A COMPARISON STUDY ON THE EFFECTS OF THE STANDARDIZED AND A TEACHER MODIFIED DIALOGIC READING PROGRAMS ON EARLY LITERACY OUTCOMES OF PRESCHOOL CHILDREN FROM LOW INCOME COMMUNITIES

A Dissertation Presented

By

RACHEL J. BOIT

Submitted to the Graduate School of the University of Massachusetts-Amherst in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

September 2010

Education

Child and Family Studies

A COMPARISON STUDY ON THE EFFECTS OF THE STANDARDIZED AND A TEACHER MODIFIED DIALOGIC READING PROGRAMS ON EARLY LITERACY OUTCOMES OF PRESCHOOL CHILDREN FROM LOW INCOME COMMUNITIES

A Dissertation Presented

By

RACHEL J. BOIT

Approved as to style and content by:

_____

Claire Hamilton, Chair

_____

Cynthia Rosenberger, Member

_____

Richard Tessler, Member

_____

Christine B. McCormick, Dean

School of Education

DEDICATION

Dedicated to my children Gloria and Franklin

ACKNOWLEDGEMENTS

I wish to thank my dissertation committee: Dr. Claire Hamilton, Dr. Cynthia Rosenberger and Professor Tessler for the support they have provided me throughout this journey. I want to sincerely thank Dr. Hamilton for her tireless efforts in providing me with the direction right from the conception of this dissertation idea to its completion. Dr. Hamilton was there to listen, provide advice and instant feedback. Thank you for reading this work over and over again and most importantly, for being there for me whenever I needed you. Dr. Resenberger was an encouragement throughout this process. Your knowledge in children's literacy was helpful in framing this study. Thank you for your great ideas, for being available to answer my questions and providing direction whenever I needed. Professor Tessler provided a lot of constructive criticism towards the methodology and analysis of data for the quantitative portion of this study, of which I am grateful for.

I am indebted to the administrators, teachers and children of the three preschools where this study was conducted for this study would not have been accomplished without their co-operation and support. I also want to thank the parents of the participants for allowing their children to participate. Special thanks are also extended to the research assistants for their help in assessing the children and carrying out classroom observations.

Completion of my graduate studies would not have been successful without the support of family, friends and colleagues. To my precious children Gloria and Franklin, thank you for understanding when I was absent in your lives. You have been such an encouragement and you are the very reason that I kept going. My entire family has been

extremely helpful to this end. My sister Alice and her husband Wilson Kalya, I will forever be grateful to them.

My friends Tara Nappi, Dr. Jen Fisette and Martina Ochiel, thank you for your true friendship and for providing any kind of help whenever I needed. To the many colleagues with whom I worked with or interacted with at different levels in the School of Education at UMass-Amherst, thank you for making my stay in Amherst a happy one. Kim Drake and Dr. Marge Magouirk, thank you for being there for me. Working with you has been such a wonderful experience, I am sincerely humbled.

ABSTRACT

A COMPARISON STUDY ON THE EFFECTS OF THE STANDARDIZED AND A TEACHER MODIFIED DIALOGIC READING PROGRAMS ON EARLY LITERACY OUTCOMES OF PRESCHOOL CHILDREN FROM LOW INCOME COMMUNITIES

SEPTEMBER 2010

RACHEL JEPKEMBOI BOIT, B.Ed., KENYATTA UNIVERSITY NAIROBI

M.Ed., UNIVERSITY OF MASSACHUSETTS AMHERST

Ed.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Dr. Claire Hamilton

The purpose of this intervention study was to investigate whether a dialogic reading model modified and implemented by the teachers would yield higher literacy outcomes among preschoolers in low in-come communities over improvements obtained through exposure to the traditional Whitehurst et al. (1998) model and those made through the typical classroom reading style. Further investigation sought to determine whether teacher involvement in the re-design of the dialogic reading program resulted in high implementation.

Three conditions were used in this study, namely; dialogic reading condition (DR), modified dialogic reading condition (MDR) and the Control condition. The Control group students received normal instruction from the teachers while DR and MDR were the experimental groups. A total of sixty three preschoolers and six teachers participated in

the study. The children were assessed on the Preschool Language Assessment Instrument (PLAI-2) and a researcher designed book vocabulary test.

Following an intervention period of eight weeks, a Repeated Measures Analysis of Variance (ANOVA) was used to analyze pretest and post test PLAI-2 and book vocabulary scores of the students. A significant difference was found for group and time indicating that over time all the groups made improvements in language but the MDR condition recorded a significant improvement.

Qualitative analysis from teacher interviews, classroom observations and weekly book log entries supplemented the above findings by providing detailed explanations concerning what was happening in the three different conditions. These results suggest that there were changes in the way teachers in DR and MDR carried out book reading conversations. Further findings showed that when teachers are involved in the making of decisions that affect their classroom practices, they were more likely to show high implementation in their classrooms thus resulting in higher child outcomes which was the case for the MDR condition.

Dialogic reading is a valuable model for use in the preschool classrooms and has been proven that it has a great impact on children's literacy development. Teacher contribution should be acknowledged in professional development. Further implications for dialogic reading and the importance of modification of programs are provided.

TABLE OF CONTENTS Page

LIST OF TABLES

Table **Page**

LIST OF FIGURES

Figure **Page**

CHAPTER 1

INTRODUCTION

The goal of worldwide literacy is probably one of the most important one we face today (Blake & Blake, 2002) and it is most likely that people who are not literate according to the standards of our present-day technological, global society, are at a dismaying disadvantage. Adams (1990) stated that learning to read is important because reading has a role to play in the economic future of our country. He further adds that our society wants our children to succeed but, sadly enough, it has been found that American children often lag behind children of other nations in academics during later grades. In the National Center for Education Statistics, West, Denton & Germinor-Hausken (2000), state that a large portion of the U.S. population lacks adequate literacy skills. Whitehurst (2001) further noted that 38% of 4th graders nationally cannot read at the basic level. He further noted that in some school districts this figure rises to over 70%. The Nation's Report Card for 2000 issued by the National Assessment of Educational Progress (NEAP) further indicates that 37% of 4th grade students are reading below a basic level, unable to meet minimum requirements for reading competency. As a result, these children suffer disproportionately from social ills and economic factors that make them unable to experience the joys of learning, the opportunities for self-reflection, or the simple pleasures of being lost in a book (Whitehurst, 2001). Unless these basic skills are met, a substantial number of children will continue to fall further and further behind.

Moreover, in results from the National Adult Literacy Survey, Kirsch, Jungeblut & Jenkins (2002) found low literacy to be correlated with low educational attainment, lower occupational attainment, unemployment, poverty, and imprisonment among others. According to the U.S .Department of Education (2001 p.1) the former President of the

United States, George W. Bush stated that “We have a genuine national crisis. More and more we are divided into two nations, one that reads and one that doesn’t”. This is a compelling quote in reference to the vast amounts of data that document the problems experienced by individuals unable to read competently. Reading is a cultural imperative and an important foundation upon which generalized independent functioning within American society and around the world is built.

In the United States, more than a third of first grade children are not able to read at grade level, and are therefore at high risk for continuing to lag behind their peers and consequently, have difficulties going through school (Klass, Needlman, & Zuckerman, 2003). This in turn places them at high risk for overall school failure, truancy, and dropping out, along with other childhood and adolescent problems related to school failure particularly if they do not receive appropriate intervention early in life (Scanlon & Vellitino, 1997; Shariff, Ozuah, Dinkevich & Mulvihill, 2003). Furthermore, it is possible that the risk is disproportionately high for children from low-income families, who, as a group, grow up with parents who themselves completed fewer years of school, with fewer books in the home, and with a lower chance of being read to. Unfortunately, there is the tendency that children who start off slowly in literacy development rarely catch up with their peers, indicating the considerable difficulty in ameliorating literacy difficulties once they occur (Scanlon & Vellutino, 1997). Failure to meet this challenge to improve all children’s readiness and achievement will perpetuate the inequalities of achievement gaps and the low performance of the U.S. student population as a whole, NAEYC (2009).

There are varied reasons that can help explain why some people do not learn how to read and the most compelling one has mainly been attributed to one's experiences during the early childhood years. It is no wonder then that studies on early literacy in particular have become one of the most investigated topics by language and literacy researchers (Blake & Blake, 2002) with the quest of finding ways to improve literacy among the members of society. In the past two decades for example, increased attention has been paid to the preschool years as a critical time for developing skills that are needed to succeed in school (Wasik, Bond & Hindman, 2006). The National Research Council reports- *From Neurons to Neighborhoods: The Science of Early Childhood Development* (Shonkoff & Phillips, 2000) and *Preventing Reading Difficulties in Young Children* (Snow, Burns & Griffin, 1998) - have documented the significance of early experiences on later development and the effects that these experiences have on school achievement.

Early childhood is a critical stage in life and therefore, being aware of what a child is being exposed to is crucial. In my experience as an early childhood educator, I have observed that the nature of interactions between children and their caregivers is significant in a child's life. Interactions take place in various contexts in different ways and during different times. For example, interactions may take place during play, meal time, bed time, reading, traveling, working, shopping etc. My personal experiences in the childhood years growing up in Kenya are based in an environment where reading to children was not a priority for most parents. Despite this, children still thrived in literacy through exposure to other literacy methods like storytelling and the use of singing games. In particular they were successful in attaining literacy that was commonly used in their

environment and later as they entered school, they developed literacy according to what was set in the curriculum. However, my knowledge in early childhood education, coupled with my experience as a kindergarten and first grade teacher, have taught me to view interactions between children and caregivers during book reading, as crucial in helping children set the foundation in learning to read well before they enter school.

Conversations during story-book reading have been found to play a big role in helping children increase their vocabulary, read fluently and comprehend the material they are being exposed to. My concern therefore is, how we as educators, can encourage caregivers to use the same methods to help children become better readers at the preschool level. My interest stems from the belief that increased and meaningful interactions between caregivers and children during shared reading, promotes children's early literacy development and is therefore my driving force towards an investigation of literature in this area of scholarship.

Early literacy and School Success.

Early literacy mainly refers to the range of literacy skills developed by the pre-literate child that lay the foundation for eventual conventional literacy which prepare the child for a smooth transition to reading. These early literacy skills develop along a continuum during the first five or six years of life and long before formal schooling (Whitehurst & Lonigan, 1998) and children must be supported in order to experience success in the development of these skills. These early skills which include phonological awareness (e.g., rhyming, alliteration), vocabulary, letter-naming and word manipulation are precursory skills for learning to read successfully (Hart & Risley, 1995; Snow et al., 1998). The teaching of early literacy and other domains in the early

childhood years is key to increasing all children's school readiness and to closing the achievement gap (NAEYC, 2009). For children to become established readers, they need to develop vast language skills, understand conventions of print, linguistic awareness and emergent writing skills, all of which develop in the early childhood years. In the educational arena, a child's failure to master early literacy concepts and skills places him/her at a great educational risk. Individual differences in early literacy skills at kindergarten entry tend to be maintained or magnified over school years (Missall, McConnell, & Cadigan, 2006). Furthermore, a child who is behind peers in literacy concepts in kindergarten is at significantly greater risk for placement in special education in elementary school (Scarborough, 1989). Poor readers are also at greater risk for broader academic and social failure. They are less likely to graduate from high school, less likely to be employed, work less overall, report lower earnings, and are even less likely to have a bank account (Missall et al., 2006).

Research has consistently shown that pre-literacy development has a profound effect on young children's successful transition to school and, in particular, on their success in learning to read (Dickinson & Tabors, 2001; Wasik et al., 2006; Whithurst & Lonigan, 1998). Children who arrive in first grade with a foundation in pre-literacy skills, interest and motivation to learn are better prepared to engage in the complex task of learning to read compared to children who lack these foundational skills (Wasik et al., 2006). Most children acquire pre-literacy skills through interactions with adults and peers who use language in ways that are consistent with the majority culture and correspond to the printed word (Wasik, et al.2006). Unfortunately, many children raised in poverty have limited access to opportunities to develop adequate early literacy skills (Snow et al., 1998)

as quoted by (Wasik et al., 2006). Hart and Risley (1995) reported that by the age of 3, children in poverty were already well behind their more affluent peers in their acquisition of vocabulary, while Dorit & Shira (2004) indicate that children from low SES communities generally attain a lower level of early literacy skills than their peers from middle and high SES communities. Moreover, (Snow et al., 1998) reported that children in poverty lack necessary pre-literacy skills at the beginning of kindergarten.

According to NAEYC (2009) position statement, vocabulary knowledge and other aspects of oral language are important predictors of children's reading comprehension. The statement further points that for these young children, vocabulary deficits may impede comprehension when reading more advanced texts in later grades. Vocabulary development is therefore highly related to reading comprehension (NICHD, 2000) as quoted by Haager, Dimino & Windmueller (2007). Though students learn many words from context and exposure, we know that a certain amount of explicit teaching of unknown words is important for reading growth (Haager et al. 2007). Children in kindergarten basically learn 2,500-5000 new words in their first year of school, but there is a great disparity between children of different backgrounds (Haager et al., 2007). For example, first grade children of lower SES know about half as many words as children of higher SES. Differences such as these persist throughout the grades and the gap widens between high and low performing students (Haager et al., 2007). Similar research further indicates that socioeconomic status is the strongest predictor of performance differences in children at the beginning of the first grade and that this gap persists as children progress from elementary to high school (Wasik et al., 2006). It is important to point out, however, that early literacy difficulties may be faced by any child no matter their social

backgrounds but due to a myriad of difficult circumstances faced by children in low SES, it is common for them to experience more difficulties in the acquisition of early and pre-literacy skills, when compared to their peers from the more affluent communities. The NAEYC (2009) position statement points that, in order to shrink the achievement gap between the different SES communities, early childhood programs need to start early with proactive vocabulary development to bring young children whose vocabulary and oral language development is lagging, closer to the developmental trajectory typical of children from affluent families.

Further explanations vary as to why children in poverty have limited language and literacy skills. Wells (1986) argued that there is an incongruity between the expectations of the home and of school with regard to language development. On the basis of his longitudinal study of 32 high, middle, and low-income children, Wells concluded that many of the language deficits of the children from low-income homes were due to the low value parents placed on literacy, as evidenced by parents' limited use of literacy skills and the absence of books in the home. In contrast, Neuman and Celano (2001) argued that it was the experience of having inadequate access to books and other literacy opportunities that contributed to children in poverty not acquiring literacy skills needed to succeed in school rather than parental values. With this in mind, there is an obvious concern for the children who might fail to succeed in school due to lack of opportunities to develop adequate literacy skills early in life. Therefore, as educators working with young children there is reason to develop strategies for intervention in order to mitigate these problems.

Who is At-Risk and why?

Factors that lead to academic failure originate from several sources, including but not limited to the students themselves, the student's family, the school, the classroom teacher and socioeconomic status (SES) among others. For each student, a multitude of factors or characteristics within each source may limit academic achievement. Children who have not had extensive experiences being read to at home for may not be able to connect stories being read to them with the visual aspects of print. Furthermore, others are placed at-risk of typical development due to innate biological or developmental characteristics.

The identification of at-risk children can be based on medical records, SES i.e. low-income backgrounds; they can be identified by the teachers based on their observations or through the use of various screening tests. Certain groups of young children are specifically at-risk for problems learning to read. Research suggests that, those with speech language disabilities, those living in poverty and those learning English as a second language are at-risk of early literacy skill acquisition and positive reading outcomes. The result is that these children are likely to complete school with inadequate skills. The growing number of children considered to be “at-risk” of gaining adequate literacy skills is therefore a critical concern for educators and the challenge for them has been to develop effective early literacy interventions to reduce this reading failure spiral. Such children will continue to struggle and although the teachers may try to foster the student’s positive images, it soon becomes obvious that at-risk students cannot fully participate in most classroom literacy activities (Pinnell, 1989).

In this paper the term “at-risk” will be used to refer specifically to children who struggle to acquire pre-literacy due to lack of, or inadequate exposure to literacy materials

both at home and the preschool settings. They are at risk of gaining adequate literacy skills necessary to be successful at the preschool, kindergarten and beyond. Most of them have not had the experiences necessary to provide a framework for the instruction they receive in school (Pinnell, 1989). In their search for methods to help children experience growth in literacy, early childhood researchers have found that certain strategies used by parents, teachers and others who spend time with children were useful in boosting children's literacy. One such method that has been found to be successful in developing children's literacy is shared book reading. This is when adults spend time reading to or with the children.

Efficacy of Shared Book Reading on Children's Early Literacy Development

Shared book reading has gained a lot of focus as one of the methods used to improve children's early literacy development. Over the years, popular media and academic research have both drawn attention to the benefits of reading to young children (DeBruin-Parecki, 1999). In support of this, the International Reading Association and the National Association for the Education of Young Children issued a joint position statement on learning to read and write (IRA/NAEYC, 1998). Politicians, volunteer organizations and governments all implore adults to make reading with their children a part of their everyday lives with the underlying reason for promoting the desire to further children's chances for achieving success as they progress through school (DeBruin-Parecki, 1999).

Book reading has been shown to be associated with the development of many skills during the toddler and pre-school years (Raikes et al., 2006). These skills include vocabulary development (Bus, van Ijzendoorn & Pelligrini, 1995; Senechal & Cornell,

1993), book handling, knowledge about print (Clay, 1979) and the understanding of fictional worlds represented symbolically in pictures and text (Snow & Ninio, 1986), exposure to story structures and conventions necessary for story comprehension and positive attitudes about book reading (Lonigan, 1994).

Early literacy researchers have consistently found that book reading can enhance the development of literacy skills among young children. This is because it is primarily through interactive dialogue that children gain comprehension skills, increase their understanding of literacy conventions, and are encouraged to enjoy reading. Book reading episodes provide an opportunity for adults and children to co-construct knowledge in a social setting and negotiate meanings together (DeBruin-Parecki, 1999). Reading sessions also provide a natural context for adults to assist children in forming concepts about books, print and reading, such as directionality and book handling (Clay, 1979).

Young children who are exposed to book experiences in interactive literacy settings develop a complex range of attitudes, concepts and skills that form the foundation of school-based literacy (Dorn, French & Jones, 1998). From these experiences, especially those with story books, children gain an interest in books, the capacity to understand and talk about stories and the ability to connect the information in the stories to their background knowledge. These children also learn that it is print that is read in stories (Snow et al., 1998). As children hear stories read to them, they acquire knowledge about book concepts, story structures, literacy language and specialized vocabulary and are able to identify many of the alphabet letters.

Strategies for Pre-literacy Development

The decade of the 1990's, saw a tremendous increase in research studying the value of early literacy intervention particularly for meeting the needs of children at risk (Justice & Pullen, 2003). Such studies have widely documented the possibility that preschool children who are experiencing difficulties in early literacy development are at an increased risk for entering elementary school without an adequate early literacy foundation. Numerous studies have shown that early readers come from homes in which adults read to them regularly and where books and reading materials are readily available (DeBruin-Parecki, 1999). Early literacy literature continues to point to the importance of using different strategies when reading with young children in order for them to enable them to read well at an early age. Furthermore, with the initiative of former President George Bush's (2001) No Child Left Behind (NCLB) Act, educators are increasingly interested in addressing early prerequisite skills as a means to prevent later academic difficulties. The NCLB mandates increased education accountability for schools and proposes that every child should be able to read by the end of third grade.

With the concern of limited language and literacy opportunities in low-income homes, more emphasis has been placed on instruction in preschool classrooms (Wasik et al., 2006). Some research findings on early literacy have shown that the opportunities for language and literacy in preschool classrooms that serve low in-come children are limited (Wasik et al., 2006).In their observation of Head Start classrooms using the Early Childhood Environment Rating Scale (Bryant, Burchinal, Lau & Sparling, 1994) as quoted by Wasik et al (2006) found that the lowest scores were on the language and literacy subscales. Similarly, data from the NICHD Early Child Care Research Network

(2000) indicated that classrooms serving low in-come children did not provide optimal support for language and literacy learning.

The field of early education has therefore continued to demonstrate conclusively the efficacy of early interventions as a means to combat the damaging effects of poverty on young children (Dorit & Shira, 2004). In particular, preschool high intensity interventions have been shown to improve the vocabulary skills and language comprehension of children (Whitehurst, Arnold, Epstein, Angell, Smith, & Fischel, 1994; Whitehurst, Epstein, Angell, Payne, Crone, & Fischel, 1994) as well as having a positive impact on high poverty children's cognitive abilities and reading achievement. Recent studies also show that ongoing clinic-based parental literacy interventions enhance parent-child "shared reading" interactions and increase children's word knowledge (Needlman, Fried, Morley, Taylor, & Zuckerman, 1991).

Book reading provides a context that supports dialogue and contributes to vocabulary development (Snow, 1983). Whitehurst and his colleagues (Whitehurst, Arnold, et al., 1994; Whitehurst, Epstein et al., 1994; Whitehurst et al., 1988) demonstrated the effects of a systematic shared book reading program, called Dialogic Reading, on children's language and literacy skills. "Shared book reading" can be defined as any period of time in which children sit down with an adult (parents, family members or teachers) and either the adult reads the entire book to the child, the child reads along with him/her, the adult and child take turns reading the book or the child reads the entire book to the adult. Dialogic Reading on the other hand is a method of shared book reading in which the teacher reads picture books with the children and provides them with multiple opportunities to talk and engage in conversations while the adult becomes an

active listener, asks questions, adds information and promotes the child's use of descriptive language. It is one context that has shown promise in providing children with the necessary skills that allow them to become successful readers throughout their education and throughout life. A series of studies using the Dialogic Reading (DR) program (Whitehurst et al 1988; Arnold et al., 1994; Valdez-Menchaca & Whitehurst, 1992; Dorit, 2006; Senechal & Cornell, 1993; Morrow & Smith, 1990; Whitehurst, Epstein et al., 1994; Wasik & Bond, 2001; Wasik et al., 2006; Lonigan & Whitehurst, 1998; Crain-Thorenson & Dale, 1999; Hargrave & Senechal, 2000; Blom-Hoffman & O'Neil-Pirozzi et al., 2007, and others) have demonstrated that children exposed to DR experimental programs, in most cases outperformed their peers who were placed in reading groups without DR, in measures of oral language and phonological processes as well as other early literacy skills.

It is worth noting however that in most of the studies named above, although care givers were trained on the processes of Dialogic Reading, most of the interventions were done by the researchers. It is only in two studies (Wasik & Bond, 2001 and Wasik, Bond & Hindman, 2006) where teachers were used as trainers for their colleagues (inside-out process) and worked collaboratively in the implementation. It is typical of most interventions to be implemented by the researchers themselves and it is not surprising that neither of the two studies listed above compared the effect of an intervention where the preschool teachers were involved in redesigning and implementing the traditional Dialogic Reading program in a way that they felt would work best in their typical preschool classrooms.

It is only in very few instances that teachers themselves actually implement the intervention programs. Consequently, the conclusions derived from many intervention studies are not necessarily transferable to regular classrooms in which teachers would be expected to implement the program. Relative to experts, teachers may be limited in terms of their knowledge about literacy promotion and in their ability to invest resources (time, energy, etc.) into the program due to educational priorities and everyday responsibilities. However, it may be true that programs implemented by teachers may offer greater productivity due to the potential for generalization and sustainability. This is because first, teachers may adapt their regular curriculum to serve the program's goals, thus widening the scope of the intervention. Second, expert's time is limited to the research time boundaries, whereas teachers may internalize the program's principles and goals and continue using them for years to come for the benefit of future cohorts (VanderVen, 1988). There is therefore the need to fully involve teachers in the development and implementation of programs for use in their own classrooms in such a way that it constitutes a collaborative professional development experience.

Professional Development in Early Childhood.

A review of the early childhood professional development literature reveals the problematic nature of the linear perspectives and deficit models of professional development prevalent in the early childhood field (Fleet & Patterson, 2001). For example, Katz (1977) described teachers in terms of their predominant concerns, in sequential order from self through to the profession at large. This concerns-based model of teacher development described teachers in terms of stages that range from survival to maturity. Rather than using individual concerns as the frame of reference (NAEYC, 1994)

focused on qualifications as a key discriminator. It proposes levels of professional development from that of people starting competency-based or degree-oriented training to higher degrees in the profession. On the other hand, VanderVen (1988) described a developmental sequence towards professionalism (i.e. from novice to influential). She argued that the "development of professionalism is related to practitioner ability to assume the roles necessary to deliver the various functions of the field". This conceptualization focused on the differentiation of roles and the amount of supervision required for effective practice while proposing a sequential model of the development of "professionalism". VanderVen (1994) therefore redefined the early childhood profession as contextual rather than linear.

Yinger & Hendricks-Lee (1993) investigated the nature and characteristics of what we often call "working knowledge" that is, knowledge particularly useful to get things accomplished in practical situations". These orientations value the background and understandings that adults bring to their work. Clark (1992) supports the statement that "Research on teacher training supports the position that teachers are more active than passive, more ready to learn than resistant, more wise and knowledgeable than deficient, and more diverse and unique than they are homogenous." (p.77). He concludes by saying that the responsibility for professional development must therefore be given to teachers themselves.

In their study, Fleet & Patterson (2001) proposed an alternative perspective that recognizes staff as empowered learners who build their working knowledge through spirals of engagement with many aspects of early childhood philosophy and practice over time. Their study focused on early childhood centers that began with off-site researcher-

led in-service workshops followed by on-site staff-led discussion. The participants took part in collaborative rethinking of approaches to planning and working with young children and their families. Ayers (1992) notes that:

> Policymakers and scholars tend to speak for teachers, never with them. The question "what can these teachers tell one another and the world about teaching and about children?" has largely been ignored in favor of more distanced questions, such as "how shall we explain what these teachers ought to know and what it must be like for them?"

A number of writers have identified the importance of individual responsibility for professional development within a supportive environment. For example, (Duff, Brown & Van Scoy, 1995; Riley & Roach, 2006) agree that self-initiated activity is critical to the child's development, and so are reflection, self-evaluation and self-direction critical to the process of professional development. They argue that many individuals within a collaborative work environment are intrinsically motivated to improve their professional competence. Rodd (1997) further emphasizes that continued improvement in the quality of early childhood service provision appears to be more related to the (Vygotskian, 1962) perspective, where early childhood professionals are supported by their colleagues to learn in order to develop.

According to the NAEYC (2009) position statement, teachers in publicly funded early childhood settings report that decision making in their classrooms is impeded by the standards/accountability movement mandating a swift student achievement. The statement further points that teachers should have a say in decision making about curriculum and teaching practices. It further states that;

> "It is the teacher who is in the classroom everyday with children…it is the teacher who is in the best position to know the particular children in the class, their interests and experiences, what they excel in and what they struggle with, what

> they are eager and ready to learn…without this knowledge, determining what is best for those children's learning as a group and individually is impossible" (p.5)

It is important to note that approaches of professional growth should employ the constructivist view which acknowledges the unique contribution of the personal professional knowledge of individuals and the importance of the orientation of individuals both to their work and to new ideas (NAEYC, 2009).

Rather than conceptualizing professional development as either enabling participation in formal upgrading of qualifications or as providing steps towards acquiring a recommended change in practice, other possibilities may be more useful. For example the recognition of staff as owners of personal professional knowledge seems to be undervalued in much of the "stages" literature.

Purpose of the Study

Most professional development practices ignore the complexity of workplace circumstances and the role of interaction in supporting the social construction of staff professional knowledge (Fleet & Patterson, 2001). Work in the early childhood field is diverse and sophisticated; professional development opportunities for staff need to embrace complexity and move beyond narrowly focused instructional models (Fleet & Patterson, 2001). Thus the importance of a philosophy of staff ownership of ideas rather than transmission of knowledge is a critical component.

Professional development with teachers should be seen to fully involve them in what they are learning to use in their classrooms. This is because the teachers themselves know what they need. Within this discussion of facilitative contexts, it is useful to acknowledge the nature of interactions between practitioners and "the professional developers". These interactions may vary on a continuum from distanced and hierarchical

to collegial and collaborative. This relational aspect of professional development is often overlooked in consideration of possible professional development approaches (Fleet & Patterson, 2001).

There is therefore need to conduct interventions using teachers as mediators thus bridging the gap between preschool teachers and researchers. Since every preschool setting has its own unique environmental features and needs, the effort to include/involve teachers in redesigning existing programs and actual implementation by them may have lasting effects on children's literacy as well as the possibility that these programs will be sustained to the end of intervention period and beyond. The purpose of this study was to compare the effects of the traditional Dialogic Reading program (DR group) and a "teacher-modified" model (MDR group) with a control group on measures of children's oral language skills and vocabulary. Another purpose was to determine the extent to which the teachers actually used the program in the course of the implementation period.

Research Questions

The following are some of the questions that were addressed in the course of this intervention:

1) How do the groups (DR, MDR and Control) differ in terms of the book reading methodologies used in the classrooms?
2) How do the groups (DR, MDR and Control) differ in student's pre literacy skills outcomes?
3) Are teachers in DR and MDR more likely to effectively and faithfully implement the dialogic reading programs in their classrooms?

CHAPTER 2

LITERATURE REVIEW

The purpose of this chapter is to review the literature that has contributed to the understanding of the effectiveness of early literacy interventions with a focus on shared book- reading interactions and the strategies used to promote children's early literacy development. Reading books to young children is one way that has been known to constitute a very common adult-child early literacy activity (van Kleeck & Stahl, 2003). This interactive context is considered productive in promoting literacy because it is viewed as contextualized, meaningful and motivating for young children (Dorit, 2006). Apart from book reading, other studies have looked at the importance of developing children's reading readiness skills in order to help them become successful in gaining literacy skills.

In one report, Lyon & Fletcher (2001) note that since most reading remediation efforts have not been effective, a number of recent studies have examined early intervention approaches that have the potential to reduce the number of children failing to learn to read (see Lyon, Fletcher, 2001 and Torgesen, 2000 for reviews). Torgesen, for example, summarized five early interventions, all of which resulted in a reduction in reading difficulties among young children. Specifically, in all of the studies, children were identified as at risk for reading failure in kindergarten and first grade based on assessment results that identified the children in the bottom 12-18 percent of the school population in either phonological processing (at kindergarten) and word reading skills (at first grade). After intervention, the reading performance of the children in the early

intervention groups in each of the studies was well within the average range which is a clear indication that interventions can be effective.

According to Lyon & Fletcher (2001), the data strongly indicate that if the interventions used in these studies were available to all children at risk for reading failure, less than six percent of the population would be in need of specialized interventions, such as those typically provided through special or compensatory education, for reading difficulties later in school. This is a massive improvement in the development of reading skills among school aged children where currently anywhere from 18 percent to 38 percent of children are not learning to read in our Nation's classrooms (Lyon & Fletcher, 2001).

Importance of Book-Reading in Children's Literacy Development.

Over the past years, book reading has been known to benefit children's literacy development (DeBruin –Parecki, 1999; IRA/NAEYC, 1998). The Release of the National Research Council Report, *Preventing Reading Difficulties in Young Children*, (Snow, Burns & Griffin, 1998) further confirms the widespread support for this notion. This idea carries the message of imploring adults to make reading with children a part of their daily activities. It is the stimulus for longer conversations and the generator for more questions between children and adults (Vivas, 1996). The underlying reason for promoting this activity therefore, according to (DeBruin-Parecki, 1999), is the desire to further children's chances for achieving success as they progress through school and also works as a way to address the social and emotional needs of the children.

Children's experiences with books play an important role. Many children enter school with thousands of hours of experience with books. Their homes contain hundreds

of picture books. They see their family members reading for pleasure. Other children enter school with fewer than 25 hours of book reading, (Whitehurst, 1992). In another important illustration (Hart & Risley, 1995) reported that by the age of three, children in poverty were already well behind their more affluent peers in their acquisition of vocabulary and oral language skills which could be attributed to the fact that they are exposed to less or no book reading at all in their homes. Picture book reading provides children with many of the skills that are necessary for school readiness: vocabulary, sound structure, the meaning of print, the structure of stories and language, sustained attention, the pleasure of learning etc. Preschoolers need food, shelter, love and they also need the nourishment of books (Whitehurst, 1992).

Furthermore, there are several interpretations of the role of story reading in the development of language and literacy (Crain-Thoreson & Dale, 1992). Reading books to children has been linked to early literacy and to school success in the writings of researchers and in the minds and talk of educators and the general public for many years (Bus, Van IJzendoorn, & Pellegrini, 1995; Scarborough & Dobrich, 1994). It has generally been agreed, at least since the late 19th century, that book reading with young children is important and is related to children's later success in school (DeTemple, 2001). A broader interpretation is that through story reading, children learn cultural ways to make meaning from their environment, (Heath, 1982) as quoted by (Crain-Thoreson & Dale,1992). Children learn to associate what they read with what they practically experience in their day-to-day living.

There is considerable evidence to support the supposition that book reading is a context that facilitates growth of literacy skills, (Dickinson & Smith 1994; Scarborough

& Dobrich, 1994). Vocabulary growth and story comprehension for example, are fostered by interactional routines during book reading experiences (Snow et al., 1999; Bus et al., 1995; Senechal & Cornell, 1993; Crain-Thoreson & Dale, 1992). Furthermore, book handling and knowledge about print (Clay, 1979), an understanding of fictional worlds represented symbolically in pictures and text (Snow & Ninio, 1986), exposure to story structures, schemes and literacy conventions which are prerequisites for understanding texts (Cochran-Smith, 1984), as well as positive attitudes about book reading (Lonigan, 1994), are other attributes developed in the reading process. Klass et al. (2003) further point to the fact that reading with children will help them grow up with literacy skills which make it more likely that they will succeed in learning to read early and with strong positive associations with books and reading. The breadth of knowledge that can be gleaned from children's books therefore, helps to explain why story reading with caregivers might facilitate language as well as literacy development (Crain-Thoreson & Dale,1992).

Shared Book Reading

Shared storybook reading is one strategy that has been used to facilitate children's early literacy skills especially in the development of oral language. Shared storybook reading expands simply reading a story to a child into a more interactive reading approach where the adult and the child are engaged in a dialogue. According to Morgan and Goldstein (2002), shared storybook reading approaches enhances a child's language development, increases a child's participation and target abstract language. Bus et al. (1995) stated that shared storybook reading in the first 6 years of life "related to outcome measures like language growth, early literacy, and reading achievement" (p. 1).

There are many reasons to incorporate shared storybook reading into language intervention. Morgan and Goldstein (2002) listed several benefits of shared reading including that it is a widely accepted way of teaching, it contains repetitive modeling for the child, it targets multiple skills, treatment outcomes are easy to monitor and it facilitates positive interaction patterns for adult and child.

Additionally, shared storybook reading has been used to facilitate multiple domains of oral language. Morgan and Goldstein (2002) summarized the aspects of early literacy that have been targeted to include vocabulary skills (Lonigan & Whitehurst, 1998), increased participation in the book reading activity, and additional skills such as print awareness (Justice & Ezell, 2000; Whitehurst, Epstein et al., 1994; Whitehurst, Zeneberger, Crone, Schultz, Velting & Fischel, 1999). The idea that story book reading promotes language development is supported by correlational, experimental and intervention studies, (Hargrave & Senechal, 2000). Senechal, LeFevre, Hudson & Lawson (1996) reported that storybook reading accounted for unique variance in preschool children's expressive and receptive vocabulary after controlling for parent's education and levels of literacy.

Experimental research further showed that shared book reading between adults and children provides children with the opportunity to acquire new vocabulary. Senechal and Cornell (1993) found that young children acquire receptive vocabulary when books are read to them. Similarly, Robins and Ehri (1994) found that children who were non-readers acquire new vocabulary from listening to stories read to them repeatedly. Additional studies have shown that instructive behaviors by the adult reader can further enhance children's language abilities, (Hargrave & Senechal, 2000). Elley (1989) as

quoted by (Hargrave & Senechal, 2000), demonstrated that children who received explanations of word meaning during the book reading made greater gains in vocabulary than children who simply listened to the story. Senechal (1997) found that children who answered questions about target words during shared reading comprehended and produced more of those words.

These studies suggest that children's participation in shared book reading promotes vocabulary development. Several experiments indicate that eliciting children's active responses to literature enables them to integrate information and to relate various parts of the story and even a teachers reading style can affect how well children comprehend stories read to them, (Morrow & Smith, 2006). There are different approaches to shared book reading that have been proposed by researchers in early literacy.

Techniques of Reading

A number of researchers have documented how children and parents interact during story reading at home (Morrow & Smith, 2006). Some of these studies suggest that a child's literacy development is influenced by the type and amount of verbal interaction that takes place between an adult and a child during story reading (Teale & Sulzby, 1987). Reading aloud and Dialogic Reading are examples of shared book reading techniques being used for preschoolers.

Read-aloud, for example is a book reading method that has been found to work well during reading interactions between children and adults. The most beneficial read aloud events appear to involve social interaction between an adult and a child in which both participants actively construct meaning. Although this model seems to be used more

in the elementary classrooms, reading aloud has always been used by the teachers in the preschool classrooms. Martinez & Roser (1985) as quoted by (Morrow & Smith, 2006), identified three roles that adults assume as they read stories to children. As *co-respondents,* they initiate discussion, recount parts of a story, share reactions, relate experiences to real life, and invite children's responses. As *informers/monitors,* they explain, provide information and assess understanding. As *directors,* they introduce the story, announce conclusions, and generally assume leadership.

Dialogic Reading on the other hand is another type of shared book reading technique that has been used in many early literacy interventions and is one that has been researched extensively by early literacy researchers. It is a process of interactive shared picture book reading practice designed to enhance young children's language and literacy skills. Whitehurst (1992) noted that when most adults share a book with a preschooler, they read and the child listens. Dialogic Reading on the other hand aims at the child becoming the story teller through being aided by an adult. In this case the adult becomes the listener, the questioner and the audience for the child. No one can learn to play the piano just by listening to someone else play and likewise, no one can learn to read just by listening to someone else read (Whitehurst, 1992). Children learn most from books when they are actively involved. The interactions are based on the use of language, feedback and appropriate scaffolding in the adult-child interaction during picture book reading. According to (Crain-Thoreson & Dale, 1999), dialogic reading provides a systematic approach for parents or teachers to interact with the child through discussion while reading the text. It is a method for parents or teachers to facilitate a child's language and pre-literacy skills through interactive book reading.

The DR approach was further developed by (Whitehurst et al., 1988) as an intervention program designed to involve children actively during shared reading and to provide a rich avenue for language development. According to Whitehurst et al. (1988), the fundamental reading technique in DR is the PEER sequence. This is a short interaction between a child and the adult. The adult:

- **P**rompts the child to say something about the book (i.e. "what can you see here?")
- **E**valuates the child's responses ("yes, it's a cow")
- **E**xpends the child's responses by rephrasing and adding information to it ("it's a bog black cow")
- Child **R**epeats the expanded response.

There are five types of prompts that are used in DR to begin PEER sequences and they have been given the acronym CROWD which stands for: **C**ompletion prompts, **R**ecall prompts, Open-ended prompts, **W**h-prompts and **D**istancing prompts.

The program is based on three broad principles, (a) encourage the child to participate, (b) provide feedback to the child and (c) adapt your reading style to the child's linguistic abilities. In this approach, the reader uses evocative techniques to assist the child in using language and becoming an active participant as opposed to a passive listener. Examples of such interactions involves the use of questions such as "wh" questions e.g. what are the children doing?, What do you think will happen next?. These types of questions are more beneficial than the "yes" "no" or pointing questions. Yes and no questions do not encourage novel speech and pointing questions do not stimulate children's use of language. Second, the use of feedback provides the children with

instructive information. Feedback can come in a variety of forms such as recasting what the child has said, expanding by adding more information and praising or correcting errors. The third principle is that the reading style of the reader should mature as the child does. For example, a child who is so adept in naming pictures should be encouraged to talk about other features in the book and not simply to label colors. In sum, dialogic storybook reading provides children with opportunities to express themselves, to build upon existing language with the aid of appropriately structured questions, and to witness language-rich models.

Research has shown that dialogic reading can facilitate a child's vocabulary, growth in language and literacy (Crain-Thoreson & Dale, 1999). Whitehurst and his colleagues have conducted several investigations on the effectiveness of this approach in facilitating early literacy skills primarily with low-income preschoolers. Children who have been read to in a dialogic manner are substantially ahead of children who have been read to traditionally on tests of language development (Whitehurst, 1992). These effects have been found with children in areas that are geographically different like USA and Mexico, in settings as varied as homes, preschools and day care centers and with children from economic backgrounds ranging from poverty to affluence as well as with both typically developing and special needs children (Crain-Thoreson & Dale, 1999). Both parents and teachers have been trained to use the techniques of DR with the children in these different settings.

Several studies have established the positive impact of dialogic reading on language development of children (Fung, Chow & McBride-Chang, 2005). Comparisons between groups of children exposed to DR and those without DR have proved largely

that it boosts children's language and literacy skills (Crain-Thorenson & Dale, 1999; Hargrave & Senechal, 2000; Lonigan, Anthony, Bloomfield, Dyer & Samuel, 1999; Wasik & Bond, 2001; Wasik et al., 2006; Whitehurst, Epstein et al., 1994; Whitehurst, Arnold et al., 1994). The following section therefore summarizes empirical research conducted using DR intervention among preschool students both at home, in the preschool and in day care centers.

Studies Done in the Home Setting

The efficacy of DR for expressive language development has been demonstrated in a series of studies focusing on mothers and their preschool children. In one study (Whitehurst et al., 1988) trained a group of middle class mothers to read to their child in a dialogic manner, whereas control group mothers were instructed to read to their children in their customary fashion. Parents of children in the treatment group participated in two 30-minute training sessions in dialogic reading methods. After four weeks of intervention, the children assigned to the treatment group performed significantly better than children assigned to the control group on two measures of expressive vocabulary. Scores of children in the treatment group were 6 to 8.5 months ahead of children in the control group and engaged in more substantial dialogue with their parents during reading sessions when compared with children in the control group. These results support the view that active participation is beneficial to language learning.

Arnold et al. (1994) examined the efficacy of using video-taped instruction to train adults in the use of DR. They compared the impact of DR on children's receptive and expressive vocabulary as a result of training using the direct or video training for mothers of preschool children aged 2-3 years. Children were randomly assigned to the

control or to one of the two treatment groups. For the first week, parents read with the children at least four times without using any specific reading instructions. For the remaining four weeks of the intervention, mothers in the treatment groups were asked to engage in dialogic reading with their children. Mothers in the direct-training group took part in two training sessions similar to the one described in the (Whitehurst et al., 1988) study while mothers in the video training group did not train with an actual person, but instead provided with a videotape that instructed them on the principles of dialogic reading while mothers in the control group continued to read with their children in their traditional manner. Following the five week intervention, although children's outcomes in both treatment groups showed an improvement in their literacy skills, the most significant difference was that children whose parents were trained in DR via videotape outperformed those in the control and the person-trained group in measures of expressive and receptive vocabulary.

Dale, Crain-Thoreson, Notari-Syverson & Cole (1996) have also used videotape instruction to trained parents of language delayed children. Dale et al. (1996) trained parents to either read to their children in a dialogic fashion or use conversational techniques to foster language development. They observed parent-child interactions at the end of the intervention and found that DR children used a greater number of different words than did the conversation-program children. At the end of the four week intervention, they found that children in the in the videotape-training group had greater expressive vocabulary scores than did children in the regular reading group. Video tape instruction was judged to be effective, inexpensive and practical. These later results seem to suggest that active participation in the context of book reading is important for learning.

It is worth noting that the aforementioned studies only looked at parent-child interactions during book reading and therefore did not include preschool teachers in the intervention procedures.

In these studies we can clearly note that the interventions involved only the parents and the researchers together with the children. The parents implemented the DR directly the way it was prescribed to them. Although the studies produced positive results in all occasions due mainly to the fact that attention was on a one-on-one basis, it would have been interesting to see the difference with other interventions conducted by teachers in different settings and with a different number of children.

Studies Done in Child-Care Settings

Other studies have been conducted in child care settings serving low income communities. Most of these studies have either been done by researchers alone, some have involved teachers while some have involved both teachers and parents. These studies are outlined in the section that follows.

Valdez-Menchaca & Whitehurst (1992) implemented a DR intervention in a Mexican day care to assess the effectiveness of DR in accelerating language skills of 2-year old children from low-income families. Children who were assigned to the treatment group took part on one-on-one dialogic reading sessions for 10-12 minutes a day with a graduate student, over a period of 30 days while the control group was exposed to one-on-one art activities for the same amount of time with no specific language stimulation apart from the regular conversation. On verbal productions, the researchers found that compared to the control group children in the treatment group spoke more often and produced longer and more complex sentences when they spoke. Valdez-Menchaca &

Whitehurst (1992) showed that a dialogic reading program had a positive effect on the language abilities of 2 and 3 year old children at a high risk day care facility. This study focused on a dialogic reading approach in which teachers implemented the approach and the results had positive effects in the children's vocabulary development.

In another study, Lonigan & Whitehurst (1998) replicated and extended the (Whitehurst, Arnold et al., 1994) results by including a third intervention group in which parents alone read to the children. They conducted a six-week intervention study in which parents from low income backgrounds and teachers in the Nashville, Tennessee area were trained by an interactive videotape on how to read dialogically to ninety one 3 and 4 year old children. The children were separated into four different groups namely; school only, home only, home plus school and a no treatment group and their oral language ability pre- and post- tested using three standardized tests namely; Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn & Dunn, 1981), Expressive One-Word Picture Vocabulary Test (3rd ed., EOWPVT-III; Brownell, 2000 and the Illinois Test of Psycholinguistic Abilities (ITPA; Kirk, McCarthy & Kirk, 1968),. Parents and teachers were trained in the DR approach by videotape with specific guidelines to follow and examples of how to perform these guidelines. The teachers received additional training by video on how to use specific guidelines when reading to children. The teachers were then asked to role-play and the examiner displayed specific child behaviors and they were provided feedback using the dialogic guidelines. Parents and teachers were asked to keep daily logs on who conducted the readings and how children were involved in each reading session. At the end of the six-week intervention, children in the home plus day-care dialogic reading group had higher expressive vocabulary scores than did children in the

control group. They found significant positive changes in oral language and demonstrated that parents and teachers can produce positive results in a child's early literacy skills using a brief DR training approach.

Whitehurst, Arnold, et al. (1994) in another dialogic reading intervention placed children under three different conditions, namely; a school reading treatment, a school plus home reading treatment or an activity group. There were 73 three year olds from low-income families. Children assigned to the school reading treatment engaged in dialogic book reading with a teacher or teacher aide in small groups of about five. These shared reading sessions occurred daily for about ten minutes a day. Those assigned to the school plus home treatment engaged in small group dialogic reading at school and in addition a parent or primary caretaker of each child was trained in DR and encouraged to read and use the DR strategies with the children. Following the intervention, children in the dialogic reading had greater expressive vocabulary scores than did the play group children. Furthermore, children who received dialogic reading at day care and at home had greater scores than did children who received dialogic reading at day care only.

Whitehurst, Epstein et al. (1994) examined 167, 4-year olds in four Head Start programs in New York for a period of one year. Children were divided into an intervention classroom or a control classroom. Classrooms were rated on the Early Childhood Environmental Rating Scale (Harms & Clifford, 1980). Children were then pretested using the PPVT-R (Dunn & Dunn, 1981) for receptive vocabulary, the Expressive One Word Picture Vocabulary Test (Gardner, 1981) to test expressive vocabulary, the expressive subscale of the ITPA(Kirk, McCarthy & Kirk, 1968), a test of verbal fluency in describing common objects and the Developing Skills Checklist (DSC;

CTB, 1990)which measures early literacy skills (i.e., naming letters, segmenting words into sounds, and identifying the function of words and numbers).

Parent and teacher training in the dialogic reading approach occurred at the beginning of the school year. Parents and teachers were trained to encourage their children to become active participants in the 30 books, which were available for reading together. Instruction in the dialogic reading approach followed the PEER/CROWD questioning technique. The experimental groups received small group reading in school and at home using the dialogic reading approach.

In this study, the experimental classrooms also used a phonemic awareness curriculum developed by Bryne & Fielding-Barnsley (1991) where children were introduced to seven consonant sounds (s, m, p, g, l, t, sh) in initial and final position of words and two vowel sounds (a, e) in initial position only. These introductions to each sound individually lasted weekly. Due to the number of assessments conducted, researchers reported their results in the form of language concepts, writing concepts, linguistic awareness and print concepts. Gains were made in the experimental classroom children's posttest scores in all areas with the most significant gains in the areas of print and writing concepts. Therefore, by instructing teachers and parents in dialogic reading program, which did not dictate much time, they found positive outcomes in the children's early literacy skills.

In another study, Crain-Thorenson & Dale (1999) compared the effects of dialogic reading instruction that was given to parents and early childhood special education teachers by comparing 32 children's vocabulary growth in three different contexts: (1) Parent instruction with one-on-one dialogic reading; (2) Special education

instruction with one-on-one dialogic reading; and (3) Special education instruction without one-on-one dialogic reading. Each child was given the PPVT-R (Dunn & Dunn, 1981) and the EOWPVT-R (Gardner, 1990) at the beginning of the study. The children were also videotaped with a familiar adult participating in shared book reading at the beginning and at the end of the study. After pre-testing, parents and teachers participated in two 90-minute dialogic reading instruction classes that took place four weeks apart. Training sessions involved a videotaped instruction on effective dialogic reading strategies, watched a demonstration of the strategies, were given an opportunity to ask questions and practiced role playing with the dialogic reading strategies. Parents and teachers read at least four times a week using the dialogic reading approach. At the end of the intervention period, post testing using the same videotaping and the PPVT-R and EOWPVT-R were administered.

Results indicated that both parents and teachers changed their style of reading as a result of the dialogic reading training. Children also responded to the change in parent and teacher reading style with the use of more expressive language and more elaborate use of expressive language. Receptive and expressive language had no statistically significant change. Since this was a four-week intervention, the author felt that these results could be due to the short time that the study was carried out and not on the effectiveness of the dialogic reading approach developed by (Whitehurst, 1988).

In all of the above studies, emphasis was placed on training the teachers and parents on dialogic reading methodologies. None of them used teachers to redesign the dialogic reading program in a way that it would best suit their classroom situations and comparing how the children in this group performed when compared with those who

used the dialogic Reading program as it is and those not exposed to the program at all. It would have also been interesting to see the extent to which the teachers sustained the use of the program. It is important to recognize staff as empowered learners who build their working knowledge through engagement in aspects of early childhood philosophy and practice (Fleet & Patterson, 2001). In recognition of this, Wasik & Bond (2001), designed a study in which an experienced preschool teacher was used to conduct training for her colleagues. The trainer modeled the book reading strategies for the teachers and also assisted with the center extension for four weeks during the 15-week intervention where preschool children were placed in either an intervention classroom or as control. The results showed that the intervention classrooms performed significantly better than the control classrooms as evidenced by the PPVT-III test. The intervention group also performed better on expressive and receptive language assessments.

There were several limitations to the above study but a major one was the fact that there were only two teachers included in the intervention. It would have been important to know whether these findings would be generalized to a larger sample of teachers. This prompted Wasik, et al. (2006) to undertake another study which had several goals, among them; to determine whether the impact of the intervention could be generalized when larger samples of teachers were involved. Their study focused on Head Start teachers who were trained in book reading and oral language strategies. In book reading, they were to incorporate the strategies of asking open-ended questions, building vocabulary and making connections. Consistent with the findings of their previous study, Wasik, et al. (2006) found that children in the intervention classrooms outperformed the control in measures of PPVT-III and EOWPVT-R. In addition, teachers in the intervention

classrooms consistently used strategies that promoted language during book reading and other classroom activities.

On the other hand, oral language training was based on the research of (Dickinson and Smith, 1994), which showed that teacher's discourse influences the development of children's language. The oral language training was designed to teach teachers how to use conversational strategies that promoted multiple opportunities to speak, to actively listen and to use varying vocabulary. At the end of the intervention, children in the experimental group had significantly larger vocabulary on measures of expressive and receptive language on the PPVT-III when compared with the control group children. According to Wasik et al. (2006), children showed more growth in vocabulary when their teachers faithfully implemented the book reading and conversation strategies.

In the Wasik et al. (2006) study, teachers participated in an intensive professional development intervention that emphasized both conceptual and procedural aspects of language and literacy development in young children. During the training, teachers were not merely told what to do rather they were also given explanations as to why talking and reading to young children would be beneficial to children's language and literacy development. They had the opportunity to be coached and to practice target strategies as well as have conferences with an expert trainer on what worked and what was less effective.

In most of these studies, teachers were not given a chance to review and decide what would/or would not work in each of their individual cases. In my opinion, it is possible to suggest that for teachers to be able to implement strategies of a program with fidelity, they need to be involved and to have a say in the process of interventions. By

recognizing the knowledge that teachers have about teaching young children, you give them the power to be in charge of their actions. This is what is missing out in most of the researches done, where in most cases teachers have been merely told what to do and not necessarily what they can contribute into the process. The conclusion based on these dialogic reading studies is that under certain conditions, reading storybooks to children in a dialogic manner can enhance the development of their early literacy abilities.

Due to my belief that teachers are the most knowledgeable in relation to working practically in a real classroom environment, my goal is to do an intervention that gives the teachers the upper hand in deciding which strategies of the Dialogic Reading by Whitehurst work or don't work in their real preschool classroom situations. By modeling the practices, re-designing the Whitehurst model for use by other teachers, it is hoped that better literacy outcomes by the children are viable as compared to using the traditional Whitehurst model. It is also hoped that the level of implementation and sustained use of the program will be higher when the teachers feel ownership of the program.

CHAPTER 3

METHODOLOGY

This chapter presents the methods utilized in the study. Both quantitative and qualitative methods were used, thus a mixed methods design. A strong case can be made for using an approach that combines both the quantitative and qualitative elements. Most intervention projects are introduced into a complex social environment with features that affect the success of the project. To ignore the complexity of the background is to impoverish the evaluation. Similarly, when investigating human behavior and attitudes, it is most fruitful to use a variety of data collection methods (Patton, 1990). By using different sources and methods at various points, strength can be built on each type of data collection so as to minimize the weaknesses of any single approach. A multi-method approach to evaluation can increase both the validity and reliability of evaluation data.

The first consideration is a discussion focusing on selection of the participants and description of the settings where the study was conducted. Next is a brief description of the study design followed by a detailed description of how the intervention was done. The intervention procedures are then presented in detail and the final portion contains the description of assessment materials used.

Setting and Participants

The intervention was conducted in three different day care centers located in low-income English speaking neighborhoods in Western Massachusetts. In this study, they have been labeled as DR (Whitehurst Dialogic Reading), MDR (Modified Dialogic Reading) and Control. Six classrooms in total were used. These participating centers

were recruited from a list of licensed childcare centers available from the DEEC website *(http://www.eec.ma.us/).*

Six teachers participated in the study. Each of the six classrooms had one teacher and a teacher aid but only the lead teachers participated. Seventy five children in the age range of 3-5 years took part at the beginning of the intervention but only sixty three stayed to the end of the study. There were twenty three children in the DR group, twenty three in MDR and seventeen in the control group.

Procedure

Each center was randomly assigned to one of three conditions. Two groups (DR and MDR) whose classrooms were assigned to the experimental conditions while the remaining group served as the control. The directors of the centers were informed that some centers would serve as the experimental conditions while one would serve as the control but they were not informed about the details of the distribution. All the sites used the same story books and observations were made to determine if the teachers read the books according to the techniques outlined for each condition. Training was provided to the control group teachers after the study was completed.

Approval Process

The first step was to obtain approval from the preschool center directors, teachers, parents of the preschoolers and the University of Massachusetts at Amherst's Institutional Review Board *(for informed consent forms, see appendices A for parents/guardians; B for DR teachers; C for MDR teachers and D for control group teachers).*

Book Selection

The Dialogic Reading kit which is commercially available and is entitled, *Read Together Talk Together* (*RTTT*: Pearson Early Learning, 2002) was used. The kit contains 20 picture books of which out of the 20 books, only 10 were selected for use in this intervention. Since six classrooms participated, 5 more copies of each of the selected books were purchased from Scholastic Inc. so as to ensure that each class had a copy of the ten selected books. These books were chosen from the Dialogic Reading kit using the following criteria which is similar to that outlined by (Hargrave & Senechal, 2000): (a) The books contained colorful illustrations to provide the opportunity to narrate the story without complete reliance on the text; (b) they had potentially new vocabulary depicted by the illustrations and in the text thus allowing children to be exposed to the new words either through being read to in a dialogic manner or through conventional reading; (c) texts were short so as to increase the likelihood of teacher-child interaction; (d) the books were appropriate for the entire age range of children participating in the intervention; (e) It was hoped that the books selected had not been previously exposed to the children in their day cares; (f) books were not specific to certain themes like holidays, events, cultures, etc. This selection criterion was taken into consideration since there were certain books in the kit that had Spanish vocabulary, others had either a lot or too little written content on the pages and illustrations also varied. *(See appendix E for a list of the book titles and authors).*

Description of the Intervention

This was an eight week intervention. All the ten books were read over the eight week period whereby in the first six weeks the teachers read one book per week. Four books were read in the remaining two weeks with two books being read per week.

Criteria for when each book was read was determined by the size of the book, with the shortest four books being read during the last two weeks. The intervention was based on the Dialogic Reading approach developed by Whitehurst et al. (1988). In this intervention, the DR group used the traditional Whitehurst's Dialogic Reading model while the MDR group used a Modified Dialogic Reading model. No intervention was introduced to the Control group even though the center received the ten sets of books. In the control group the teachers read with the children in the way that they usually did. Before DR and MDR groups received their training, all the teachers and teacher aides were interviewed individually the week prior to the start of the intervention. The interview focused on some of the reading methodologies that the teachers used or were using in their classrooms and what they felt about some of the reading programs that they had been introduced to before.

Dialogic Reading Group (Whitehurst Model)

This is an interactive shared picture book reading program designed to enhance young children's language and literacy skills. The use of this program requires that the adult and the child switch roles so that the child learns to become the story teller with the assistance of the adult who functions as an active listener and questioner.

Teachers at the Dialogic Reading group (DR) received a two-hour training based on the strategies of the standardized Dialogic Reading by viewing the published DR training video (RTTT; Pearson Early Learning, 2002). The training session consisted of an introduction to Dialogic Reading where the teachers were given an overview of the reading program followed by a presentation of a fifteen minute training video. The video has been used widely by researchers to train teachers of young children on how to use its

techniques when reading with children. The teachers watched the video twice followed by a 1 ½ hour period when the teachers got involved in role playing and discussion on the various techniques of the reading program. Teachers were provided with a handout summarizing the techniques of dialogic reading as well as teacher notes for each of the 10 books.

The model has two sets of techniques and they are outlined as follows: In the first set the focus is on (1) asking children specific types of questions, (2) evaluating the child's responses, (3) expanding the child's responses and (4) having the child repeat expanded utterances (Whitehurst, Epstein, et al., 1994). The acronym PEER is used to remind the adults to *prompt* the child to label objects in the book and talk about the story, *evaluate* the child's responses, *expand* the child's verbalization by repeating what the child has said and then adding information to it, and encourage the child to *repeat* the expanded utterances.

The second set of techniques has been given the acronym CROWD which refers to the five types of questions asked by adults when engaging in dialogic reading with young children. These questions include:

(1) *Completion prompts:* These are fill-in the blank questions (e.g., "when we went into the car, we all put on our _____.")

(2) *Recall prompts:* These are questions that require the child to remember aspects of the book (e.g., "can you remember some of the things that the elephants did?")

(3) *Open-ended prompts:* These are statements that encourage the child to respond to the book in his or her own words (e.g., "Tell me about this page")

(4) *Wh-prompts:* These are what, where and why questions (e.g., what is this called? where did Peter go?)

(5) *Distancing prompts:* These are questions that require the child to relate the content of the book to aspects of life outside of the book (e.g., did you ever go to the zoo like Jenna did?).

This program requires that children are read to in small groups of 3-4 and each book read twice. The DR group started implementing the intervention in the 4th week of September.

Modified Dialogic Reading Group

This model was implemented in the MDR group. The teachers in this group made changes to the traditional dialogic reading model described above that was proposed by Whitehurst et al. (1988). They watched a video of Dialogic Reading after which, with the help of the guidelines provided by the researcher as well as the guidelines summarizing the techniques of dialogic reading, they made changes to suit their typical preschool classroom context. The teachers in this group were instructed that they were going to use a whole-class setting and for a period of eight weeks, they would read ten picture books to the children. Within the first six weeks, one book would be read per week and two books per each of the final two weeks.

Prior to watching the video, there was a 10 minute discussion about shared reading which included what the teachers knew about Dialogic Reading as well as what their expectations would be after watching the video. The teachers watched the video for about half an hour followed by a 45 minute discussion about the program. The teacher training video creates a powerful tool for staff development in the use of dialogic reading in promoting early literacy. For the sake of collecting accurate information during the

discussion, audio tape recording was used alongside note taking. This session took at least two hours.

In the process of analyzing the dialogic reading techniques, the teachers were informed to pay attention to outlining those techniques in the program that were workable for them as well as those they felt would be difficult to implement as far as their real classroom situations were concerned. Teachers were expected to make suggestions and provide for some examples to include in the new model. The ultimate goal was to come up with a more practical model that the teachers would be able to continue using even after the intervention period. For the next one week following this activity, the researcher put together the ideas proposed by the teachers.

After the one week of consolidating the ideas and writing up the modifications, the program was presented to the teachers and the researcher checked with them to see if there were additional comments or suggestions, and then arranged to have a demonstration on that same week. The following is a description of what the teachers proposed as a more practical model which was implemented on the third week, which in this case was the first week of October, 2008.

First, the teachers agreed that, they were going to read each book three times during different times of the day. They preferred to read the first time during rest time without any interaction and then do a follow up later. The aim of the first reading was to introduce the story in a simple way. They would then read the story a second time and this time go into more details by using the strategies of dialogic reading. The same book was read a third time on a different day in the course of that week because other children

had different center schedules. This meant therefore that some children might have heard the book read more than twice if they attended the center more frequently.

After viewing the video, the teachers felt that as far as the PEER technique was concerned, it was not going to be very practical to expand on every child's response to a prompt neither was it possible to constantly ask children to repeat the expanded format. They agreed that they were going to limit the use of the Expand and Repeat prompts, but did not indicate to do away with it completely.

In the case of CROWD technique the teachers agreed to use all the CROWD prompts. However, for Open-ended questions, they agreed to ask children in small groups or individually outside of reading sessions. This would be done throughout the day during small group activities, choice time or free play both in and out of class. The teachers believed that by practicing this mode of questioning one would avoid the chorus answering that is typical of whole group sessions. They further reasoned that open-ended questions require extensive thinking and reasoning and the child can be helped more individually or in small group settings.

In addition to PEER and CROWD techniques, inferential questions were included in this model. Examples of such questions are, "*how did that happen?" "Can you tell me something about what is going on here?" "What if…..?".* Although these are examples of open-ended questions, the teachers felt that questions could be asked in a more specific manner and directed towards helping children; (1) make proper judgments**,** (2) reasoning, (4) prediction and (5) observation. These were mainly incorporated in the open-ended section of CROWD with the expectation that this would encourage children to go deeper into explaining their answers and making predictions.

Dramatizing the stories instead of the drawing and writing activities that are common in preschool classrooms was thought by the teachers to be a better approach in developing children's oral language. By avoiding drawing the teachers felt you avoid having children get frustrated by the fact that they are not capable of drawing. Moreover, they felt that dramatization was a way of encouraging verbal participation which is an important aspect of dialogic reading. They also felt that when dealing with a large group of children, dramatization was more effective in ensuring that all the children participated.

Typical Classroom Reading Group

The third group served as the control and therefore and therefore the children in this group were not exposed to any of the intervention models. However, as stated earlier in the text, the teachers used the same 10 sets of books being used by the intervention groups for a period of eight weeks and they read using the typical methods that they always used with their students. This group also began reading in the first week of October.

Intervention Procedure

The intervention lasted for a period of eight weeks. For DR and MDR groups, implementation was from the fourth week of September to the third week of November while the control group started reading from the first week of October to the fourth week of November. Post testing began at the end of November for DR and MDR, while for Control it started in the first week of December. Post testing lasted for approximately 2-3 weeks and therefore it was over by mid December. The teachers participated in another interview at the end of the intervention period in order to compare their thoughts as they

had presented in the first interview prior to the intervention and what they thought after the intervention. *(See appendix F for the Intervention Timeline).*

Measures

Various data sources were used in the course of the eight-week period in order to determine the extent of the effects of the intervention on the participants. The sources included two sets of test instruments that were used at the start and end of the intervention, interviews, classroom observation checklists and book reading logs.

Child Assessment

All the children were assessed prior to and at the end of the intervention to measure the children's performance in oral language and vocabulary. For oral language, the Preschool Language Assessment Instrument (PLAI-2) developed by Blank, Rose & Berlin (2003) was administered. PLAI-2 is used to assess the oral language development of children ages 3-5.11 years. The test is individually administered and it takes 30 minutes to complete. This test is based on a model of classroom discourse that emphasizes the ability for children to respond effectively to the teacher's use of questions and commands of varying levels of abstraction. Normed on a sample of 463 children residing in 16 states, PLAI-2 can measure how effectively a child integrates cognitive, linguistic and pragmatic components to deal with the full range of adult-child exchange. It can easily be used by teachers, speech-language clinicians, and those in special education.

The tool comprises of two sections: a standardized assessment and a non-standard assessment. The standardized section of the tool was administered to the children. This section is made up of six subtests: four assessing levels of abstraction and two assessing

modes of response. The aspects of oral language assessed in the test (referred to as levels of abstraction) are: (a) Matching- to test the close linking of verbal and perceptual information, *e.g., what is this? Or find me the* _____ (b) Selective analysis- the identifying and/or combining of perceptual components, *e.g., how are these different? What is happening in this picture?* (c) Reordering- the reduction or restructuring of salient perceptual cues, *e.g., which is NOT a _____? How are these (different objects) the same?* (d) Reasoning- the prediction of events and the justification of ideas, *e.g., What will happen if _____? How do you know that ____?* (e) Receptive mode- a nonverbal response and (f) Expressive mode- a verbal response. For the purpose of this intervention, only two aspects of oral language used to assess levels of abstraction out of the four outlined in PLAI-2 were assessed. They are: (a) Matching and (b) Reasoning. This is because these two aspects relate more closely to the strategies outlined in the interactive models of book reading (based on the Whitehurst dialogic reading) that this study adopted.

The assessment instrument permits for early identification of children with language and communication difficulties that might impede current or later classroom performance, Blank et al (2003). It serves as a guide for structuring teaching or therapy to match preschoolers' levels of functioning and also allows for comparison of a child's receptive and expressive discourse skills across four levels of abstraction. It also assesses discourse ability in children who have minimal or no expressive language and evaluates the effectiveness of intervention efforts.

The characteristics of the total normative sample with regard to geographic region, gender, race, ethnicity, socioeconomic status, disability and educational

attainment of parents are similar to those reported in the *Statistical Abstract of the United States* (U.S. Bureau of the Census, 1999) for the preschool-age population (Blank et al.,2003). The comparison of those percentages demonstrated that the PLAI-2 sample was representative. The PLAI-2 evidenced an acceptable degree of reliability coefficients of .80 as reflected from the degree of homogeneity of the test items as well as its generalizability. This figure was obtained by sampling two sources of test error, namely; the test-retest reliability over time as well as the internal consistency reliability of its content. The validity of PLAI-2 based on discourse ability of four items (matching, selective analysis, reordering and reasoning), showed PLAI-2 as a valid measure of children's discourse skills. Moreover, many validity studies have been conducted and special attention has been devoted to showing that the test is valid for a wide variety of subgroups as well as for the general population.

I chose to use this test over other early literacy tests mainly due to the fact that the test adheres strictly to the guidelines of dialogic reading. This makes it meaningful to use the test when assessing the literacy development among children who have been exposed to dialogic reading.

In order to assess the children's vocabulary, a book vocabulary test was developed by selecting 3 words from each of the 10 books used in the intervention. This made a total of 30 words. The list contained of 8 words that were common in young children's books such as picture books and 22 words that were not familiar to the children. They were all nouns and the 22 were low frequency words among young children.

The design of the test followed that of the Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn & Dunn, 1981).The test consists of one plate for each target item. Each plate consisted of four illustrations, one representing the target item and three representing distracters *(see appendix G for a sample).* Included at the beginning of the test were three plates representing familiar items. This was used before the actual test so as to familiarize the children with the testing procedure and scores were not recorded. This researcher-designed test required that for each item, the interviewer asked the child to choose one illustration out of four, depicting a spoken word. For every picture, there were three words (two wrongs and a correct one) and the number of correct responses amounted to the book vocabulary score. This book vocabulary test was piloted with a small group of children before being used in the actual intervention *(see appendix H for the book vocabulary test).*

The rationale for developing own vocabulary measure was to assess whether the children learned the specific vocabulary contained in the story books. In contrast to the PLAI which assesses children's general language skills, the target vocabulary measure assessed the learning directly associated with the individual story books provided to the classroom teachers. This vocabulary measure was similar to the target vocabulary measure developed by Wasik & Bond (2001).

Six undergraduate students were trained by the researcher on the protocols of using the testing instruments in assessing young children. This training took place early in the month of September. The testers were not familiar with any of the book reading conditions taking place in the classes. The training mainly focused on the test procedures/ protocols of test administration and scoring and other expectations like interaction with

the center staff and children. They were also trained on how to use the observation checklists as well as what to pay attention to when taking field notes. The testers had an initial practice session with at least two children (not from any of the three centers) aged 3-5 years before proceeding to do the actual testing. This process allowed them to practice timing and accuracy. The research assistants were instructed on the importance of clearly labeling all the score sheets with the child's name, age, class and date of testing before the start of the test session. Sitting positions for both the tester and the child was discussed as critical for the purpose of scoring and also keeping the child focused throughout was another aspect taken into consideration during the training.

The general child-tester interaction is particularly critical for obtaining good results. The child should feel good all through the test and the tester should display positive attitudes even when the child's responses are incorrect. The tester should use his/her own judgment to decide whether the child should test at a particular time especially if a child displays signs of unwillingness to participate. Every child was rewarded with a sticker at the end of the test and the obtained data from testing or observations were not shared with the teachers and administrative staff. On their first testing assignments, each research assistant was observed by the researcher to ensure that they adhered to the right assessment protocols.

The testers together with the researcher assessed the children in the various centers. During each of the different assessment periods the testers were randomly assigned to different centers and classrooms so as to ensure that no tester repeatedly assessed the same children. The same person administered all the tasks to a particular child, individually in a quiet room at the center. In an event that a child felt

uncomfortable leaving the classroom, the teacher assistants would escort them out to the testing room and once the child settled, she would leave. The book vocabulary test was first administered followed by the PLAI-2 measure.

Teacher Assessments

Interviews

Two sets of interviews were carried out individually with all the teachers; one at the beginning and the second, at the end of the intervention. The first was a semi-structured interview focusing on finding out what the teacher's prior and current experiences with literacy programs were as well as the methods they used in their classroom literacy activities *(see appendix I for the interview questions).* The second interview session assessed the level of implementation of the programs by DR and MDR group. In this second interview, the focus was on areas of success, difficulties experienced, improvement, what did not work and why, level of satisfaction and the general feeling at the beginning as opposed to how they felt at the end of the intervention. The control group teachers were also interviewed to find out if there were any changes in their reading practices as they read with the children over the 8-week period. *(See appendix J for DR and MDR; appendix K for control for the interview questions).*

Classroom Observations

Observations were carried out before the intervention so as to determine the general literacy characteristics existing in the classrooms and during the intervention phase in order to determine whether the intervention was being implemented as planned. This provided valuable insights into the interactive styles during the book reading sessions. These observations were carried out using carefully developed set of

instruments with a structured protocol of specific behaviors and activities that address the evaluation question of interest. Field notes as well as tape recording were used to gather data. In cases where tape recording was utilized, two observers were present to take notes at the same time.

One of the tools that were used is the *Early Language and Literacy Classroom Observation* (ELLCO; Smith, Brady & Anastasopoulos, 2002). This tool is used in the observation of pre-K to 3rd grade classrooms and the areas addressed are: literacy and language practices and materials in early childhood classrooms. The components of the tool are (1) Literacy environment checklist which takes 15-20 minutes, (2) Classroom observation and teacher interview lasting 20-45 minutes and, (3) Literacy activities rating scale which takes about 10 minutes. The total time to complete the observation in one class is 1 to 1 ½ hours. This tool has been used for research purposes in more than 200 preschool classrooms whereby on average interrator reliability was high (88% for the literacy environment checklist, 90% for the classroom observation and 81% for the literacy activities rating scale). The literacy environment checklist and the literacy activities rating scale (Language, Literacy, and Curriculum) sections of the tool were used once, before the intervention begun. In the current study, inter-rater agreement was calculated by having two people independently rate the classrooms based on the ELLCO items. Agreement was determined by dividing the number of agreements (intervals in which both observers gave the same ratings) by the number of agreements plus disagreements, and multiplying this value by 100. On average, the overall inter-rater reliability was 83.4%.

Another set of observations was made twice in each of the classrooms (the intervention groups as well as the control) to observe the teachers interacting with the children and to carry out consultation sessions with the teachers. Specifically, the observations focused on whether the teachers in the intervention groups were using the dialogic reading and the modified dialogic reading techniques during shared book reading. The control group was observed to find out if the teachers were using any techniques in the shared book reading sessions in order to boost children's literacy development *(see appendix L for DR and MDR and appendix M for control group observation tools).*

Book reading Logs

Teachers were provided with book reading logs for the ten books they are reading in their classrooms. The list contained three sections. For all the three groups the teachers were to record the title of the book, the dates each book was read as well as a comments section where DR and MDR groups rated their accomplishments as it related to their reading intervention models while the control group teachers recorded the what they felt worked or did not work in each book reading session, *(see appendix N for DR and MDR; appendix O for control for the book reading logs).*

Data Analysis

This intervention was undertaken using the mixed methods design (Creswell, 2003) that integrated qualitative and quantitative data so as to ascertain that each data carried equal weight, priority and consideration. Collection of data from the quantitative method occurred at the beginning and end of the program while qualitative data was ongoing throughout the research period. Triangulation of this data was used to provide a better understanding of the results (Creswell, 2003) in the attempt to address the research

questions. Analysis of the quantitative portion of the study utilized the Repeated Measures ANOVA to compare the means for the groups before and after the intervention. This procedure was used because the study involved repeated administration of the same measures to the same participants under different conditions. For the qualitative portion of the study, the audio-recorded interviews, information from the book reading logs, and data collected from the classroom observations were utilized. During the book reading sessions interactions between the teacher and the children were recorded. This included all talk before, during and after book reading that reflected the strategies of dialogic reading except when the teacher was reading directly from the text. The audio-recorded interviews and field notes were transcribed and analysis completed through Axial and Open Coding, as illustrated by Corbin & Strauss (1998). Results of both the qualitative and quantitative data have been analyzed and reported in the next chapter.

CHAPTER 4

RESULTS

This chapter presents the results of the intervention. These results attempt to inform each of the three research questions for which data were obtained using both the quantitative and qualitative methods. The following are the questions: (a) how do the groups differ in students' pre literacy skills outcomes? The focus was to find out if involving teachers in the design and implementation of a reading program would yield different early literacy outcomes among preschoolers than if the teachers were not involved, (b) how do the groups differ in book reading methodologies used in the classrooms? This question sought to find out if there was a difference in the way the teachers read before, during and after the intervention. (c) Are teachers in DR and MDR more likely to effectively and faithfully implement the dialogic reading programs in their classrooms? The third question addressed treatment fidelity as well as classroom practices during implementation of the dialogic reading program. Table 1 presents a summary of how the study was undertaken.

Both quantitative and qualitative results are presented. The results of the quantitative and qualitative analysis will be compared and to the extent possible, integrated. The resulting triangulated results could show convergence, inconsistency, or be complimentary (Creswell, 2005). The quantitative results will provide the opportunity for generalizability, while the qualitative results will provide a better understanding of the context and meaning (Creswell, 2005).

Table 1: Organizational Chart

Questions	Measure/data collection instrument	Administration	Analysis
How do the groups differ in student's pre literacy skills outcomes?	Vocabulary test	Pre/post	Quantitative
	PLAI-2	Pre/post	Quantitative
How do the groups differ in book reading methodologies used in the classrooms?	ELLCO (observations)	Pre	Quantitative
	Interview (set 1,2)	Pre/post	Qualitative
	Observations (set 1,2)	Implementation period	Qualitative
Are teachers in DR and MDR more likely to effectively and faithfully implement the dialogic reading programs in their classrooms?	Book logs	Implementation period	Qualitative
	Interviews (set 1, 2)	Pre/Post	Qualitative
	Observations (set 1, 2)	Implementation period	

Quantitative Portion

The study sought to determine whether or not there were significant differences in children's vocabulary and oral literacy development as a result of an eight-week reading intervention. Three groups were compared to determine how they performed in two independent variables across two different points in time. The procedure involved exposure to either the traditional Whitehurst's Dialogic Reading (DR) program or a

teacher Modified Dialogic Reading (MDR) program. A third group (Control) was not exposed to any of the reading programs. This design is presented in Table 2.

Table 2: Research Design

Item	Treatment with no modification (DR)	Treatment with modification (MDR)	Classroom environment (Control)
Independent Variable	Classroom instruction and traditional dialogic reading	Classroom instruction and modified dialogic reading	Typical reading style
	Teacher and children in active mode PEER and CROWD	Teacher and children in active mode PEER, CROWD and Inferential questions	Typical reading style
Type of improvement	Overall language improvement, increase in target vocabulary, increase in oral language	Overall language improvement, increase in target vocabulary, increase in oral language	Developmental change
Dependent Variables	PLAI-2/target vocabulary	PLAI-2/ target vocabulary	PLAI-2/ target vocabulary
Number of children	23	23	17
Administration Period	Pretest/ Post test	Pretest/ Post test	Pretest/ Post test

The growth in pre-literacy skills of the groups over time has been compared and summarized using a Repeated Measures one-way ANOVA design. This design is used to test if three or more means are equal in a case where participants have repeatedly been administered the same measure under different conditions.

Hypotheses

Two hypotheses were tested in this study in order to determine if the intervention had an effect on children's pre-literacy skills. They are stated as follows:

Null hypothesis: There is no difference in performance between the three groups.

Alternative hypothesis: It was anticipated that the treatment groups (MDR and DR) would show improvement in vocabulary and oral language development.

Analysis was conducted to compare the differences in performance on vocabulary and oral language between the intervention groups and the control group. It is important to note that at the beginning of the study there were a total of seventy three child participants but this analysis is based on the results obtained from the sixty three children who remained to the end of the intervention. Performance on the assessment is the Dependent Variable while reading program is the Independent Variable. The question at hand involved whether the Reading activities were effective in improving the children's early literacy skills as indicated by their performance on the book vocabulary test and PLAI-2 assessment measures.

For quantitative analysis, a series of descriptive statistics were run in order to review the distribution of scores obtained from each of the measures during the two time periods. This has been broken down by the intervention groups and the comparison group. Descriptive statistics provide important information about the distribution of scores and measures of central tendency.

Before running the results, it was critical to examine if there was an effect as a result of some children not taking part in the post testing and also determine the validity of the researcher-designed book vocabulary test. In total, there were twelve children (DR 4; MDR 3 and Control 5) who did not participate in post testing. Two of these children

(from DR and Control) turned five and according to the teachers, their parents pulled them out of the centers. Another four (3 from DR and 1 from MDR) simply transferred from the centers and the teachers did not have reasons for their transfers. The remaining six (4 from Control and 2 from MDR) were present to the end of the intervention period but were absent during the post testing period. Several attempts to assess these children were unsuccessful since the closing of the centers came and these children had not come back. One teacher in the control group explained that it was common for children in the center to leave before the last day since most of the parents in this center were students in the area colleges who tended to leave the area as soon as the college semester was over.

Based on descriptive analysis for vocabulary, the group means were: DR 12.75; MDR 11.00 and Control 14.20. The average mean was 12.92. These group means were further analyzed using ANOVA and the results indicated a no significant difference in the group means $t(2)\ 2.32,\ p>.154$. Similarly, PLAI-2 analysis indicated means of: DR 17.25; MDR 17.67 and control 20.20 with an average of 18.58. ANOVA analysis indicated no difference in these group means $t(2)\ 1.82,\ p>.217$

Validity of the vocabulary test was determined by conducting a correlation analysis to see if there was a relationship between the vocabulary test and the PLAI standardized measure. The results of this correlation are based on the pretest scores before the start of the intervention.

The first step was to run a correlation using all the 30 vocabulary words that had been presented to the children. It is important to note that eight words that were assumed the children already knew were included in this measure so as to make all the children have confidence while taking the test. These words were picked from the books used in

the intervention. The obtained Pearson correlation coefficients indicated a statistically significant relationship between vocabulary and oral language skills development measure (PLAI-2). The correlation between the total scores of vocabulary and the total scores of PLAI as indicated by a Pearson Correlation was r= .498, which demonstrated a significant ($p<.000$) relationship. It was also evident that there was a correlation between the vocabulary measure and the two subscales of PLAI. Matching and vocabulary had a correlation of $r =.477$, $p<.000$ while vocabulary and reasoning had a correlation of $r=.370$, $p<.001$. These results generally indicated a significant association between the two measures.

A frequency table was generated to find out the percentage of cases that got each word correct or incorrect at pre and post periods. This information is represented in Table 3.

Table 3: Vocabulary Words Correct or Incorrect by Percentage (%).

	Pre test		Post test				
	Analysis by cases (freq)		Analysis by cases (freq)		Cross tabulations		
	incorrect	correct	incorrect	correct	% of correct words by center		
Words	%	%	%	%	DR	MDR	Control
Clown	28	72	14.3	85.7	37.0	40.7	22.2
Raccoons	85.3	14.7	61.9	38.1	37.5	50.0	12.5
Pigtails	90.7	9.3	69.8	30.2	36.8	52.6	10.5
Claws	70.7	29.3	47.6	52.4	27.3	57.6	15.2
Pail	58.7	41.3	14.3	85.7	37.0	42.6	20.4
Hatchet	96.0	4.0	87.3	12.7	37.5	37.5	25.0
Truck	17.3	82.7	4.8	95.2	36.7	36.7	26.7
House	5.3	94.7	1.6	98.4	37.1	37.1	25.8
Beak	68.0	32.0	47.6	52.4	33.3	54.5	12.1
Violin	83.5	14.7	66.7	33.3	38.1	52.4	9.5
Briefcase	74.7	25.3	49.2	50.8	25.0	56.3	18.8
Wagon	25.3	74.7	12.7	87.3	40.0	38.2	21.8
Trunk	56.0	44.0	42.9	57.1	38.9	44.4	16.7
Stamp	88.0	12.0	61.9	38.1	33.3	58.3	8.3
Suspender	92.0	8.0	73.0	27.0	23.5	64.7	11.8
Shawl	92.0	8.0	76.2	23.8	6.7	80.0	13.3
Scarf	81.3	18.7	42.9	57.1	30.6	50.0	19.4
Daisy	16.0	84.0	12.7	87.3	34.5	36.4	29.1
Saucer	85.3	14.7	68.3	31.7	10.0	80.0	10.0
Overalls	96.0	4.0	81.0	19.0	8.3	91.7	0.0
Plate	20.0	80.0	7.9	92.1	34.5	37.9	27.6
Boot	29.3	70.7	12.7	87.3	30.9	41.8	27.3
Totals	61.9	38.1	43.9	56.5	30.6	51.9	17.5

Note. The eight easy words were analyzed separately and are not included in this table

At post test, the frequency of correct words was higher as indicated by the increase in the percentage of children who got the words correct. This too was indicated by the percent of children per group who got the words correct. The percentage rose from 31.8% at pre test to 56.5% at post test. During pre test, most of the words listed above were unknown to the children (61.9%). By the end of the intervention period, although some of the words remained largely unknown to the children, the percentage of those who did not know the words had decreased to 43.6%. The words that remained hardest for the children were words like; hatchet, overalls, shawl, suspenders, raccoons, pigtails, violin, stamp and saucer with the following percentages of children getting them wrong; 87.3%, 81%, 76.2%, 73.0%, 61.9%, 69.8%, 66.7%, 61.9% and 68.3% respectively.

The eight words that were thought to be known to the children were analyzed separately. As was expected, the children's scores for these words were very high during the pre testing period. The percentage of children who got the words right was as follows: Fish (97.3%), Cat (94.7%), Phone (94.7%), Bell (82.7%), Bike (96%), Bear (88%), Train (90.7%) and Chair (94.7%). During post testing, the distribution of the scores were even higher for all the words where for words like Fish, Cat, Phone, Chair and Bike, the score was 100%. It is important to note that the distribution of these scores was even among all the three groups.

A further analysis was done to find out which of the three groups had higher gains in the number of correct words. This too was illustrated by the percentage of the children per group who got the words right when compared to the other two groups at the end of the intervention. This information is also presented in Table 3 (p.61). The striking results

here indicate that the percent of children who knew the words was highest in the MDR (51.9%) when compared to DR (30.6%) and Control (17.5%). It was evident from the results that at the end of the intervention, the children in MDR knew the words that had been reported above as still hardest for the children at the post test period. This was indicated by the high percentage of the children in MDR getting the words right. For example, Hatchet 37.5%, overalls 91.7%, shawl 80.0%, suspenders 64.7%, raccoons 50.0%, pigtails 52.6%, violin 52.4%, stamp 58.3% and saucer 80.0%. It is possible that the high percentage of children who did not know the words at post test were from DR and Control groups. These group differences were analyzed by ANOVA.

In this section, descriptive statistics and ANOVA results for children's performance on vocabulary and PLAI-2 analysis during both pre and post test periods are presented. The results address the following question:

How Do the Groups (DR, MDR and Control) Differ in Student's Pre-literacy Skills Outcomes?

In order to determine the effectiveness of the literacy program, comparisons were run separately for both PLAI-2 and the book vocabulary assessment scores obtained before and after implementation. All the results have been reported, including the Mean and Standard Deviations of the different scores on each measure for the treatment and control groups. ANOVA tables are presented to determine if the intervention resulted in differences among the groups. A conventional alpha level of 0.05 was used for all statistical tests and the following results were obtained.

Vocabulary

Descriptive Statistics for the Book Vocabulary Measure

Descriptive statistics were obtained for the book vocabulary measure in order to compare means for the three groups (DR, MDR and Control) at the pre test and post test periods. The results indicated that at the beginning of the study, vocabulary means for the three groups (DR, MDR and Control) were 16.00, 16.35 and 15.00 with standard deviations of 2.82, 3.26 and 4.12 respectively. At the end of the 8 week period, their means rose to 19.04, 23.87 and 16.41 for DR, MDR and Control respectively. Although there was a gain in all the groups, the gain was minimal especially for DR (3.04) and control (1.41) points as opposed to MDR which had a 7.52 point gain.

Results indicate that the effect of the intervention on the student's vocabulary skills depended on group and time an indication that there was an interaction between group and time. Although there was an increase in vocabulary scores in all the centers as depicted from the pre and post scores, it is noticeable that MDR which implemented the modified program yielded a higher mean of 23.87 at the end of the 8-week intervention period as compared to means 19.04 and 16.41 for DR and Control groups respectively. This information has been summarized in Table 4.

Table 4: Descriptive Statistics for Vocabulary at Time 1 and Time 2

		Time 1				Time 2			
Center	(n)	M	Std. Dev.	F	P-value	M	Std. Dev.	F	P-value
DR	23	16.00	2.82	-	-	19.04	3.01	-	-
MDR	23	16.35	3.26	-	-	23.87	2.63	-	-
Control	17	15.00	4.12	-	-	16.41	3.92	-	-
Total	63	15.83	3.40	1.44	.246	20.10	4.37	20.43	.000*

Note. * Significant at the $p<0.05$ level

There was a significant interaction effect between group and time, *(F) (2,125) =9.211, P<.000* on children's knowledge of book vocabulary. As can be seen in Figure 1, children's knowledge of the book vocabulary increased over time across all groups. At the post-assessment the differences between conditions were greater and children in the modified dialogic reading condition knew more of the book vocabulary words than children in either the DR or control conditions.

Furthermore the results indicate that there was a significant difference between DR and MDR as well as between MDR and the Control group. At the alpha level of .05, the difference in vocabulary between the centers was significant, *(F) (2, 60) =20.431, P<.000*. The difference in means between DR and MDR was 3.67. A much higher difference resulted between MDR and the control group with a mean difference of 5.65 (refer toTable4).

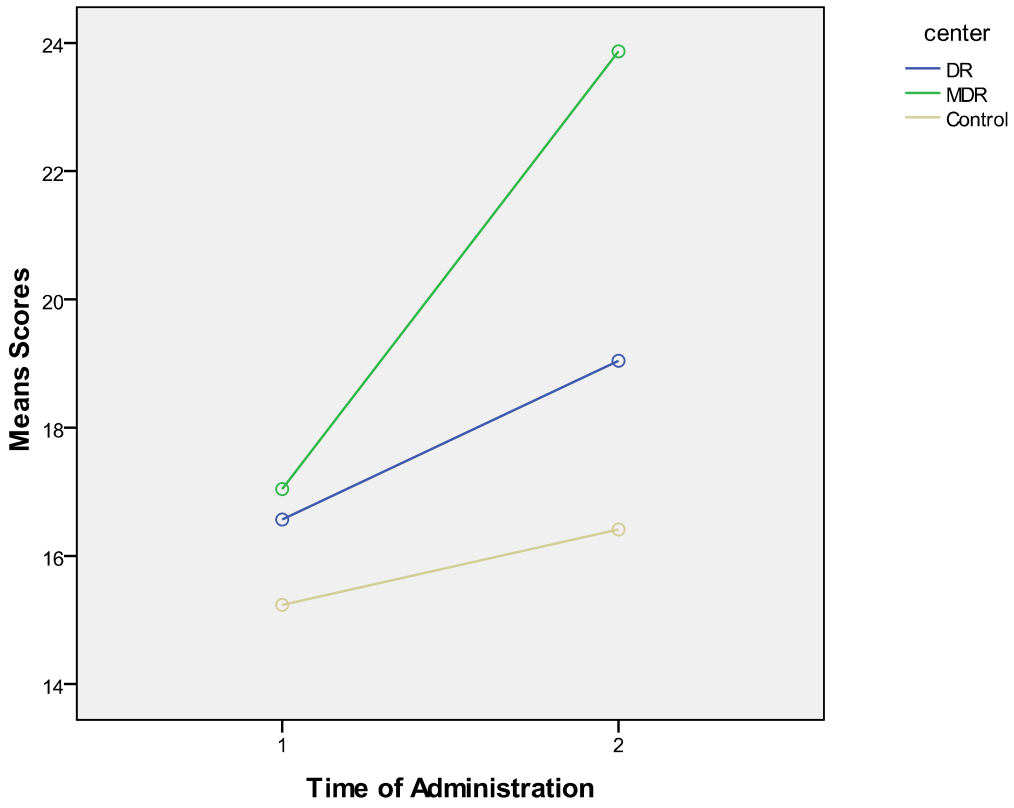


Figure 1: Performance in Vocabulary between the Three Groups

Figure 1 further supports the interpretation that the means for the three groups increased over time as a result of an increase in performance in the book vocabulary. It also indicates that between the first and the second test administration periods, gains for MDR were most significant when compared to DR and Control. MDR had a sharp increase in vocabulary gains. These results suggest that the students who were exposed to the Modified Dialogic Reading performed at a higher level in their vocabulary skills as measured by the book vocabulary test when compared to DR and the Control group.

Comparisons Using the Overall Total Scores before and after Implementation.

Analysis was conducted to compare the mean scores for PLAI before the start of the intervention and the means at the end of the intervention. This analysis included the sixty three participants who remained to the end of the intervention. The procedure was carried out for the subscales of PLAI-2 (i.e. matching and reasoning) so as to determine how the children performed in the two different subscales. Table 5 presents the descriptive statistics obtained.

Table 5: Descriptive Statistics for PLAI-2 at Time 1 and Time 2

		Time 1									Time 2								
		Matching			Reasoning			Overall			Matching			Reasoning			Overall		
Center	(n)	M	SD	R	M	SD	R	M	SD	R	M	SD	R	M	SD	R	M	SD	R
DR	23	13.04	2.59	8-11	8.93	3.67	16-17	21.78	5.74	12-32	15.09	1.59	16-17	11.35	4.80	3-21	23.30	5.06	15-36
MDR	23	12.00	2.37	7-17	9.04	2.65	3-15	21.35	3.67	11-29	14.74	1.05	13-17	14.61	2.98	9-19	29.22	3.32	23-35
Control	17	12.14	2.85	8-9	7.95	2.36	5-14	19.82	4.90	14-31	13.65	2.79	16-17	7.59	4.08	1-16	21.24	5.56	14-31
Totals	63	12.41	2.61	7-17	8.68	2.98	3-17	21.10	4.83	11-32	14.57	1.91	9-17	11.52	4.84	1-21	24.90	5.94	14.36

The results show that before the intervention started, the mean scores for the matching subscale in the three groups DR, MDR and Control were slightly different. They ranged from 13.04, 12.00 and 12.14 respectively with standard deviations of 2.59, 2.37 and 2.85 from the overall mean of 12.41. In all the three groups, the scores ranged from a minimum of 8 points to a maximum of 17 points.

During the post test, the means for all the groups had increased by a few points. This increase was expected for control group due to maturational changes of the children and the increase recorded by DR and MDR could be attributed to the reading program. The mean scores at post test rose to 15.09, 14.74 and 13.65 for DR, MDR and Control respectively. The standard deviations had decreased for DR and MDR (1.59 and 1.05) while there was a slight increase for control with a 2.78 standard deviation from the overall mean of 14.57.

Results for the reasoning subscale indicate very low means for all the three groups during the pre test period. The average mean for all the groups was 8.68. The means for the individual groups was 8.93, 9.04 and 7.95 for DR, MDR and Control respectively. The standard deviations were significant indicating 3.67 for DR, 2.65 for MDR and 2.36 for Control. The scores ranged from a minimum score of 3 points to a maximum of 17 out of the possible 21.

At post test, the gains were high for DR and MDR with each recording a mean of 11.35 and 14.61 respectively. There was no gain for the control group which recorded a mean of 7.59 slightly lower from the previous 7.95. Participant scores ranged from the minimum of 1 to a maximum of 21. During both pre and post, DR had participants

gaining the highest maximum scores while the control group had the minimum scores during both times.

The results for PLAI-2 sub-scales indicate a big difference for the reasoning portion of the measure as opposed to the matching sub-scale. All the groups performed at almost the same level for matching during both pre and post periods. However, for reasoning, the performance was much lower at pre test for all groups but at the end of the intervention the gains for DR and MDR groups were very high as opposed to control which did not register any gains but instead recorded a loss of .36 points.

Overall, the totals for PLAI revealed very interesting results. The groups began with means of 21.78, 21.35 and 19.82 for DR, MDR and Control respectively. However by the end of the intervention, MDR recorded the highest mean with quite a substantial range from the means of DR and Control groups. The means recorded were 23.30, 29.22 and 21.24 for DR, MDR and control respectively. The minimum and maximum points recorded for MDR were noticeably high from pretest to post test periods. The results indicated that out of the possible 38 points, the participants scored 23 at the minimum and 35 at the maximum up from 11 and 29 points.

The ANOVA analysis revealed that differences between the groups at the pretest period were not significant. There was no major difference between the groups in performance of the sub scales as well as the total means for the groups. Results on Table 6 indicate that differences between the three groups before the intervention were not significant ($p>.194$) at the 0.05 level. Before the intervention was implemented, majority of the children performed at almost the same level on the PLAI-2 measure. However, over a period of 8 weeks, all the three groups showed an improvement in their

performance on the PLAI-2 measure and overall, the results were significant (p<.000). Although scores for Matching were not significant (p>.051), Reasoning was significant (p<.000) and so was the overall score as stated earlier.

Table 6: PLAI-2 Differences between the Groups at Time 1 and Time 2

	Time 1				Time 2			
	df	**MS**	**F**	**P-value**	**df**	**MS**	**F**	**P-value**
Matching	**2**	**9.49**	**1.61**	**.209**	**2**	**3.4**	**3.13**	**.051**
Reasoning	**2**	**46.4**	**4.19**	**.020**	**2**	**241.5**	**14.95**	**.000***
Totals	**2**	**41.93**	**1.69**	**.194**	**2**	**311.89**	**11.98**	**.000***

Note. *significant at the p<0.05 level

The results indicated that there was a significant interaction between group and time, *(F) (2,125) 3.459, P=<.035*. Figure 2 is a graphical representation of this interaction effect. The gains by MDR were much higher than both DR and Control. MDR gained significantly from the beginning of the intervention and continued to record its gains at a high rate to the end of the intervention period. The gains by DR and Control were similar from the time preceding the first administration to the second administration period. Although DR started with a higher mean than the Control, and still had a higher mean at the end, both groups were gaining at almost the same rate therefore indicating that the gains in DR were not significant when comparing with the control group.

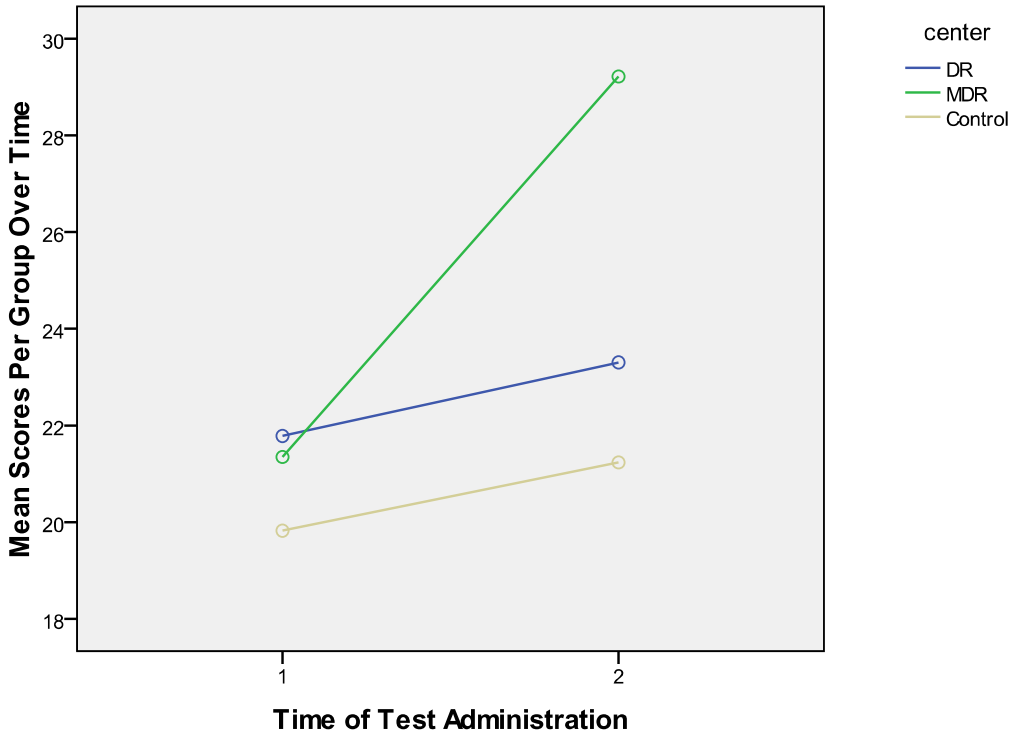


Figure 2: Performance in PLAI-2 between the Three Groups

Overall, performance on the vocabulary test and the PLAI-2 measure indicated that all the three groups gained in both vocabulary and oral language development. However, the gains in MDR were much higher than DR and Control in both vocabulary and oral language.

Qualitative Portion

The quantitative portion of the study identified the major characteristics of the groups both before and after the intervention. However, the qualitative portion allowed for a more complex study of the perceptions, ideas, experiences and meaning-making of

the intervention process. This provided for a rich description of the results. The two research questions central to the qualitative analysis were: (a) How do the groups differ in terms of the book reading methodologies used in the classrooms? (b) Are teachers more likely to effectively implement self-developed programs in their classrooms? In order to address these two questions, multiple data sources were utilized, namely; interviews, classroom observations, weekly book logs and field notes. Each of the data collection instruments have been discussed briefly in the section that follows:

Interviews

Through interviews teachers shared information on their book reading experiences. All six teachers from the three centers individually participated in a semi-structured interview first, before the intervention started and then immediately following the end of the eight weeks. The first interview aimed at gathering information about book reading methodologies that the teachers were using in their classrooms. As indicated in the previous chapter, appendix D contains the set of questions for this interview session. The second interview focused on assessing fidelity of implementation by the two treatment groups (DR and MDR). In the case of the control group, the aim was to find out if there were any changes in literacy practices over the eight weeks and also to see if the teachers were using any of the dialogic reading techniques. For questions see appendix E and F for the treatment groups and control respectively.

Weekly Book Logs

Teachers were asked to complete weekly book logs. They were to include information on the frequency with which each book was read per week and the number of children present during each reading session. At the end of each week they made a

comment on what they felt had worked or did not work in their classrooms. Specifically, the two groups (DR and MDR) which implemented the Dialogic Reading method were to indicate by the end of each week whether they accomplished all, some or none of the dialogic reading techniques. It is important to note that in all the three groups, ten books were read over the course of the eight weeks. This information is discussed later in this section. Appendix H and I are the book log for the treatment groups and control respectively.

Observations

A total of three visits were made to observe the literacy activities going on in each of the classrooms. On the days that the first interviews took place, observation time was suggested by the teachers to reflect a time in their class schedules in which book reading took place. The researcher suggested to the teachers the weeks when observations were scheduled to take place although the exact dates and time were set by the researcher with individual teachers as time drew closer to the week of observation. In almost all instances the teachers read stories immediately following free choice activities in the morning. If there was a change in the class schedule, the teacher and researcher mutually agreed on a day and time when the class would be observed. The researcher and six research assistants carried out the observations. During each scheduled observation, the researcher and one research assistant together observed the same class at the same time. Each time, research assistants were randomly placed in the classrooms such that there was always a different research assistant observing in each classroom. In the first observation, the ELLCO instrument was utilized to rate the classrooms using the literacy items in the

instrument. This observation was done before the intervention started. The two rating scores obtained by the observers for each group were averaged to get the final scores.

The second observations were carried out in weeks three and four while the third took place in weeks six and seven of the implementation period. The aim of these observations was to determine the extent to which the teachers in DR and MDR groups adhered to the techniques of dialogic reading and also to determine if there was a difference in the way the teachers carried out the story book reading sessions over time. Each observation lasted 30-45 minutes. Information gathered included the number of children and adults present when observations took place, the title of the book being read and the type of setting (e.g. small group or whole class setting) when books were read.

Checklists were developed for use in these two observations. The checklist for DR and control matched the techniques of the traditional dialogic reading while that of MDR was designed to gather information according to how the teachers had modified the reading program as illustrated in the previous chapter *(see appendix H for DR and control and appendix I for MDR).* One important thing to note is that it is not unusual for preschool teachers to employ questioning in their classrooms and therefore it was necessary to observe if the control group teachers were using any of the dialogic reading techniques, thus the checklist for DR was utilized.

However, use of the checklists in the course of doing the observations proved difficult since there were many aspects to observe. Therefore, immediately following the first observation, a decision was made to change the protocol from checking off the checklists to actually tape recording the book reading sessions and teacher-child conversations in all the classrooms (with the cooperation of the teacher, this first

unsuccessful observation was repeated on the next day). Attention was paid to capture the teachers' use of the dialogic reading techniques PEER: P-Prompt, E-Evaluate, E-Expand, R-Repeat and CROWD: C-Completion, R-Recall, O-Open ended, W-Wh prompts and D-Distancing.

Analysis

The observation periods were labeled as T1 (Time 1) and T2 (Time 2). After each observation, the researcher listened to the tapes and carefully transcribed all the conversations. The transcripts were reviewed and coded for when the teachers used PEER and CROWD. Once the coding was complete, tallying was done on the checklists for each center to correspond with when PEER and CROWD techniques were observed. Coding and transcription of tapes was ongoing throughout the intervention period.

Field notes were taken to supplement the checklists particularly in cases where tallying was not applicable. Note taking was also tailored towards follow up activities after story reading sessions to document the nature of interactions between the teachers and the children and also interactions amongst the children themselves. The notes were later written in a narrative form and they provided initial interpretation of what was observed.

All the interviews were audio taped, transcribed and the transcripts reviewed several times later during analysis. In the process of reviewing the transcripts, notes were being made regarding the possible constructs that were being expressed. Open coding was utilized to identify categories and themes (Strauss & Corbin, 1998) that were beginning to emerge. Recurrent ideas or concepts formed the basis for the development

of categories used to code the data. The categories were examined to determine if they represented underlying themes that the questions sought to address.

The section that follows presents the results from the two interviews. Information is presented in the exact manner that the teachers verbalized. When necessary, punctuation has been added to break up long sentences in order to make the data more reader friendly. Names of the teachers have been changed (pseudonyms) so as to protect their identity and they are indicated as; DR (Jane and Molly), MDR (Rose and Mary) and Control (Ida and Jane). At this point it is important to note that the teacher interview sessions differed from one teacher to another as did the data collected. Some teachers provided lengthier, more complex descriptions and explanations while others provided very brief descriptions. The researcher observed that one of the teachers in the control group was reluctant to share information and seemed very uncomfortable with the interviews. She gave very brief answers (1-2 sentences) to each of the questions asked and even when probed further, she would not give any detailed explanations. This made it a bit difficult for the researcher to collect candid information from her. One teacher from the MDR center too, didn't seem very enthusiastic when answering questions during the first interview. She was more concerned about the process of implementing the program and the implications on her time. She stated that,

> "…with almost thirty children in the class on a daily basis I wonder how I am going to incorporate your program…my prior experience with people who do research is the amount of paperwork involved…I wonder, how much of my time will this project require?"

From the way the teacher expressed herself, it could be deduced that she already held a preconceived idea that the work was going to be very time consuming in as far as paperwork was concerned. At this point, the researcher had to reassure her that they were

going to work very closely together and that she was free to suggest any ways that would make her work manageable. As per the informed consent, she was also free to stop implementing the program if she thought it interfered with her daily routines and the success of her work with the children.

First Interview

In the first interview I look only at the themes that emerged across groups and their general contribution to book reading and literacy in the classroom. This presents a picture of the general literacy approaches used prior to professional development. Overall, three themes emerged from reviewing the data gathered from the first interview. These themes have been summarized as: (a) Book reading practices, (b) Classroom talk, and (c) Teachers' needs and experiences. They are discussed below:

Book Reading Practices

As the teachers discussed issues relating to children's early literacy, they talked consistently about the different ways in which they read books to children. Their discussions mainly focused on how books were chosen, how they read books to children and the kind of interactions taking place during story book reading time. They tied these ideas to their experiences in the classrooms and the benefits gained by the children in the learning process.

Most of the teachers, felt that the way they chose children's books was an important factor. Molly (DR) actually indicated that she made sure to read every book before reading to the class so as to have a clear picture of the contents of the book. They all mentioned that when choosing books, they considered the theme or topic of the day, week or month, the curriculum, culture and children's interests as well as home

experiences. Sara (control) noted, "I choose books according to the curriculum content for the day or week such that if we are talking about the farm, I will pick farm or animal books." Ida added that,

> "…when we plan our weekly curriculum, we spot for language and literacy books that we want to talk about… so books are chosen according to what they are learning in areas like Science and Math…but also, teachers really have the freedom to choose the books they want to read and everybody chooses to approach in their own way…"

They also selected books based on current events or situations so as to help children connect with real life experiences. Sara mentioned that

> "…we link with home experiences… for example if there is a new baby in another child's family, we read books about a new born child…other children might ask why we are reading this while another will be able to identify with it…"

Rose (MDR) talked about friendship issues that commonly arise amongst children and she thought the best way to address this issue was by reading a book about friendships. She said that this had always been effective whenever she used with the children in her class as it allowed the children to identify with what was happening in the story. Culture and diversity also played a role as one of the aspects that teachers took into consideration when choosing books. Sara (control) stated, "…there are children from different backgrounds in the class which is a factor that we as teachers cannot overlook..." The teachers felt that they had to pick books that reflected on children's different cultures as this was a tool to help them identify with who they are.

Books were also chosen according to the children's interests. Rose (MDR) explained that on a day to day basis she actually gave children a chance to choose books they wanted read to them except, when she had a specific book in mind depending on the activities planned for the day. Thus culture, children's experiences and curriculum played an important role in determining which books were read in the classrooms.

There were also variations in the way teachers described the methods of reading books although certain similarities existed. The teachers interviewed agreed that in order for preschoolers to learn how to read they need to know their letter sounds, have knowledge of the alphabet and also know some of common sight words. They too agreed that continued exposure to book reading both at home and in school was important if children were to gain these skills. Molly (DR) noted "…when children come to preschool, we do not expect all of them to have gained these skills and while some thrive easily, there are those who struggle because they have no past experiences of being read to." Furthermore, Sara (control) added that" lack of basic sounds makes it difficult for the child as they proceed to Kindergarten…" Some of the teachers also pointed out the importance of the "Left-Right" orientation as a critical skill in children's literacy development. Jane (DR) and Ida (control) both agreed that this skill aids in helping children identify the front and back of a book and consequently being able to turn pages properly.

The teachers also pointed out the importance of resource persons and libraries. Sara and Ida (both from control) agreed that in their classrooms they each had a library corner with lots of books. They said that,

> "…the children utilize the corner on their own, with other peers or with the help of other adults present in the classroom. The children explore books on their own and their role was to find something for those who are not interested…every Monday we go to the library down the street and the children love this because it is a different environment…"

During the observations the researcher noticed that there were always at least three adults in the control group classrooms. Moreover, the teachers in DR mentioned that they too had a resource person coming to read to the children every once a week and

they expressed that this gave the children an opportunity to interact with other books that were different from the ones in their classrooms. In this case, the reader chose the books and they always made sure to choose age-appropriate books.

Classroom Talk

The teachers consistently mentioned that reading with the children using creative interactive books helps to boost attention, story comprehension and also enables the children to identify word-picture associations "…all of which are attained through our little classroom talk…which we view as discussions at the preschool level…" (*Molly (DR), interview 1*). Rose (MDR) noted that "sometimes I tell a story without pictures for them to look at so as to build imagination skills" She went further to emphasize that,

> "…we as teachers are well aware of the fact that our responsibility is to ensure children gain a lot of literacy skills by the time they complete preschool and I feel that it is my obligation to read books repeatedly to children, practice the alphabet and pay a lot of attention to details during story book reading sessions. We talk about new words, discuss illustrations in the books and try to connect stories to real life as this helps children make meaning of what they are learning..."

Jane and Molly (both from DR) talked about story time being an everyday activity. However, they both had differing opinions on how they carried out the book reading sessions. Jane said,

> "…often when I read to them, I sit on a chair or on the floor and make sure that I have direct eye contact with the children…before reading we first talk about the book. We point out the author, illustrator and the children talk about what they see on the cover. The one thing that we don't do much is to discuss the book as we read but rather I wait to talk about it in the end…I just think that the children get destructed and I would rather they paid attention to the end…"

On the other hand, Molly (DR) noted that "…as we read I try to discuss the book in detail and sometimes I incorporate the use of puppets to make if more fun…" Ida (control) talked about how she read to the children over and over again and in the process of

reading, she let the children talk about the pictures, they practiced spelling words from the books and they did a lot of follow up activities in the writing and reading areas. This was an indication that their beliefs were different in as far as how the story session transpired.

The teachers too, had differing views as far as interaction in the form of questioning was concerned. They expressed that although they asked questions, they did not have a specific technique of asking and so in most cases they would ask random type questions. Sara (control) said that "I usually ask direct questions like for example; has any one got a red dress?" Such questions call for the children to respond by giving a one word answer without going into any details. If a child asked a question, the teacher would repeat and then have the rest of the peers try to answer. Ida (control) and Rose (MDR) both noted that, "…when a child asks a question, I throw the question to the rest of the children in the class so as to generate a discussion…" They both felt that providing an opportunity for the children to interact in this way was beneficial. Furthermore, three of the teachers interviewed said that they discussed only the questions that were related to the book and not the unrelated so as to re-focus the children's attention to the story being read at the time. Sara (control) stated that "…I like to discuss only the questions related to the book instead of all other questions that the children might have and do not relate to the story…" Yet others understood that discussions could extend beyond that moment to other situations that children had experienced in order to integrate learning.

Teacher's Needs and Experiences

In all the three groups, teachers talked about the need for different ways of teaching children to get ready to read. They all expressed the need for newer ways of

helping children develop literacy as opposed to the old ways that they had been accustomed to. The teachers mentioned that they would welcome different literacy programs so long as they were seen to be beneficial to the children. Teachers in the DR and MDR groups reported that they had had no literacy or reading programs introduced to them for use in their classrooms. Molly (DR) stated that, "…we have had no formal literacy program to use…once in a while we have someone who comes to read with the children..."

In the control group, the teachers reported that on occasional basis, they attended workshops for professional development and that these were provided by an agency that oversees learning in the early childhood centers located in low-income communities. They indicated that these workshops did not always reflect their unique classroom contexts. In addition to this, they added that during these workshops they had no input as teachers and Sara echoed this by stating that,

> "…in most cases, the facilitators offered us a lot of information and then we would be given resources and materials to try out in our classrooms and we decided to utilize according to how it worked in our classrooms…ideally, I always felt that most of the ideas were what I was already implementing and I only borrowed some from the workshops...with any new techniques that I introduced in the classroom, I noticed that the children were very attentive and they seemed to grasp a lot. Last semester, I introduced a letter-links technique that I learnt from a training last year and the children were able to easily associate letters with their own names…a child would look at say, the letter L, and express that "wao!, that's me" and therefore for me am always looking forward to new information..."

Overall, the teachers seemed to agree that when children first come to preschool, they are at different stages as far as literacy skills development is concerned. Children's past experiences was pointed out as an aspect that affects how children progress in their development. Molly (DR) noted, "…vast differences exist among children right from when they start preschool and as teachers we expect to see these differences…we have no

literacy expectations from them when they are coming but we expect that they have learned some social skills…" Another teacher added that, "…we have some children who might be at the pre-reading stage while some might have started reading..." The teachers felt that literacy opportunities that children experienced before starting preschool was one of the determining factors as far as these differences were concerned. One teacher stated that,

> "…what I find is a lot of children come in…and I don't think they've been exposed to books, or if they have, they haven't been exposed to it very much. They come in and they are not familiar with even how to open a book or where to begin reading…I usually have may be one or two in class that may know how to read…"

The roles played by both home and school were seen to be paramount in boosting children's literacy. They all felt that it was important for the parents to be involved and therefore expected parents to offer children some literacy support in their homes. It was evident from their conversations that certain commonalities existed in the way the teachers carried out their literacy activities in the classrooms. However, we also cannot ignore the fact that during other times they differed in their thoughts.

Second Interview

Review of the second set of interviews revealed the following three categories; a) A shift in perception of story time, b) a learning experience and, c) building connections in learning. These categories are discussed below with an assumption that they will shed a light on some of the changes that occurred in the classrooms at the end of the eight weeks.

A Shift in Perception of Story Time

The results suggest that both the teachers and children had changed in the way they perceived story book reading time. In particular, the MDR and DR teachers talked

about how children's perception of story book reading had changed as a result of exposure to a different method of reading. They observed that children had started viewing story time as not just a time to sit and listen to stories read to them but more as a time of fun accompanied with a lot of interaction with teachers and peers. The teachers perceived the children's level of participation to have increased tremendously as did their level of skill development.

The children's increased level of engagement was demonstrated by the manner in which they participated during the story book reading sessions. In particular, the teachers talked about the various questions that children asked throughout, something that they never did before. The children were also generating a lot of discussions and they looked forward to being read to. Mary (MDR) stated, "…they never asked questions…now they ask a lot of questions or give statements about the pictures instead of me having to probe them…that is amazing to me…" Molly (DR) echoed this by saying;

> I think that the one thing that stands out for me is that the children are more engaged…they are asking a lot of questions and I have seen a change in their vocabulary and they are more engaged while we are reading…they are just energized to read more, I can't believe.

Rose (MDR) added that;

> The prompting is different and I am getting a lot from them…I am more focused because now they are even asking questions that I might have to go back and say, oh!! …because of their understanding…this has been an enormous change for them.

The teachers said that they were very surprised by the amount of change that had taken place within a very short time as the children seemed to bring something new to their experience every day. Rose (MDR) expressed that;

> Oh! My gosh! Countless experiences…the children talk about the story all the day now, whole week…When they come a week later and all the books are laid out on

> the table, they will open and remember something in the book…since we've looked at the pictures, talked about the words, it's more of a hands-on experience.

Mary (MDR) further noted that she asked a lot of thought provoking questions and so did the children. She had this to say;

> "…my kids seemed to enjoy a lot…They were able to remember stories from the previous weeks and tried to link characters…For example, when asked questions about the current reading, they would directly relate to the book they had read previously..."

Such was an indication that the children readily recalled past information. The teachers expressed that in the event of asking all these questions, the children were demonstrating a high level of understanding and they were able to make meaning out of this kind of engagement. This is a vital skill for children to develop since they need in their comprehension of any reading materials. Jane stated "…they realize a lot about the little things going on in the picture…they seem to understand and be able to connect some of what is going on in the picture…" She continued to state that;

> The kids, I think have more knowledge about what is going on in the story…I ask them a lot of questions and they ask me also, I get a lot of why? why? why?...they seem to have a better understanding and realize more about what's going on in the book.

Rose (MDR) added that,

> I think the questions now have changed…they are now asking more about what we are reading or about something on the page whereas before it was "when are we going out today?"…now it's about the story…they are understanding more of the story content and what to look for when being asked questions…so I feel that more of our functions have changed…I feel that their story time is more fruitful now and even their vocabulary has improved a lot…and for any new words I realize that they were really interested and pay more attention to them.

She went further to state;

> I realize that by pointing when reading, they are getting more the concept of left and right as we read the story and they are having fun…now they are paying more

> attention to the details of the stories looking at pictures and having them pick out words from the page that have to do with the story…so later on when they are looking for clues as they read, they are going to be able to know how to use a picture.

She further added that, "…when they read I find that now they point even when they don't know…they mimic what I do and they are looking at the pictures reading quietly in the book area…"

In the control group, the teachers also expressed that they had observed some changes. Sara (control) noted that;

> These kids have grown so much the last few months…the difference is huge…we can see a lot of difference from when you were here a month ago. The book reading has come a long way from what it was a month ago. We are having more children start to read.

A Learning Experience

The teachers viewed the whole process as a big learning experience and they pointed out in the end that they wanted to continue using the program. Mary (MDR) stated, "…this has been a real learning experience for me…I really liked it…" She continued to say that;

> This is what I will do from now on in my reading and I think it's even going to get better as I do more…it was harder at the beginning because I had to incorporate changes but it became so much fun…this is it…am sticking with this…now I look forward to doing it every day.

Rose (MDR) indicated that "…at first you know, learning something new and especially where I had to do pointing at the words was especially difficult for me. The children were not used to that. Then I realized that I didn't have to do that for every single word or every single page…you know…" Molly (DR) further added;

> "…well before, I would read without pointing, now I am pointing…before I would pick up certain words but not tie them as much as I am doing now…I think

> now I am paying a lot of attention to what am reading as well…I think that I don't just read along am much more worried about what they are able to learn.

The teachers in DR and MDR talked about how they felt the program had contributed significantly to their ability to adopt newer ways of interacting with the children during book reading. Molly (DR) had this to say;

> I really liked this program…I see myself asking a lot of questions and doing a lot of the things that were on the program…it has worked well…I do catch myself and if I skip a page without asking questions, I always go back to it or ask a lot of questions on the next page and also ask if they have done something that is described in the book…I see myself progressing with it.

In support of Molly's (DR) idea, Rose (MDR) stated that;

> I asked the children a lot of open-ended questions and also asked them to read with me and even try to replace certain words using newer ones that they had learned…what was good with this was that yes! It really did work in helping children remember things as I read a couple of times because what I stopped doing was reading just one book then another and another…I started doing a lot of repeating and what I found out was that the children actually enjoyed the story more…this surprised me a lot and therefore I kept reading the same book over and over again.

There was evidence that the amount of conversations had increased and the teachers used these opportunities to help the children make sense of what was coming out of the discussions. The conversations also led to the children being able to make predictions on what would happen next in each of the stories that they were being read to them. Rose (MDR) said that "…sometimes I hold up books with pictures illustrated by the same person and they are able to talk about the differences in the book covers by comparing the pictures…" She further noted that;

> With open-ended questions, what we practiced was raising hands and they did pretty well…they would interrupt one another and what happened was one child would make a comment and another child would elaborate on it…so it turned out…well at the preschool level to be a discussion of the story.

Rose (MDR) explained that;

> When a child asks a question, I sometimes post it back to that particular child or open it up to the class…I elaborate it differently depending on the child and what they ask and if it relates to the book or not…like we just read a story about a cat and one child exclaimed "that mother cat is biting her baby" and another child said "no, they don't bite their babies"…and there was a little argument and I explained that each mother carries their baby differently and so then we talked about people, elephants and also how kangaroos carry their young ones.

The teachers also pointed to the fact that the program had enhanced the children's vocabulary and literacy skills in general. Molly (DR) indicated that "…prior to this program we would pass by words thinking that they knew but I realized that they had no idea what some of these words meant…so this has been an awareness for me…it's like the whole culture of story reading has changed…a lot has changed, we stop on every second page to discuss what we just read…"

Rose (MDR) pointed out that "…before, when I asked questions, I was really digging to find what is in the book but now they are more interested in the words…I am trying to tie the words to real life experiences and they are making a lot more sense out of these words…now I pick out a couple of words per week and we would concentrate on them…" She continued to add that;

> Some of the books had words that they didn't know…like I discovered that in one book they didn't know what "cup corn" was…they don't know where cup corn comes from, they think that it's from the bag. Some of these things we discovered together. Again in the Corduroy book, some children didn't know how we put the money in the washing machine and how it takes…so we would have conversations about what all these means…it's not just reading for the sake of reading and general talking but it's more about understanding a complete story.

In the control group it was observed that the teachers asked a lot of questions too. However, the type of questions asked were closed type questions rather than those that elicited discussions. Examples of the questions asked were;

> "How many of you have pockets?"
>
> "Who jumps on their bed at home?"
>
> "Does anyone have a dinosaur in their backyard?"
>
> "Who came to school by bus today?"
>
> "Is it okay to be mean to others because they are different?"

In all the above questions, there was no further probing for the aim of eliciting more discussion. It was only in one occasion that the teacher asked a "*what"* question. For example, she asked, "What would happen if you brought a snake or frog to school?"

Building Connections in Learning

The ability to build connections in a learning environment is important. One teacher explained that "…with reading you can bring in so many aspects of learning than just reading a book…" The teachers in DR and MDR talked about how the strategies of Dialogic Reading helped children learn how to piece information together. This, they thought was gained through a lot of conversations about books and the learning of new words. They said that most of the children were now able to connect information from different episodes in different books and they were also relating what they were learning with their real life experiences. Evidence from the classroom observations and weekly book logs showed that there was a lot going on in the MDR group as far as classroom making connections was concerned. Rose (MDR) explained that;

> In a lot of the books that we have been doing for projects the children generated a lot of discussions…for example when they brought up a story about the bird we

> ended up discussing about birds even though the story had nothing to do with birds…we even have a nest, there is a nest up there on the tree and we talk about feeding birds…so they just expand on whatever they are asking and we talk about it.

Rose (MDR) continued to add that;

> I think that the prompting from the beginning i.e. from the cover, asking them what they think is going to happen in the story like in the "Whistle for Willie" they could connect it with the book "Taxi dog" and when they saw a boy they said it was Willie meaning they could remember the other story.

The teachers talked about paying special attention to all the new words that they came across and in most instances they would ask the children to talk about the meaning of those words. Molly (DR) explained that;

> We tried to keep using the new words and they would get stuck to demonstrating using the new words…for example, in the book "No jumping on the bed" they got stuck with the word "ceiling" and then we had musical instruments in the morning to try and reinforce what they had learnt…the words that are really entertaining for them, you just take those and use them every day.

Rose (MDR) noted that "I introduced words like 'maestro', 'audience' and 'string quartet' in one of the books and I heard the children saying these words most of the day." In the MDR center, the teacher indicated that on an average of seven weeks she was able to accomplish all the strategies of dialogic reading. The teacher noted that " I enjoyed a new technique… for me, having the children participate on each page was an enriching experience… usually I would ask questions after reading the book and only have a conversation with the children in the end but now I am able to help them weave the learning with other areas of the curriculum."

On the other hand the teachers in the control group were not consistent in the way they talked about linking learning with the different areas of the curriculum. For example one teacher mentioned that "…most of their questions tend to relate a lot to home and

sometimes they are not even questions… we probe the children a lot and sometimes you find that they will tend to ask questions that are completely unrelated to what we just talked about in class…" The other teacher had this to say, "…sometimes we try to relate learning with what they did the previous day and they usually have a lot to talk about…we try to incorporate language everywhere, in book form and none book form and we send things home related to the language activities…" This shows that the two teachers were doing things differently and independently from one another.

From the point of view of both the children and their teachers it is clear from the interviews that the whole story book sessions had changed for DR and MDR centers. Discussions had become a focus point in the classrooms and the children were more engaged as demonstrated by the endless questions they were asking. They were able to build connections between what they were reading and other life experiences outside of the classroom which was a demonstration of greater understanding. To the teachers, the whole process was a challenge as well as a great learning experience which resulted in influencing literacy practices in these centers.

Summary of Observations

Early Language and Literacy Classroom Observation (ELLCO)

The ELLCO instrument was utilized in order to become familiar with the details of the literacy environment in each of the classrooms. The subscales for the ELLCO were (1) Literacy environment, and (2) Language, Literacy and Curriculum. For literacy environment, the items that were rated included the book area, book selection, book use, writing materials and writing around the room. In the case of Language Literacy and Curriculum, ratings were done for the following instruments; oral language facilitation,

presence of books, approaches to book reading, facilitating home support for literacy and approaches to curriculum integration. Each of the above items was rated and final averages tabulated for use in interpretation. For inter-rater reliability, two observers rated the classrooms at the same time using two subscales in the ELLCO checklist. The scores reported were averaged from the ratings done by the two observers before the intervention started and the results are presented in Table 7.

Table 7: Literacy Environment

	Book area	Book selection	Book use	Writing materials	Writing around the room
Total possible score per center	(3)	(14)	(13)	(10)	(22)
DR	2	8	5	4	6
MDR	2	5	0	7	12
Control	2	5	2	5	8

Note. A count of different items in the classrooms

The literacy environment ratings revealed that all the classrooms were rated equally as far as the book area is concerned where they all scored two points out of the total three. This means that all the classes had an area set aside for book reading and books were displayed in an orderly manner and easy for the children to reach. However, it was evident that in all the classes, these areas did not have any soft materials like pillows, cushions or comfortable furniture e.g. a couch where the children could look at books comfortably.

In terms of book selection, DR scored higher than both MDR and Control groups. The MDR center had a score of "0" for book use because they had no books in the science area, dramatic play area; block area or any other areas even though these areas were clearly defined in the classroom. There was no evidence that an area had been set up where children could listen to recorded books or stories. Both DR and Control centers had books in other learning corners other than the book area. It was also evident that they had an area equipped with a TV or Radio where they could listen to stories.

Language Literacy and Curriculum

Figure 3 reflects how language literacy and curriculum subscale of the ELLCO was rated in each of the classrooms in the three centers.

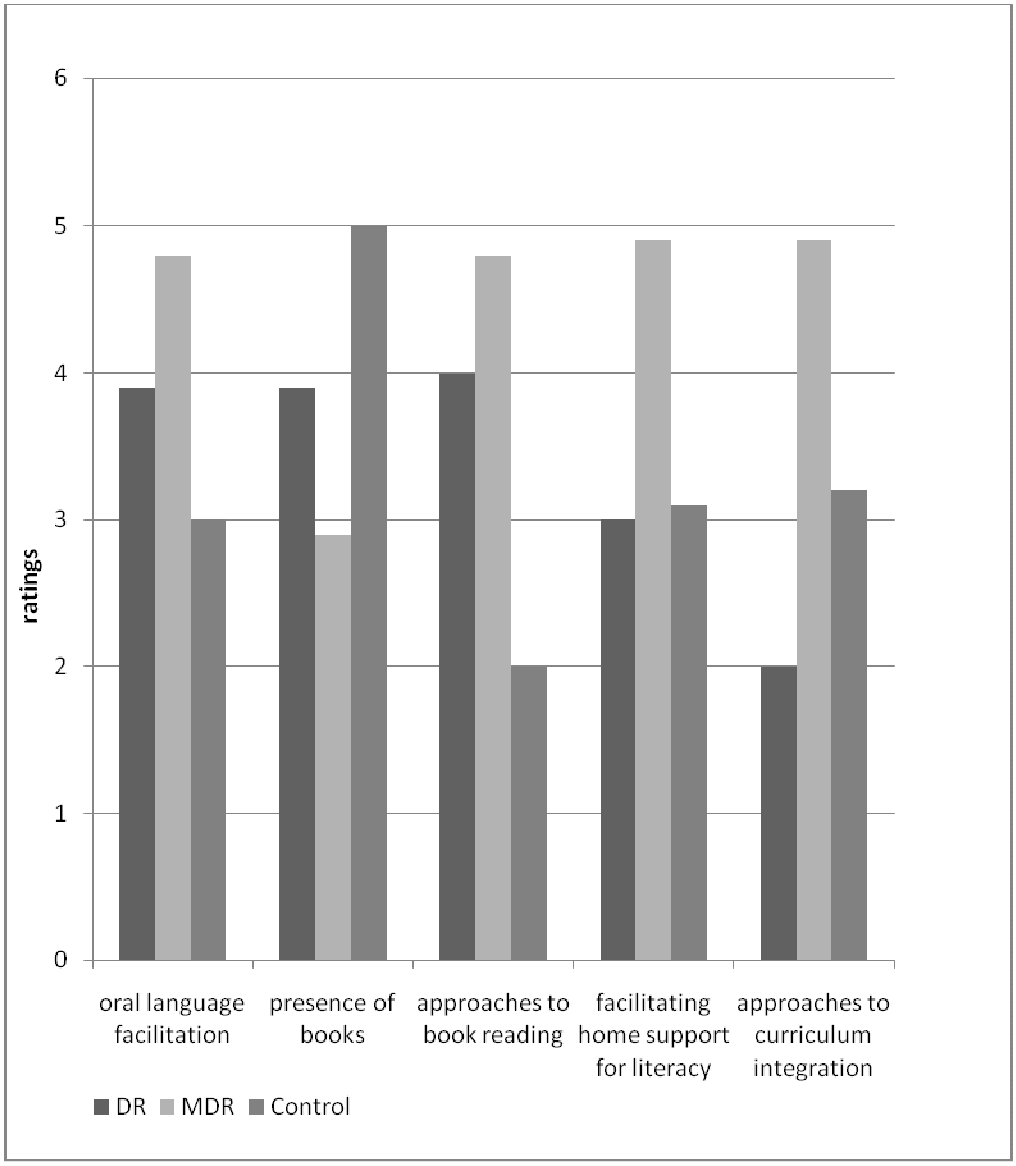


Figure 3: Language Literacy and Curriculum

The classrooms portrayed a literacy rich environment as determined by the amount of writings displayed on the walls and number of books found in every corner of the classrooms. The ELLCO results illustrate that the control group classrooms had a lot of books than the DR and MDR classrooms. On a scale of 1(deficient) to 5 (exemplary),

the control group had a score of 4.9 as compared to DR (score 3.7) and MDR (score 2.5). Although all the centers had books, the Control group had the greatest number of books. There were books in almost all the play corners i.e. there were books in the home corner, blocks corner, science corner and literally almost every play area/corner in the classroom

Dialogic Reading Checklists

PEER Technique

Classroom observations of book reading sessions were done for approximately thirty minutes per session during the intervention period to monitor the extent to which the DR and MDR teachers were using the PEER technique as stipulated in the dialogic reading program. Observations in the control group did not emphasize much on what techniques were used. PEER stands for; Prompt, Evaluate, Expand, and Repeat. The following are some examples; “What did Max do?” (P), “Yes, he poured the milk” (E), “He poured all the milk on the floor” (E), and children Repeat, “He poured all the milk on the floor”. Results indicated that all the three groups did not use much of the PEER techniques during T1. The number of times these techniques were used per a single story book reading session ranged from 0-3 times. During T2, DR remained the same as in T1 in the way the PEER techniques were used, recording a 1-point difference for both prompting and evaluation. MDR on the other hand showed a significant improvement especially in the prompting and evaluation of children’s responses. Control was the same as DR in T1 for prompting and hardly did any evaluating or expanded children’s responses. The technique of repetition in particular was not used at all especially in MDR and control while DR was recorded to have used it only once. This information is represented on Table 8.

Table 8: Oral Language Results from Observations (PEER)

	Time 1			Time 2		
Technique (PEER)	**DR**	**MDR**	**Control**	**DR**	**MDR**	**Control**
Prompt	**3**	**2**	**3**	**4**	**17**	**3**
Evaluate	**2**	**3**	**1**	**3**	**6**	**1**
Expand	**3**	**2**	**0**	**3**	**5**	**1**
Repeat	**1**	**1**	**0**	**1**	**4**	**0**
Totals	**9**	**8**	**4**	**11**	**32**	**5**

CROWD Technique

Observations were also conducted to determine how the groups utilized the CROWD questioning technique. CROWD stands for; Completion, Recall, Open-ended, Wh and Distancing. The following are the examples, "And all the children shouted_____"(C), "Can you tell me what happened to the dog?" (R), "Can you tell me something about this picture" (O), "What is going on here?" (Wh), "Why is it dangerous for you to jump on the bed?" (D). Table 9 shows the results from these observations. From the results one can tell that DR used more CROWD techniques than both MDR and control during the first round of observations. There was a clear indication also that during this time MDR almost did not incorporate any questioning techniques except only once for Completion and the same for Distancing. Control group on the other hand utilized some of the CROWD techniques except for open-ended questions. However, during the second round of observations, MDR was observed to be using much more Distancing and Completion techniques as opposed to DR and control. As much as there was no use of Recall, Open-

ended and Wh-questions in MDR at the beginning, there was a clear indication by the second observations that the teacher was employing a lot of these techniques. Control tended to remain almost the same for the whole period.

Table 9: Oral Language Results from Observations (CROWD)

	Time 1			Time 2		
Technique (CROWD)	**DR**	**MDR**	**Control**	**DR**	**MDR**	**Control**
Completion	**6**	**1**	**2**	**3**	**6**	**1**
Recall	**1**	**0**	**1**	**1**	**3**	**0**
Open ended	**4**	**0**	**0**	**4**	**9**	**1**
"Wh"	**5**	**0**	**2**	**3**	**9**	**1**
Distancing	**1**	**1**	**1**	**1**	**4**	**1**
Totals	**17**	**2**	**6**	**12**	**31**	**4**

Weekly Book Logs

The weekly logs were completed at the end of each week. The teachers wrote the title of the books they had read, how many times and how many children were read to each time. The teachers in DR and MDR indicated whether they were able to accomplish all, some or none of the techniques that they were required to implement. Since the control did not implement the program, they made specific comments related to the process of book reading. The researcher collected all the weekly logs at the end of the eight weeks and the information from the teachers has been summarized as shown in Table 10.

Table 10: Results from Weekly Book Logs

Item		Condition		
		DR	MDR	Control
Number of books read in total		10	10	7
Number of times each book was read		2	3-4	1
Number of children present during each book reading		5-6	18-20	12-15
Dialogic reading techniques accomplished:	All	3	6	
	Some	4	2	
	None	1	0	

Overall, the treatment groups (DR and MDR) read all the ten books while the control read only seven. In DR each book was read twice, three to four times in MDR and once in control. DR read to small groups of five to six while MDR and control read to the whole class. MDR group felt that in six out of the eight weeks, all the techniques were accomplished and only some in two weeks. In the DR group the teachers felt that in three out of the eight weeks they accomplished all, in four weeks they accomplished some and they felt that there was one week when they did not accomplish any of the reading techniques stipulated in the reading program.

How Do the Groups Differ in Book Reading Methodologies used in the Classrooms?

This question sought to compare the book reading practices used by the teachers in their classrooms. In particular, attention was paid to comparing how the groups were reading at the beginning of the intervention and through to the end of the eight weeks. Each condition (DR, MDR and Control) has been discussed in light of the data collected from the interviews, classroom observations and the weekly book log entries.

Dialogic Reading Group (DR)

There were a total of twenty three children in this group and the teachers read to the children in small groups of three to five (which was consistent with dialogic reading guidelines). According to the observations using ELLCO, this center had a variety of books. Many were simple reading books whereas others incorporated a lot of new vocabulary. The books in the classroom were not only in the book area but in other learning corners too. Most of the books conveyed factual information and at least three or more books were related to the theme being covered in the class at that time.

On the language literacy and curriculum component of the ELLCO, this center had an average score of 3.8 in oral language facilitation, presence of books and approaches to book reading. However, there was very little evidence from the teachers to suggest that the center strived to facilitate support for literacy at home. Moreover, there was no indication to show that the teachers tried to integrate learning in the various curriculum areas. The teachers tended to compartmentalize learning to the extent that every learning area of the curriculum was treated almost as an independent unit.

During the implementation period, this group did not show a big difference in their use of the PEER technique during both time 1 and time 2 of the observations. The only slight difference was in prompting and evaluating children's responses. The teachers rarely asked the children to repeat correct responses during both times. On the contrary, the teachers incorporated a lot of CROWD questioning techniques. Even though recalling and distancing prompts were uncommon, one teacher (Molly), especially used a lot of completion, open-ended and "wh" prompts throughout the intervention period.

In their weekly book reading logs, both teachers indicated that they were able to read all the ten books and each book was read twice to small groups of children. At the

end of almost every week, Molly (DR) indicated that she was able to accomplish most of the dialogic reading techniques. However, Jane (DR) noted that in most cases she was unable to accomplish everything because she was having difficulty pointing while reading to the children. At the end of reading one of the books “Blueberries for Sal”, both teachers felt that they were unable to incorporate much of dialogic reading approaches. The reason given was that the story was too long with dull pictures and it was boring which resulted in the children losing interest in the story and even reading it a second time did not make much of a difference.

During the two interviews, they expressed different opinions about the book reading methods they were using. They both expressed that their ways of reading had changed. During the first interview they had talked about how they spent time reading as many books as they could with as little interaction with the children as possible. Molly (DR) mentioned that, “…the focus was not about how much the children had understood but more about how many books were read per week”. Jane (DR) also agreed that her goal was to read many books. By the time of the second interview, their exposure to dialogic reading had changed their thinking and had had an influence on how they were reading. The goals had shifted from reading many books to reading a few, this time with a focus on helping children understand more the content of the book. The teachers mentioned that interaction now took center place and it no longer mattered how long it took to finish one book. They had noticed that the children had become more engaged during story book reading than before.

Modified Dialogic Reading Group (MDR)

In the Modified Dialogic Reading group there were always eighteen to twenty children during each story book reading session. As was the plan for this center, reading sessions took place with the whole class setting at all times. In total there were twenty six participants in this group but the schedule was organized in such a way that there were always a maximum of twenty children in the class per day. There were some days or part of the day when some children did not attend the center but the teacher made sure they received the same learning materials as the rest of the children.

From the observations using the ELLCO instrument, there was an indication that in all the centers teachers tried to extend children's literacy support beyond school to the homes. In particular the MDR group did a lot more than DR and control groups in engaging parents. They had something to go home on a daily basis for the children to read with their parents. There were boxes where parents picked up children's work at the end of the day and dropped off every morning. In most cases it was a book that they had to read at least two to three pages per day and they kept a reading log. In class the teacher took time to ask children to share what they read with their parents or anything else that they did whenever they went back home. Usually, whatever the teacher sent home was related to what they learnt in class that day. This was clear evidence that learning goals were set to extend beyond the classroom.

Out of the three centers, MDR had the least number of books and they were only found in the book corner. There were no books in the other learning corners except for play materials. Therefore, although there was evidence to support children's learning, the fact that books were not found in every corner of the classroom indicated that book reading was centralized to a particular area of the class and the children would not easily

come across books anywhere else in the classroom. Book handling therefore didn't seem to be a spontaneous thing for the children to do anywhere in the classroom.

When MDR was observed the first time to see the extent to which the teachers incorporated the PEER technique, it was common that whenever the teachers prompted the children, they used direct questions like "what is this?" This was usually in the case where the teacher pointed at a picture and the children had to name it. Generally, this group rarely used prompting, evaluation and expanding prompts. Asking the child to repeat certain aspects in the course or after story book reading was not observed in MDR.

Findings from the next observation indicated that implementation of the dialogic reading program had had an impact in the way teacher carried out the reading sessions. They demonstrated a variety of opportunities that encouraged children to interact amongst themselves as well as with the adults in the classroom which was a way of facilitating children's oral language development. The teacher stimulated the children to talk about the new words that they were meeting for the first time or even those that they already knew. By this time too, it was evident that the teacher was using inferential questioning in order to encourage children to participate in conversations. Many questions were directed towards helping children to predict reason, analyze a situation and even go further into discussing it. The following excerpts demonstrate how the teachers encouraged prediction;

Example 1

Teacher: What do you think the story is about?

Child: about Max

Teacher: why do you think it's about Max?

Child: because he has cakes and overalls

Example 2

Teacher: I wonder what's gonna happen.

Child: It was too late

Teacher: what happened?

Child: He broke the eggs

Conversations like these were common and during the interview the teacher pointed out that she enjoyed engaging the children in this manner because it helped them remain focused. In other conversations, the teacher was more interested in seeing how children reasoned and analyzed a situation. This is demonstrated in the following excerpts;

Example 1

Teacher: What just happened?

Child 1: She spilled the milk

Child 2: She's sad

Teacher: Could the grocer read well?

Child 1: No, because he's still learning how to write

Child 2: yes, he's still learning.

Example 2

Teacher: Look at this, what is it?

Child: A snake… it's a python

Teacher: what is wrong with the python?

Child: look, the skin is coming out

Teacher: why is the skin coming out?

Child 1: Because it is dry

Child 2: because it's growing

Teacher: yes, as they grow the old skin comes out.

Reasoning was demonstrated by the following excerpt:

Teacher: how were they going?

Child: Very fast

Teacher: What tells you that they were going very fast?

Child: Because there is a lot of dust behind.

These conversations elicited a lot of discussions and the teacher moved the children a level higher to think "critically" and give responses depending on how they independently viewed different situations.

During some of my observation visits, I noticed that one of the classroom routines in the MDR center was that children took turns in choosing books to be read. This was something that the children looked forward to and it made story book reading a time to long for.

Control Group

In this group, there were books in almost all the play corners i.e. the home corner, blocks corner, science corner and literally almost every play area in the classroom which was an indication that perhaps, books were being used to support children's learning and development in various areas. Just like MDR and DR, the control group had children's

work displayed on the classroom walls. They also had some writing materials in each of the learning corners. Evidence from the ELLCO instrument shows that stimulating oral language during book reading or any other class activities was very basic. This was indicated by the low scores recorded for oral language facilitation and approaches to book reading.

The control group had two classrooms, there were always between twelve to fifteen children being read to at the same time. The children always sat in a big circle and sometimes far from the book and so most of them could not see the pictures. It is no wonder then that Ida (control) spent a lot of time controlling and giving instructions to the children during book reading sessions. When children made comments or exclamations in the course of reading, the teacher did not respond and instead just kept reading. Below is an excerpt made from one of the classroom observations.

Teacher: introduces book *(children too far from the book)*

Teacher: do you know what to squeeze off means?

Teacher: can you see?

Child : I like jumping on my bed

Teacher: no you can't jump on the bed

Child: I can

Teacher: It's dangerous *(Children make some comments; teacher takes no notice)*

Teacher continues reading, children seem eager to interact, gestures, sounds, expressions

Teacher: that was not funny *(children are not engaged, start fidgeting)*

Child: I can't see *(moves forward as she couldn't see the book)*

Teacher: Phil, don't play with the books *(takes more time trying to control children moving around and playing, not paying attention)*

In the above example, it was clear that the teacher did most of the talking. Sara tended to have full control of her class but like in Ida's (control) class, there was very limited interaction during and even after reading a book. During the interview, she mentioned that sometimes she read to the children in smaller groups or one-on-one for those she thought were struggling with language. This is what she said;

> …some days the whole group was read to together, sometimes small group was better…and like I said, the large group was good because we have children who are more advanced than others and so they will speak up more. Both ways worked but I think that with the books that you brought the large group was good.

There was also no evidence to show that the teachers emphasized the role of parents in supporting children's literacy. Sara (control) however mentioned that once in a while she did class projects that involved the input of parents but that it had not been an easy undertaking because parents did not show a lot of enthusiasm in participating.

Although this group did not implement dialogic reading, it is not unusual for any preschool teacher to ask questions in their classrooms. Therefore it was necessary to observe if these teachers were using any questioning formats that were similar to those outlined in the dialogic reading program. An observation on the use of PEER indicated that the teachers were asking less questions and did not do much as far as evaluating, expanding and asking children to repeat the correct responses. This trend was common in both classes throughout the eight weeks. The teachers also incorporated very little of CROWD questioning techniques. In particular, it was only Sara (control) who tried to incorporate completion, "wh" and open ended prompts.

This group had the most number of books which could lead one to mistakenly conclude that perhaps a lot of book reading was going on. In fact there was no indication in the planning to show any activities done as follow up in order to reinforce the understanding of a story. At the end of every story session other different activities followed almost immediately. Information entered in the weekly logs by the teachers indicated that each of the books assigned were mostly read once a week in one of the classrooms while in the other classroom each book was read twice. In both of these classes, the following three books were not read; *"Blueberries for Sal by Robert McCloskey", "A trip to the firehouse by Wendy Lewison"* and *"the dinosaur who lived in my backyard by Hennessy B. G."*. The teachers felt that these books were a bit difficult for the children and therefore they chose to utilize three other unassigned books which they had in their classrooms. During the final week, the teachers felt that they did not accomplish much because the concepts portrayed in the books were too hard for the children to grasp. There were other occasions when two books were read per week. During two different occasions, one teacher read one-on-one with each child. The books read one-on-one were *"The quilt story by Tony Johnson"* and *"The adventures of taxi dog by Debra & Sal Barraca"* This showed a lot of inconsistency in the manner in which books were read in this center.

The issue of fidelity for DR and MDR will be addressed in the next section but it is important to point out that the three groups sometimes used similar methods when reading and different during other times depending on the training they had received or the teacher's own disposition. Before the intervention, every teacher had their own style of doing the book reading activities but as would be expected, DR and MDR tended to do

similar things as the intervention progressed. By the end of the eight weeks there wasn't a considerable change in the way the teachers in the Control group were reading. However, a lot of changes were realized in DR and MDR groups where there was a lot of interaction taking place, generated by the many questions being asked. The teachers and children in the MDR group in particular were found to be more engaged, enthusiastic and it was obvious that a lot of changes had taken place in their learning environment.

Are Teachers in DR and MDR More Likely to Effectively and Faithfully Implement Dialogic Reading Programs in their Classrooms?

The issue of fidelity was critical in this study and therefore an attempt to answer the above question was a direct way of addressing the extent to which the teachers actually implemented the program. The goal was to find out if there was a high level of implementation in the MDR group where teachers had an input in modifying the dialogic reading program as opposed to DR group which implemented the program as it was.

The teachers took advantage of every moment to prompt the children by using the techniques of dialogic reading. In MDR for example the following conversation suggests how the teacher evaluated the child's response when prompted with a question;

Teacher: Could the grocer read well?

Child : No, because he's still learning how to read.

Teacher: Yes, he's still learning...

The last comment made by the teacher was an aspect of evaluating the child's response. Samples of prompts that the teacher used were as follows:

> "What is this here? What do you see on this picture? How many are there? Could the grocer read well? What is wrong with that writing? How many things were on that list? Can you read this now?"

Questions such as these were common during every book reading session and they generated a lot of discussions. This showed a very big improvement between the time of the first observation and the second time the observations were done. As indicated earlier, the teacher was literally asking an average of seventeen questions per book reading session so as to gain an insight on the children's understanding of the stories read to them. The aspects of evaluation and expanding of children's responses by the teachers were also observed to be a large part of the conversations. The following excerpts from the conversations demonstrate how the teacher used the conversation to evaluate and expand the children's responses:

Teacher: What happened?

Child : He broke the eggs.

Teacher: Spells out the word "eggs" and points out "g"(here is the letter we are talking about.

By spelling out the word eggs and pointing at the letter "g", the teacher was expanding the children's understanding of what they were learning.

Information gathered from the weekly book logs indicated that in seven out of the eight weeks, Rose (MDR) was able to accomplish all she had planned as per the Modified Dialogic Reading techniques. She indicated that some of the books particularly generated a lot of discussions and she sighted books like *"Bunny cakes by Rosemary Wells", "A trip to the firehouse by Wendy Lewison"* and *"I took my frog to the library by Eric Kimmel"*. There was a lot of new vocabulary, sentence completion was common and discussions did not only focus on what was in the books but also about other life experiences that related to the story at hand. The book *"a trip to the firehouse by Wendy*

Lewison" related directly to the fire truck visit the class had just made. The teacher also felt that in four weeks out of the eight she had made a lot of accomplishments. In those four weeks the teacher indicated that the children learnt a lot of new vocabulary and they were able to repeat and recall information.

Information gathered from the observations clearly revealed that there were specific goals planned for each book reading session in the MDR group. The sessions involved a lot of interaction and discussion stemming from asking a lot of questions. Follow up activities were included in the planning where painting, dramatization and song were linked to stories read in class. This may be linked to explaining the high level of implementation realized in this center.

During the second observations, it was clear that MDR had surpassed DR in the use of questioning techniques. Completion, Open-ended and Wh-questions were significantly used by the teacher throughout in the second observations as compared to time 1 where none had been incorporated. In the conversation below, the use of open-ended and "Wh" questioning is evident:

Teacher: What did he write now?

Child : He wrote the word "flour"

Teacher: Do you see that writing?

Child : Yes, but no mash mellow squires

Teacher: Why didn't he give him?

Child : Because he couldn't read it

Teacher: How would that make you feel?

Child : I would feel very sad

Examples of some of the Recall questions that the teacher used are:

What just happened? What did Max get to do? Who gave it to him? You see that line, why can't he cross over?

Information gathered from the weekly book logs further supports this. In the case of MDR the teacher noted that each book was read different number of times ranging from twice to four times per week. In some cases, a book was even read twice or three times per day. This trend was common for all the ten books throughout the eight weeks.

When asked about group size and how this impacted the way the literacy program was carried out, the teachers had different opinions. In the MDR group where reading was done with the whole group, Rose (MDR) felt that having rules in the classroom was helpful when reading to the whole class. She said that;

> "…as long as in the beginning you have to say that…we have to raise our hands and listen to the person talking…but if I am loosing the attention of the group then that is not going to serve any purpose…so if they have lost interest at that time then you stop…all you have to do is to be able to read your kids…"

She continued to state that;

> I think the best thing that I found with a large group is reading the story with the group where they see the pictures and then reading the story during rest time when they just listen and then when we read again, have them help me with the words that are left or if there are rhyming words, have them help me with that.

During every story book reading session, the teacher read in a whole group setting. There were always seventeen to twenty children during each session. Sticking to the way she had designed, the teacher mainly asked open-ended questions to either a small group or individual children after she had finished reading the story. This was mainly done when children were involved in follow up activities. She would ask a child to either retell the whole or part of the story.

This activity was evident throughout where the teacher engaged the children in rich and meaningful conversations. In small groups of five to six, children would be involved in dramatizing the whole or part of the story. The teacher tried to make sure that all the children were involved in dramatizing which was either in the form of song or modeling characters and the children looked forward to it. She grouped the children for these particular activities so as to reinforce in a smaller group what they had been exposed to in the larger group setting.

It was interesting to note how the children were more engaged in these smaller groups. The teacher asked a lot of thought provoking questions or made statements that prompted children to go deeper into elaborating their answers. At one point during the discussion a child said “you have a dark skeleton” and the teacher’s response was, “let’s hear more about it.” By making such a statement, the teacher was prompting the child to talk more about what he meant or his understanding of what he was talking about. The teacher was also asking questions that called for prediction. For example, “Tell us more about why you think he couldn’t step over the white line? “ Why didn’t the grocer give him the mash mellow squares? “What do you think the story is about?” “Why do you think the story is about Max?”, “Talk about what the story could be”, ‘I wonder what’s going to happen next?”

The teacher also talked about helping children make proper judgments and encourage observation so as to promote story comprehension. In order to instill this, she would ask the children questions like, “It was too late, what happened?”
Reasoning: “Why is it not a good thing to keep candy until the next year?”
Open-ended: “Why was that not a nice thing to do?”

Both Molly (DR) and Jane (DR) agreed that even though they were reading to small groups of 5-6 children, they would even prefer smaller groups of about 3 children at a time. On the other hand Rose indicated that

> …I would like to have smaller groups but again you cannot always do that …although reading to smaller groups of children is much better…making more time for reading is harder because there is much more that you want to do…and so in my case I was comfortable reading to a big group of children…it worked for me.

Overall, it seemed that there were mixed feelings as far as group size was concerned but it was not a hindrance to the learning experiences being gained by both the children and the teachers.

The teachers who used the Dialogic Reading program all seemed to agree that there were certain aspects of the program that were challenging. Rose's (MDR) disposition after the intervention was as follows:

> "…I liked the program but I did not like the paperwork. I know that you needed that information for your research which I understand. ..the writing part of it can be a bit tedious and when you have a big group of children it's not easy to keep track… at the beginning it sounded simple but as time went by and I went deep into it I begun to feel overwhelmed. However, in the end I became used to it and it became simpler. It will be simpler now that I do not have to do extra paperwork. .."

Therefore even though at this time she exhibited some excitement and was eager to share what had transpired in her classroom, she still held to her first position and mentioned that sometimes she felt a little overwhelmed

The most salient one was the strategy of pointing while reading. They all agreed that it was not an easy thing to do and it distracted the children's attention. Jane (DR) noted that "…I wasn't really a fun of the whole thing of pointing as the kids couldn't understand what was going on. I found like my hands got on the way…it's kind of hard to hold up a book and point at the same time…"In echoing what Jane (DR) said, Molly

(DR) stated that…"I think I was a little hang up at pointing every word and I think I was concentrating in the beginning on doing that and then I forgot things like expression…" However, Rose (MDR) pointed out that;

> It's still difficult for me to follow the story with my finger and most of the time I figure that I am blocking and I think that some of them were caught with watching my finger and they would ask "what are you doing?" …so that is difficult but I don't think it's an obstacle... in itself I didn't find any part that didn't work.

However, even though they expressed how difficult this may have been, the teachers said that they still took time to practice it and with time it became easy and the children got used to it too. As far as the number of children was concerned, it was evident that in DR the number of children being read to varied all the time and the teachers reported that this was due to children either being absent, coming late or being picked up early from the center. However, since they were to read to the children in small groups, reading sessions were always planned for 5-6 children at a time. The book reading logs for this center indicated that the number of children ranged from 5-8 for each group and even with this small number of children, the teachers wished that the numbers were even smaller.

As the data demonstrated with regard to actual strategy usage, the DR group teachers found it difficult to integrate all the DR strategies into their reading sessions. On the contrary, MDR teachers were able to successfully integrate the strategies they chose to use and this is reflective of the results obtained and the possibility that in this group, the rate of implementation was high.

This study worked on the triangulation of the findings through the comparison of different data sources, documented in field notes, interviews, observations, weekly book logs and audio taped transcripts. Another method employed for credibility in this study

was by way of researcher and research assistants comparing field notes and observation data after every observation. This was thought to be a way of contributing to the validity of the study, which was an important factor.

The quantitative data point to the significant factors related to children's literacy development while the qualitative data complement the quantitative data and offer the "how" of the process of this development as a result of exposure to the dialogic reading program. Quantitative data reveal a relationship between the dialogic reading program and children's literacy outcomes. The results indicate that children exposed to the program exhibited higher scores than did the control group children. Furthermore, children in the modified dialogic reading group outperformed both the DR and the control group in vocabulary and oral language development. Furthermore, this study adds to our understanding of how higher gains in children's literacy development are realized as a result of allowing teachers the opportunity to be in control of the reading programs introduced for use in their classrooms. This is evidenced from the MDR group where there was an indication of higher implementation rate and fidelity by the teachers.

Qualitative data support the quantitative findings (both in this dissertation study and in previous research) that using the strategies of dialogic reading when reading with children help boost their literacy development. The next chapter discusses the findings of this study in light of previous research that has been done in the same field.

CHAPTER 5

DISCUSSION, IMPLICATIONS AND CONCLUSIONS

Overview

There is vast evidence to suggest that story book reading boosts children's vocabulary and oral language development (Hargrave & Senechal, 2000; Scarborough & Dobrich, 1994; Bus, van IJzendoorn & Pellegrini, 1995) and various reading programs used in early childhood settings have consistently yielded such evidence. One program, the dialogic reading program developed by Whitehurst and colleagues (1988), has been used extensively in low-income preschools and the results have been impressive. Most of these results have been obtained by the researchers doing the implementation of the reading programs themselves. As stated in the earlier chapters, with the exception of Wasik, Bond and Hindman (2006), who included teachers in the implementation, most studies have not investigated how the involvement of teachers in modifying and implementing the dialogic reading program would have on children's early literacy development and thus the need for such a study.

The purpose of this study was to investigate the effectiveness of a teacher implemented dialogic reading on preschool children's vocabulary and oral language skills. The study sought to determine whether involving teachers in redesigning and implementation of the dialogic reading program would produce higher child outcomes than if the program was used as traditionally designed by Whitehurst and colleagues (1988). In order to accomplish this, a modified dialogic reading program and the traditional dialogic reading by Whitehurst (1988) were implemented in different preschool settings and compared to a control group. The current study also sought to find

out if there was a higher rate of implementation by the teachers who redesigned the program where they added their own design features. Finally, the study aimed at comparing literacy practices among the three groups throughout the implementation period.

The Whitehurst dialogic reading model has two sets of questioning technique with the acronyms PEER and CROWD. In the case of PEER, the teacher Prompts the children with questions; Evaluates the child's responses; Expands the child's responds and have the child Repeat expanded utterances. On the other hand, CROWD requires that the teachers asks the children Completion prompts; Recall prompts that require the child to remember; Open-ended questions that encourage the child to respond in his or her/her own words and Distancing prompts that require the child to relate the contents of the book to the aspects of life outside the book. The guidelines of dialogic reading require that each book is read twice to small groups of three-four children.

The MDR model is the redefined Whitehurst model created by the teachers to suit their classroom situations. Teachers agreed to adopt some of the PEER and CROWD techniques in addition to inferential questions. For PEER they agreed to Prompt and Evaluate the children while adopting the whole of the CROWD questioning technique with the only difference being that Open-ended questions were asked children individually during small group activities. These were inferential questions that were more specific and more directed to helping children make proper judgments, analysis, reasoning, prediction, observation and explanation. The teachers read to a whole class setting instead of the small groups and each book was read at least three times. Therefore, in addition to the questioning techniques (PEER & CROWD) proposed by Whitehurst

(1988), the modified dialogic reading (MDR) teachers added inferential type of questions. In their study, Snow (1983) and Van Kleeck (2003) suggested that preschoolers benefit from adult use of inferential questioning. In this chapter therefore, a discussion of the research findings is presented. Limitations posed by the design of the study and the nature of the data are considered. Implications for educators have been highlighted and recommendations for future studies are offered.

To assess efficacy of the program, two measures were used to assess children's vocabulary and oral language, and both quantitative and qualitative methodologies were employed. Informed by prior research, the quantitative portion of the study aimed to obtain data on the trends of children's literacy development and whether these differed by the type of intervention introduced in the different centers. The qualitative portion of the study aimed to obtain data based on observations and teachers' narratives concerning classroom literacy practices and the changes they observed to be taking place. It was thought that the qualitative data could be used to better understand the quantitative findings. Overall the results indicate that the intervention implemented by DR and MDR had an impact on preschooler's literacy outcomes. By the end of the eight weeks, the children in these conditions had increased their vocabulary and oral language development compared to control children. Furthermore, the results indicated that gains in both vocabulary and oral language were highest for the MDR condition.

An analysis performed for PLAI-2 and the book vocabulary during pretest suggested a moderate relationship ($r = .498$), between the two measures indicating that there were some language dimensions in common between the subtests of PLAI-2 and the book vocabulary test. The book vocabulary test was designed using the specifications

of the standardized PPVT-R measure. The measure consisted of words that were only found in the ten books read in the classrooms. The aim was to find out if dialogic reading allowed the children to learn the target vocabulary found in the assigned books. Results from the use of this measure demonstrated that children who scored higher in vocabulary also scored higher in their measure of oral language skills. These findings are closely related to those obtained by Lehrer and DeBernard (1987) who found a correlation (R=.52-.82) between PLAI and the PPVT-R scores. It is important to note that although PPVT-R measures receptive and expressive vocabulary while the book vocabulary test used in the current study targeted certain vocabulary, the interpretation from both studies point to the fact that there is a relationship between vocabulary and oral language.

From the analysis of the book vocabulary, the percentage of children who got each of the vocabulary words right or wrong during both pre and post testing indicated that those who got the words correctly identified during post test rose from 31.8% to 56.5%. During pre test, most of the words were unknown to the children i.e. 61.9% of the words were unknown to the children. Although this percentage decreased to 43.6% by post test, there were certain words that still remained largely unknown to some of the children. These are words like hatchet, overalls, shawl, suspenders, raccoons, pigtails, violin, stamp and saucer; an indication that children may need repeated exposure to these words to support integration into working vocabulary.

However, further analysis supports the supposition that these words were actually largely unknown to the children in DR and control. For example, 80% of children in MDR got the word shawl correct, overalls, 91%, and saucer, 80%. A similar trend was observed for all the words listed above and the end result was that the percentage of the

children who knew these words were 51.9% for MDR, 30.6% DR and 17.5% Control, a clear indication that the high percentage of children who did not know the words were from DR and Control. There was a significant gain in vocabulary by the children in the MDR condition suggesting that the MDR teachers could have spent more time elaborating words they felt were new to the children.

The pretest mean scores for vocabulary and PLAI were similar for all the groups. However, the post test mean scores recorded a difference between the groups. An analysis using the Repeated Measures ANOVA found a significant main effect for group and time. This suggests that the children's vocabulary and oral language gains improved as indicated by the different scores during the two different test administration periods. Overall results from the three groups indicate that each group made an achievement. However, MDR group registered the highest gains over the eight weeks when compared to DR and the control group.

The qualitative analysis of this study was based on information from interviews carried out before and after the intervention, classroom observations utilizing the ELLCO instrument, as well as observation checklists to assess the use of the dialogic reading techniques (PEER & CROWD) by the teachers. Results indicated that both DR and MDR teachers embraced the reading program as evidenced from changes in their reading practices. They reported that story book reading had become a fun time for the children, there was increased interaction and the children had gained a lot of literacy skills as compared to what they were able to do before the intervention. This is supported by evidence gathered from observing teachers as they used PEER and CROWD techniques throughout the intervention period. The MDR teachers especially used all the techniques

that they had identified to use within PEER and CROWD and they also utilized all the techniques they had added to the program. This is an aspect that they indicated in their weekly book logs. DR and Control teachers noted that they made some accomplishments for their weekly goals but most accomplishments were notable among the MDR teachers. Growth was also realized among the control children and although theirs was minimal, it could be attributed to the children's expected maturational changes as well as the usual literacy practices they were exposed to in their classrooms.

Discussion

The study contributes to a body of research showing that adult-child book reading behavior is malleable and that, changes in adult reading behavior has an effect on children's literacy development. The current study indicates that teachers learned to increase their use of dialogic reading techniques as demonstrated by their utilization of CROWD and PEER questions as well as the use of inferential questions by the MDR group and the amount of sustained interactions in the classrooms. Information gathered from interviews, observations and weekly book logs show that teachers applied the intervention with a high degree of integrity. Interpretations are discussed using questions posed earlier as a framework and in the context of related published studies. Results of this study support the following conclusions:

First, a major question at hand involved the effectiveness of the dialogic reading program on vocabulary and oral language skills of the children in the study. Thus one of the foci was to determine if there were differences in children's pre-literacy skills outcomes as a result of implementing the traditional Whitehurst dialogic reading or the modified dialogic reading program. A review of the descriptive and inferential statistics

presented in the previous chapter suggests that dialogic reading was effective in developing children's vocabulary and oral language skills. Further observations indicated that when the program was modified and implemented by the teachers themselves it yielded better results in children's vocabulary and oral language scores as opposed to when the program was implemented in its original form.

In the current study, the increase in vocabulary means (51% to 80% for MDR, 51% to 61% for DR and 50% to 51% for Control) supports previous research in showing the short term benefits of dialogic reading on vocabulary acquisition. It also extends prior research in demonstrating that the dialogic reading procedure is effective in raising vocabulary in low-income preschools especially when implemented by the teachers themselves. These findings are consistent with previous studies (Hargrave & Senechal, 2000; Wasik, Bond and Hindman, 2006; Lonigan & Whitehurst, 1998; Whitehurst et al., 1994) who found that when children participate in dialogic reading activities, they show improvements in vocabulary.

The intervention was implemented intentionally for a short period (8 weeks) which is consistent with earlier dialogic reading research. Other published studies have used 4-6 weeks (Hargrave and Senechal, 2000; Heubner, 2000; Valdez-Menchaca and Whitehurst, 1992) or 8-12 weeks (Chow and McBride-Chang, 2003; Wasik et. al., 2006). In their study, Hargrave and Senechal (2000) indicated that short programs seem to be effective with 3-5 year old children if book vocabulary was assessed.

During pre test, the three groups started off at the same level with mean differences that were not significant. However, the post intervention scores for book vocabulary were different with all the three groups registering some gains. Analysis

revealed that the children in MDR performed at a much higher level when compared with their counterparts in the DR and control groups registering a sharp increase of 7.52 points by the end of the intervention. The ANOVA analysis indicated that the difference between the groups at post test was significant. This could be attributed to the fact that teachers in MDR paid a lot of attention to the new words in all the pages of all the ten books read. Similarly, in their study Wasik et. al., (2006) found that the intervention children had significantly larger vocabulary than control and also performed significantly better on expressive and receptive language assessments that were constructed on the basis of target words that the children were exposed to during the intervention. Senechal (1997) and Senechal, Thomas and Monker, (1995) found that children who answered questions about target words during shared reading comprehended and produced more of those words than did children who listened to a story in which the reader emphasized the target words.

The MDR teachers reported reading the books at least three times and therefore listening to the books many times could have enabled the children to master a lot of new vocabulary. Senechal and Cornell (1993) found that young children acquire receptive vocabulary after a single reading of a book. Similarly, Robbin and Ehri (1994) found that children who were non-readers acquire new vocabulary from listening to stories read twice with no explanation of word meanings. On the contrary, Elley (1989) demonstrated that children who received explanations of word meanings during the book reading made greater gains in vocabulary than did children who simply listened to the story. Based on the qualitative findings, the high interaction between the teachers and the children in MDR could have resulted in the teachers taking advantage to elaborate the more difficult

words. Previous experimental research show that shared book reading between adults and children provides children with the opportunity to acquire new vocabulary, Hargrave and Senechal (2006).

Another finding indicates that the efforts made by the MDR teachers to follow the children with open-ended questions outside of book reading time may have contributed to the significant vocabulary and oral language increases. The teachers followed the children with inferential questions during story extension activities as they sought for further explanations to scenes in the stories that the children had just been exposed to. In their study, Zevenbergen & Whitehurst (in press) acknowledged that asking open-ended questions in small groups was a challenge identified by the teachers. In the current study it would have been even harder to do the same in the whole class setting. Zevenbergen and Whitehurst suggested that if gains are to be realized, these questions could be carried out with children on individual basis, an idea that is consistent with what MDR designed to do. Furthermore, from their findings, Wasik et al., (2006) suggest that the way teachers talk to children both during book reading and outside of book reading can affect children's language skills, i.e. according to them, the asking of predictive, reactive recall questions outside of reading appears to be related to children's language development.

Another conclusion arrived at indicated that when dialogic reading is done in a whole class or large group setting, it results in significant increases in children's vocabulary and oral language gains. This was true of the current study where the program was implemented in a whole class setting of seventeen to twenty children in MDR and compared with DR which had groups of four to five children being read to at a time. A recommendation of the dialogic reading program requires that the child-teacher ratio

stays at 5:1. In their study**,** Hargrave & Senechal (2000) extended the ratio to 8:1. Whitehurst, Arnold et al., (1994) and Lonigan and Whitehurst (1998) studied groups of no more than five children. In all these studies, children's vocabulary yields were high. Moreover, a more recent study by Opel, A., Ameer, S. and Aboud, F. (2009) investigated the efficacy of a 4-week dialogic reading intervention on vocabulary of preschoolers. In this study, the paraprofessional implemented the program where a group of twenty to twenty five children were read to. The mean vocabulary scores of the dialogic reading group increased from 26% to 54% whereas the control remained the same. These studies suggest that group size recommendation may not be the critical factor but rather that benefits can be even higher when children are read to in a whole class or large group setting. Therefore, the present study extends previous findings by showing that dialogic reading is beneficial in groups larger than those previously investigated.

With a group this size, i.e. seventeen to twenty children in the Modified Dialogic Reading group, it is possible that not all children were overtly engaged in dialogue every time. However, the repeated reading of books together with the large amount of questioning is presumed to have kept the children more engaged. Consistent with these findings, Wasik, Bond & Hindman (2006) found that repeated exposure to vocabulary during follow up activities in a whole class dialogic reading program contributed to vocabulary gains among early Head Start children. As in the current study, they concluded that the level of commitment by the teacher and the amount of sustained meaningful interactions with the children was more important than group size.

While appreciating that small groups are beneficial when using dialogic reading and at the same time recognizing the difficulty with interactions in large groups, it is

important to consider the beneficial effects and the feasibility of doing so with adult-child ratios that are more reflective of real preschool settings. Zevenbergen and Whitehurst (in press) concur that it is often not easy for teachers to include small group dialogic reading sessions within their classroom schedules. This is because dialogic reading with small group of preschoolers requires the full attention of another teacher to monitor and assist those who are not at the time involved in the reading interaction, an aspect that is not practical in all preschool settings. This suggests that reading should be done in ways that the teachers feel able to manage their classrooms.

Observations of both PLAI- 2 subtests and PLAI-2 composite score indicate mean score increases post intervention for both DR and MDR. Mean scores for the PLAI-2 subscales indicate that for the Matching subscale there was no significant changes for all the centers by the end of the 8 weeks. This could be attributed to the fact that the dialogic reading techniques tend to focus more on oral language and is therefore not surprising that the children did not gain much in the matching subscale. In the case of the reasoning subscale, the mean scores indicate that there was an increase in the intervention groups. The sharp increase especially in MDR could be attributed to the questions added by the teachers which focused more on inferential questioning. This finding is consistent with the most current study conducted by Zucker, Justice, Piasta and Karavadek (2010) where the authors examined the relation between teachers inferential questioning and children's vocabulary outcomes. Interestingly, they found out that inferential questioning did not have a huge impact on children's vocabulary outcomes but that inferential questioning indeed encouraged children to participate in conversations at complex inferential levels. Longitudinal research by Dickinson and Smith (1994) links preschool children's

exposure to inferential language in reading discussions (e.g. analysis, prediction) to superior receptive vocabulary skills in kindergarten.

The current study suggests that children's active participation enhances learning. In a longitudinal follow-up study using dialogic reading as part of a package intervention with Head Start preschool children, Whitehurst, Zevenbergen et.al., (1999) concluded that "…a preschool or kindergarten curriculum focused on more traditional reading readiness skills such as letter recognition and letter-sound matching boosts children's literacy. However, the focus on broader emergent literacy skills evolving from sustained interaction with picture books might pay greater dividends in early literacy outcomes". This conclusion is supported by the author's research findings that dialogic reading has a primary effect on oral language development rather than on what they call traditional readiness skills. The NAEYC (2009) position statement identifies vocabulary and oral language as important predictors of children's reading comprehension. It continues to state that "limited vocabulary in the early stages impedes children's decoding and comprehension skills in the third and fourth grades." Oral language is therefore critical to the development of later reading skills and for children to gain vocabulary and advanced linguistic structures that they will need for elementary grade level reading, their teachers need to engage them in language interactions throughout the day (NAEYC, 2009).

Observations of both PLAI-2 subscales and PLAI-2 total score indicate mean score increases post intervention for both DR and MDR (29.22 in post test up from 20.92 during pretest while DR had 25.57 up from 21.48 and Control had 20.88 which was a slight drop from the previous 21.24). Analysis of Variance further indicated that the overall differences between the groups in PLAI-2 were significant. Specifically, the

increases for the reasoning subscale were greatest in MDR. These increases could have been due to the effect of inferential questions that were added to the MDR model. An analysis of variance for the book vocabulary test and PLAI-2 final scores indicated a significant effect for both time and group. The DR and MDR children registered improvements over the eight weeks and MDR had significant improvements. These results are consistent with the Lehrer & deBernard (1987) study who also realized high post test scores for PLAI-2. However, it is important to note that the 1987 study involved special needs children who were exposed to language instructional software in order to determine the effect of the software on their vocabulary and language skills.

Another question that the study sought to answer was to compare the differences in book reading methodologies in the classrooms. A growing body of research continues to point to the importance of reading books to children and studies have shown that exposing children to books early in life contributes to the child's successful transition to school and success in learning how to read (Dickinson & Tabors, 2001; Wasik et al., 2006; Whithurst & Lonigan, 1998). An important aspect and one that has been researched extensively concerns how adults (both teachers and parents) read books to children. The findings of the current study point to the importance of the various ways teachers employ when reading books to children. During the interviews, teachers talked about the different reading practices used in their classrooms, they talked about classroom environment during book reading sessions and also their needs and experiences which they felt had a way of influencing how the story book reading sessions transpired throughout the intervention period.

One finding from this study was that when teachers spent less time on story activities like conversations, questioning and follow up activities, gains were minimal. The control group could be a reflection of this whereby although the teachers read books in traditional ways, results from the PLAI-2 measure and the book vocabulary test indicate low gains for this group of children. In their data (Dickinson, 2001; Dickinson & Tabors, 2001, as part of the Harvard Home School study of Language and Literacy Development [HSLLD]) has shown that when children and teachers spend relatively little time in classrooms engaged in conversations (e.g., only 17% of the time engaged in meaningful exchanges), less is gained. In this group, very few new words were introduced and the questions posed by the children did not encourage the story teller to elaborate or introduce new words. Likewise the style of story reading did not clarify the meanings of new words for children and they were unable to derive meaning from the story or the illustrations. The following is a typical conversation that was observed in this group;

Example 1

Teacher: What do you see?

Child: Children name pictures

Teacher: Where is the frog?

Child: The frog is right there

Teacher: That's a cat

Teacher: Do you see a flea on the cat?

Child: No, it's a mouse

Child: Yes, it's a mouse

Child: The cat is sleeping

Child: It's just sitting

Teacher: That's a hog

Example 2

Child: I see a frog

(Children are naming things. No attention or comments from the teacher)

Child: I see a baby mouse

Child: Right there *(pointing at picture in the book)*

Teacher: Is that how you guys behave?

(Teacher continues reading)

(Children making animal sounds)

(Teacher keeps on reading, does not encourage conversations)

Rather than explain new words to children, the teacher often avoided repeating the new words and rarely held a sustained conversation preferring to read in the traditional format which is typically associated with less procedure. Research suggests that responding to children's own verbal initiatives is important, Trawick-Smith (1994) and that teachers should respond to the content of children's verbalizations and demonstrate an eagerness to listen even to the most egocentric meanderings of discourse that are so prevalent in early childhood (Piaget, 1971 as quoted by Trawick-Smith, 1994). To emphasize the same, Wasik et. al. (2006) point that children learn to use language by engaging in dialogue; limited opportunities to talk and receive feedback will limit language development.

Another finding that was observed concerned the frequency with which teachers read books to children. This differed from one group to another. When the teachers were interviewed prior to the intervention, they all expressed that their goal was to read as many books as possible to the children. In this study, all the three groups had ten assigned books to read. The intervention groups were to read two books per week with DR reading

twice and MDR reading each book up to three times a week as they had indicated to do so. Reading frequency became a confounding factor and it is not surprising that the control group did not gain much since the teachers were not systematic in the way they read and even the books they read were sometimes different. One of the control teachers seemed to aim at reading as many books as possible in a single session. In two out of the three observations she read four books within the thirty minutes allotted for each observation. In contrast, Whitehurst et al (1988) verified in their study that the frequency of book reading was equivalent across the regular reading and dialogic reading groups, thus assuring that reading frequency was not a confound.

The children in DR and MDR groups were observed to be more engaged. This kind of engagement was brought about by the amount of open-ended questions resulting in a lot of interaction both between the children and the teachers as well as between the children themselves. Children's active participation is a critical aspect of shared reading given that young children's sheer volume of talking is linked to their vocabulary development (Hart & Risley, 1995). Indeed, children's amount of talk during shared reading interactions predicts language development and literacy skills, Zucker et al., (2010). As Snow (1983) pointed out, book reading provides a context that supports dialogue and contributes to vocabulary development particularly because of the opportunities book reading offers to become exposed to familiar words that a child would not typically encounter in his or her everyday experiences. In the MDR group the teachers were able to make the reading sessions more frequent and more interactive (Taverne & Sheridan, 1995); increase commenting in order to relate reading to children's lives (Hockenberger, Goldstein & Haas, 1999) and increase the rate of asking different

types of questions instead of straight reading or yes/no questions (Arnold, Lonigan, Whitehurst & Epstein, 1994; Whitehurst, Falco, Lonigan et al., 1988).

On the basis of observational data, it was found that DR and MDR teachers changed the way they talked to and willingly listened to children during book reading, increasing their use of open-ended questions and providing opportunities for children to engage in conversations. In contrast, the control group teachers asked questions in a predictable way, usually requiring that children repeat phrases or simply answer yes/no. Typically, all the children would reply in unison. Neither the teachers nor the children frequently asked questions nor sought clarifications, thus contradicting the notion that adult questioning provides children with the occasion to structure responses, to use language and thus improve their language skills, Hargrave & Senechal (2000).

Based on these results, it can be deduced that modification of the Dialogic Reading program had an effect on both the children and the teachers themselves. The teachers in MDR were very enthusiastic and ultimately more engaged in conversations with the children. This meant that a lot of oral language was being used. The addition of questions that focused more on prediction, analysis, judgment and reasoning may have been a contributing factor. The greater intensity of instruction by the MDR teachers may have contributed to this significant difference. In their weekly book logs, the teachers in MDR reported that they were able to accomplish all the PEER and CROWD techniques as they had planned. This is consistent with Hargrave and Senechal's (2000) study who concluded that in their observations, the teachers at the dialogic reading center were successfully applying the techniques of dialogic reading and they were observed to have used a lot of "wh" questions during book reading.

The issue of whether teachers were more likely to effectively and faithfully implement self developed programs in their classrooms was also addressed in this study. As mentioned earlier in the previous chapters, most of the studies have focused on implementation by the researchers themselves with the exception of the study by Wasik, Bond & Hindman et al. (2006). Thus doing a study implemented by the teachers themselves was necessary in order to see the effects as a result of implementing a self modified program by teachers as opposed to a program implemented the way it was originally designed.

Although both DR and MDR groups showed high level of implementation, results showed that implementation was highest for the MDR group. During the interviews, teachers in all the three groups expressed that they had had no literacy programs introduced to them for use in their classrooms and that they would welcome newer ideas that would improve their practice as well as boost children's literacy. From their conversations, it was clear that their opinions supported the notion that children's exposure to different literacy programs would be beneficial. One teacher (Sara) from the control group pointed out that "sometimes we attend literacy workshops offered by early childhood agencies… but we usually have no input in suggesting what would/would not be implemented in our classrooms…" In such instances, the teachers would usually feel that whatever they implemented would not reflect their unique classroom contexts. Fleet & Patterson (2001) pointed out that each individual's experience of professional development is complex, unpredictable and dependent on contextual influences. This suggests that teachers need programs that address their real classroom situations. Involving teachers therefore is a way of making sure programs are implemented

successfully in the classrooms. Moreover, it is possible that when teachers "buy-in" a program, high chances are that they will be able to sustain it which although not highlighted, was one of the intentions of this intervention.

There was a high rate of growth in children's vocabulary and language when the teachers faithfully implemented book reading and conversation strategies. Findings from the second observations revealed that there was a high rate of implementation in the MDR group. The teachers in this group were observed to be asking an average of seventeen questions per reading session as opposed to earlier when they were observed to be asking three to four questions. There was a lot of interaction as a result of the many questions. The teachers focused on all new vocabulary and made sure to connect stories with the children's lives. It appears that teachers making connections between what occurrs during book reading and other classroom center activities is likely related to children's language development (Wasik et al., 2006). There was a high level of commitment as Rose (MDR) indicated that she was able to read a book up to three times per day which may be a reflection of the high scores by the children in this group. This supports the idea proposed by Fleet & Patterson (2001) that the commitment and enthusiasm of staff to rethinking their practice in the light of the non-prescriptive provocations offered in workshops and planning meetings highlight the value of flexible approaches to professional development. Wasik et al (2006) study concluded that there was a relationship between teacher characteristics and child outcomes indicating that children showed more growth when their teachers faithfully implemented the strategies of reading programs.

The fact that the teachers in MDR implemented successfully could be attributed to the fact that they were involved in redesigning the reading program that they implemented. This suggests that the intervention worked better when the teachers were involved in the implementation process, an indication that allowing teachers to modify and implement programs by themselves is bound to be more effective than when teachers implement programs the way they have been originally designed. Fleet & Patterson (2001) posit that "constructivist perspectives acknowledge the unique contribution of the personal professional knowledge of individuals and the importance of the orientation of individuals both to their work and to new ideas."

The teachers' judgments should also be considered in the determination of program effectiveness. Both DR and MDR teachers noticed differences in children's vocabulary and oral language development which they attributed to the dialogic reading program. The overall judgment of the effectiveness by the teachers involved in the process was very positive. They were surprised by the level of growth they witnessed in many children. The children's growth was testimony to the type of activities and the level of child involvement needed to produce such results. These data also emphasize the need for a systematic reading or literacy curriculum in the classrooms. The reactions by the children showed the teachers that this type of instruction is developmentally appropriate and effective at the same time. The children had fun and their way of asking and answering questions indicated that they benefited from the process. This could also mean that as teachers appreciate and enjoy their own practice, the trickledown effect will be the same for the children thus leading to satisfactory achievements by both players.

The teachers pointed out that they embraced the use of weekly book logs as these served as a way to evaluate their own performance and reflect on it at the end of every week. The consistent improvements that DR and MDR groups made could be attributed to this self reflection. When teachers reflect on their own performance, it provides them with systematic feedback thus helping them improve in their planning and instruction. Duff, Brown & Van Scoy, 1995; Riley & Roach, 2006) posit that reflection, self-evaluation and self-direction are critical to the process of professional development. Clark (1992) as quoted by Fleet & Patterson (2001), states that the responsibility of professional development must be given to the teachers themselves so as to transform them into empowered learners. This supports the notion that teachers are intrinsically motivated when they are empowered to realize that they own the knowledge and are capable of making decisions that best suit their classroom environments. The importance of a philosophy of staff ownership of ideas rather than transmission of knowledge is a critical component (Fleet & Patterson, 2001).

Limitations

Although this study provided important information on the positive effects of reading books to children using dialogic reading and the understanding that teacher involvement in the implementation of reading programs is critical, several limitations must be pointed out and addressed in future research.

First, there were inherent flows in the design used in this study. The small number of teachers and students and also the fact that the three groups were intact groups (class) was a limitation even though it is a reality often faced by researchers working in the field. Random assignment is often not feasible in the field yet this poses threats to both the

internal validity of the study that need to be acknowledged. Lack of random assignment leads to violations of independence that are critical in conducting ANOVA's, thus leading to overestimating the effect of an intervention, particularly when the sample sizes are unequal (Hinkle, Wiersma & Jurs, 1988). Children were not randomly assigned to the classes and thus there may have been pre-existing differences between the groups in the study.

The fact that classroom observations were scheduled ahead of time could be viewed as a limitation due to the fact that the teachers could have used this chance to prepare themselves and thereby present their reading sessions at their best, an aspect that was expected in all the three groups. It would have been interesting to see if different results were realized as a result of doing impromptu observations in the classrooms. However, this was not possible considering that there are rules and regulations concerning access to each of the day care center facilities. If impromptu visits were to be made, then the teachers would have been made aware of this before they signed the informed consent forms otherwise it would be deemed a violation of center regulations and the teacher's rights at their work place.

Although the teachers implemented the programs successfully, it was not without challenges. There were challenges that were specific to the questioning techniques as stipulated by Whitehurst et al., (1998). The teachers in both DR and MDR groups expressed that it was not possible to actually put into practice both PEER and CROWD questioning techniques in a single story book reading session. Molly (DR) noted that it was especially difficult to **E**xpand, **E**valuate and ask the children to **R**epeat the corrected responses and therefore she found herself using more of the CROWD questions. Teachers

also reported having difficulty pointing while reading. They felt that the children were distracted and when they read this way, they were not sure whether the children were following the finger or paying attention to the reading. Even though they reported that the children got used to it in the process, it was a general feeling that it was not possible to do it all the time especially with lengthy books.

Though not a direct focus for this study, the variability in classroom approaches to parent involvement may have had an impact. The lack of information relating to parent-teacher communication about literacy reflects the limited nature of this activity. Teachers send home communications to parents on an intermittent basis. These include letters and newsletters from the school at large. They cover various topics resulting in a limited amount of information about literacy being disseminated. Rose (MDR) illustrated that a valuable source of instruction lies beyond the walls of the school and therefore parents need to be acknowledged and encouraged for the role they play in their children's learning. Out of the three groups, the MDR and control group teachers having parents sometimes participate in some of their children's literacy activities. However, all the teachers generally talked about exploring the development of a project aimed at improving the home-school connection. They felt that parents should be provided with effective tools as they work to develop literacy skills at home.

Educational Implications and Recommendations

The progress of many children in the study indicates that dialogic reading is effective even when used in a whole class setting. This point to the powerful effects of story book reading in developing children's literacy and has implications for preschools to use interactive techniques when reading books with children.

The collaborative nature of the project seemed to encourage discussion around the need to communicate with parents. Teachers reported this as the next logical step in a comprehensive literacy program. Both DR and MDR teachers talked about the need to put literacy packets together for parents and to have workshops offered at different times in order to share information with the parents. One teacher suggested the possibility of inviting parents for training on how to use the techniques of dialogic reading. This suggestion is in line with what Whitehurst et al (1998) considers as an important factor if children have to gain more in dialogic reading. In conjunction with the teacher training video, Whitehurst and his colleagues also developed a parent training video with the belief that if both teachers and parents use dialogic reading, the children would benefit more. The teachers however agreed that all of these take time to plan and resources from administration as well as convincing parents to attend may sometimes be challenging. This, they viewed as a major obstacle in offering these services but agreed that greater interaction between home and school would serve to facilitate the development of literacy in children.

The primary purpose of this study was to determine the effect that involving preschool teachers in redesigning and implementing the dialogic reading would have on children's early literacy outcomes. The study also sought to find out whether there were changes in reading practices among the teachers and also to determine the fidelity of implementation by the teachers by the teachers involved in the intervention. Results indicated that when teachers were given the opportunity to be part of the redesigning and implementation process, they were empowered and felt ownership of the program and thus rate of implementation was high and so were the children's literacy outcomes. There

were progressive changes in the way the teachers carried out the book reading sessions, there was increased interaction between the teachers and the children and the children were fully engaged. These findings support the NAEYC (1990) view that;

> "Considering teachers find it challenging to create/design comprehensive programs from the start, there is value in providing teachers a validated program framework and related professional development as long as teachers have the opportunity to make individual adaptations for the diversity of children they teach."

The results from the present study showed that preschool children can gain vocabulary and oral language skills from listening to story books read to them and participating in conversations during book reading sessions. The benefits of story book reading were evident for children in classrooms in which teachers followed their usual reading practices as well as for children in the dialogic reading conditions. These benefits were however most extensive for the children whose teachers modified the standardized dialogic reading program and were read to in a whole class setting. Based on such results, preschool teachers can be encouraged to use the techniques of dialogic reading in their classrooms.

Given the importance of child-teacher interaction during book reading and the effectiveness of dialogic reading interventions on children's vocabulary and oral language, research in dialogic reading must continue. The current eight week intervention was successful in improving children's vocabulary and oral language and future research should focus on implementing the intervention for a longer period of time to establish if the changes are progressive and also to determine if the teachers continue using the program for long periods of time either with the same classes or different groups of children.

Professional development should give teachers the autonomy to make decisions on how they should use intervention programs in their classrooms. Future research should focus on training more teachers and supporting them in the implementation process so as to reach more children with the need for reading interventions. The current study demonstrated that when teachers are involved in redesigning and implementing learning programs in their classrooms, the result is high implementation rates and better child outcomes. However, it would be interesting to find out if the same results would be obtained if teachers made changes individually as opposed to working collaboratively with other teachers and the researcher as was the case in this study.

APPENDICES

APPENDIX A

INFORMED CONSENT FOR PARENTS

Dear parent/guardian

This semester, the preschool children from your child's cay care center will participate in an early literacy program that is designed to improve their pre literacy skills. I will be working with the children and their teachers in activities that are aimed at enriching their literacy skills through story book reading, picture naming and word recognition activities.

All the children participating will be evaluated using simple language and literacy measures at the beginning and at the end of the Fall semester.

As a parent/guardian of a child in the preschool classroom, your wish to have or not have your child participate or withdraw at any time will be respected. You will have the chance, if you wish, to review any of the materials that your child will be exposed to during the time that this will be going on.

It is hoped that this activities will benefit both the children and the teachers in that they will all be involved in more interactive ways of reading thus strengthening communication styles as well as improving the children's literacy development.

If you do not wish for your child to participate, please sign this form and return it to your child's teacher

Thank you.

My child **will not** participate _____

Child's name _____

Signature _____.

APPENDIX B

INFORMED CONSENT FOR TEACHERS (DR)

My name is *Rachel Boit* and I am a doctoral student at the University of Massachusetts-Amherst in the Child and Family Studies Concentration. One of the requirements for the completion of this doctoral degree is to undertake a research study on a topic related to my field of study. For this reason, I intend to do a reading intervention with preschool children in different day care centers. Thus you are receiving this informed consent letter as a teacher in one of these day care centers.

As a participant you would need to agree to be part of the following activities:-

- Take one hour training on how to use the strategies of a selected preschool reading program on a date that will be schedule for September.
- You will implement the program and agree to be observed twice during the implementation stage
- Participate in a brief interview before and after the intervention stages.

The information shared during this session will be kept confidential. The information gained from both the interview and observation will not be shared with other participants and most of all, pseudonyms will be used to protect your confidentiality.

Your participation is voluntary and you are free to discontinue or refuse participation at any time without prejudice. You also have the right to review any of the materials used in this study and if you wish, a summary of the study can be made available to you as I believe that the information gathered through this study will be beneficial to both of us.

I am giving you two copies of this informed consent which you should sign if you are willing to participate. You will then retain one copy for your records and the other is for my records. By signing below, you agree that you:-

- Have read and understood the information provided.
- Willingly agree to participate
- May withdraw your consent at any time

If you have any questions about this research or you participation in it, you can reach me at:

Tel. 413-546-6953 or Email: rboit@educ.umass.edu

You may also contact my advisor:

Dr. Claire Hamilton: cehamilt@educ.umass.edu

Your name _____ Signature _____

Date _____

APPENDIX C

INFORMED CONSENT FOR TEACHERS (MDR)

My name is *Rachel Boit* and I am a doctoral student at the University of Massachusetts-Amherst in the Child and Family Studies Concentration. One of the requirements for the completion of this doctoral degree is to undertake a research study on a topic related to my field of study. For this reason, I intend to do a reading intervention with preschool children in different day care centers. Thus you are receiving this informed consent letter as a teacher in one of these day care centers.

As a participant you would need to agree to be part of the following activities:-

- Involved in a discussion session to re-design a reading program which will be audio-taped for approximately one hour on a date that will be schedule for September.
- You will implement the re-designed program and agree to be observed twice during the implementation stage
- Participate in a brief interview before and after the intervention stages.

The information shared during this session will be kept confidential and the audio- tape will be erased after transcribing. The information gained from both the interview and observation will not be shared with other participants and most of all, pseudonyms will be used to protect your confidentiality.

Your participation is voluntary and you are free to discontinue or refuse participation at any time without prejudice. You also have the right to review any of the materials used in this study and if you wish, a summary of the study can be made available to you as I believe that the information gathered through this study will be beneficial to both of us.

I am giving you two copies of this informed consent which you should sign if you are willing to participate. You will then retain one copy for your records and the other is for my records. By signing below, you agree that you :-

- Have read and understood the information provided.
- Willingly agree to participate
- May withdraw your consent at any time

If you have any questions about this research or you participation in it, you can reach me at:

Tel. 413-546-6953 or Email: rboit@educ.umass.edu

You may also contact my advisor:

Dr. Claire Hamilton: cehamilt@educ.umass.edu

Your name _____ Signature _____

Date _____

APPENDIX D

INFORMED CONSENT FOR TEACHERS (CONTROL)

My name is *Rachel Boit* and I am a doctoral student at the University of Massachusetts-Amherst in the Child and Family Studies Concentration. One of the requirements for the completion of this doctoral degree is to undertake a research study on a topic related to my field of study. For this reason, I intend to do a pre literacy study with preschool children in different day care centers. Thus you are receiving this informed consent letter as a teacher in one of these day care centers.

As a participant you would need to agree to be part of the following activities:-

- Read picture books with the students for a period of eight weeks beginning from a date that we will both agree on.
- You will be observed twice during this period.
- Participate in a brief interview before and after the eight-week period.
- Participate in a training session at the end of the 8-week period.

The information gained from both the interview and observation sessions will be treated as confidential material and will not be shared with other participants. Pseudonyms will be used for both the centers and participants for confidentiality purposes.

Your participation is voluntary and you are free to discontinue or refuse participation at any time without prejudice. You also have the right to review any of the materials used in this study and if you wish, a summary of the study can be made available to you as I believe that the information gathered through this study will be beneficial to both of us.

I am giving you two copies of this informed consent which you should sign if you are willing to participate. You will then retain one copy for your records and the other is for my records. By signing below, you agree that you :-

- Have read and understood the information provided.
- Willingly agree to participate
- May withdraw your consent at any time

If you have any questions about this research or you participation in it, you can reach me at:

Tel. 413-546-6953 or Email: rboit@educ.umass.edu

You may also contact my advisor:

Dr. Claire Hamilton : cehamilt@educ.umass.edu

Thank you.

Your name _____ Signature _____

Date _____

APPENDIX E

LIST OF PICTURE BOOKS

A pocket for Corduroy *by Don Freeman*

The Quilt story *by Tony Johnston*

Bunny cakes *by Rosemary Wells*

No jumping on the bed *by Ted Arnold*

A whistle for Willie *by Ezra J. Keats & Ernesto L. Grosman*

The adventures of Taxi dog *by Debra Barracca, Sal Barracca & Mark Buehner*

Blueberries for Sal by *Robert Mc Closkey*

A trip to the firehouse by *Wendy C. Lewison*

I took my frog to the library *by Eric A. Kimmel & Blance Sims*

The Dinosaur who lived in my backyard *by B. G. Hennessy, Susan Davis & Larry Robinson*

APPENDIX F

TIMELINE FOR INTERVENTION

September

Day	Date	Week of	Activity
		9/7-9/13	Recruit and train Testers
	8-19	9/7-9/20	Teachers of MDR re-design program & do write up
Monday-Friday	15-26	9/14-9/27	Pre-test DR and MDR
Monday-Frid. ?	22-26	9/21-9/27	Train Teachers of DR
Monday	9/22/08	9/28-10/4	DR and MDR start intervention
Monday-Friday	9/29-10/3	9/28-10/4	Pre-test Control

October

Day	Date	Week of	Activity
Monday	10/6/08	10/5-10/11	Control start intervention
Monday	10/13/08	10/12-10/18	Columbus day

November

Day	Date	Week of	Activity
Tuesday	11/11/08	11/9-11/15	Veteran's Day
Friday	11/21/08	11/16-11/22	DR and MDR end intervention
Saturday-Sunday	23-29	11/23-11/29	Thanks Giving

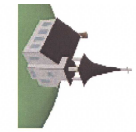
December

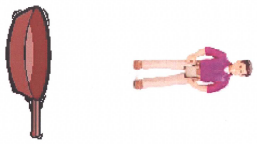
Day	Date	Week of	Activity
Monday-Friday	1-12	11/30-12/12	Post-testing for DR and MDR
Friday	12/5/08	11/30-12/6	Control ends intervention
Friday	12/12/08	12/7-12/13	Last day of classes
Monday – Friday	8-19	12/7-12/20	Post-testing for Control

APPENDIX G

VOCABULARY TEST SAMPLE

Sample Vocabulary Measure





shawl

pan

church

man

Get it Got it Go!
www.getgotgo.net
Individual Growth and Development Indicators

APPENDIX H

VOCABULARY RECORD SHEET

Child's Name_____

Age_____

Center_____

Fish_____

clown___

Raccoons_____

Pigtails_____

Claws_____

Pail_____

Hatchet_____

Truck_____

Cat_____

House_____

Beak_____

Phone_____

Bell_____

Violin_____

Briefcase_____

Wagon_____

Trunk_____

Stamp_____

Suspenders/Straps_____

Bike_____

Shawl_____

Scarf_____

Bear_____

Daisy/flower_____

Saucer_____

Train_____

Overall_____

Chair_____

Plate_____

Boot_____

APPENDIX I

FIRST TEACHER INTERVIEW (ALL GROUPS)

Center_____ Class_____

Personal information: Age bracket:-20-30; 31-40; 41-50; 51+

Gender:- M/F Level of Education_____ Yrs of exp_____

1. What do you think preschoolers need to know in order to learn how to read? Are there any special activities that you incorporate?

2. What do you do in your classroom to meet these needs? How do you know if children have learned what they need to know?

3. How have you read books to them in class? large or small group setting? During a special reading time? During other learning times during the day?

4. How do you choose the books to read?

5. When you read in circle time, children like to ask questions: How have you used this teachable moment in order to boost their pre literacy skills? What else do you bring/offer into the storybook reading session?

6. Have you used any specific early literacy reading programs in your classroom? What has been your experience? What about in-service workshops or professional development?

7. If you've used an approach, how involved have you been in having a say in the way these pre literacy reading programs are designed and used in the preschool classrooms?

APPENDIX J

SECOND TEACHER INTERVIEWS (DR & MDR)

Center_____ Class_____

1. Talk about your experiences in using the DR method in a typical story book reading session. Compare how you did things previously and now.

2. Are there any ways that your practices in book reading have changed as a result of using DR? I what ways do you think it has worked for the children?

3. When you read in circle time, children like to ask questions: How have you used this teachable moment in order to boost their pre literacy skills? What else do you bring/offer into the storybook reading session?

4. How did you reinforce vocabulary learning and ability for the children to reason and make clear judgments?

5. From your own perspective, what strategies of DR worked or did not work for your class? How would you do things differently?

APPENDIX K

SECOND TEACHER INTERVIEW (CONTROL)

1. Talk about your experiences in reading the books to the children? What was the setting like when you read most of the books? i.e. in whole class or small groups?

2. Are there any ways that your practices of book reading have changed over the past eight weeks? Describe to me your typical book reading session.

3. What kind of questions did children mainly ask and how did you respond to their questions?

4. How or what kind of questions do you ask the children?

5. What did you do in order to make sure that children learnt the new vocabulary that appeared in the books? How did you reinforce reasoning and the ability to make clear judgments?

APPENDIX L

CLASSROOM OBSERVATION FOR DR & CONTROL

Observer initials _____

Date: _____

Time: From _____ to _____

Book title:_____

Number of children present in class:_____

Number of adults in the room:_____

Type of setting: Whole class_____ Small group_____ Other (specify) _____

Observe and make notes at every 5-minute intervals. Make a tally for every aspect being observed whenever it happens.

Oral Language

What to observe	Tally	Notes(examples)
Teacher prompts children with questions to name pictures or start a conversation		
Teacher evaluates child's responses		
Teacher expands on what the child says		
Child asked to repeat the expanded/correct response		
Children asked to complete words or phrases		
Children asked to retell a story or details about what happens in the story		
Teacher asks open-ended questions		
Teacher uses "wh" prompts Asks questions that relate something in the story to the child's life		

Time	What to observe	Tally	Notes (examples)
	Children are encouraged to engage in conversations during book reading		
	Thoughtful questioning by the teacher during shared book reading sessions		
	Child's experiences are used in scaffolding understanding of story content		
	Oral language is used to broaden knowledge in problem solving, predicting and analyzing Attempt to coordinate book reading experiences with ongoing curricular activities		
	Teacher reads books without much child interruption		
	Children have an opportunity to respond orally by asking questions about the story and pictures and making comments		

Vocabulary

Time	What to observe	Tally	Notes(examples)
	Teacher frequently introduces new words to children While reading picture books.		
	Teacher calls attention to the pictures in the story		
	Teacher makes connections to concepts and vocabulary		
	There are efforts to enrich vocabulary through interactions and other activities (i.e. follow up activities)		
.			

APPENDIX M

CLASSROOM OBSERVATION FOR MDR

Observer initials _____

Date: _____

Time: From _____ to _____

Book title:_____

Number of children present in class:_____

Number of adults in the room:_____

Type of setting: Whole class_____ Small group_____ Other (specify) _____

Observe and make notes at every 5-minute intervals. Make a tally for every aspect being observed whenever it happens.

Oral Language

What to observe	Tally	Notes(examples)
Teacher prompts children with questions to name pictures or start a conversation		
Teacher evaluates child's responses		
Teacher expands on what the child says		
Child asked to repeat the expanded/correct response		
Children asked to complete words or phrases		
Children asked to retell a story or details about what happens in the story		
Teacher asks open-ended questions		
Teacher uses "wh" prompts Asks questions that relate something in the story to the child's life		

Time	What to observe	Tally	Notes (examples)
	Children are encouraged to engage in conversations during book reading		
	Thoughtful questioning by the teacher during shared book reading sessions		
	Child's experiences are used in scaffolding understanding of story content		
	Oral language is used to broaden knowledge in problem solving, predicting and analyzing Attempt to coordinate book reading experiences with ongoing curricular activities		
	Teacher reads books without much child interruption		
	Children have an opportunity to respond orally by asking questions about the story and pictures and making comments		

Vocabulary

Time	What to observe	Tally	Notes(examples)
	Teacher frequently introduces new words to children While reading picture books.		
	Teacher calls attention to the pictures in the story		
	Teacher makes connections to concepts and vocabulary		
	There are efforts to enrich vocabulary through interactions and other activities (i.e. follow up activities)		
.			

What to observe	Tally	Notes (examples)
Read to whole group		
Ask open-ended questions in small groups or to individual children		
Use of dramatization as a follow up activity		
Attempt to help the child to go deeper into explaining his/her answer		
Inferential questions: • make proper judgments • encourage prediction • encourage reasoning • encourage observation		

APPENDIX N

BOOK READING LOG FOR DR AND MDR

Center _____ Class_____

In comments section, rate yourself according to the extent you were able to accomplish the strategies of Dialogic Reading and make any other follow up comments in support of it: (**N**=No accomplishments; **S**=Some accomplishments; **A**=All accomplished)

Book Title	Dates Read	# of children present	(N, S, A)+ comment on specific strategies
A pocket for Corduroy			
The Quilt story			
Bunny cakes			
No jumping on the bed			
A whistle for Willie			
The adventures of Taxi dog			
Blueberries for Sal			
A trip to the firehouse			
I took my dog to the library			
The Dinosaur who lived in my back yard			

APPENDIX O

BOOK READING LOG FOR THE CONTROL GROUP

Group _____ Class_____

In comments section, indicate specifics that you observed in the book reading session e.g ***types of questions asked by you or the children, how the children were involved, elements that you paid a lot of attention to in the book.***

Book Title	Dates Read	# of children present	Comment on specific
A pocket for Corduroy			
The Quilt story			
Bunny cakes			
No jumping on the bed			
I took my frog to the library			
A whistle for Willie			
The adventures of Taxi dog			
Blueberries for Sal			
A trip to the firehouse			
The Dinosaur who lived in my back yard			

REFERENCES

Adams, M. J. (1990). Beginning to read: Thinking learning about print. Cambridge: MIT Press.

Arnold, D. S. & Whitehurst, G. J. (1994). Accelerating language development through picture book reading: A summary of dialogic reading and its effects. In D. K. Dickinson (Ed), *Bridges to literacy: Children, families and schools*. Cambridge, MA: Blackwell.

Arnold, D. S., Lonigan, C. J., Whitehurst, G. J., & Epstein, N. J. (1994). Accelerating language development through picture book reading: Replication and extension to a videotape training format. *Journal of Educational Psychology, 86*, 235-243.

Ayers, W., (1992). Disturbances from the field: Recovering the voice of the early childhood teacher. In Kessler, A. S., & Swadener, B.B. (Eds.), Reconceptualizing the early childhood curriculum: Beginning the dialogue (pp. 256-266). New York: Teachers College Press.

Blake, B.,E. & Blake, W. R.(2002). Literacy and Learning: *A reference handbook*. Santa Barbara: ABC-CLIO, Inc.

Blank, M., Rose, S., & Berlin, L. (2003). Preschool Language Assessment Instrument Examiner's Manual (2nd edition). Pro.ed Publishers, Austin, TX.

Blom-Hoffman, J., O'Neil-Pirozzi, T. & Cutting, J. (2007). Instructing parents to use Dialogic Reading strategies with preschool children: Impact of video-based training program on caregiver reading behaviors and children's related verbalizations. *Journal of Applied School Psychology,* 23(1), 117-131.

Brownell, R. (Ed.) (2000). Expressive One-Word Picture Vocabulary Test Manual (3rd Ed). Novato, CA: Academic Therapy Publications.

Bryant, D. M., Burchinal, M., Lau, L. B., & Sparling, J. J. (1994). Family and classroom correlates of Head Start children's developmental outcomes. *Early Childhood Research Quarterly,* 9, 289-309.

Bus, A. G., van Ijzendoorn, M. H., & Pelligrini, A. D. (1995). Joint book reading makes for success in learning to read. A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research, 65*(1), 1-21.

Byrne, B. & Fielding-Barnsley, R. (1991). Evaluation of a program to teach phonemic awareness to young children. *Journal of Educational Psychology,* 83(4), 451-455.

Clark, C. M. (1992). Teachers as designers in self-directed professional development. In Andy Hargreaves & Michael G. Fullan (Eds). *Understanding Teacher Development* (p. 75-84). New York: Teachers College Press.

Clay, M. M (1979). *Reading: The patterning of complex behavior*. Auckland: Heinemann Educational Books.

Cochran- Smith, M. (1986). Reading to children: A model of understanding texts. In B. B. Shiefflin & P. Gilmore (Eds), *The acquisition of literacy: ethnographic perspectives.* Norwood, NJ:Ablex.

Crain-Thoreson, C. & Dale, P. S. (1992). Do early talkers become early readers? Linguistic precocity, preschool language and emergent literacy. *Developmental Psychology, 28*(3), 21-29.

Creswell, J.W. (2003). Research Design: Quantitative, Qualitative and Mixed Methods Approaches (2nd ed.). Thousand Oaks, CA:Sage.

CTB. (1990). Developing skills checklist. Monterey, CA: CTB/McGraw-Hill.

Dale, P., S., Crain- Thoreson, C., Notari-Syverson, A., & Cole, K., (1996). Parent child book reading as an intervention technique for young children with language delays. *Topics in Early Childhood Special Education,* 16(2), 213-235.

DeBruin-Parecki, A. (1999). *Assessing Adult/Child storybook reading practices*. Center for the Improvement of Early Reading Achievement. Report # 2-004

Department of Early Education and Care*: http://www.eec.ma.us/*

DeTemple, M.,J. (2001). Parents and children reading books together. In Dickinson, D. K., & Tabors, P. O. *Beginning literacy with language*. Baltimore: Paul H. Brooks Publishing Co., Inc.

Dickinson, D. K. (2001). Book reading in preschool classrooms: Is recommended practice common? In D. K. Dickinson & P. O. Tabors (Eds.), *Beginning literacy with language: young children learning at home and school.* (p. 175-204). Baltimore: Brooks.

Dickinson, D. K. & Smith, M. W. (1994). Long-Term effects of preschool teacher's book readings on low-income children's vocabulary and story comprehension. *Reading Research Quarterly,* 29, 104-122.

Dickinson, D. K., & Tabors, P. O. (Eds). (2001). *Beginning literacy with language: Young children learning at home and school*. Baltimore: Brooks.

Dorit A. (2006). Early Literacy interventions: The relative roles of storybook reading, alphabetic activities and their combination. *Reading and writing,* 19(5), 489-515.

Dorit, A. & Shira, B. (2004). *Joint storybook reading and writing interventions among low SES preschoolers: differential contributions to early literacy. Early Childhood Research Quarterly, 19 (4), 588-610.*

Dorn, J. L., French, C. & Jones, T. (1998). *Apprenticeship in Literacy: Transitions across reading and writing. York: Stenhouse Publishers, Maine.*

Duff, R. E., Brown, M. H., & Van Scoy, I. J. (1995). *Reflection and self evaluation: Keys to professional development. Young Children, 50(4), 81-88.*

Dunn, L. M., & Dunn, L. M. (1981). Examiner's manual for the PPVY-III: Peabody Picture Vocabulary Test-Revised: Circle Pines, MN: American Guidance Service.

Elley, W., B., (1989). Vocabulary acquisition from listening to stories. *Reading Research Quaterly,* 24, 174-187.

Fleet, A., & Patterson, C. (2001). Professional growth reconceptualized: early childhood staff searching for meaning. *Early Childhood Research and Practice*, 3(2), 14.

Fung, P., Chow, B. W., & McBride-Chang, C. (2007). The impact of a dialogic reading program on deaf and hard-of hearing kindergarten and early primary school-age students in Hong Kong. *Journal of deaf studies and deaf education,* 10(1), 82-95.

Gardner, M. F. (1981). *Expressive one-word picture vocabulary test*. Novato, CA: Academic therapy publications.

Haager, D., Dimono, J. A., & Windmueller, M. P. (2007). *Intervention for Reading Success*. London: Paul H. Brooks Publishing Co., Inc.

Hargrave, A.C., & Senechal, M. (2000). A book reading intervention with preschool children who have limited vocabularies: The benefits of regular reading and dialogic reading. *Early Childhood Research Quarterly,* 15, 75-90.

Harms, T. & Clifford, R. M. (1980). *Early Childhood Environmental Rating Scale*. Teacher College, New York.

Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore: Brookes.

Heath, S. B. (1982). What no bed time story means: Narrative skills at home and school. *Language in Society,* 11, 49-76.

Hockenberger, E., Goldstein, H. G., & Haas, L. (1999). Effects of commenting during joint book reading by mothers with low SES. *Topics in Early Childhood Special Education*, 9(1).

http://www.kidzone.ws/dolch/preschool.htm

Invernizzi, M. A. (2001). The complex world of one-on-one tutoring. In Neuman, S. B. & Dickinson, D. K. (Editors). *Handbook of Early Literacy Research*, The Guilford Press, New York.

Justice, M. L. & Ezell, H. K. (2002). Use of story book reading to increase print awareness in At-Risk children. *American Journal of Speech Language Pathology*, 11, p. 17-29.

Justice, M. L. & Pullen, P. C. (2003). Promising interventions for promoting emergent literacy skills: Three evidenced-based approaches. *Topics in Early Childhood Special Education, 23*(3), 99-113.

Katz, L, G. (1977). *Talks with teachers: Reflections on early childhood education*. Washington, DC: National Association for the Education of Young Children.

Kirk, S.A., McCarthy, J. J., & Kirk, W.D. (1968). *Illinois Test of Psycholinguistic Abilities*. Urbana, IL: University of Illinois Press

Kirsch, I., Jungeblut, A., Jenkins, L. & Kolstad, A. (2002). *Adult Literacy in America*. A first look at the findings of the National Adult Literacy. US Department of Education, NCES. (NCES 1993-275).

Klass, P.E., Needlman, R. & Zuckerman, B. (2003). The developing brain and early learning. *Archives of Disease in Childhood, 88,* 651-654.

Lehrer, R. & DeBernard, A. (1987). Language and Learning and Language of Computing: The Perceptual-Language Model. *Journal of Educational Psychology*, 79(1), 41-48.

Lonigan, C. J. (1994). Somebody read me a story. Evaluation of a shared reading program in low-income daycare. *Society for Research in Child Development abstracts, 9,* 219.

Lonigan, C. J., Anthony, J. L., Bloomfield, B. G., Dyer, S.M., & Samwel, C. S. (1999). Effects of two-shared reading interventions on emergent literacy skills of at-risk preschoolers. *Journal of Early Intervention*, 22(4), 306-322.

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(2), 263-290.

Lyon, G. R., & Fletcher, J. M., (2001). Education Matters, 1(2), 2-29.

Martinez, M. & Roser, N. (1985). Read it again: The value of repeated readings during storytime. *Reading Teacher*, 38(8), 782-786.

Missall, K. N., McConnell, S. R., & Cadigan, K. (2006). Early literacy development: Skill growth and relations between classroom variables for preschool children. *Journal of Early Intervention, 29*(1), 1-21.

Morrow, L. M. & Smith, J.K. (eds) (1990). *Assessment for Instruction in Early Literacy*. Prentice-Hall Inc., Englewood Cliffs, NJ.

National Association for the Education of Young Children (1994). NAEYC Position Statement: A conceptual framework for early childhood professional development. *Young Children*, 49(3), 68-77.

National Association for the Education of Young Children (2009). NAEYC Position Statement: Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through age 8.

National Centre for Education Statistics (1993). Education in States and Nations, 1988. U.S. Department of Education, Washington DC.

Needlman, R., Fried, I., Morley, D., Taylor, S., & Zuckerman, B. (1991). Clinic-based interventions to promote literacy. *American Journal of Diseases of Children, 145*, 881-884.

Neuman, S. B., & Celano, D. (2001). Access to print in low-income and middle-income communities: An ecological study of four neighborhoods. *Reading Research Quarterly, 36*, 8–26.

NICHD Early Child Care Research Network. (2000). The relation of child care to cognitive and language development. *Child Development*, 71, 960-980.

Opel, A., Ameer, S. S., & Aboud, F. (2009). The Effect of Preschool Dialogic Reading on Vocabulary among Rural Bangladeshi Children. International Journal of Educational Research, 48(1), 12-20.

Patton, M. Q. (1990). The challenges of being a profession. Evaluation Practice, 7(1), 45-51.

Pearson Early Learning (2002). Read Together Talk Together "Motion Picture". (Available from Pearson Early Learning, www.pearsonearlylearning.com).

Pinnell, G. S. (1989). Reading Recovery: Helping at-risk children learn to read. *Elementary School Journal, 90*(2).

Raikes, H., Luze, G., Brooks-Gunn, J., Raikes, H. A., Pan, B. A., Tamis-LeMonda, C. A., Tarullo, J. C., Tarullo, L. B. & Rodriguez, E. T.(2006). Mother-Child book reading in low-income families: correlates and outcomes during the first three years of life. *Child Development, 77*(4), 924-953.

Riley, D.A. & Roach, M.A. (2006). Helping Teachers Grow: Toward Theory and Practice of an "Emergent Curriculum" Model of Staff Development.

Robbins, C., & Ehri, L, C., (1994). Reading storybooks to kindergarteners help them learn new vocabulary words. *Journal of Educational Psychology*, 86, 54-64.

Rodd, J. (1997). Learning to develop as early childhood professionals. *Australian Journal of Early Childhood*, 22(1), 1-5.

Scanlon, D. M. & Vellutino, F.R. (1997). A comparison of the instructional backgrounds and cognitive profiles of poor, average and good readers who were initially identified as at-risk for reading failure. *Scientific Studies of Reading, 1*(3), 191-215.

Scarborough, H. S. (1989). Prediction of reading disability from familial and individual differences. *Journal of Educational Psychology, 8*(1), 101-108.

Scarborough, H. S., & Dobrich, W. (1994). On the efficacy of reading to preschoolers. *Developmental Review, 14*, 245-302.

Schwartz, R. M. (2005). Literacy learning of at-risk first grade students in the Reading Recovery early intervention. *Journal of Educational Psychology, 97*(2), 257ff.

Senechal, M. & Cornell, E. H. (1993). Vocabulary acquisition through shared reading experiences. *Reading Research Quarterly, 28*(4), 360-374.

Senechal, M., (1997). The differential effect of storybook reading on preschooler's acquisition of expressive and receptive vocabulary. *Journal of Child Language*, 24, 123-138.

Senechal, M. And Others (1995). Individual differences in 4-year old children's acquisition of vocabulary during storybook reading. *Journal of Educational Psychology*, 87(2), 218-229.

Senechal, M., LeFevre, J., Hudson, E., & Lawson, E.P. (1996). Knowledge of storybooks as a predictor of young children's vocabulary. *Journal of Educational Psychology*, 88, 520-536.

Shariff, I., Ozuah, P.O., Dinkevich, E. I. & Mulvihill, M. (2003). Impact of a brief literacy intervention on urban preschoolers. *Early Childhood Education Journal, 30(3)*, 177-180.

Shonkoff, J. P., & Phillips, D.A. (Eds). (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.

Smith, M., Brady, J., & Anastasopoulos, L.(2002). *Early Language and Literacy Classroom Observation, Pre-K* (New ed.). Education Development Inc., Paul H. Brookes Publishing Co, Newton, MA.

Snow, C. E. (1983). Literacy and language: Relationships during the preschool years. *Harvard Educational Review*, 53, 165-189.

Snow, C. E., Burns, M. S., & Griffin, P. (Eds.)(1998). *Preventing Reading Difficulties in Young Children*. Washington D.C., National Research Council, National Academy Press.

Snow, C.E., & Ninio, A. (1986). The contracts of literacy: What children learn from learning to read books. In W. H. Teale & E. Sulzby (Eds). *Emergent literacy: writing and reading.* Norwood, NJ: Ablex.

Strauss, A., & Corbin, J. (Eds.) (1998). Basics of qualitative research: Ground Theory procedures and techniques. Newbury Park, CA: Sage.

Taverne, A. & Sheridan, S. (1995). Parent training in interactive book reading. An investigation of its effects with families at risk. *School Psychology Quarterly,* 10(1), 41-64.

Teale, W. H., & Sulzby, E. (1987). Literacy acquisition in early childhood: The roles of access and mediation in storybook readings. In D. A. Wagner (Ed), *The future of literacy in a changing world* (pp111-130). New York: Pergamon Press.

Torgensen, J. K., (2000). Cognitive and behavioral characteristics of children with learning disabilities: Concluding comments. *Journal of Learning Disabilities,* 22(3), 166-168.

Trawick-Smith, J. (1994). Authentic dialogue with children: A sociolinguistic perspective on language learning. Dimensions of Early Childhood, 22(4), 9-16.

U.S. Bureau of Census, *Statistical Abstract of the United States*: 1999.

U.S. Department of Education (2001). *No Child Left Behind Act (PL 107-110).*

Valdez-Mechaca, M., C., & Whitehurst, G., J., (1992). Accelerating Language Development through picture book reading: A systematic extension to Mexican day care. *Developmental Psychology,* 28, 1106-1114.

Van Kleeck, A., & Stahl, S. A. (2003). Preface. In van Kleeck, A., Stahl, S.A., & Bauer, E. B. (Eds). *On reading books to children* (pp, vii-viii). Mahweh, NJ: Lawrence Erlbaum.

VanderVen, K. (1988). Pathways to professional effectiveness for early childhood educators. In Spodek, B. Saracho, O., & Peters, D (Eds.), *Professionalism and the early childhood practitioner* (p. 137-160). New York: Teachers College Press.

VanderVen, K. (1994). Professional development: A contextual model. In Johnson, J. & McCracken, J. B. (Eds.). *The early childhood career lattice: Perspectives on professional development* (p. 79-88). Washington, DC: National Association for the Education of Young Children.

Vivas, E. (1996). Effects of story reading in language. *Language Learning, 42*(2), 189-216.

Vygotsky, L. (1962). Thought and Language. Cambridge, Mass: MIT Press.

Wasik, B. A., & Bond, M. A. (2001). Beyond the pages of a book: Interactive book reading and language development in preschool classrooms. *Journal of Educational Psychology*, 93, 243-250.

Wasik, B. A., Bond, M. A., & Hindman, A (2006). The effects of language and literacy intervention on Head Start Children and Teachers. *Journal of Educational Psychology*, 98(1), 63-74.

Wells, G. (1986). *The meaning makers: Children learning language and using language to learn*. Portsmouth, NH: Heinemann.

West, J., Denton, K. & Germinor-Hausken, E. (2000). *America's Kindergarteners*. Findings from the Early Childhood Longitudinal Study. Washington DC: U.S. Department of Education, NCES. (NCES 2000-070).

Whitehurst, G. J. (1992). Dialogic Reading: An effective way to read to preschoolers.

Whitehurst, G., Arnold, D., Epstein, J., Angell, A., Smith, M., & Fischel, J. (1994). A picture book reading intervention in daycare and home for children from low-income families. *Developmental Psychology, 30*(5), 679-689.

Whitehurst, G. J., Epstein, J. N., Angell, A. C., Payne, A.C., Crone, D. A., & Fischel, J. E. (1994). Outcomes of an emergent literacy intervention in Head Start. *Journal of Educational Psyhology, 86*, 542-555.

Whitehurst, G. J., Falco, F. L., Lonigan, C. J., Fischel, J. E., DeBaryshe, B. D., Valdev-Menchaca, M. C., & Caulfield, M. (1988). Accelerating language development through picture book reading: *Developmental Psychology,* 24, 552-559.

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

Whitehurst, G. J., Zeneberger, A. A., Crone, D. A., Schultz, M. D., Velting, O. N., & Fischel, J.E. (1999). Outcomes of an emergent literacy intervention from Head Start through second grade. *Journal of Educational Psychology,* 91, 261-272.

Yinger,R & Hendricks-Lee, M. (1993). Working knowledge in teaching. In Christopher Day, James Calderhead & Pam Denicolo (Eds), *Research on Teacher Thinking: Understanding Professional Development (p. 100-123).* London: Falmer Press.

Zucker, T., Justice, L., & Piasta, S. (2010). Preschool teachers' literal and inferential questions and children's responses during whole-class reading. Early Childhood Research Quarterly, 25(1), 65-83.