level. To clarify, it is referred to as *shared reading* for a reason. This is <u>not</u> an adult merely reading *to* a child, but an adult reading *with* a child. While the adult may be responsible for correctly reading words and identifying letters and sounds, it is done together. For example, an adult may read *to* a child without the child ever seeing the words, letters or pictures. On the other hand, an adult may read *with* a child by guiding and scaffolding the child through sounding out words, talking about pictures with the child and helping the child identify letters and words in the text. The proposed model of a dynamic interaction within the ZPD is predicated on the notion of a shared activity, not the rigid top-down hierarchal practice of a unidirectional encounter.

Shared Reading: An Example

T= Teacher, C =Child (four years old)

C: What's in there? [pointing]

T: What is it? Well, I guess we'll find out from the story. "Lash"

C: Lash

T: "Lunge"

C: Lunge

T: "Herons"

C: Herons

T: "Plunge"

C: Hunge [made up word]

T: That's a good rhyming word, but plunge is the word here. Look, if I cover up the "p" here, and I look at this word and this word [pointing], what do you notice about that?

C: Yeah!

T: What, what do you notice about them?

C: It's the same.

T: It's the same! But if I add a "p" it says "plunge". So [together] "Lash, lunge, herons plunge". Ooh, look at that frog.

C: [laughs]

T: The frog looks so scared. Why do you think the frog looks so scared?

C: Because he might peck him. [pointing]

T: Because the heron might peck him. Do you think herons eat frogs?

C: [Shrugs shoulders] I don't know [slurred –more like "uh-uh-uuh"]

T: I don't know either. I know they probably eat fish. [turns page]

This multilevel excerpt from Fu, Wiles and Milne (2006, 2008 in progress) is an exemplar of some of the possibilities for extending thinking and learning through the

shared reading activity, particularly those of emergent literacy. Of note is the use of text identification techniques, noting that "lunge" and "plunge" are similar in both text and phonemic qualities. Reading the words aloud together aids with phonemic awareness, text recognition, and oral language development, which occur throughout this shared reading exercise. The child also takes this information and makes her own rhyming word, "hunge", demonstrating her creativity and engagement in the activity, and the teacher's redirection to the text when learning about the components of the text.

The teacher and child also engage in Theory of Mind exploration, with the teacher questioning, "Why do you think the frog looks so scared?" an assistance question, challenging the child to think about the frog's mental state. She also asks an assessment question, "Do you think herons eat frogs?" The teacher also uses humor to keep the child engaged, and the child in closely attending to the story.

Finally, some of the behavioral scaffolding techniques outlined in the model are being used in this excerpt. The adult uses *questioning, instruction,* and *modeling.* The teacher asks both assessment and assistance questions. She also instructs the child about spelling and rhyming and offers behavior for modeling by reading the words aloud for the child to model. She also gave the child an opportunity to explore manipulation of words to make them rhyme, and perhaps offer behavior for modeling, which could have led to several variations of rhyming words with "lunge" (e.g. grunge).

The child demonstrates her part of the model through asking a question, "What's in there?" Being consistently engaged in the activity is also demonstrated through the use of non-verbal communication (pointing) and feedback through answering questions and

commenting on the frog through laughter. The child and adult are also assessing their dyadic interaction and working together to make meaning of the text.

Finally, the cultural transmission aspect of this interaction cannot be overlooked. There are several overt cultural examples (e.g. accepted laughter during the activity and valuing the frog's feelings) as well as the recognition that this activity occurred in the United States, in Virginia, in a university child development center, in a small room, on a couch. This setting within the socio-historical cultural context is an inextricable part of the interaction.

Shared Reading Interventions

The major intervention currently in place is what Lonigan and Whitehurst (1998) have termed "Dialogic Reading". This intervention is based on a prescribed method of a) extending responses from the child through evocative questioning, instead of "yes-no" questions or simple identification questions, e.g. "what's that?" b) the adult's positive and informative use of feedback and c) the adult's using progressive standards for the child. The intervention was specifically designed to scaffold children's responses in the shared reading activity, first by increasing their rates of open-ended questions, function/attribute questions, and expansions and second, by responding appropriately to children's attempts to answer these questions. Parents are also asked to decrease their frequency of straight reading (just reading, not engaging in conversations about the book) and questions that could be answered by pointing

Although this intervention is somewhat effective, it still is unable to bring disadvantaged children who participate in the program up to the performance level of their peers. The authors point to the parents' compliance more than the intervention as the cause for this result. (Whitehurst, et al., 1988; Lonigan & Whitehurst, 1998). There is also evidence that prescribing limited-scope interventions involving reading may not be culturally appropriate. Deckner, Adamson & Bakeman (2006, p. 39) caution that we researchers and practitioners "should temper impulses to advocate that caregivers adopt specific styles of communicative interaction during shared reading without considering children's contributions (Lonigan & Whitehurst, 1998; Whitehurst et al., 1988)."

This criticism of dialogic reading is especially relevant here. Of the several means of assisting performance, dialogic reading merely advocates for questioning, while ignoring the other means of scaffolding, such as cognitive structuring, modeling and providing feedback. Additionally, dialogic reading advocates for a single type of question, an assistance question. However, the effective parent can also use assessment questions to determine the child's current developmental level (Tharp & Gallimore, 1988). It would seem that a more holistic view of the shared reading activity could be more culturally relevant and allow an adult to use more than one specific technique to extend thinking, learning and construction of meaning in the ZPD.

SHARED READING DYNAMICS

Within the complex interactions between an adult and child in the shared reading activity, the parent and child share some bi-directional processes, while also engaging in the internal mental processes of dialectical learning. The effective adult will also employ mindful and mind-minded strategies to assist the child's developing mind.

While each of these processes is presented individually, it is important for educational practitioners and researchers to consider this interaction as dynamic and bidirectional, and not performed in isolation. Learning does not occur in a vacuum and neither do the processes delineated in the model. Shared reading is not just the following: parent's contribution + child's contribution + joint contributions = learning to read. It is much more than merely the sum of the components. As the model in Figure 1 depicts, it is a cyclical and dynamic interaction including and dependent upon constant, effective and proper assessment occurring in both parties' cognitive processes.

Adult's contribution

When operating in an optimal way, the adult in the shared reading setting is scaffolding and guiding the participation of the child (depicted by the large blue arrow in Figure 1), outwardly exhibited by the six emphasized means of assisting performance (there may be others), while at other times acquired through observational learning (Rogoff, 1990). Tharp and Gallimore identify the outward strategies and behaviors in the ZPD, while Bruner and Rogoff emphasize the cultural transmission and meaning making

processes within the cultural context of the interaction. In sum, these processes are described on different levels, with Tharp and Gallimore's (1988) theory of Assisted Performance identifying *strategies* that adults can use to assist a child, but this overly behavioristic approach might miss the overarching development within the cultural context. On the other hand, Rogoff and Bruner seem to be contributing overall description and meaning to the interaction within the context of culture. Regardless of whether it is through overt strategies or simply the human nature of social interaction, cultural transmission occurs within the ZPD.

The orange arrow from the parent to the child in Figure 1 depicts the hypothesis that when the parent is operating in a truly effective manner within the shared reading activity, she will demonstrate the use of mindfulness. Using this framework includes an attention to the possible ways that children's contributions to the interaction may be used. Mindfulness, in this case, is akin to parent creativity, thus not viewing the child's contribution as a right or wrong response, but using the response in a mindful, creative way to extend thinking, learning and meaning making through the interaction.

Additionally, the adult's view of the child as an individual with a mind is another of the processes at work depicted by the orange arrow in Figure 1. Since the adult is constantly making assessments of the child's engagement in the shared reading activity, the concept of mind-mindedness is useful in identifying positive contributions the adult can make in the shared reading activity. By treating the child as a being with a mind, the adult can use strategies that will aid in ToM development, cognitive and social-emotional developments. This view of the child contributes a more sensitive approach to the child,

and provides qualitatively different information for the child to process and resolve through dialectical learning than when the child is viewed as merely a being with needs.

It is important to note that mindful and mind-minded processes are mental states and frames of reference. When an adult is mind-minded, the choices of behavioral strategies to employ in assistance of the child's performance are more directed at the child's cognitive and social development. Mindfulness and mind-mindedness are operating at different cognitive levels, metacognitive levels, than the behaviors outlined in assisted Performance, guided participation and scaffolding. It is through the mind-minded and mindful frame of mind that one is able to select appropriate strategies to achieve maximum potential development of the child in the ZPD. The behaviors displayed in the means of assisting performance are external, behavioral expressions of internal metacognitions. However, regardless of any strategic approach, cultural transmission is continually occurring throughout the interaction in the language we use, and the non-verbal communication style we employ.

The adult also contributes to the interaction by maintaining the child's interest. If adults are not receptive to the child and do not allow for exploration, children will become reluctant to participate in the activity (Sénéchal & Lefevre, 2002). Deckner, Adamson and Baker (2006), when investigating the contributions of the adult to the shared reading activity, demonstrated that child interest was strongly associated with the rate at which mothers produced meta-lingual utterances (those communications that have to do with language as a subject). The adult contributes to the shared reading activity by maintaining the interest and engagement of the child. In particular, presenting novel information, such as metalingual utterances, increases child interest and thus engagement.

Adults can extend, through scaffolding and guided participation, the thinking, learning and engagement of the child. When considering the question of which one of the many contributions an adult can make is more or less important, the answer is inevitably dependent on what the child needs at the time. For example, instruction may be useful in a situation in which questioning has not led the child to the answer. In some cases simply instructing a child will facilitate learning more than at other times. Note that whatever the strategy employed by the adult, maintaining the child's interest and engagement is theorized to be the most crucial to extend thinking and learning.

Child's contribution

While the child may contribute elements that are similar to those of the adult, there is a qualitative difference in the function of these elements. For example, a child may pose a question to an adult inquiring about a certain aspect of the book. On the surface this may seem similar to the questioning behavior of an adult. However, the child usually asks a question to gain knowledge about the world. An adult usually asks a question to either assess the child's current knowledge, or assist the child through questioning, leading them to engage in cognitive processes in which she would not have engaged without being questioned (Gallimore and Tharp, 1988).

The child's contribution to the shared reading activity (depicted by the red arrow in Figure 1) is often overlooked (e.g. Lonigan & Whitehurst, 1998). However, the child provides meaningful information to the parent about his own thinking, including describing his own cognitive structures (e.g. "this is how I think about it"), instructing the parent on what is next (e.g. "it's time to turn the page), and many other operations that

contribute to the shared reading dynamic. Additionally, the child will often ask questions, and check her understanding of the interaction. These actions may seem similar to those of an adult (e.g. questioning, instructing, cognitive structuring, modeling, etc.), but they serve a different purpose than that of the adult's use of these techniques. Children engaged in the shared reading activity are often using similar techniques to those used by the adult, but they are usually used to further their own understanding, not that of the parent. This is not to say that they do not assist the adult's understanding of their own mental state, only that this is not their explicit goal. Many of the child's questions are simply information-seeking interrogatives. Questions such as "Why?" or "How?" when asked by a child are qualitatively different than when an adult asks the same question of a child. The child is often fact-checking or seeking approval or knowledge, whereas an adult is often assessing the child's knowledge to determine the child's developmental level. It should be noted that a parent who is sensitive, mind-minded and mindful could assess the child's engagement and use this information to make useful contributions to the child's meaning-making cognitive processes. While the means of interacting in the ZPD may appear to be similar between the adult and child, the child has a qualitatively different *intent*.

Fu, Wiles, & Milne (2006, 2008 in progress) and Fu, Milne, and Wiles (2006) and found that the child also contributes information about her own state of mind, offering the adult examples of the child's own thinking, learning processes, and knowledge. These behaviors are hypothesized to contribute to the interaction both by informing the adult about the way the child is feeling and thinking, and by forcing the child to evaluate her

own thoughts, beliefs, desires and intentions. In this manner the child and adult lay the foundation for furthering the child's ToM development.

Additionally, the child is hypothesized to engage in the dialectic process of organization and adaptation, incorporating sensory, emotional and cognitive information provided throughout this process. Not only is she assessing the interaction, but she then contributes her own understandings of the interaction, providing a point of assessment for the adult to consider in the adult's own cognitive and metacognitive processes.

The child's contributions all return to the qualitatively different intent of the interactions. A child is exploring her world through learning, thinking and making meaning. The adult is learning about the child, but already has *a priori* knowledge that the adult can provide to the child to assist her in her cognitive and social-emotional development.

Joint contributions

While the adult and child are each contributing different elements to the interaction, providing feedback information to one another, and engaging separately in their own inner cognitions, there are some aspects of the shared reading activity that are jointly shared by the participants, collectively referred to as intersubjectivity.

Intersubjectivity, depicted by the green bidirectional arrow in Figure 1, is shared in the sense that there is a mutual understanding of what is going to occur in a given interaction (Goncu, 1993), in this case, the shared reading setting for the interaction. Intersubjectivity is by definition a shared or joint phenomenon. As the model indicates, it is a bidirectional and constant exchange of understanding that occurs within the ZPD.

Rommetveit (1985) notes *"intersubjectivity must in some sense be taken for granted in order to be attained"*(italics in original). The point here is that meaningful interactions need to have some basic assumptions, foremost that the person starting the communication is saying something that makes sense (Rommetveit, 1985).

The adult and child jointly contribute to an activity in the ZPD through the use of non-verbal communication. This communication consists of touching and gesturing. Much of these non-verbal communications are happening in an intersubjective manner, in that they do not need to be explained, they are accepted as parts of communication between two humans. The child assesses the communication for clues about the content being conveyed. Meanwhile, the adult may use non-verbal communication to enrich the interaction.

While there are several established and identified ways of teaching and learning in the ZPD, future research could identify elements of the interaction that might be understood in ways not previously established.

MODEL DISCUSSION

On a global scale, the theoretical model posits that children and adults are continually assessing development within the shared reading activity and that learning and cognitive developments occur within that interaction. The model posits that cultural transmission is a fundamental aspect of cognitive development and is achieved through scaffolding (Wood, et. al, 1976; Bruner, 1985, 1986, 1990) and guided participation (Rogoff, 1990). Further, the model posits that reading is a fundamental aspect of literacy and that literacy is the ability to make sense of words.

The theory as presented provides descriptions and pathways that can be investigated through future research. The main research hypothesis accompanying the model is that any one of the arrows provides a point of entry for an intervention. For example, because of the positive child outcomes associated with a mind-minded adult, the hypothesis is that an intervention at this level would be able to predict gains in cognitive development.

Research considerations necessary for the model to be tested include a child developing emergent literacy and oral language skills. Additionally, the model requires the presence of a more skilled other and the ability to use language. Finally, testing the model would require that researchers embrace the cultural transmission piece of the model and that these researchers be considerate and conscious of the over-arching cultural implications of the shared reading activity. The model's result is the child's complex cognitive and social development within the framework of culture.

Further, the model depicts a complex and synergistic dynamic between an adult and child in the ZPD. The shared reading activity provides an activity setting for many diverse domains, including ToM development (Ruffman, Slade and Crowe, 2002; Adrian, Clemente and Villanueva, 2005), social-emotional development (Serpell, et al. 2002), and emergent literacy (Connor, Morrison & Slominski, 2006; Bergin, 2001; Arnold et al., 1994; as cited in Bus, van IJzendorn and Pellegrini, 1995).

Through this model we are able to visualize and describe both the individual cognitive processes at work (e.g. dialectical learning), as well as the dyadic exchange of information about the intentions, beliefs, desires and emotions of the other. Additionally, there is knowledge exchanged from the adult to the child in the form of new vocabulary, word and letter identification, and novel oral language. This knowledge lays the foundation for emergent literacy, oral language development and other cognitive gains for the child.

However, as the model depicts, the interaction is not overly unidirectional. The adult, particularly an adult who is mindful and mind-minded, will also learn. Through being receptive to the child, the adult will be able to learn more about the child's developmental level, cognitive gains, and emotional tendencies. While the shared reading exercise is traditionally thought to be beneficial to the child in terms of cognitive gains, the adult makes gains as well, albeit in different but equally important domains.

The model's depiction of the shared reading activity can be useful for researchers and practitioners as a guide for developing intervention strategies. Because of the nature of the shared reading paradigm, it would seem that interventions aimed at training to assist the child's performance, guide his participation, and scaffold his development

could be beneficial. Additionally, training to draw attention to mindfulness and mind-mindedness could lead to significant gains in cognitive development, as well as an improved adult-child attachment relationship (Meins, et al., 2002; Meins et al. 2003).

Researchers and practitioners can work to improve cognitive development efficacy of the shared reading activity by using the proposed model as a framework for exploration. While the model does present a complex set of interactions, by presenting it in this manner, we can select any of the pathways depicted to begin looking at intervention strategies.

As a caution to future research in shared reading, prudence requires that we remember that there may be culturally diverse ways of interacting in the ZPD (Rogoff & Morelli, 1989). A major criticism of Dialogic Reading is that is seems to lack cultural sensitivity (Deckner, Adamson & Bakeman, 2006). However, using this model, we can use any subset of culturally relevant means of assisting performance. If asking questions of children in a particular society is uncomfortable or taboo, we can advocate and provide for the use of other means to aid the cognitive and social development of children within these cultures. This can be done without breaking norms or mores while still maintaining a positive experience for both the child and adult.

In a more general sense, it is up to us to advocate for a more sensitive, mindful and holistic approach to shared reading. Policy makers, legislators and administrators all want our children to be better prepared to face the challenges of the twenty-first century. However, we may have differing views of what is best to prepare them for the future. Research findings have demonstrated that early shared reading experiences have positive influences on several domains of development. Using the proposed model both to

understand the interaction and also to make the shared reading experience more fun and interesting for the adult and child can yield significant gains for children, families, neighborhoods and societies.

References

Adams, M. J. (1990). *Beginning to read: Thinking and learning about print: A summary*. Urbana-Champaign, IL: University of Illinois.

Adrian, J. E., Clemente, R. A. , & Villanueva, L. (2005). Parent–child picture-book reading, mothers' mental state language and children's theory of mind. *Journal of Child Language, 32*. 673–686.

Al Otaiba, S. (2004) Weaving moral elements and research based reading practices in inclusive classrooms using shared book reading techniques. *Early Child Development and Care, 174,* 575-589.

Arnold, D. H. (1997). Co-occurrence of externalizing behavior problems and emergent academic difficulties in young high-risk boys: A preliminary evaluation of patterns and mechanisms. *Journal of Applied Developmental Psychology, 18,* 317−330.

Bergin, C. (2001). The parent-child relationship during beginning reading. *Journal of Literacy Research, 33*(4), 681-706.

Bus, A., Van Ijzendoorn, M.H.; & Pellegrini, A.D. (1995). Joint book reading makes for success in learning: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research, 65*, 1-21.

Bruner, J. (1985). Vygotsky: An historical and conceptual perspective. In J.V.Wertsch (Ed.)*, Culture, communication and cognition: Vygotskian perspectives* (21-34). London, Cambridge University Press.

Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge: Harvard University Press.

Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.

Chak, A. (2001). Adult sensitivity to children's learning in the zone of proximal development. *Journal for the Theory of Social Beahviour, 31 (4)*, 383-395.

Connor, C. M., Morrison, F. J., & Slominski, L. (2006). Preschool instruction and children's emergent literacy growth. *Journal of Educational Psychology, 98,* 665-689.

Deckner, D. F., Adamson, L. B., & Bakeman, R. (2006). Child and maternal contributions to shared reading: Effects on language and literacy development. *Applied Developmental Psychology, 27,* 31-41.

Dunn, J. (2000). Mind-reading, emotion understanding, and relationships. *International Journal of Behavioral Development, 24,* 142–144.

Evans, J. (1997). The Importance of storytime in primary schools. *Reading, 31*, 2-4.

Flavell, J. H. (1963). *The Developmental Psychology of Jean Piaget.* Princeton, N.J.: Van Nostrand Press.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive—developmental inquiry. *American Psychologist, 34,* 906-911.

Flavell, J. H., (2000). Development of children's knowledge about the mental world. *International Journal of Behavioral Development, 24,* 15-23

Flavell, J.H., Miller, P.H., & Miller, S.A. (1993). *Cognitive development* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Fu, V. R., Wiles, B., & Milne, K. (2006, June). *Shared reading of picture books: Teacher guidance in preschoolers' language development.* Paper presented at the Head Start's Eighth National Research Conference, Washington, DC.

Fu, V.R., Wiles, B. & Milne, K. (2008, in progress). *Teacher guidance in reading for meaning: shared reading of picture books.*

Fu, V.R., Milne, K. & Wiles, B. (2007, April). *Teacher guidance in reading for meaning: shared reading of picture books.* Paper presented at the American Educational Research Association (AERA) annual meeting, Chicago, IL.

Gallimore, R. & Tharp, R. G. (1990). Teaching mind and society: A theory of education and schooling. In L. Moll (Ed.), *Vygotsky and Education: Instructional implications and applications of sociohistorical psychology*. (pp. 175-205). Cambridge: Cambridge University Press.

Goncu, A. (1993). Development of intersubjectivity in social pretend play. *Human Development, 36,* 185-198.

Karrass, J., VanDeventer, M. C., & Braungart- Rieker, J. M. (2003). Predicting shared parent-child book reading in infancy. *Journal of Family Psychology, 17*(1), 134-146.

Kassow (2006). Parent-Child shared book reading quality versus quantity of reading interactions between parents and young children. *Talaris Research Institute, 1*, 1-9).

Kitchener, R. F. (1986). *Piaget's Theory of Knowledge*. New Haven: Yale University Press.

Korat, O. (2005). Contextual and non-contextual knowledge in emergent literacy development: A comparison between children from low SES and middle SES communities. *Early Childhood Research Quarterly, 20,* 220–238.

Kuhn, D. (2000). Metacognitive development. *Current Directions in Psychological*

Science, 9, 178-181.

Langer, E. J. (1993). A mindful education. *Educational Psychologist, 28,* 43-50.

Langer, E. J. & Moldoveanu, M. (2000). Mindfulness research and the future. *Journal of Social Issues, 56* (1), 129-139.

Leseman, P. P. M., & de Jong, P. F. (1998). Home literacy: Opportunity, instruction, cooperation and social-emotional quality predicting early reading achievement. *Reading Research Quarterly, 33*(3), 294-318.

Lillard, A. S. (1998). Ethnographies: Cultural variations in theories of mind. *Psychological Bulletin, 123*, 3–33.

Lonigan, C. J. & Whitehurst G. J. (1998) Relative efficacy of parent and teacher involvement in a shared-reading intervention for preschool children from low-income backgrounds, *Early Childhood Research Quarterly,* 13, 263–290.

Mancini, J. A., Bowen, G. L., & Martin, J. A. (2005). Community social organization: A conceptual linchpin in examining families in the context of communities. *Family Relations: Interdisciplinary Journal of Applied Family Studies*, 54, 570–582.

Meins, E. (1997*). Security of attachment and the social development of cognition.* Hove, England: Psychology Press.

Meins, E., Fernyhough, C., Wainwright, R., Gupta, M. D., Fradley, E., & Tukey, M. (2002). Maternal mind-mindedness and attachment security as predictors of theory of mind understanding. *Child Development, 73,* 1715–1726.

Meins, E. et al. (2003). Pathways to understanding mind: Construct validity and predictive validity of maternal mind-mindedness. *Child Development, 74,* 1194-1211.

Miller, P.H. (2000). *Theories of developmental psychology*. New York: Worth Press.

National Institute of Child Health and Human Development (2000). *Report of the National Reading Panel: Teaching children to read*. [http://www.nichd.nih.gov/publications/nrp/smallbook.cfm]

Ninio, A. & Bruner, J. S. (1978). The achievement and antecedents of labeling. *Journal of Child Language, 5,* 1-15.

Payne, A. C., Whitehurst, G. J., & Angell, A. L. (1994). The role of home literacy environment in the development of language ability in preschool children from low income families. *Early Childhood Research Quarterly, 9,* 427–440.

Premack, D., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *Behavioral and Brain Sciences, 1,* 515-526

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context.* New York: Oxford University Press.

Rogoff, B., & Morelli, G. (1989) Perspectives on children's development from cultural psychology. *American Psychologist, 44,* 344-348.

Rogoff, B., Mistry, J., Goncu, A., & Mosier, C. (1993). Guided participation in cultural activity by toddlers and caregivers. *Monographs of the Society for Research in Child Development, 58,* serial no. 236.

Rommetveit, R. 1985. "Language acquisition as increasing linguistic structuring of experience and symbolic behavior control." In J.V. Wertsch (ed.) *Culture, communication, and cognition - Vygotskian perspectives*. London: Cambridge University Press.

Ruffman, T., Slade, L., & Crowe, E. (2002). The relation between children's' and mothers' mental state language and theory of mind understanding. *Child Development, 73,* 734-751.

Sénéchal, M. (2000). A naturalistic study of the links between storybook reading and vocabulary development in preschool children. *Enfance, 52,* 169–186.

Sénéchal, M., & LeFevre, J. (2002). Parental involvement in the development of children's reading skill: A five-year longitudinal study. *Child Development, 73,* 445−460.

Serpell, R., Sonnenschein, S., Baker, L., & Ganapathy, H. (2002). Intimate culture of families in the early socialization of literacy. *Journal of Family Psychology, 16*(4), 391 405.

Tharp, R. G. & Gallimore, R. (1988) *Rousing Minds to Life: Teaching, Learning, and Schooling in Social Context.* New York: Cambridge University Press.

Trevarthen, C., & Hubley, P. (1978). Secondary intersubjectivity: Confidence, confiding and acts of meaning in the first year. In A. Lock (Ed.), *Action gesture and symbol* (pp. 183-229). London: Academic Press.

Ukrainetz, T. A., Cooney, M. H., Dyer, S. K., Kysar, A. J.& Harris, T. J. (2000). An investigation into teaching phonemic awareness through shared reading and writing. *Early Childhood Research Quarterly, 15, 3,* 331–355.

Vygotsky, L. S. (1978). *Mind in society.* Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (1987). Thinking and speech. In *The Collected Works of L. S. Vygotsky, Vol. 1* (pp. 37–285), New York: Plenum. (Original work published 1934).

Wellman, H. M., Cross, D., & Watson, J. (2001). Meta-analysis of theory-of-mind

development: The truth about false belief. *Child Development, 72* (3), 655-684.

Whitehurst, G. J., Falco, R. L., Lonigan, C. J., Fischel, J. E., DeBaryshe, B. D., Valdez-Menchaca, M. C., et al. (1988). Accelerating language development through picture book reading. *Developmental Psychology, 24*(4), 552-229.

Whitehurst, G. J., & Lonigan, C. J. (1998). Child development and emergent literacy. *Child Development, 69*(3), 848-872.

Wolf, S.A., & Heath, S.B. (1992). *The braid of literature: Children's worlds of reading*. Harvard University Press: Cambridge, MA.

Wood, D., Bruner, J., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry, 17*, 89-100.

Zevenbergen, A. A., Whitehurst, G. J. & Zevenbergen, J. A. (2003). Effects of a shared-reading intervention on the inclusion of evaluative devices in narratives of children from low-income families. *Journal of Applied Developmental Psychology*, *24*, 1–15.