Dissertations

Graduate College

12-1-2007

Intensive Professional Development in Early Literacy Instruction for Preschool Teachers

Rebecca Brinks
Western Michigan University

INTENSIVE PROFESSIONAL DEVELOPMENT IN EARLY LITERACY
INSTRUCTION FOR PRESCHOOL TEACHERS

by

Rebecca Brinks

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Philosophy
Department of Educational Leadership, Research and Technology
Dr. Louann Bierlein-Palmer, Advisor

Western Michigan University
Kalamazoo, Michigan
December 2007

INTENSIVE PROFESSIONAL DEVELOPMENT IN EARLY LITERACY INSTRUCTION FOR PRESCHOOL TEACHERS

Rebecca Brinks, Ph.D.

Western Michigan University, 2007

This study assesses the efficacy of using an intensive professional development program to improve preschool teachers' practices related to early literacy. A mixed methods approach was employed to review secondary data from a federally-funded Early Reading First Grant. The population studied consisted of thirty-one preschool teachers at four diverse programs serving low income children located in the mid-western urban community of Grand Rapids, Michigan.

The intensive professional development used in this study resulted in significant improvements in the mean scores for all areas of the Early Language and Literacy Classroom Observation (ELLCO) when comparing baseline to the final scores in year three. In addition, this study found significantly higher baseline scores in most areas of the ELLCO in classrooms where lead teachers had higher educational levels. This difference in scores was no longer significant in final ELLCO scores after intervention was provided through intensive professional development.

Teachers' Likert score ratings regarding the effectiveness of professional development components indicated college coursework was ranked the highest each of the three years, with conferences and in-service workshops being rated second and third

respectively, the first two years. There was a significant increase in the coaching ratings from the first to the third year. Teachers' rich responses in the qualitative phase of this study revealed that this increase was tied to improvements made in defining the coaches' role and responsibilities and in the relationships that built over time between the teachers and the coaches. In addition, teachers with lower educational levels rated coaching significantly higher than teachers with higher educational levels.

In summary, key findings from this study confirm the importance of requiring higher educational qualifications for beginning preschool teachers and providing intensive professional development and coaching support for current teachers who do not meet these requirements. Both the quantitative and qualitative analysis provide direction for using scientifically based reading research and assessment as a basis for intensive professional development. Results pinpoint specific strategies such as providing financial support for college coursework, engaging learning communities, and utilizing effective coaching models focused on cognitive processes to improve preschool teachers practices related to early literacy.

UMI Number: 3293158

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI®

UMI Microform 3293158

Copyright 2008 by ProQuest Information and Learning Company.

All rights reserved. This microform edition is protected against unauthorized copying under Title 17, United States Code.

Copyright by
Rebecca Brinks
2007

ACKNOWLEDGMENTS

ii

TABLE OF CONTENTS

iii

Table of Contents-Continued

CHAPTER

iv

Table of Contents-Continued

CHAPTER

v

Table of Contents-Continued

CHAPTER

vi

Table of Contents-Continued

CHAPTER

LIST OF TABLES

LIST OF FIGURES

CHAPTER I
INTRODUCTION

Preschool teachers are in a key position to influence the development of children's early literacy skills by engaging families, providing literacy rich classroom environments, and using intentional instructional strategies related to literacy (Bodrova, 2003; Neuman & Dickinson, 2006; Snow, 1983; Strickland et al., 2004). Yet, this critical opportunity is often missed because preschool teachers do not have the knowledge, education, training, skills and resources necessary to provide a high quality literacy experience for the children and families they serve (Barnett, 2003a; Bellm & Whitebook, 2003; Tivnan & Hemphill, 2005; West & Tivnan, 1974).

The need for quality interactions during the first five years of life is supported by recent breakthroughs in neuroscience which have profiled how the brain develops and the impact of stimulation in the early years (Shonkoff & Phillips, 2000; Shore, 2003). Indeed, Hart and Risley's (1995) landmark studies provide strong longitudinal evidence regarding the critical nature of language development during a child's early years and the impact it has on reading skill development. They found a high correlation between the amount of language used with children in the first three years of life and children's reading scores on standardized tests in fourth grade. This highlights the important role preschool teachers can play in influencing language development and early literacy skills in a child.

Research has shown that the educational qualifications of such teachers are strongly tied to their effectiveness in teaching children. For example, Tivnan and Hemphill (2005) found that the teacher is more important than the reading models or programs used in the classroom. Howes (1997) also notes that one of the main factors in determining the overall quality of an early childhood program is the quality and

educational level of the teacher. Indeed, a number of research studies have shown a connection between the educational levels of preschool teachers and the student achievement levels within their classrooms, with higher educational levels being correlated with higher achievement (Bellm & Whitebook, 2003; Ferguson, 1991; Honig & Hirallel, 1998; Howes, 1997; Snider & Fu, 1990). Such research points toward the importance of formal early childhood programs, such as the Child Development Associate Credential, and associate bachelor, and masters degree programs that include a supervised teaching component, as a way to increase the quality of teacher practices and student outcomes. Unfortunately, as the next section will profile, few states require such training for their preschool teachers to enter the classroom and there is limited research regarding how best to address this issue. Thus, there is a need for continued research regarding the use of significant interventions consisting of well designed professional development and educational opportunities to enable practicing teachers to improve outcomes for their students.

<center>Problem Identification and Significance</center>

Legislation such as the federally mandated No Child Left Behind program emphasizes the importance of having skilled, highly qualified teachers in all classrooms, including early childhood settings. While all fifty states require a bachelor degree for kindergarten teachers (Maxwell, Lim, & Early, 2006), the requirements for preschool programs vary widely and differ depending on the type of program involved. Twenty-one states require a bachelor degree in state financed preschool programs, but only one state does so in child care settings. Most states have only some informal training requirements for preschool teachers (Barnet, 2003a). Many professionals believe such limited

standards are insufficient for early childhood teachers in pre-k settings and are calling for increased training and education requirements (Barnett, 2003a; Howes, James, & Ritchie, 2003). Clearly, requiring some *college coursework* related to developmentally appropriate practices and literacy is an important part of professional development for such preschool teachers.

Absent such requirements, many early childhood teachers enter their positions lacking higher education or formal training. Researchers have found that working in a classroom, without a formal educational background, can actually make it difficult for teachers to master new skills because their current teaching behaviors may interfere with new models (Bowman, Donovan, & Burns, 2001; Joyce & Showers, 1982). This makes it important to also include a more intensive instructional strategy such as *coaching* for practicing preschool teachers. Joyce and Showers (1996) discussed the importance of providing feedback and in-class coaching in addition to theory demonstration to help teachers transfer training to their daily instructional practice.

Coaching has been described as providing "ongoing consistent support for the implementation and instruction components" (Poglinco, et al., 2003, p. 42). Bean (2004) separates such coaching into three levels ranging from informal to formal, based on the intensity of the coaching activities. Informal coaching is generally less intense and intentional, while formal coaching involves modeling and discussing lessons, co-teaching, visiting classrooms, goal planning, feedback and reflection. Types of coaching and research related to its effectiveness will be discussed in more detail in the literature review in chapter two.

In addition to *college coursework* and *coaching*, other strategies that research has found to be effective include providing internal *cohort workshops* and external professional association *conference* attendance. Both are aimed at providing teachers with vivid examples of teaching methods they may practice and adopt as their own. Professional development must aim at cognitive processes (Bodorva, Leong, Norford, & Paynter, 2003; Costa & Garmston, 2002; Garmston, 2000; Guskey, 1995; Joyce & Showers, 1980). Adult learners have different learning styles and strengths and have more life experience to draw on than younger learners (Hiebert & Stigler, 2004; National Staff Development Council [NSDC], 2001). Whenever possible, it is important that teachers experience first hand, as learners, the instructional approaches they in turn will be using with their students (NSDC, 2001). Cohort workshops paired with coaching, provide in-service training that is research based and effective because it is continuous, intensive, and individualized (Bowman, Donovan, & Burns, 2001; Hayes, Grippe, & Hall, 1999; Joyce & Showers 1996).

A systematic approach is essential to identify which specific strategies match individual teachers' needs. Assessing individuals' key strengths and competencies is critical to determine specific actions to take to help these teachers achieve their goals (Sparks & Loucks-Horsley, 1989). This type of assessment based planning guides the development of knowledge, skills, and behaviors needed for success. A primary focus is to help individuals grow and gain expertise in their current positions. This involves providing professional development resource personnel who are accessible to classroom teachers in order to develop relationships and be effective (Hayes, Grippe, & Hall, 1999; Scroggins & Powers, 2004; Smith, 2002). These personnel are able to use research

related to literacy in k-12 classrooms to identify strategies and characteristics of in-service training that improve teachers' knowledge, skills and daily practices.

Since it is shown that literacy instruction is more effective when teachers have advanced educational levels, professional development strategies such as college coursework, coaching, cohort workshops and conferences must be focused on scientifically based reading research and associated practices. A number of studies exist which have identified how these types of professional development experiences have been effective with kindergarten through twelfth grade teachers, all who typically have an educational level of at least a bachelors' degree (Bowman, Donovan, & Burns, 2001; Costa & Garmston, 2002; Joyce & Showers, 1982). However, there is limited research focused on effective professional development with preschool teachers who enter the field with varying educational experiences, ranging from no college education to masters degrees.

As a part of the No Child Left Behind Act (NCLB) of 2001, the Early Reading First (ERF) program was created to fund "Centers of Excellence" that serve children from low-income families. The primary aim of these programs is to support preschoolers' development of language and literacy skills. As mandated by NCLB, an independent evaluation of the ERF program was completed to assess children's literacy skills and the instructional content and practices in preschool classrooms. That quasi-experimental design examined a treatment group of 28 (of the 30) ERF 2003 grantee sites and a comparison group consisting of 37 (of the 67) unfunded applicant sites from 2003 that had the highest scores and agreed to participate in the study (Russell, et. Al., 2007). The first report from that study was released June 4, 2007, with its findings focused primarily

on the impact of ERF programs funded in 2003 on child outcomes and on professional development in general. The results of that evaluation are described in more detail in Chapter 2.

While the larger national evaluation project offers interesting outcomes, it did not delve deeply into each of the funded programs. To this end, the purpose of this dissertation is to provide a more in-depth examination of the effectiveness of a particular intensive professional development program within one 2002 ERF grant and each of its components related to improving practicing preschool educators' perceptions and practices related to literacy. This dissertation study looks at data focused on: (a) the overall professional development model, (b) onsite coaching, (c) in-service cohort workshops, (d) college coursework, (e) conferences, and (f) training and use of the Classroom Literacy Enrichment Model (CLEM), an early literacy program which actively engages preschoolers in play and intentional instruction related to five goal areas: phonological awareness, oral language, written expression, print concepts and alphabetic knowledge.

<div align="center">Research Questions</div>

This study employed a mixed methods approach to explore research questions using data collected for one ERF program entitled Early Accent on Reading and Learning for Young Children (EARLY). Awarded in the Winter of 2002, this grant program operated during three school years and ended in the Summer of 2005. It involved four diverse early childhood programs located in the mid-western urban community of Grand Rapids. As required by the U. S. Department of Education, extensive data was collected on all aspects of the project and compiled into a database. In addition, the data collected

by this program related to professional development went beyond the federal project requirements, enabling a more in-depth analysis. This dissertation research study tapped into this data base to carefully analyze data related to the professional development component of the grant.

Specifically, four central research questions were of interest. The first three questions focused on using quantitative data to identify changes in preschool educators' perceptions and practices related to literacy and the impact of a variety of professional development strategies used in this model. The fourth research question required the use of qualitative methods to delve more deeply into the educators' views of their professional development experience. The specific research questions follow.

1. To what extent and in what ways has the implementation of intensive professional development increased the use of appropriate, measurable literacy enrichment-related teaching practices of participating preschool teachers regarding: (a) the structuring of their classroom environments, and (b) using intentional instructional strategies related to early literacy?

2. To what extent and in what ways do preschool teachers perceive that each of the following components of professional development contributed to any improvements in their literacy enrichment practices: (a) the overall professional development model, (b) onsite coaching, (c) internal cohort workshops, (d) college coursework, (e) professional conferences, and (f) training and use of a classroom literacy enrichment model?

3. To what extent do factors such as (a) years of experience, (b) educational level of the teacher, and (c) level of participation in professional development activities predict

measurable literacy enrichment-related teaching practices and teachers' perceptions regarding various components of the professional development model?

4. What is the meaning and value of the intensive professional development components experienced by the preschool teachers during the EARLY project including: (a) what are the underlying themes and contexts that account for the experience, (b) what influenced the cognitive process of developing as a teacher, and (c) what are the universal structures related to feelings and thoughts about the experience?

Conceptual Model and Term Definitions

This investigation examined as secondary data, information collected from the EARLY grant project. This particular ERF grant developed and implemented three models: a Professional Development Model (PDM), a Classroom Literacy Enrichment Model (CLEM), and a Family Engagement Model. This research study focused on data that was collected from teachers primarily from the PDM aspect of the overall project. Attention is also paid to the CLEM portion of the project and its role in guiding professional development.

The Professional Development Model (PDM) begins with planning for each individual. Early childhood classroom educators worked with a Professional Development Plan Specialist (PDPS) to create an Individual Professional Development Plan (IPDP). The IPDP served as the foundation that was used to build an intentional connected set of professional development activities. These activities included educational experiences, professional experiences, networking and coaching. Educational experiences focused on completing college coursework and using the teacher idea sharing library as a resource for information about research and practice. Professional

experiences involved participating in monthly in-service cohort workshops, attending

external professional conferences and workshops, and engaging in professional

organizations. Networking opportunities included classroom visitations, peer

partnerships, online discussion boards and newsletters. Finally, the key strategy of

coaching was included which involves working collaboratively with a coach in the

teacher's classroom to examine and define goals for classroom practices, determine

meaningful outcomes for children, implement new strategies, and become reflective

practitioners.

   The Classroom Literacy Enrichment Model (CLEM) is a best practices

curriculum model using scientifically based reading research. It is an early literacy

program which actively engages preschoolers in play and intentional instruction related

to five goal areas: phonological awareness, oral language, written expression, print

concepts and alphabetic knowledge. Preschoolers learn best while actively engaged in

play in a child-centered environment (Bergen, 1998; Bronfenbrenner, 1992; Erikson,

1968; Gardner, 1983; Gardner, 1993; Johnson, Erschler, & Lawton, 1982; Piaget, 1963;

Vygotsky, 1962). Oral language, speaking and listening skills, build a foundation for later

success with reading and writing (Adams, 1990; Neuman & Dickinson, 2006; Snow,

Burns, & Griffin, 1998). Phonological awareness, the ability to identify and manipulate

parts of spoken language, needs to be supported during the preschool years to improve

later ability to read and spell (Adams, 1990; Adams, Foorman, Lundberg, & Beeler,

1998; Lieberman, 1989; McCradle, Scarborough, Dobrich, & Hager, 2001; National

Reading Panel, 2000). Print concepts, the understanding that print has meaning, comes in

different forms, and has many functions, develops during the preschool years through

repeated exposure to and experiences with books, charts, and other types of functional print (Adams, 1990; Strickland & Schickedanz, 2004). Written expression, the ability to communicate thoughts, ideas and information in written form, begins in early childhood as children are exposed to the writing process and adults can help develop these skills by observing, modeling, extending, and providing support (Lenski & Johns, 2000; McCarrier, Pinnell, & Fountas, 2000; Neuman & Roskos, 1998; Schickedanz, 1999). Letter knowledge, knowing the names of the letters of the alphabet and being able to recognize them, is a strong predictor of later reading success and developmentally appropriate activities can build children's interest in letters and their sounds (Adams, 1990; Strickland, 1998; Wasik, 2001).

Figure 1 offers a visual of the conceptual framework conveying the main components of this study. The two boxes on the left identify the inputs related to teacher characteristics and strategies from the PDM portion of the broader research project examined for this dissertation. The box on the right-hand side identifies the outcomes that were investigated for this dissertation, with such outcomes framed as a subset of the overall goals of the EARLY project.

The key goals examined via this dissertation relate to the use of scientifically-based reading research to promote literacy in the following areas: phonological awareness, oral language, written expression, print concepts and alphabetic knowledge. These components are measured by examining two measurable literacy enrichment-related teaching practices: (a) the structuring of the classroom environment and (b) the use of intentional instructional strategies. Structuring of the classroom is operationally defined as the use of practices outlined in the CLEM to enhance literacy in all the

classroom learning centers: art, block, classroom library, dramatic play, gross motor, math/manipulative, science/sensory, technology and writing. Use of intentional instructional strategies pertains to the use of practices outlined in the CLEM to enhance literacy through intentional instruction throughout the routine times of the day: group experiences, meal times, transitions, rest times and during interactions in the learning centers.

Educator Characteristics

(a) Years of Experience
(b) Educational Level
(c) Level of Participation

Professional Development Model (PDM)

(a) Overall Professional Development Model
(b) Onsite Coaching
(c) In-service Cohort Workshops
(d) College Coursework
(e) Professional Conferences
(f) Training and Use of Classroom Literacy Enrichment Model

Outcomes:
Educator Perceptions and Practices Related to Literacy (Oral Language, Phonological Awareness, Alphabetic Knowledge, and Print Awareness)

Implementation of the Classroom Literacy Enrichment Model (CLEM)

(a) Structuring of the Classroom Environment

(b) Using Intentional Instructional Strategies related to Literacy

Learner Centered Theoretical Framework

Piaget
Erikson
Gardner
Bronfenbrenner
Vygotsky

Figure 1. Conceptual framework for dissertation study.

The six-sided box on the lower middle of the conceptual framework diagram refers to the learner centered theoretical underpinnings of both the PDM and CLEM. The

underlying theories are those of Jean Piaget (1963), Erik Erikson (1968), Howard

Gardner (1983), Urie Bronfenbrenner (1979), and Lev Vygotsky (1962).

Jean Piaget believed in constructivism, the creation of knowledge through

interactions between the developing individual's current understanding and the

environment (Piaget, 1963). This is reflected in the use of the individualized educational

planning done with adults as well as the CLEM's focus on developing interesting

environments for children through well thought out learning centers. Constructivism is

also apparent in the coaching process, which focuses on engaging teachers in inquiry

based decision making and reflection.

Erikson's psychological theories emphasize the individual's adaptation to

differing social development (Erikson, 1968). This philosophy is apparent in the

individualized educational planning and the coaching component used in the PDM.

Educators are encouraged to embark on a personal journey to refine their own philosophy

and establish their professional identity. In the CLEM this is reflected through the design

of the physical environment and use of uninterrupted free play periods supported by

teachers to encourage initiative in preschoolers.

The theory of multiple intelligences (Gardner, 1983, 1999) proposes that there are

eight major types of intelligence: linguistic, musical, logical, spatial, bodily-kinesthetic,

intrapersonal, interpersonal, and naturalistic. Gardner (1993) provided practical guidance

related to identifying strengths and weaknesses in areas of intelligence in early childhood

and using this information to nurture multiple intelligences. This influence can be seen in

the CLEM's focus on developing learning centers engaging all of the intelligences. The

multiple strategies used in the PDM as a whole and especially within the coaching process and internal cohort workshops also reflect this approach.

Bronfenbrenner's (1979) ecological systems theory describes how all systems influence each other and provides a holistic approach to understanding development. In the preschool classrooms, as well as through the monthly in-service cohort workshops and the coaching process, this is reflected by embracing socio-cultural influences and building a sense of community in each classroom and in the program as a whole. All levels emphasize providing a safe, comfortable, supportive environment for all children and teachers. Ecological systems theories also encompass strength based models related to diversity which will be discussed in more detail in Chapter 2.

Lev Vygotsky (1962) placed a strong focus on the social context of language as a tool of culture. His model revolving around a zone of proximal development describes language as a means to scaffold cognition. This can be seen in the questioning strategies used in the coaching process. It is also apparent in how educators are adapting to the needs of individual children by using assessment information as a basis for planning and responsive interactions in learning centers and during routine times.

Chapter I Summary

Chapter 1 summarized the importance of early learning and the key role teachers play in determining the quality of early literacy experiences for preschoolers. It introduced literature related to effective literacy programs and important characteristics of effective professional development strategies used to promote high quality teaching and learning. The purpose statement, research questions, conceptual framework and definition of terms familiarized the reader with the nature of this study.

A literature review related to effective early childhood literacy programs, teacher qualifications, literacy coaching, professional development in K-12 programs, strength-based models focused on diversity and systemic approaches to professional development is presented in chapter 2. Chapter 3 identifies methodology, including research design, population, instrumentation, data collection methods and data analysis. Chapter 4 presents findings related to the four research questions. Finally, the fifth chapter discusses the overall research findings and identifies areas for further study.

CHAPTER II
LITERATURE REVIEW

This literature review presents research relevant to the preparation of preschool teachers in supporting their role to provide literacy rich environments and intentional instruction for preschoolers. It begins by identifying the wealth of information that exists related to programming and implementing effective early childhood literacy practices. This initial section defines and outlines the role of play in an early childhood classroom and the components of early literacy instruction: oral language, phonological awareness, print concepts, written expression, and letter knowledge. Research and practices related to each section are identified and discussed.

Next the review delves into the issues of low teacher qualifications and the challenges of adequate teacher preparation. These variables are critical when it comes to effective literacy instruction in preschool classrooms as the lack of education and training makes it difficult to translate research based theory into instructional strategies.

In an effort to bridge the gap between research regarding effective early literacy programming and the practices generally used in preschool classrooms, the literature review next investigates k-12 research related to effective teacher preparation and ongoing professional development. This leads to discussions about systematic approaches including the development of learning communities, leadership, and strategies for improving the quality of teaching. The importance of addressing cultural diversity through curriculum and teaching practices is then explored both in terms of the teaching and learning process and curriculum development.

Finally, attention is turned to looking in more detail at the role coaching may be able to play in moving preschool teachers to understand research findings related to

literacy and translate them into classroom practices. This section involves connecting to the National Council for Staff Development standards for professional development and exploring Joyce and Showers' seminal work on coaching initiated during the 1970's and the early 1980's, as well as current research on coaching practices.

Research related to early childhood literacy components and quality programming was easily accessible through typical library and internet database searches. Initial attempts to search for research related to professional development and coaching of preschool teachers, however, were very limited and largely unsuccessful. This required a broadening of the net to include research related to k-12 teachers and literacy instruction. This research certainly provides direction regarding preschool education as there are many common characteristics, between preschool and early elementary classrooms. However, preschool teachers and programs both have many unique characteristics which indicate a strong need for more research related to professional development and coaching in preschool settings.

Effective Early Childhood Literacy Programming

Much is known about the critical components of effective preschool literacy programs. Researchers agree that such programs actively engage preschoolers in play and intentional instruction. Derived from the areas of cognitive psychology and psycholinguistics, the emergent literacy perspective expands the focus of reading research from measuring discrete reading skills to taking a broader view of literacy development (Mason, & Allen, 1986; Sulzby & Teale, 1991).

Play-based, Child-centered Environments

Preschoolers learn best while actively engaged in play within a child-centered environment (Bergen, 1998; Bronfenbrenner, 1992; Erikson, 1968; Gardner, 1983; Gardner, 1993; Johnson, Erschler, and Lawton, 1982; Piaget, 1963; Vygotsky, 1962; Morrow, 1990). Curriculums must continue to address the physical, social, emotional, cognitive and language development of young children as all areas of development play a major influence on early literacy development (Strickland & Schickedanz, 2004).

Categories of Emergent Literacy Knowledge

Common components of frameworks categorizing areas of literacy knowledge across emergent literacy literature include: oral language, phonological awareness, print concepts, written expression, and letter knowledge (Mason, & Allen, 1986; Morrow, O'Connor, & Smith, 1990; Stahl & Miller, 1989; Van Kleeck, 1990). Curriculum approaches that scaffold early literacy provide children with support as they master new skills (Bodrova, Leong, Norford, & Paynter, 2003).

Experiences and understandings of print build general literacy knowledge and specific print and oral language skills. Children entering school without this knowledge and such experiences do not progress at the same rate as their counterparts and are more likely to become "at risk" (Copeland & Edwards, 1990; Scarborough, Dobrich, & Hager, 1991). One recent study found that only 37 % of children entering kindergarten have a basic familiarity with print (West, Denton, & Germino-Hausken, 2000).

Effective early literacy opportunities can act as an intervention for children considered to be at risk for failure based on factors such as developmental disabilities, having a parent with a history of a reading disability, being an English Language Learner,

or living in a household in which experiences with oral and written language are infrequent (Snow, Burns, & Griffin, 1998).

Oral language, speaking and listening skills, build a foundation for later success with reading and writing (Adams, 1990; Neuman & Dickinson, 2006; Snow, Burns, & Griffin, 1998). Children who are raised in families that provide rich language and support literacy do significantly better in school than their counterparts in families where language stimulation is weak. In these environments, fewer words were used in everyday conversation and much of what was used consisted of commands and directions (Hart, & Risley, 1995). The use of more sophisticated vocabulary at home has a direct relationship to children's vocabulary and there is a strong relationship between vocabulary and reading achievement (Dickinson & Tabors, 2001; Duke, Pressley, & Hilden, 2004; Nagy & Scott, 2000). Dickinson (1994) also found evidence that talk between teachers and preschool children was a predictor of the children's vocabulary skills in second grade, even when factoring in contributions of the home environment. Intentional, purposeful learning opportunities focusing on strategies such as modeling, questioning, vocabulary building, using de-contextualized conversations, and reading and conversing about quality children's literature, ensure that children's vocabulary is increased and opportunities for conversation are expanded to lessen the gap for children whose exposure to rich oral language experiences puts them at risk (Dickinson, 1994; Dickinson & Smith, 1994; Hart & Risley, 2002; Strickland et al 2004).

In studying the effects of state pre-kindergarten programs, the National Institute for Early Education Research found that state-funded preschool programs increased children's vocabulary scores by an average of four months of progress (Barnett, Lamy, &

Jung, 2005). They also found significant growth in the areas of print awareness and alphabetic knowledge.

Phonological awareness, the ability to identify and manipulate parts of spoken language, has been shown to be the second most critical predictor of future reading success (McCradle, Scarborough, & Catts, 2001) and needs to be supported during the preschool years to improve later ability to read and spell (Adams, 1990; Adams, Foorman, Lundberg, & Beeler, 1998; Lieberman, 1989; National Reading Panel, 2000). Rhyming, alliteration and segmentation activities are known to be among the best ways to develop phonological awareness (Bradley & Bryant, 1983; Meuter & Rumiati, 2002). Strategies to integrate phonological awareness include modeling and segmenting speech sounds, emphasizing beginning sounds to increase the child's awareness of the meaning and purpose of the sounds of speech and extending the use of noises and sounds through rhyming and alliteration activities.

Print concepts, the understanding that print has meaning, comes in different forms, and has many functions, develops during the preschool years through repeated exposure to and experiences with books, charts, and other types of functional print (Adams, 1990; Strickland & Schickedanz, 2004). Children's background knowledge about the world and print concepts are fostered through experiences with books and shared book reading experiences (Strickland & Riley-Ayers, 2006; Teale & Sulzby, 1989). Reading aloud to children is cited as the single most important activity for developing skills essential for reading success (Bus, Van Ijzendoorn, & Pelegrini, 1995; Whitehurst et. al, 1994). In the classroom, print materials should be incorporated into all areas of the classroom (i.e. environmental print in dramatic play, blueprint paper in the block area,

chart templates in the science area, labeling objects throughout the classroom) and intentionally integrated into daily activities.

Written expression, the ability to communicate thoughts, ideas and information in written form, begins in early childhood as children are exposed to the writing process. An attempt at beginning writing has its roots in young children's growing desire to represent ideas and thoughts symbolically (Lenski, 2000). Children construct their knowledge of print in fairly consistent ways and adults can help develop these skills by observing, modeling, extending, and providing support (McCarrier, Pinnell, & Fountas, 2000; Neuman & Roskos, 1998; Schickedanz, 1999). Children learn written language through active engagement with objects and events in their world. A well stocked writing center providing materials such as templates, sensory letters, a variety of writing tools and letter stamps helps children form letters. The development of children's writing begins with their social interaction with others in their environments through meaningful literacy activities.

Letter knowledge, knowing the names of the letters of the alphabet and being able to recognize them, is one of the best predictors of success in first grade reading (Adams, 1990). Research has shown that at-risk children must be exposed to letter knowledge in the preschool classroom (Strickland, 1998; Wasik, 2001). In order for children to read, they need to recognize distinctive features of the alphabet (Adams, 1990). Learning to recognize all the alphabet letters by name and how to write them takes children one to two years to complete (Bloodgood, 1999). Letters are learned when children are taught to distinguish shapes, manipulate magnetic letters, read labels, recognize familiar names, and distinguish special features. Letter knowledge can be integrated by providing props that help children

explore symbols, shapes and letters to learn their meaning. Conversations and questioning strategies help children recognize letters in the environment.

As is evident by the wealth of research and information available regarding common components of literacy knowledge across emergent literacy literature, there is clear information available to guide teachers in developing and implementing effective literacy programming for preschoolers. However, the lack of educational qualifications of preschool teachers, as outlined in the next section, points to a major problem in transferring this research to practice.

Educational Qualifications and Preparation of Preschool Teachers

The quality of early childhood education programs is strongly tied to the educational qualifications of the teacher. Quality and the higher education level of a teacher make a significant difference in student achievement (Ferguson, 1991; Honig & Hirallel, 1998; Howes, 1997; Howes, Phillips, & Whitebook, 1992; Snider & Fu, 1990). A recent report looking at Early Childhood Teacher preparation programs found that nationally, 77% of 4 year programs and 65% of 2 year programs offer a full course devoted to emergent literacy and literacy strategies (Maxwell, Lim, & Early, 2006). In Michigan, the percentages are lower with only 67% of 4 year programs and 48% of two year programs offering such a course. While teachers with many years of experience can provide a warm, positive classroom environment, knowing new teaching techniques related to how to promote literacy in the classroom is necessary to ensure student success (Bodrova et al., 2003; McCarthy, Cruz, & Ratcliff, 1999). Unfortunately, as the National Research Council Committee on Early Childhood Pedagogy reports, there is a "great disjunction between what is optimal pedagogically for children's language and literacy

and development and the level of preparation that currently typifies early childhood educators" (Bowman, Donovan, & Burns, 2001, p. 34).

Although current standards are insufficient in the area of training and education for early childhood teachers in pre-k settings, they are shifting toward increased training and education requirements (Barnett, 2003a; Dole, 2004; Howes, James, & Ritchie, 2003). For example, government mandates and national reports have resulted in increased requirements for the formal education and training of preschool teachers in state funded pre-kindergarten programs and in Head Start (Strickland & Riley-Ayers, 2006).

The Head Start Family and Child Experiences Survey (FACES) collects data on a nationally representative sample of Head Start programs, classroom, teachers, parents and children in order to examine the quality and effectiveness of Head Start. Data collected from 1997, 2000 and 2003 shows teachers' level of education was highest in 2003. At that point 37.8% of teachers had Bachelor's degrees or higher, 34.3% had Associate's degrees, 23% had some college, and 4.9% had only high school or equivalent (Administration for Children and Families, 2006). The FACES findings noted that the teacher's level of education was related to knowledge and attitudes about early childhood education as reported on the Classroom Activities Scale, completed by teachers.

While some progress has been made in raising the levels of teacher qualifications, it is evident that in general, preschool teachers have less education than teachers at other levels which generally require bachelor's degrees as an entry level. The National Report on Early Childhood Teacher Preparation Programs (Maxwell, Lim, & Early, 2006) contends that teacher education programs also need to continue to improve their

educational offerings related to early literacy instruction by devoting at least one full course to early literacy development and pedagogy.

Currently, one of the largest barriers to increasing educational qualifications of preschool teachers is the low wages in the field. Barnett (2003b) sums this problem up in the National Institute for Early Childhood Research Preschool Policy Brief:

> Recruiting and retaining good teachers ranks as one of the most significant roadblocks to solving the preschool quality crisis facing this country. Evidence points to the low wages and benefits offered to preschool teachers as the single most important factor in hiring and keeping good teachers.
> Despite the importance of their responsibilities, American preschool teachers are paid less than half of a kindergarten teacher's salary — less than janitors, secretaries, and others whose jobs require only a high school diploma and a few years experience. Pay and benefits for assistant teachers are even worse, with the full-time average wage too low to keep a family of three out of poverty.
> The significance is clear. The social, emotional, educational and economic advantages from high quality preschool programs translate to better lives for children, their families, communities and society as a whole. Yet, poor pay and benefits threaten the delivery of these very high quality programs that can make such a dramatic difference for the nation and its children. (p.1)

Preschool teachers play a critical role in influencing the development of early literacy skills by providing literacy rich classroom environments and using intentional instructional strategies (Bodrova, Leion, Nortord & Paynter, 2003; Neuman & Dickinson, 2006; Snow, 1983; Strickland et al., 2004). This makes improving teacher qualifications, teacher preparation programs and professional development experiences critical. The lower levels of education of preschool teachers results in a strong need for programs providing in-service training to teachers. Research in the k-12 arena provides some clear direction in the form and content of effective professional development, as well as some guidance in the types of resources and supports necessary to truly impact the quality of teaching and learning in the classroom. Such research will be summarized in the next section.

Systematic Approach to Professional Development

Teacher education is an ongoing process composed of pre-service training, classroom experiential opportunities and continued in-service training (Strickland & Ryers-Alverson, 2006). Isolated training and workshop experiences are typically ineffective in improving instruction (Corcoran, Fuhrman, & Belcher, 2001; Guskey, 2003). Such methods of professional development do not provide tools to translate learning into classroom practices. In-service training must be continuous, intensive and individualized in order to be effective. Preparing early childhood teachers to provide high quality early literacy instruction requires a systemic approach to effective professional development. Successful programs are supported by administrators, cyclical in nature, provide for diverse learning needs through individualization and are given the necessary time and resources to succeed (Bowman, Donovan, & Burns, 2001; Hayes, Grippe, & Hall, 1999; Joyce & Showers 1996).

Current research on effective professional development strategies for teachers is largely based on k-12 schools. Nevertheless, it points to key strategies and characteristics of in-service training that improve teachers' knowledge, skills and daily practices related to literacy development. The National Staff Development Council (2001) established clear context, process and content standards that identify important characteristics and goals for effective professional development. The context standards focus on organizing adults into learning communities built around a common vision, providing leadership focused on guiding continuous instructional improvement, and providing resources to support adult learning and collaboration. The content standards highlight quality teaching and are aimed at providing teachers with research-based instructional strategies centered

on rigorous academic standards and effective use of classroom assessments. The standards related to learning communities, leadership, and raising the quality of teaching by focusing on cognitive processes necessitate further examination.

Learning Communities

Effective team-based learning communities provide the most effective type of professional development (Brochu et al. 2006; Schmoker, 2006; Sparks, 1998; Stigler & Hiebert, 1999). Learning communities are committed to continuous improvement and a spirit of inquiry. Members are engaged in improving their daily work through learning, experimentation and reflection. These improvements are based on goals for student learning. The focus is on deepening research and content knowledge, critically reviewing new standards, and revising and implementing curriculum. The development and facilitation of collaborative groups as teachers work on improving the teaching and learning is a vital step in creating better learning environments. This approach clearly places teachers squarely in the middle of the process to make changes and improvements (Corcoran, 1995; DuFour & Eaker, 1998; Fullan & Hargreaves, 1991; Garmston & Wellman, 1999; Lieberman & Miller, 1999).

In order to develop a learning community with a focus on collaboration, professional development resource personnel need to be site-based and accessible to classroom teachers. The development of relationships is a key component of effective professional development (Hayes, Grippe, & Hall, 1999; Scroggins & Powers, 2004; Smith, 2002). Teachers need time to develop relationships with resource staff and to practice new skills in their own classrooms (Dole, 2004; Guskey, 1995; Hodges, 1996).

New approaches to professional development focus on results-driven education, systems-thinking, and constructivism (Sparks & Hirsh, 1997).

Learner-centered professional development supports teachers through three phases of professional development. Vision building focused on modeling high-quality literacy instruction acts as a foundation to create a shared instructional vision. Phase two, implementation, focuses on in-classroom coaching, observing other classrooms and continuing to study research. The final phase results in the development of a self-managing learning community that sustains the work (Sweeney, 2003).

Leadership

In studying the forces that have the greatest influence on student achievement, effective leadership is recognized as having a profound and direct impact (Goodlad, 1994; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Reeves, 2006). Effective leadership recognizes and confronts the status quo and focuses on building self-managing learning communities. This encouragement of shared leadership leads to a culture of inquiry and continuous focus on instruction (Collins, 2001; Lambert, 1998; Schmoker, 2006; Senge et al. 2000).

This view of leadership is not new. Burns (1978) described the transformational leader as one who "looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower" (p.4). He goes on to state: "The result of transforming leadership is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents" (p. 4). This emphasizes a powerful and higher level of leadership that can truly produce change and matches the

dynamics in a school setting where all teachers must truly act as leaders in their own classroom.

District support is critical for strong leadership within schools, both in terms of principals and teachers. This allows school personnel to focus energy on a literacy approach over a sustained period of time (Taylor, Pearson, Peterson, & Rodriguez, 2005). Administrators and supervisors also need to give programs time to develop (Costa & Garmston, 1985; Hayes, Grippe, & Hall, 1999; Joyce & Showers, 1982).

Quality of Teaching: Focusing on Cognitive Processes

To improve the quality of teaching, professional development should focus on cognitive processes, be comprehensive and systematic, and meet the challenges of the field by responding effectively to the scientific research base (Corcoran, 1995; Garmston, 1987; Garmston & Wellman, 1998; Guskey, 1994, 2003; Hirsch, 2004; Joyce & Showers, 1983; Rasmussen, Hopkins, & Fitzpatrick, 2004). In one study, for example, a K-12 program used a comprehensive set of effective professional development practices such as visiting other schools, designing personal professional development plans, introducing new staff to existing way of teaching literacy, and job embedded collaborative coaching to impact cognitive processes. In three years the school moved from performing in the lowest 10th percentile to the top 10th percentile on standardized reading and math tests (Brochu, et. al., 2006; Russo, 2006).

Research clearly indicates that teacher expertise is the most critical factor for improving instruction (Darling-Hammond, 1997). Professional development must focus on cognitive processes and teachers' roles as decision makers. Reformers in the area of professional development recommend changing its form and content based on research

related to cognitive constructivist theories. They identify specific components that are critical to succeeding in moving from traditional models of teaching to cognitive approaches. They include focusing on teacher's own motivations, inquiry and reflection, as well as being sustained, ongoing, intensive, connected to teacher's direct work with children, centered around teaching and learning tasks, and connected to and supported by school change as a whole (Bodorva, Leong, Norford, & Paynter, 2003; Costa & Garmston, 2002; Garmston, 2000; Guskey, 1995; Joyce & Showers, 1980).

This focus on reflection resonates with research in the early childhood field that emphasizes the teacher's role as a reflective practitioner (Carter & Curtis, 1996a, 1996b; Edwards & Gandini, 1993, 1998; Katz & Chard, 2000). The National Council for Accreditation of Teacher Education (NCATE) defines dispositions as being "guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice" (2006, p. 53). As teachers develop reflection skills, they are strengthened as both learners and teachers (Freidman, 2004). Zeichner & Liston (1996) described the history and tradition of reflective teaching in general and outlined dispositions that lead towards the process of inquiry, including positive dispositions toward issues of diversity. Carter and Curtis (1996) also focused on these types of dispositions as being necessary for reflective teaching in early childhood, tying this to the process children use to construct knowledge. This can clearly be seen in child-centered approaches such as those used in the Reggio Emilia schools in Italy and Lilian Katz's Project Approach in the United States. Wurm (2005) quotes Loris Malaguzzi, known as the father of the Reggio approach, as saying:

> Teachers – like children and everyone else – feel the need to grow in their competences; they want to transform experiences into thoughts, thoughts into

reflections, and reflections into new thoughts and new actions. They also feel a need to make predictions, to try things out, and to interpret them.... Teachers must learn to interpret ongoing processes rather than wait to evaluate results. (p. 96)

Addressing Diversity through Strength-based Models

Many researchers have described the negative influences of "risk factors" such as poverty, single parenthood, divergent language and cultural backgrounds, or having parents with low educational levels (Bowman & Stott, 1994; Duncan & Brooks-Gunn, 1997; Fox, 1997; Lee & Burkham, 2002; Lewis, 1996; Mayer, 1997). These types of criteria are often used to identify eligibility of children and families for federally and state funded preschool programs, as research has shown they are linked to lower scores in cognitive development, school achievement and emotional well-being. Lewis states that: "Without literacy skills, a child will probably be unable to break out of the "intergenerational cycles of poverty" (Lewis, 1996, p. 186).

Ruby Payne (2005) integrates much of this research in describing what she calls the "culture of poverty". She focuses on extensive discussion identifying language issues including definitions of the registers of language, discourse patterns, story structures, language experience in the first three years of life, cognitive differences and strategies for addressing all of these issues. She describes specific strategies that are critical for teachers to understand for building relationships and providing rich language experiences to prepare children for the world or work and school where middle class formal language registers and sequential story patterns prevail.

Ruby Payne's additive model focuses on defining differences between poverty, middle class and wealth, as well as unique assets each group has developed to match their own culture. She describes each group as having a "full glass" in their own culture and a

half glass in the two other cultures. The additive model is a positive strength-based approach focusing on insights into how hidden rules of economic class work and building resources can be used to fill up the glass. Payne focuses on developing resources by communities, families and individuals, building on strengths rather than weaknesses, and addressing all four areas of poverty research: behaviors of the individual, human and social capital in the community, exploitation, and political/economic structures.

Comer (2001) contends that lack of staff training can result in professionals adopting the deficit model and making inaccurate assumptions. Specific practices that are important for early childhood teachers to comprehend related to using a strength based model, are described by Gonzalez –Mena based on what she terms as cultural pluralism. "Cultural pluralism is the notion that groups and individuals should be allowed, even encouraged, to hold on to what gives them their unique identities while maintaining their membership in the larger social framework." (2008, p. 13). She maintains that children benefit from retaining their home culture as well as learning new cultural systems such as the middle class system Payne (2005) describes as dominating schools.

In addition to teaching and learning strategies in general, early childhood teachers also need to focus on the role of language and literacy in curriculum planning. Diversity issues are key considerations in content, material and book selection. Stories read in preschool classrooms reflect specific social and cultural content and can have a positive or negative impact on children and their identity (Bruner, 1996; Dean, 1992). Literature can provide a method to partner with families in assuring the transmission of cultural traditions and values. Teachers need to focus on finding stories that present the distinctive traditions and experiences of African American and Latino families and address the

issues of racism and poverty (Hale, 1991, Paley, 1979, Thompson, 1994). In addition, teachers need to reach out to parents to improve home learning environments, teach them about intellectually stimulating learning activities, and provide books for families to keep at home (Mayer, 1997; Smith, Brooks-Gunn, & Klebanov, 1997).

<div align="center">Coaching to Transfer Training</div>

The use of coaches in supporting teachers in their professional development is growing quickly in the field of education. The Reading First program alone accounts for 5,600 coaches hired in recent years (Deussen & Riddle Buly, 2006). Coaching encompasses the main components of the National Council for Staff Development's standards (as discussed earlier). Traditional in-service experiences alone are not effective in helping teachers implement new research-based strategies (Bodorva, Leong, Norford, & Paynter 2003; Bowman, Donovan, & Burns, 2001; Joyce & Showers, 1981; Spencer & Logan, 2003).

Adding feedback and in-class coaching to theory demonstration and practice increases the transfer of training to teachers' daily instructional practice and is the most powerful way to build their knowledge and improve practices (Costa & Garmston, 2002; Deussen & Riddle Buly, 2006; Garmstan & Wellman, 1999; Joyce & Showers, 2002).

The seminal work in coaching originated in the 1980's by Joyce & Showers. In their work in the early 80's, Joyce and Showers focused on examining the transfer of training through coaching. They found that teachers and principals who were coached used new content/strategies more frequently, appropriately, and over a longer course of time, as well as provided clearer understanding of the purpose of the new strategy (Joyce & Showers, 1981, 1982, and 1984).

In the mid 1980's, Joyce and Showers moved to thinking about whole school initiatives and altered their model to reflect this process with less emphasis on technical feedback and more on collaborative planning. In their most recent work they extended the focus on collaborative planning to emphasizing monitoring implementation of new strategies and studying the their effect stating: "Measuring the impact of the planned changes in the educational program is of critical importance to any school improvement and change effort" (Joyce & Showers, 2002, p. 93).

Definitions of Coaching

Quality coaching models should include a study of the theoretical base, observation of demonstrations, opportunities for practice, feedback, and reflection (Garmston, 2000; Joyce & Showers, 1982, 1996). Staff development trainers have traditionally modeled strategies and skills for teachers, whereas coaches are more focused on working with the teacher to shift understandings (Riddle-Buly, Coskie, Robinson, & Egawa, 2006).

Expert, or technical, coaching models are more effective in transfer of practices than peer coaching models (Joyce & Showers, 1981, 1983). This requires coaches to be well versed in teaching reading and experienced in the classroom. In addition to being good teachers, they need to be skilled in teaching adults and be able to work with administrators. Effective coaches are able to reflect on their own coaching practices and can support teachers in their professional development, supporting teaching excellence and change (Ackland, 1991; Anderson & Radencich, 2001; Bendetti & Reed, 1998; Garmston, 1987; Dole, 2004; International Reading Association [IRA], 2004b).

Content coaching is aimed at both the classroom and school levels. In the classroom the focus is on transferring knowledge about new practices to the classroom through modeling, observation and feedback. At the school level, coaches work with administrators on leadership skills, provide professional development opportunities, facilitate study or book groups, focus on interpreting and sharing assessments of students and work with administrators to plan systematically (Neufield & Roper, 2003).

In addition to differences in terms used to define types of coaches, programs differ in how they define the responsibilities of a coach. Dole (2006) offers three big ideas, or duties, for reading coaches. A coach's first duty is to teachers, students, and reading instruction. The second is to be in the classroom, collaborate with teachers, offer assistance as needed, and model new skills for teachers. Third, the reading coach needs to establish him or herself as someone who can help with reading instruction in order to be viewed by teachers as a valuable asset. Initial work should be collaborative and supportive.

Other researchers focus on more specific tasks: supporting and assisting teachers in new curricular programs (Lyons & Pinnell, 2001; Poglinco et al., 2003), consulting with and mentoring teachers (Costa & Garmston, 2002), writing grants, lesson planning, conducting research, and facilitating study groups (Walpole & McKenna, 2004), and leading discussion groups (Sweeney, 2003).

Current Coaching Models

The use of coaching in school reform programs is widespread in k-12 programs such as Success for All, The Learning Network, Literacy Collaborative, and grants such as Reading First. Coaching is widely identified as a critical component in improving

teacher's instructional practices. Programs such as Cognitive Coaching (Costa & Garmstan, 2002) are also involved in researching the impact of their coaching models. Researchers have studied the discourse and interactions between teachers and coaches and provided clear guidelines in terms of how to promote higher levels of reflective thinking (Nowak, 2003). Let us examine several of these models and related research findings.

Success for All, America's Choice Schools include coaches in each building who lead literacy workshops, including writers' and readers' workshops, as well as study groups focused on reviewing research and standards. They develop model classrooms where demonstration lessons and skills are practiced and then gradually move into individual teachers' classrooms where coaches then observe the teachers using the specific skills. Data from this program has found teachers are very positive about the individual support coaches give them and the modeling and demonstrations in their own classrooms (Poglinco et al., 2003).

The Literacy Collaborative, a comprehensive project focused on improving reading, writing, and language skills in the primary grades, revolves around a long-term professional development system centered on school-based literacy coordinators. Data collected over the last ten years clearly document student achievement in schools with the same literacy coordinator for at least four years (Schrarer, Desai, Williams, & Pinnel, 2003; Williams, 1998, 1999; Williams, Scharer, & Pinnell, 2000, 2001).

The Cognitive Coaching approach developed by Costa and Garmstan in the mid 1980's has been examined through a variety of research studies. Research has focused on linking cognitive coaching with increases in student test scores, teacher efficacy, teacher

reflection and collaboration, and increased teacher satisfaction and professionalism (Edwards, 2005).

Gains in student test scores have been measured for children ranging in age from kindergarten through high school for programs using the Cognitive Coaching model. The results often focus on reading related measures on standardized tests and also note significant decreases in referring students to special education (Grinder, 1996; Hull, Edwards, Rogers, & Swords, 1997). Teachers who participate in coaching grow on measures of reflective thinking and problem solving. They report growth in their awareness of their teaching practices as they examine their teaching methods and make changes in how they deliver instruction (Moche 2000; Schlosser, 1998; Slinger, 2004; Smith, 1997).

Studies also look at specific types of coaching. In one case study of seven coaches, researchers found that "reform coaches" can serve as an important bridge between a vision of improvement and its enactment, through day to day support for teachers (Coggins, Stoddard, & Cutler, 2003). Kise (2006) proposes a differentiated coaching model which uses learning styles of the teacher and coach and matches them accordingly as a way to have a more positive effect on the teacher. This model emphasizes analyzing multiple intelligences, experiential learning models and a mind styles model. Here the emphasis is clearly on the role the relationship between the coach and teacher plays.

As noted earlier, the Reading First program, established under the No Child Left Behind Act of 2001, is very focused on using coaching as a main strategy. It is a direct and intensive effort by the federal government to influence instructional practice and

student achievement in low-performing schools. Reading First was developed in response to research findings that find that high-quality reading instruction in the primary grades significantly reduces the number of students who experience reading difficulties in later years. The U.S. Department of Education has contracted for a Reading First Impact Study, but the first report is not yet available (MDRC, 2007).

Preliminary journal articles are beginning to appear describing Early Reading First's experiences by program. One ERF program, EXCEL in Oregon, uses similar coaching strategies and a play-based curriculum. The program is engaging in a quasi-experimental study comparing classrooms not receiving the intensive early literacy intervention, but results are not yet available (Reed, 2006).

The National Evaluation of Early Reading First: Final Report was presented to Congress on June 4, 2007 and subsequently released to the public. This evaluation used a quasi-experimental design to assess the impact of the program on both children's literacy skills and the instructional content and practices in preschool classrooms. The study compared a treatment group composed of 28 programs funded by Early Reading First in 2003 and a comparison group made up 37 programs that were not funded, but submitted applications that scored in a higher range of unfunded programs that year (Russell, et.al, 2007).

In terms of child outcomes, the ERF programs in the national evaluation had a positive impact on children's print and letter knowledge, but not on phonological awareness or oral language (Russell, et.al, 2007). The final report for the ERF program to be studied in this dissertation indicates positive impact in the areas of print and letter knowledge and phonological awareness, but not oral language.

In relationship to ERF impacts on teachers and classroom practices, the national evaluation looked specifically at: teacher knowledge and skills, general quality of preschool environment and quality of language, early literacy, and child assessment practices and environments. The major findings reported related to these areas indicated that ERF had positive impact on the number of hours of professional development that teachers received and on the use of mentoring as a mode of training. In the areas of classroom environments and teacher practices, the national report indicated that ERF had positive impacts on: language environment of the classroom, book-reading practices, the variety of phonological-awareness activities and children's engagement in them, materials and teaching practices to support print and letter knowledge, writing, and the extensiveness of child-assessment practices.

General Conclusions

The prolific amount of research and information that has been revealed in recent years related to effective early literacy practices speaks to the importance and timeliness of working to improve the quality of preschool classrooms. These studies provide clear guidance in the types of learning opportunities young children need to have in order to become proficient readers and succeed in school. The importance of providing these opportunities can not be understated as the United States continues to adapt to the global economy and knowledge age where education is critical to individual and national success.

Low standards related to preschool teacher qualifications and the need for reform in teacher preparation provide a barrier in terms of enabling teachers to be effective in providing literacy rich classroom environments. This problem requires a two pronged

providing literacy rich classroom environments. This problem requires a two pronged attack focused on improving educational requirements and training, and providing effective in-service training to teachers already in the field.

Organizations such as the National Staff Development Council play an important role in assimilating and sharing the large amount of research that is available related to professional development efforts aimed at school reform in general and literacy instruction specifically in the k-12 arena. This information can provide guidance in terms of the nature and form of effective professional development, especially in the areas of building learning communities, developing leaders, and improving the quality of teaching through cognitive processes.

Research aimed at addressing diversity through strength-based models focusing on cultural competence provides teachers and teacher educators clear direction. Teaching and learning strategies and content both need to be carefully considered in developing classroom practices and curriculum to improve the academic achievement of children considered to be "at risk". Pre-service and in-service professional development experiences must prepare teachers for working with children in poverty and with diverse racial/ethnic, family context and language experiences.

In recent years, the strategy of using coaches as a major focus in professional development has become increasingly prevalent. While articles abound in terms of defining types of coaching and describing coaching roles and relationships, there is still limited research attesting to the effectiveness of coaching. The research that is available is anecdotal in nature and predominantly focused on the use of coaching in k-12 programs.

The National Evaluation of ERF plays a critical role in beginning a dialogue reflecting on the impact of ERF programs. It used different tools for child and classroom measures, as well as teacher surveys than the ERF program studied in this dissertation. However, there is some overlap in the items being measured. The National Evaluation of ERF was more focused on the impact of professional development in general, than looking specifically at each strategy employed. It also used quantitative measures to determine things such as the number of hours teachers engaged in professional development, but did not focus on qualitative measures such as teachers' perceptions of those experiences.

<div align="center">Basis for Investigation</div>

There is, therefore, a clear need for further investigation into professional development experiences in general, and coaching in particular, for preschool teachers. The importance of the early years in terms of the role they play in learning and the low educational qualifications of teachers in the field make this a critical area of focus. While research from k-12 programs provides some guidance, the unique characteristics of both preschool teachers, programs and the children they serve require further investigation. This information can play of critical role in the early childhood field as national, state and local policies are continuing to be formulated and refined related to teacher qualifications and preparation, as well as resources provided for early childhood programs. This study is focused on providing a meaningful contribution to the dialogue begun by research related to teacher qualifications and preparation and the role ERF programs can play in influencing the field in this area.

CHAPTER III
METHODS

Introduction

This chapter presents a detailed description of the research design chosen, including rationale for its use, the setting and population studied, the major components of the EARLY project examined in this study, the instrumentation and materials used to examine data to answer the research questions, and the data analysis techniques. The specific research questions addressed include:

1. To what extent and in what ways has the implementation of intensive professional development increased the use of appropriate, measurable literacy enrichment-related teaching practices of participating preschool teachers regarding: (a) the structuring of their classroom environments, and (b) using intentional instructional strategies related to early literacy?

2. To what extent and in what ways do preschool teachers perceive that each of the following components of professional development contributed to any improvements in their literacy enrichment practices: (a) the overall professional development model, (b) onsite coaching, (c) internal cohort workshops, (d) college coursework, (e) professional conferences, and (f) training and use of a classroom literacy enrichment model?

3. To what extent do factors such as (a) years of experience, (b) educational level of the teacher, and (c) level of participation in professional development activities predict measurable literacy enrichment-related teaching practices and teachers' perceptions regarding various components of the professional development model?

4. What is the meaning and value of the intensive professional development components experienced by the preschool teachers during the EARLY project including:

(a) what are the underlying themes and contexts that account for the experience, (b) what influenced the cognitive process of developing as a teacher, and (c) what are the universal structures related to feelings and thoughts about the experience?

Research Design

Johnson and Onwugbuzie (2004) contend that:

> What is most fundamental is the research question – research methods should follow research questions in a way that offers the best chance to obtain useful answers. Many research questions and combinations of questions are best and most fully answered through mixed research solutions. (p. 18)

This description certainly applies to the research questions that formed the focus of this study. The first three questions sought answers regarding the effectiveness of the intensive professional development program used, differentiate between teacher's perceptions of the role each component of the program played, and consider the effect of variables such as educational level, experience, and level of participation in the program. This is critical when examining a new approach such as is used in this project. The newness of the strategies used in this project make it essential to go beyond quantitative measures to explore the experience of the participants, and provide a framework for discovering how best to construct this type of program for other preschool teachers.

This study utilized a mixed-methods approach reviewing secondary data. A two phase sequential exploratory design (Creswell, 2003) was employed, beginning with a quantitative phase examining the extent to which intensive professional development improved teachers' perceptions and instructional practices, and analyzing the elements of the preschool teachers' experience, education and professional development that may predict growth in these areas. The second phase applied qualitative methods to delve

deeper into how preschool teachers describe and value their professional development experiences and the role they play in their development as a teacher.

The quantitative phase used what Creswell (2003) calls a pre-experimental design reviewing pretest-posttest and survey variables to measure the extent of change over the course of the three year grant period. This design matches the nature of the first three research questions as it seeks to identify the extent of changes in perceptions and instructional practices. The nature of the initial project ties the researcher to a pre-experimental design as this is a single group study of a small population.

In addition, Johnson (2001) encourages researchers to classify research as descriptive research, predictive research, or explanatory research that is either retrospective, cross-sectional, or longitudinal. Johnson provides researchers with questions to aid in determining the type based on the primary research objective and time dimension. Using his classification, this study is considered explanatory because it focused on testing a theory about a phenomenon and then explaining how it operated by identifying factors that produce change. The EARLY project used a longitudinal research approach in that data was collected from the same individuals over a three year period to measure the impact of an ongoing intervention.

The fourth research question aimed at telling the story of the teachers that were involved in this project. This question lent itself to a qualitative phenomenological design. Patton (2002) identifies the foundational question in this type of approach as "What is the meaning, structure and essence of the lived experience of this phenomenon for the person or group of people?" (p. 104). This clearly reflects the nature of the researcher's goal in question four aimed at describing the meaning and value of the

intensive professional development components experienced by the preschool teachers during the EARLY project.

Schultz and Luckmann (1974) described social phenomenology as a way to "interpret and explain human action and thought" (p. 3). A phenomenological study focuses on descriptions of what people experience and the essence of a shared experience (Patton, 2002). Schulz (1970) emphasized the importance of language in transmitting meaning. There is certainly symmetry in having used a research design focused on language in evaluating the meaning of a project aimed at literacy.

<center>Setting and Sample</center>

This study used secondary data from one federally funded Early Reading First Grant program implemented from September, 2002 through May, 2005, entitled Early Accent on Reading and Learning for Young Children (EARLY). This EARLY grant program was aimed at creating preschool centers of excellence, focusing on early literacy. The population studied within the EARLY program included preschool teachers and assistant teachers who taught at the four centers targeted in this grant over the three years. The centers in the grant are diverse both in terms of program type and the populations served. The programs include a public school early childhood center, a Head Start center, a college laboratory preschool, and a faith-based childcare program. The programs serve low-income populations, diverse racial populations, families with English language learners, and children with special needs.

The population for this study was purposefully chosen to look closely at the effectiveness of the intensive professional development model used in this grant. A total of thirty-one preschool educators participated in the complete intensive professional

development activities of the grant. Eighteen of the teachers were involved across the entire three year period, five teachers participated for two years and eight participated for one year. The teachers ranged in educational qualifications from teachers with no college coursework to those who have attained Masters degrees. All of the teachers are female. Four additional teachers participated in some of the professional development activities such as internal cohort workshops and college coursework, but their main teaching assignment was in infant/toddler classrooms so they did not participate in coaching and were not included in the population for this study.

The external evaluators, who had been hired by the EARLY grant program to collect federally required data, also used purposive sampling to identify eleven participants with whom to conduct interviews. In making their selection, these things were considered: (1) they chose educators who had participated for at least two years, (2) they balanced the number of teachers and assistant teachers interviewed, and (3) they chose educators from each of the four sites based on the overall number of teachers participating.

Intervention

The Professional Development Model developed and implemented during the EARLY grant focused on providing intensive individualized professional development for the preschool teachers. Each teacher worked closely with a professional development plan specialist to create an individual professional development plan. This acted as a guide for designing an intentional set of professional development activities. Formal meetings took place two times a year and these plans were reviewed on an ongoing basis.

All preschool teachers participated in coaching on a weekly basis. They were also paid to attend monthly classroom educator cohort workshops. The other opportunities listed under professional experiences, as well as the educational experiences and networking, were identified by the teacher and the professional development plan specialist based on the individual needs of the educator.

Educational experiences included pursuing college coursework or using the teacher idea sharing library. Coursework could be taken at all levels (Associates, Bachelors, Masters, and Doctorate) that was within a program directly related to literacy. The grant paid tuition costs not covered by the teacher's employer up to a combined maximum of twelve credits per calendar year. The teacher idea sharing library was available to classroom educators at a central location. The library was equipped with books and periodicals, equipment such as a laminator and die cut machine, a book binder for creating books, flannel board and magnet stories, and math and literacy games.

Professional experiences included monthly in-service cohort workshops scheduled during the academic school year (September through May), professional memberships, and conference attendance. The workshops provided preschool teachers with opportunities to learn about research related to new instructional approaches, diversity issues related to topics such as book selection, parent communication, English language learners, and experiences related to the CLEM. They were led by college instructors, literacy coaches, teachers and external nationally known speakers such as Joan Lessen-Firestone who connected brain research to the development of literacy skills and Janice Hale who challenged teachers to explore perspectives related to how teachers

and schools relate to African American children. The workshops rotated among the pilot sites encouraging teachers to visit classrooms at the other sites.

The preschool teachers were paid a stipend at an hourly rate for attendance and provided with a light dinner and child care. Each teacher received a professional membership to either the National Association for the Education of Young Children, the National Black Child Development Institute or the International Reading Association. All of these organizations provide benefits including professional journals. In addition, the teachers had opportunities to apply to attend national and state conferences sponsored by these organizations.

Networking experiences included classroom visitations to preschool and kindergarten classrooms, peer partnerships with other teachers within the project with similar interests, online discussion boards, and bi-monthly newsletters. Classroom visitations allowed teachers to observe environments and instructional practices of other early childhood professionals. Peer partnerships were aimed at promoting relationships between participants and building a learning community. The online discussion boards were not widely used, but did provide a vehicle for asking questions, replying to each other and discussing issues as they arose. The bi-monthly newsletters connected teachers with their colleagues and helped them to see what was happening in the grant as a whole. Newsletters included celebrations, written and photographic updates from each of the pilot sites, updates on work of the Professional Development and Curriculum Team, Family and Engagement Team, Assessment Team and Management Team, information on the latest literacy research, announcements, photos and biographies of grant participants and monthly calendars of grant events.

Coaching was a key component of the Professional Development Model. It acted

as a means to support teachers in their learning and assisted them in doing what Joyce

and Showers (1981) referred to as "transfer" their learning into their own classrooms.

Coaches worked closely with teachers to reflect on their current practices, set goals,

identify desired outcomes, choose strategies to reach those outcomes, create an action

plan, select coaching strategies, implement the action plan and reflect collaboratively as

is illustrated in the flow chart in Figure 2.
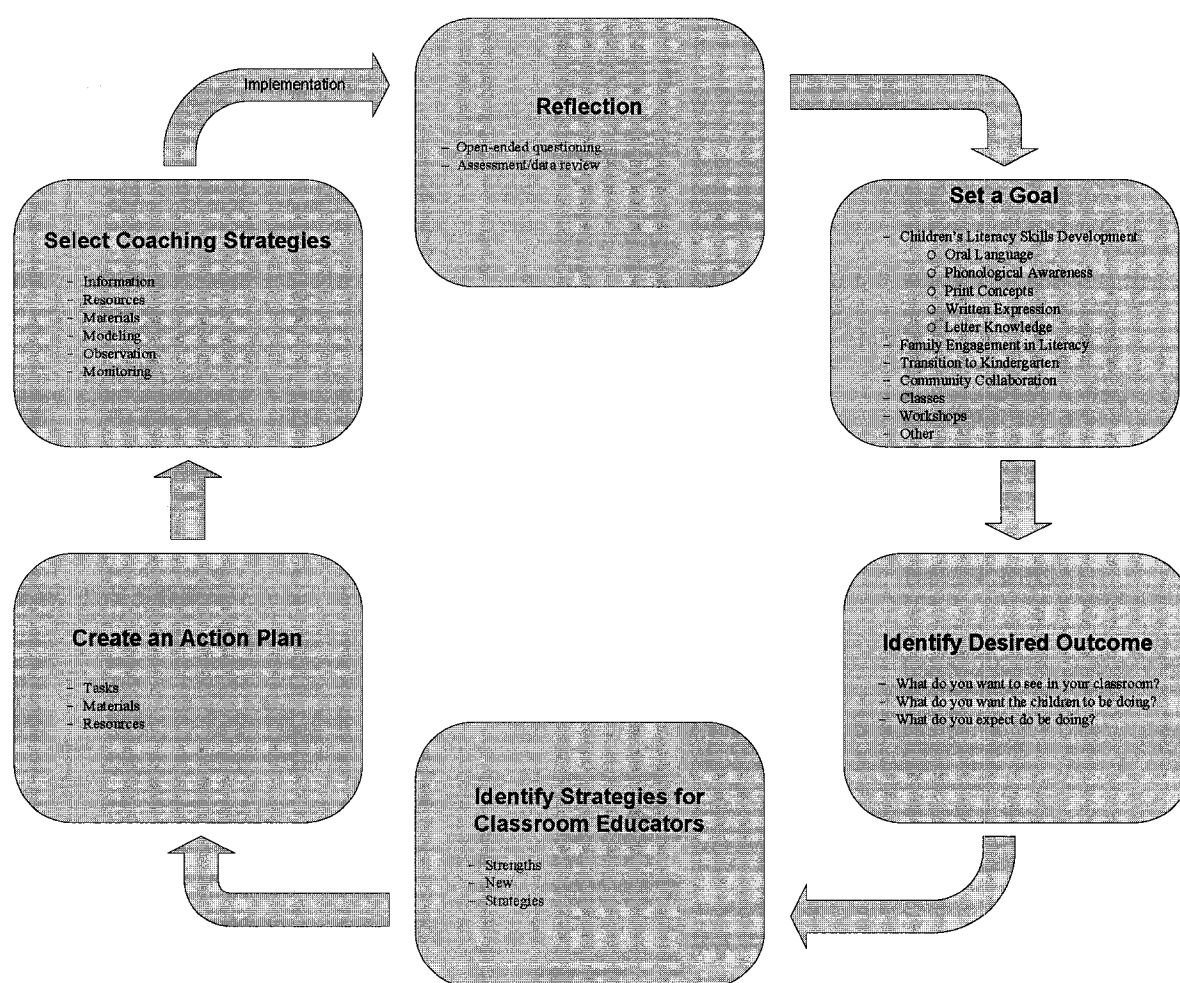
Figure 2. EARLY coaching model flow chart.

Each of these steps in the Coaching Model is specifically outlined in the Professional Development Model describing the goal and rationale for the step as well as the coach's and teacher's role. This model focused deliberately on strategies that promote cognitive processes and reflective teaching. Coaching cycle forms incorporating each of these steps were completed to document this coaching process.

<div style="text-align:center">Instrumentation and Materials</div>

This study reviewed secondary data from the EARLY project collected through four instruments: the Early Language and Literacy Classroom Observation (ELLCO), the Preschool Educator Self-Administered Survey, the Professional Development Plan Summary, and the Early Educator Interviews.

The Early Language and Literacy Classroom Observation (ELLCO) focuses on assessing literacy and language practices and materials in early childhood classrooms. It consists of three components: Literacy Environment Checklist (15- to 20-minute orientation to the classroom), Classroom Observation and Teacher Interview (20- to 45-minute observation; 10-minute interview), Literacy Activities Rating Scale (10-minute book reading and writing summary). In terms of validity and reliability, Brookes Publishing reports that the average inner-rater reliability is high for these assessment tools (88% for the Literacy Environment Checklist, 90% for the Classroom Observation, and 81% for the Literacy Activities Rating Scale).

The ELLCO was completed by members of the Assessment Team who attended training sessions to become certified to administer the observation. The ELLCO was completed at the beginning and end of each school year during the three years of the grant. Data consisted of total scores for each of the main areas, sub-scores for the General

Classroom Observation and Language and Literacy Curriculum within the Classroom Observation segment and scores on twenty-one specific items.

The Preschool Educator Self-Administered Survey (see Appendix B) was developed and administered by the external evaluators, Phillips Wyatt Knowlton, Inc. (PWK), with input from the EARLY Assessment, Professional Development and Curriculum, and the Family Engagement teams. It is composed of three sections: Classroom Literacy Enrichment Practice Inventory, Literacy Enrichment Support for Teachers, and Literacy Enrichment for Parents. This survey is composed of multiple choice questions using Likert scales and open-ended questions. PWK estimated that the survey should take participants approximately one hour to complete. The survey was administered at the end of each of the three years of the grant.

This dissertation study focused on the second section of the survey. The Literacy Enrichment Support for Teachers section included Likert scaled questions asking to what extent each literacy component contributed to the teacher's ability to successfully develop the early literacy skills of her students. The components addressed included: the overall EARLY project, the Classroom Literacy Enrichment Model, additional college coursework, cohort in-service workshops, coaching, classroom resources, conferences, peer partnerships, classroom visitation and blackboard discussion groups. Each area also included questions related to descriptions of how the component helped support practices, why the teacher values the component, and suggestions for improvement. In addition, year three also included a yes/no question about whether the coaching component should be included in future projects.

The Teacher Participation Record Summary provided a record of the teacher's participation in some of the variable professional development components. This included a list of the cohort in-service workshops attended, additional college coursework completed, and conference attendance. This instrument was compiled by the Professional Development Planner and confirmed by each teacher.

At the end of the grant, Teacher Interviews were conducted with eleven educators by the external evaluators, PWK. The interview protocol (see Appendix C) identifies twelve main questions with additional probing questions.

Data Analysis

In the quantitative phase of this project the researcher began by using descriptive statistics to provide the basic features of the data and simple summaries about the sample and measures. This included exploring distributions, central tendencies such as the mean, and variability through standard deviations. Next inferential analysis was applied to address the directional hypotheses identified in the chart on the next two pages. T-tests were used to look for differences in measures taken multiple times across the three year study in research questions one and two. A one-way between groups analysis of variance (ANOVA) was used to test the hypotheses presented in the third research question.

Tables 1-3 identify the directional hypotheses and data sets that were used in the quantitative phase to address each of the three research questions. In table 1, research question one focuses on looking at the impact of the overall *Professional Development Model*.

Table 1

Hypothesis for Research Question 1

Directional Hypothesis	Data Source
Hypothesis 1: Scores on the Early Language and Literacy Classroom Observation (ELLCO) subsections: (a) Literacy Environment Checklist, (b) General Classroom Environment, (c) Language, Literacy and Curriculum Observation and (e) Literacy Activity Rating Scale will increase from the beginning of the first year to the end of the third year.	Early Language and Literacy Classroom Observation (ELLCO) Baseline scores from year one, and post-test scores from year three.

In table 2, the second research question examines the overall Professional Development Model and five specific components of the model.

Table 2

Hypothesis for Research Question 2

Directional Hypothesis	Data Source
Hypothesis 2: Teachers will report that: (a) the overall professional development model, (b) onsite coaching, (c) internal cohort workshops, (d) college coursework, (e) professional conferences, and (f) training and use of the CLEM contributed to their ability to successfully develop the early literacy skills of their students.	Preschool Educator Self-Administered Survey: Literacy Enrichment Support for Teachers (Administered at the end of each of the three grant years)

In table 3, research question three explores connections between years of experience, educational level of the teacher, and level of participation and observed/reported changes in measurable literacy enrichment-related teaching practices and teachers' perceptions regarding components of the professional development model.

Table 3

Hypotheses for Research Question 3

Directional Hypotheses	Data Source
Hypothesis 3A1: Teachers with higher levels of education will have higher ELLCO scores for both the (a) baseline and (b) final observations.	Educational Level as compared with ELLCO scores
Hypothesis 3A2: Teachers with more experience will have higher ELLCO scores for both the baseline and final observations.	Years of experience/ELLCO scores
Hypothesis 3A3: Teachers who participate in more in-service workshops will have higher ELLCO scores on the final observations.	Numbers of In-service Workshops Attended/ELLCO scores
Hypothesis 3B1: Teachers with lower levels of education will rate components of the PDM higher.	Educational Level/ Language Enrichment Survey for Teachers (LEST) survey ratings
Hypothesis 3B2: Teachers with less experience will rate components of the PDM higher.	Years of experience/ LEST survey ratings
Hypothesis 3C1: Teachers participating at greater levels will rate components of the PDM higher.	IEP Summary/LEST survey ratings

In the qualitative phase of the study, the data analysis began with an initial read through of the teacher interview transcripts by the researcher to get a sense of the whole. Patton (2002) describes this as a way to check out the quality and the completeness of the information that has been collected. Next, the data was coded broadly according to themes and patterns. Inductive coding was used based on multiple readings of the interview transcripts. The researcher identified what Creswell (1998) refers to as

"meaning themes" (p. 65) and reviewed for the general description of the experience by the participants.

Triangulation was used to test the consistency of the findings. Denzion (1978) identified four basic types of triangulation that researchers rely on. In this case, data triangulation was conducted by examining the open-ended questions from the Preschool Educator Self-Administered Survey and comparing the themes that emerged from this larger sample to those from the interviews. Methodological triangulation was also used by looking at the quantitative results in terms of the Likert scores teachers assigned to the professional development strategy in the first phase of this mixed methods design.

Delimitations and Limitations

This study confined itself to studying aspects of one specific Early Reading First federal grant program. The small sample size and lack of a control group decrease the generalizability of the findings related to the quantitative research questions. The findings related to the qualitative research question could be open to other interpretations.

The researcher performing this secondary analysis acted as the project manager in this grant and might have brought certain biases to this study. However, every effort was made to counter these biases. Data in the grant was collected and the educators were coded through an external evaluator. This work was directed by the Assessment Team, on which the researcher did not participate.

Protection of Participants Rights

The secondary data reviewed in this study were collected within the confines of an Early Reading First grant. The ELLCO data were collected as a part of the educational program at each of the sites and is tied to unidentified classrooms. The data from the

Preschool Educator Self-administered Survey were all collected on a voluntary basis and kept confidential. These data have been tied to numbers and only the external evaluators and the project secretary have a master list connecting participant names to the numbers. These lists are kept in locked file drawers in their respective offices. No individuals are cited by name.

Chapter III Summary

In conclusion, this mixed methods approach encompassed two phases. The quantitative phase reviewed secondary data consisting of pre- and post- test Early Language and Literacy Classroom Observation (ELLCO) scores, Preschool Educator Self-Administered Survey ratings and responses, demographics and Professional Development Plan Summary information to answer the first three research questions focused on measuring the extent of change in teacher practices and professional development over the three year grant period. The second phase used a qualitative approach focused on delving into the Early Educator Interview transcripts to address the fourth research question exploring the value and meaning of the EARLY professional development experience. The results and discussion of these phases are presented in chapters four and five.

CHAPTER IV
RESULTS

This chapter presents the results of both the quantitative and qualitative elements

of this mixed methods investigation. Each of the four research questions and

accompanying directional hypotheses are examined.

Description of the Sample

As indicated in the methods chapter, the population for this study was

purposefully chosen to look closely at the effectiveness of the intensive professional

development model used in the EARLY grant. A total of thirty-one preschool teachers

participated in the complete scope of intensive professional development activities

provided by the grant. All of the teachers are female. Eighteen of the teachers were

involved across the entire three year period, five teachers participated for two years and

eight participated for one year. The teachers were either in the role of a lead or assistant

teacher. The range of experience working in an early childhood classroom spanned from

2 to 33 years. This information is depicted in table 4.

Table 4

Teachers' Grant Participation and Early Childhood Teaching Experience

	Years of Participation			Years of Experience		
	1	2	3	0 - 10	11 - 20	21+
Lead Teachers	3	2	10	8	7	4
Assistant Teachers	5	3	8	5	4	3
Total	8	5	18	13	11	7

The teachers ranged in educational qualifications from teachers with no college coursework to those who have attained Masters degrees. Table 5 identifies the levels of lead and assistant teachers' education at both the beginning and end of the grant period.

Table 5

Beginning and End of Grant Educational Levels of Teachers

	Educational Level							
	Beginning of Intervention				End of Intervention			
	HS/CDA	AA	BA	MA	HS/CDA	AA	BA	MA
Lead Teachers	2	2	7	2	1	1	7	5
Assistant Teachers	8	3	2	0	7	3	2	0
Total	10	5	9	2	8	4	9	5

Four additional teachers participated in some of the professional development activities such as internal cohort workshops and college coursework, but their main teaching assignment was in infant/toddler classrooms so they did not participate in coaching and were not included in the sample for this study.

The sample included 25 teachers during year one, and 23 teachers during years 2 and 3. There were 7 individual classrooms and one large open set of rooms that served five pairs of teachers and their students in year one, with one less individual classroom during years 2 and 3.

Research Question 1: Early Language and Literacy Classroom Observation Scores

Research question one asked: To what extent and in what ways has the implementation of intensive professional development increased the use of appropriate,

measurable literacy enrichment-related teaching practices of participating preschool educators regarding (a) the structuring of their classroom environments and (b) using intentional instructional strategies related to early literacy? The directional hypothesis (1) put forward to operationally define these variables is stated as follows: Scores on the Early Language and Literacy Classroom Observation (ELLCO) subsections (a) Literacy Environment Checklist, (b) General Classroom Environment, (c) Language, Literacy and Curriculum Observation, (d) Overall Classroom Observation and (e) Literacy Activity Rating Scale will increase from the beginning of the first year to the end of the third year.

The ELLCO was administered at the beginning and the end of each of the three school years from Fall 2003 to Spring 2006. Trained observers completed the assessment in 1 – 1.5 hours using three tools in sequential steps. A Cronbach's Alpha was used to measure the reliability of the assessment using all of the scores over the three year period. The result was an Alpha score of .914 for the General Environment items and of .962 for the Language, Literacy and Curriculum items, with 100% of cases deemed to be valid in each one.

Baseline scores from the Fall of 2003 and the final scores from the Spring of 2006 were compared to evaluate the effectiveness of the intervention. There are three tools used as a part of the ELLCO. The Literacy Environment Checklist measures the classroom layout and content through 24 items that measure availability, content, and diversity of reading, writing, and listening materials. The mean score for this section was 20.83 in the Fall of 2003 and 40.0 in the Spring of 2006 as illustrated in the bar graph in Figure 3.
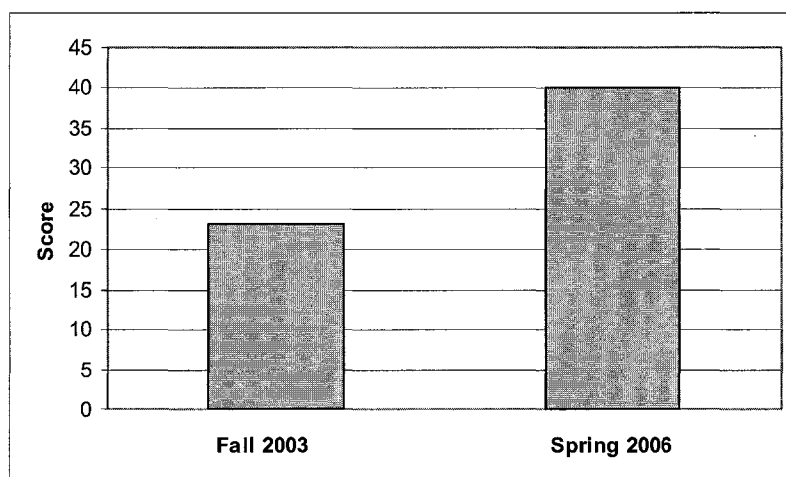
Figure 3. ELLCO: Literacy environment checklist mean scores.

A paired-samples t-test was conducted to evaluate the impact of the intervention

on the Literacy Environment Checklist. There was a statistically significant increase in

scores from Fall 2003 (M = 20.83, SD = 5.231) to Spring 2006 [M = 40, SD = 1.095, t(6)

= -8.032, p = .000]. The eta squared statistic (.93) indicated a large effect size.

The second tool, the Classroom Observation, is composed of two parts, the

General Classroom Environment and the Language, Literacy and Curriculum segment.

The General Classroom Environment segment had a mean score of 19.0 in the Fall of

2003 and 28.83 in the Spring of 2006 as illustrated in Figure 4. A paired-samples t-test

was conducted to evaluate the impact of the intervention on the General Classroom

Environment Observation. There was a statistically significant increase in scores from

Fall 2003 (M = 19.00, SD = 7.043) to Spring 2006 [M = 28.83, SD = 2.858,

t(6) = -3.350, p = .011]. The eta squared statistic (.75) indicates a large effect size.
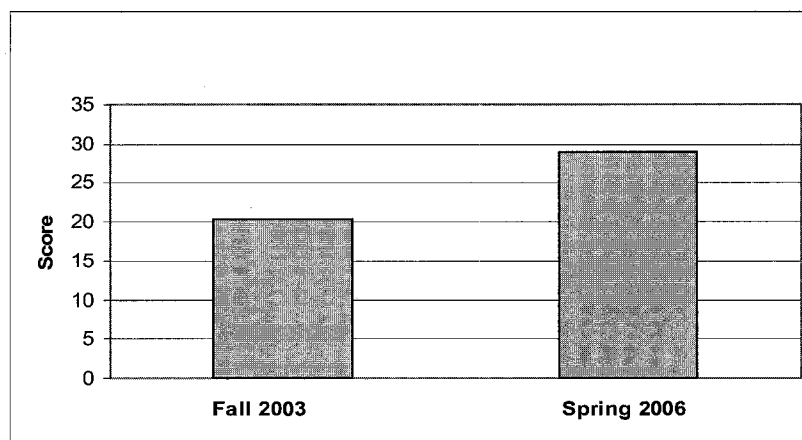
Figure 4. ELLCO: General classroom environment mean scores.

The second part of the Classroom Observation, the Language, Literacy and Curriculum segment examines teachers interacting with children and rates the quality of classroom supports for literacy. The mean score for this section was 22.67 in the Fall of 2003 and 39.83 in the Spring of 2006 as illustrated in figure 5.
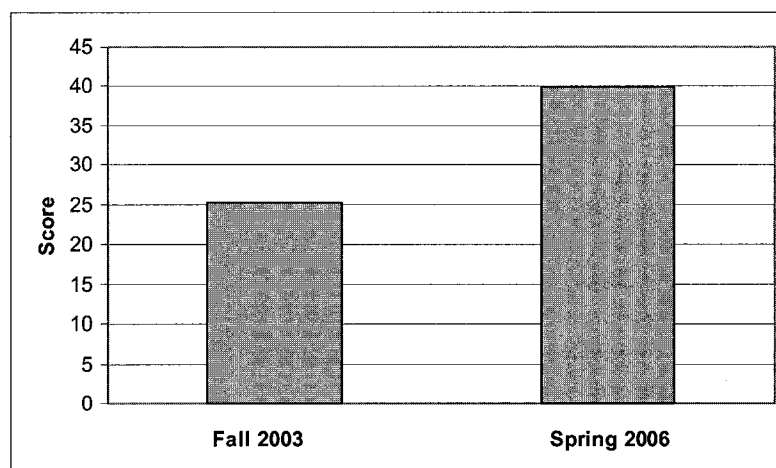
Figure 5. ELLCO: Language, literacy and curriculum mean scores.

A paired-samples t-test was conducted to evaluate the impact of the intervention on the Language, Literacy and Curriculum Observation. There was a statistically significant increase in scores from Fall 2003 (M = 22.67, SD = 8.618) to Spring 2006

[M = 39.83, SD = .408, t(6) = -5.020, p = .004]. The eta squared statistic (.83) indicated a

large effect size.

The total Classroom Observation had a mean score of 41.67 in the Fall of 2003

and 68.67 in the Spring of 2006 as illustrated in figure 6.
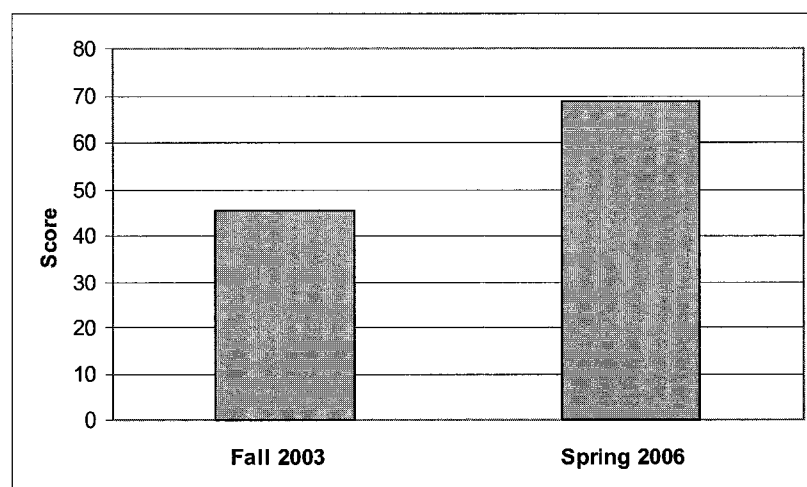
Figure 6. ELLCO: Overall classroom observation mean scores.

A paired-samples t-test was conducted to evaluate the impact of the intervention

on the Overall Classroom Observation. There was a statistically significant increase in

scores from Fall 2003 (M = 41.67, SD = 15.475) to Spring 2006 [M = 68.87, SD = 3.266,

t(6) = -4.753, p = .005]. The eta squared statistic (.82) indicated a large effect size.

The third tool, the Literacy Activities Rating Scale, focuses on recording how

many times and for how long nine literacy behaviors occurred in two categories, Book

Reading and Writing. The scale had a mean score of 5.0 in the Fall of 2003 and 9.67 in

the Spring of 2006 as illustrated in figure 7. A paired-samples t-test was conducted to

evaluate the impact of the intervention on the Literacy Activities Rating Scale. There was

a statistically significant increase in scores from Fall 2003 (M = 5.0, SD = .894) to Spring

2006 [M = 9.67, SD = 1.033, t(6) = -9.439, p = .000]. The eta squared statistic (.95) indicated a large effect size.
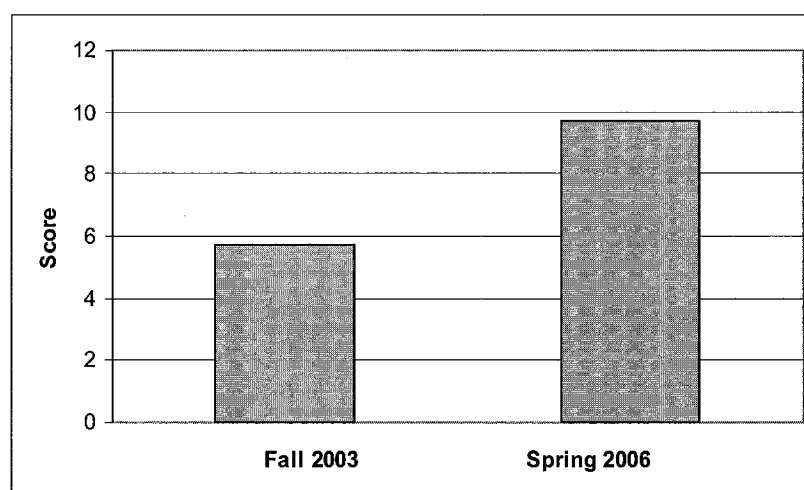
Figure 7. ELLCO: Literacy activities rating scale mean scores.

Based on these results, the directional hypothesis predicting a positive increase in scores over the three year project period would be accepted for all areas of the ELLCO.

Research Question 2: Teachers' Ratings of Professional Development Strategies

The second research question examines to what extent and in what ways preschool teachers perceive that each of the following components of professional development contributed to any improvements in their literacy enrichment practices: (a) the overall professional development model, (b) onsite coaching, (c) internal cohort workshops, (d) college coursework, (e) professional conferences, and (f) training and use of a classroom literacy enrichment model. The directional hypothesis for this question focuses on teachers reporting that each of these strategies contributed to their ability to successfully develop the early literacy skills of their students. Data for this question comes from the Literacy Enrichment Support for Teachers section of the Preschool Educator Self-administered Survey that was given at the end of each of the three grant

years. The analysis begins by examining the extent to which teachers rated the

effectiveness of each area on a Likert scale with 1 identified as "Not at All," 5 as "A

Great Deal," and 0 as "Missing." The results are depicted in Table 6.

Table 6

Teachers' Ratings of Professional Development Strategies

Strategy/Year	Number of Responses	Mean	Standard Deviation	Rank*
Overall Professional Development				
Year One	22	4.0	.873	-
Year Two	17	4.35	.786	-
Year Three	18	4.50	.514	-
3 Year Aggregate	57	4.26	.762	-
Training and Use of the Classroom Literacy Enrichment Model				
Year One	19	3.63	1.116	4
Year Two	17	3.65	1.057	4
Year Three	18	3.94	.998	5
3 Year Aggregate	54	3.71	1.066	4
College Courses				
Year One	6	4.83	.408	1
Year Two	6	4.83	.408	1
Year Three	7	4.86	.378	1
3 Year Aggregate	19	4.84	.375	1
In-service Workshops				
Year One	21	4.10	1.044	3
Year Two	17	3.88	.993	3
Year Three	18	4.22	.732	3
3 Year Aggregate	56	4.07	.923	3
Coaching				
Year One	19	2.79	1.357	5
Year Two	15	3.40	.910	5
Year Three	18	4.28	.958	2
3 Year Aggregate	52	3.49	1.250	5
Conferences				
Year One	19	4.32	.820	2
Year Two	14	4.00	.784	2
Year Three	14	4.14	.949	4
3 Year Aggregate	47	4.17	.834	2

*Note: Rank is based on a comparison of the mean rating score for each year for the five separate components listed in the chart.

In year one, 23 out of 25 teachers and assistant teachers completed the survey for a 92% return rate. In both years two and three, 19 out of 23 teachers and assistant teachers completed the survey for a 82.6% return rate. Table 6 includes the number of respondents who provided a rating from 1-5, the mean score, the standard deviation and the ranking for each strategy over the three year period.

In addition to Likert scores, the Literacy Enrichment Support for Teachers section of the Preschool Educator Self-administered Survey included questions calling for short answers for each strategy detailing how classroom knowledge and/or practice were strengthened, and what teachers value about the experience and why. In addition, the coaching section also asked about the relationship that was formed with the coach, the strengths the coaches bring to the classroom, and whether the coaching experience was something they would recommend to others.

Overall Professional Development

As noted in table 6, the overall professional development was rated 4 or above with an aggregate average of 4.26. Repeated readings via qualitative analysis of the short answers provided over the course of the three years related to the values of the overall professional development activities revealed four main themes. A list of those themes and phrases related to each one is provided in table 7.

The comments related to thinking, reflecting, and planning tied closely to overall goals of the professional development model and specific steps included in the coaching model. One participant said: "Being involved in the grant helped me re-focus and re-energize my teaching. I am more deliberate about what I'm doing with kids and know why I am doing it."

Table 7

Themes Arising from Teachers' Responses Related to the Overall Professional Development Experiences

Theme	Related Words or Phrases
Knowledge	More aware of... Gained information More intentional More deliberate Purposeful Learning Time to think, reflect and make plans
Materials, Resources	New resources available New books and library Cameras and docking stations Supplies
New Ideas	New ways to teach How to implement literacy activities New practices Specific skill areas: transitions, alphabetic knowledge, rhymes, phonological awareness, concepts about print Daily planning
Collaboration	Collaboration and networking with other teachers Sharing ideas with one another as we learn We did a lot of teaming Networking with other EDE educators
Valued as a professional	Felt valued as a professional Feel really valued as a teacher

There were numerous comments related to the importance of having supplies on hand. Clearly availability of resources was valued by the teachers. They also made many positive comments about having assistance and support to learn about and implement specific strategies related to literacy practices. Teachers commented on the importance of having the materials and new ideas, as well as reminders and encouragement to try new things and emphasize literacy development.

The value of collaborating and sharing with other teachers was also commented on by many of the teachers. Some of there responses included: "Networking with other EC educators, you learn a lot," "It gives us a chance to collaborate," and "We did a lot of teaming and were able to be compensated for this time!"

In terms of professional development strategies, teachers appreciated having professional development opportunities and commented on how much they liked being reimbursed for workshop attendance and tuition. The most powerful idea that teachers focused on related to professional development strategies was summed up by one participant who said: "EARLY made me feel so valued as a professional!"

These five themes were also woven through the short answer responses for each of the individual components of the professional development model.

Training and Use of the Classroom Literacy Enrichment Model

The training and use of the Classroom Literacy Enrichment Model had a three year aggregate Likert score of 3.71 and was ranked fifth out of the components the first two years and fourth the third year. The themes related to "knowledge" and "new ideas" described in table 7 were repeated in the set of questions asking how the CLEM strengthened classroom practices, what teachers valued about the experience and why. One teacher noted that she is: "Now more aware of different areas of literacy and how to put it into every center in the room."

One additional area of note relates to changes that were made to this tool half way through the grant. The first edition was very different from the second in terms of balance between theory and practice and overall content. The first edition started with theory and then listed some possible strategies that could be used related to the main components of

literacy. The second edition introduced theory and concepts, but then focused on integrating literacy through classroom routines and learning centers. It also included many photos from the participating classrooms of children and teachers engaged in those activities.

While there was not a significant difference in how the CLEM was rated over the three years, there were noticeable differences in the descriptions teachers provided in the short answer section. In the first year there were 11 negative comments related to the CLEM that used phrases such as "very overwhelming," "so confusing," and even a pointed question asking: "Who will actually refer to it? Was it just done for the Feds?" During years 2 and 3 the only negative response noted that the teacher had not had time to work with it. In terms of positive responses, during years 2 and 3, there were 31 responses that referred to the CLEM as "user" or "teacher friendly," a "great resource," "clear and concise," or "laid out well and easy to use," as opposed to only five of these types of responses the first year. One participant summed this change up by stating: "The first CLEM wasn't used very much, because it wasn't user friendly. The current one is great. When I do lesson plans or a problem arises I can refer to CLEM for ideas."

College Coursework

As previously shown in table 6, college coursework received the highest mean ratings (aggregate M = 4.84) and was ranked the highest all three years. Teachers' responses related to college coursework centered around three main topics: monetary assistance, support and encouragement, and learning that strengthened teachers' practices. Many of the teachers made comments related to how the financial assistance made it possible for them to return to school saying: "I couldn't have done this without

the financial help!" "…without it, I don't think the chance to further my education would have been available" and "I learned SO much. If the grant had not helped financially, I would not have been able to go."

There were also comments that acknowledged the importance of encouragement, such as: "The grant has given me the encouragement to complete my BA and work on my masters" and "I really liked the encouragement to take classes because it was hard for me to go in the first place with full time work and family responsibilities."

Finally, teachers noted how courses impacted their knowledge and teaching practices related to a variety of topics. Several teachers indicated the importance of learning more about development, saying: (Courses have) "given me a better understanding of the brain and physical development of the children" and (it) "help(ed) me learn more about the development of a child and how literacy impacts you even at a young age."

Other comments related directly to the context of the programs teachers were working with such as: "The things that I have learned are very applicable and an asset to the low income families we service" and "A class in advanced studies in early childhood and one in preschool special needs have helped me consider the needs of our individual children." One particularly poignant comment related to college coursework stated:

> I value how teachers from many different parts of the city, get together and share ideas and experience. I value how we talk about what's best for our children in this day and time. How children were taught when I was a little girl, don't work for our children today. We have to learn how to reach outside the box. Who said children learn best sitting at a desk, back straight? Our children today learn by moving around, especially young children. They learn through music, rhythms, fingerplays, dancing, running, jumping, etc…

In-service Cohort Workshops

In-service workshops had a three year aggregate mean of 4.07 (see table 6), and were ranked third by teachers each of the three years. The overwhelming response related to the in-service workshops was focused on teachers feeling like the workshops brought them new ideas. Of the 28 teachers that provided short answer responses over the three years, all but two commented about receiving "new ideas" that could be used in their classrooms. Some of the responses related to this were as follows: "The workshops have most often been energizing times including hands on experience with materials and ideas to promote literacy" and "The workshops continue to inspire me to consider best practices." This was even true of veteran teachers, as exemplified by the following responses by two teachers: "It was great to have so many practical workshops on what works in early childhood. Even though I've been teaching a long time, it helped me become more intentional about what I'm teaching and why" and "I always take something away from the workshops and I've been teaching a LONG time."

Two teachers responded with more negative comments related to the level of the workshops, saying: "I have already learned most of this in my college MA classes" and "They (the workshops) haven't been helpful. The info is so basic; I rarely leave with any new ideas or information." However, even these two teachers had positive things to say about the opportunities for collaboration that will be discussed next.

Networking with other teachers, learning from others, and collaborating were frequently referred to as the components of the workshops teachers valued most. Two responses that sum this up well are as follows: "The workshops gave us a chance to bounce ideas off each other – a sense of community was made" and "With the workshops

we saw something that doesn't happen often, as most programs are competitive – here we have a common goal and support each other."

During the third year of the grant, an effort was made to bring in more external speakers who are well known in the early childhood field. A couple of the comments related to this were: "I value the professional speakers most who really made us think about a particular topic and enrich us about it" and "I learn better from diverse sources. Each speaker I've heard present has some worthwhile perspective and practical ideas."

Finally, teachers described what the workshops meant to them as teachers, saying: "It enables me to become a better teacher and provide skills that children need" and "(Workshops) make me feel confident in my ability to teach."

Conferences

Attending conferences had a 3 year aggregate rating of 4.17 (see table 6), and was ranked second the first two years and fourth the third year. The themes of knowledge, new ideas, collaboration, and being valued as a professional were all included in the short answer responses related to conferences. Teachers indicated that: "Professionals need to be up on the latest in the field" and "Attending the conference enlarges your knowledge and skills in performing in your classroom. The more you learn the better you become."

Teachers indicated that they appreciated being able to attend conferences together, as well as network with teachers from across the country. The first year of the grant the NAEYC Annual conference was held in Chicago, just a few hours away. Twenty two teachers and coaches attended and several teachers commented specifically about this opportunity; one said: "It was great to go to Chicago with all our staff –

including paraprofessionals. It helped strengthen us as a staff and made us feel

important."

Several teachers commented on how attending conferences contributed to how

they felt about themselves as professionals. Teachers said: "I feel valued! To be sent to a

conference all expenses paid said to me 'you are important as an early childhood educator

– and what you do is important'" and "It shows we are valued – we are the ones who will

be implementing the ideas and practices – who better to attend?"

On-site Coaching

The coaching strategy was the only mean score rating that varied significantly

from one year to another and in the overall ranking of strategies. Figure 8 highlights this

difference in the bar graph below showing the mean scores for each strategy each year.
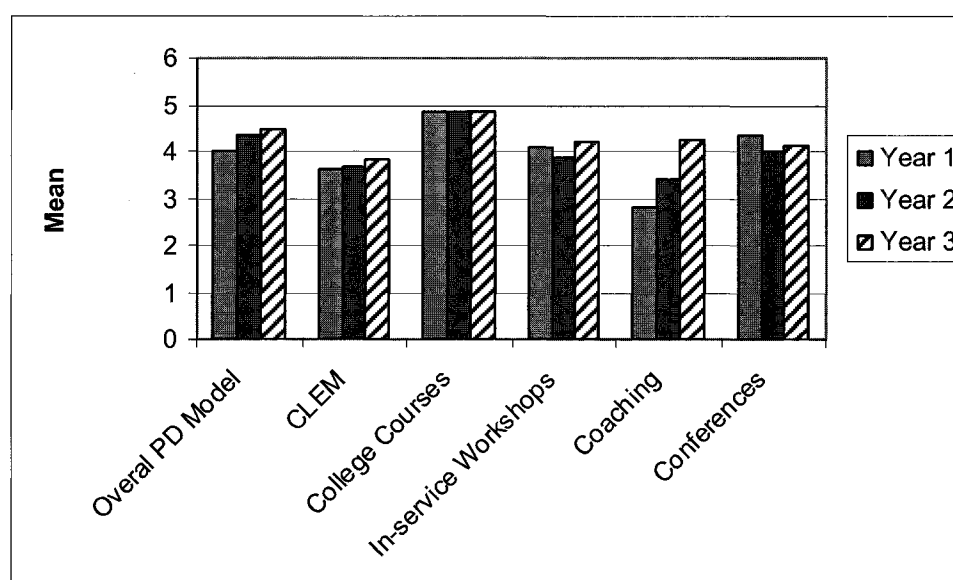
Figure 8. Professional development strategies three year rating comparison.

A paired samples T-test looking at 11 teachers and assistant teachers who

provided ratings for coaching both year 1 and year 3 was conducted. There was a

significant increase in coaching ratings from year 1 (M = 2.75, SD = 1.138) to year 3

[M = 4.08, SD = 1.084, t(11) = -3.546, p = .005]. The eta squared statistic (.56) indicated a moderate effect size.

This change in perception was also very evident in the short answer responses. The first year, 14 out of the 20 teachers who replied to the prompt asking them to describe the relationship formed with the coach at their site provided negative answers. Most of them made comments related to not feeling like their coach was accessible or in the classroom enough. Some of the responses included: "I have no relationship with the coach – she doesn't work with the teaching assistants," "She has not been available much for 'coaching,'" "She is tied up in meetings," "She was mostly out of the building" and "She has not made an effort to assist us in the classroom."

This changed as the coaching model and the role of the coach evolved during the second and third year of the grant. By year two, 14 out of 19 responses were positive and then in year three all 18 responses were positive. These positive responses included many comments about coaches being "supportive and encouraging" and "more available." Many of the comments the third year reflected a strong relationship, such as: "This year a true relationship was made. It was nice meeting weekly and setting workable goals. Her interactions seemed genuine, more directed to classroom success, than in the past" and "___ is a great coach. She has bonded with the kids, they love her dearly. She is always ready to help us out and improve our center with great knowledge." The importance in having a "primary coach relationship" was described by this comment by one teacher: "This year and at the end of the last year, it was helpful to have just one coach for our site. It seemed to be more of a commitment and a desire on both ends to make it work and to have the best for the children."

When asked about how their knowledge and/or classroom practices have been strengthen through involvement with EARLY coaching, the changes over the course of the three years were also evident. In the first year most of the teachers focused on materials, new room set-up, and activity ideas that coaches provided for them. By the third year, there was a shift to teachers talking more about their own accomplishments and how the coach supported them in the decision making process. There were comments saying the coach was: "a great sounding board to get a feel for strengths and weaknesses," "It was great to have such a knowledgeable person to bounce ideas off of," and "I can tell her my own misgivings and she will help sort out what to do about it – I don't feel stupid – I feel she will support me."

Teachers also commented on how the coaches helped them to be accountable and stay focused, saying: "It has really helped me be accountable and implement things I have wanted to do but lack the extra focus and time to accomplish" and "Making me more aware of my goals in working with non-English speaking children and the rewards of the time spent."

Finally, the year 3 survey also asked whether teachers and assistant teachers would recommend coaching. Of the 15 participants who responded to this question, all indicated "yes."

Research Question 3: Factors Predicting ELLCO Scores and Teachers' Ratings

Research question three asks: To what extent do factors such as (a) years of experience, (b) educational level of the teacher, and (c) level of participation in professional development activities predict measurable literacy enrichment-related teaching practices and teachers' perceptions regarding various components of the

professional development model? One way between groups Analysis of Variances

(ANOVA) statistics were used to compare each of the independent variables (educational

level, years of experience, and level of participation) with the Professional Development

strategy ratings as measured on Self-Administered Survey: Literacy Enrichment Support

for Teachers and the ELLCO classroom scores. In both of these cases, the overall small

sample size prohibited the use of Multiple Regression and there were too few cases in

many of the cells for a multivariate analysis of variance statistical analysis.

To examine this research question, the demographic information related to

educational level, years of experience, and level of participation (as measured by the

number of in-service workshops attended), were each recoded into three groups as

depicted in table 8.

Table 8

Recoding of Independent Variables

Educational Level	Years of Experience	Level of Participation
(1) CDA or Associates Degree	(1) 0 – 10 years	(1) 1-7 workshops
(2) Bachelors Degree	(2) 10 – 20 years	(2) 8-14 workshops
(3) Masters Degree	(3) 21+ years	(3) 15 – 22 workshops

Comparisons between Educational Levels and ELLCO Scores

The first hypothesis stated: teachers with higher levels of education will have

higher ELLCO scores for both the (a) baseline and (b) final observations. Lead teachers

were identified to address the hypotheses related to ELLCO scores as they have the

primary responsibility for curriculum development at all of the sites studied. This

hypothesis was examined by comparing the lead teachers' levels of education with the

ELLCO scores that were taken at the beginning and end of the grant in each of their

classrooms.

A one-way between groups analysis of variance was conducted to explore the

impact of lead teacher educational level with measurable literacy enrichment related

teaching practices, as measured by each of the ELLCO sub-scores. Teachers were divided

into three groups according to their educational level, as indicated on Table 8.

There was a statistically significant difference at the p < .05 level in ELLCO

Literacy Environment scores [$F(2, 13) = 4.782, p = .028$]. The effect size, calculated

using eta squared, was .42. A significance level of .039 violated Levene's Test of

Homogeneity of Variances so a Dunnett C Post-hoc was used to identify where the

differences were significant. The mean score for Group 1 ($M = 18.40$, $SD = 7.570$) was

significantly different from Group 3 ($M = 37.00$, $SD = 0$). Group 2 ($M = 30.00$, $SD = 9.042$) was not statistically different from either Groups 1 or 3. Figure 9 depicts these

relationships in a means plot.
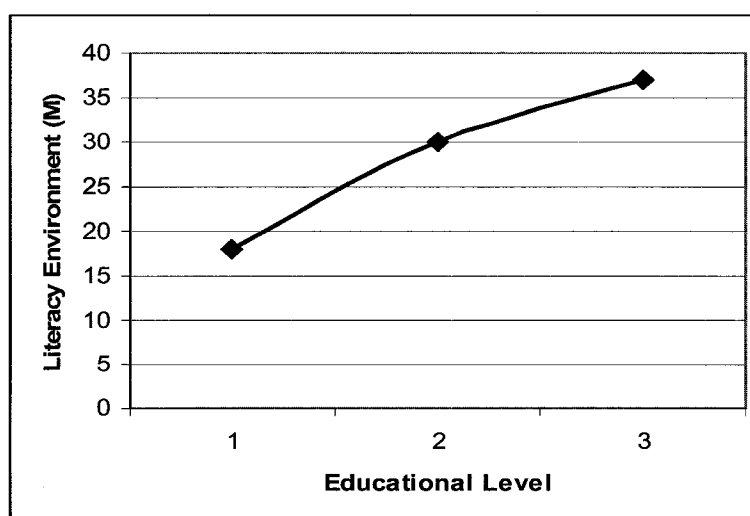
Figure 9. Differences on literacy environment ELLCO scores by educational level.

There was also a statistically significant difference at the p < .05 level in ELLCO

General Environment scores [$F(2, 13) = 5.345, p = .020$]. The effect size, calculated

using eta squared, was .45. Post-hoc comparisons using the Tukey HSD test indicated

that the mean score for Group 1 ($M = 16.60, SD = 6.066$) was significantly different from

both Group 2 ($M = 25.56, SD = 5.703$), and Group 3 ($M = 29.00, SD = 0$). There was not

a significant difference between Groups 2 and 3. These differences are depicted in figure

10 by way of a means plot.
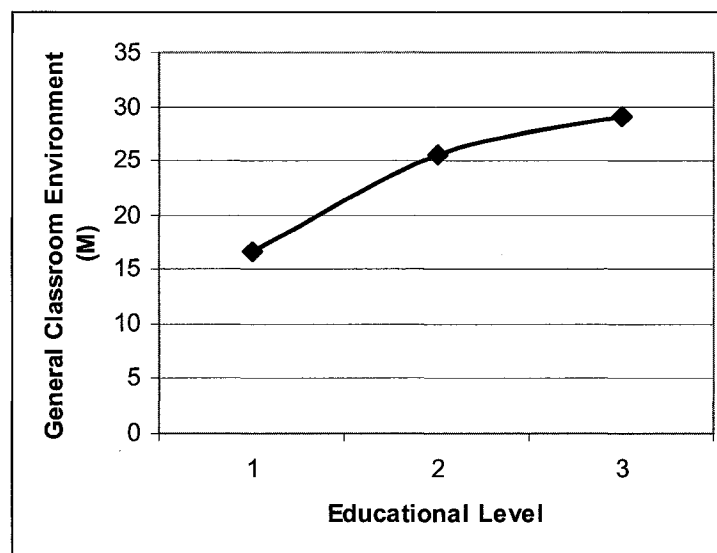
Figure 10. Differences on general environment ELLCO scores by educational level.

As shown in figure 11, there was also a statistically significant difference at the p

< .05 level in ELLCO Language, Literacy, and Curriculum scores [$F(2, 13) = 7.098, p =$

.008]. The effect size, calculated using eta squared was .52. Post-hoc comparisons using

the Tukey HSD test indicated that the mean score for Group 1 ($M = 18.40, SD = 6.656$)

was significantly different from both Group 2 ($M = 33.56, SD = 9.515$), and Group 3 (M

$= 40.00, SD = 0$). There was not a significant difference between Groups 2 and 3.
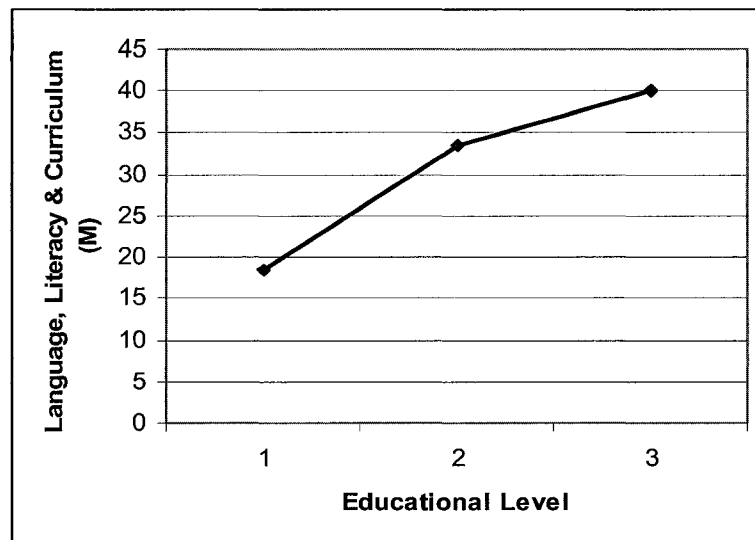
Figure 11. Differences on literacy, language and curriculum ELLCO scores by educational level.

As shown in figure 12, there was a statistically significant difference at the $p < .05$ level in ELLCO Overall Classroom Observation scores $[F(2, 13) = 6.528, p = .011]$. The effect size, calculated using eta squared was .50.
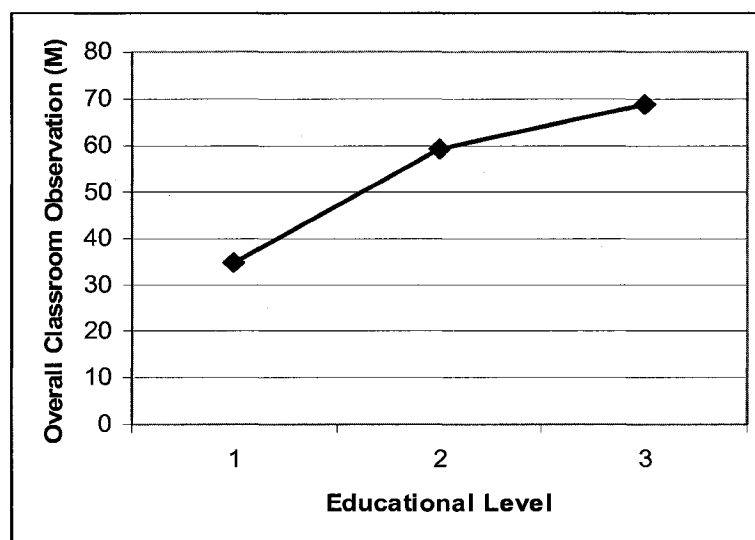
Figure 12. Differences on overall classroom observation ELLCO scores by educational level.

Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 (M = 35.00, SD = 12.390) was significantly different from both Group 2 (M = 59.11, SD = 15.178), and Group 3 (M = 69.00, SD = 0). There was not a significant difference between Groups 2 and 3.

A one-way between groups analysis of variance comparison for Literacy Activities had a significance of .105, above the .05 level set for this test. Therefore, there was not a significant difference in Literacy Activities over the three year period. The first directional hypothesis comparing Lead Teacher Educational Levels with (a) baseline ELLCO scores would be accepted for all of the components of the ELLCO between the groups identified in the preceding section, except Literacy Activities. These significant findings point towards the importance of advanced degrees for preschool teachers.

A one-way between groups analysis of variance conducted to examine the relationship between lead teachers' educational levels and final ELLCO scores found that there was not a statistically significant difference at the $p < .05$ level for any of the ELLCO components. Therefore, part (b) of the first hypothesis would be rejected. This indicates that intensive professional development can close the gap between teachers with initial and advanced educational levels. However, one caveat to these findings relates to possible limitations in the ELLCO. The teachers in the highest educational group scored high in the baseline assessments. The ELLCO may not have enough power to measure further improvements by these teachers. The lack of significant differences in final scores of the ELLCO based on educational level may be attributed to teachers hitting the ceiling of the assessment. Their short answer responses did indicate that they felt like there had been improvements in their teaching practices.

Comparing Experience to ELLCO Scores

The second hypothesis related to ELLCO scores is stated: Teachers with more experience will have higher ELLCO scores for both the baseline and final observations. Teachers were divided into three groups according to their years of experience (1 – 0–10 years, 2 – 10–20 years, and 3 – 21+ years). This hypothesis was examined by comparing the lead teachers' years of experience with the ELLCO scores that were taken at the beginning and end of the grant in each of their classrooms. The hypothesis is rejected as there was not a statistically significant difference at the $p < .05$ level in ratings for the three levels of experience.

Comparing Levels of Participation with ELLCO Scores

The final hypothesis related to ELLCO scores is stated: teachers who participate in more in-service workshops will have higher ELLCO scores on the final observations. Teachers were divided into three groups according to their level of attendance at in-service workshops: (1) 1-7 workshops, (2) 8-14 workshops, (3) 15 – 22 workshops. This hypothesis was examined by comparing the lead teachers' level of participation with the ELLCO scores that were taken at the beginning and end of the grant in each of their classrooms. The hypothesis is rejected as there was not a statistically significant difference at the $p < .05$ level in ratings for the three levels of participation.

Comparing Teachers' Educational Levels with Professional Development Ratings

The first hypothesis related to professional development ratings is stated as follows: teachers with lower levels of education will rate components of the professional development model higher. The hypotheses related to professional development involve studying all of the lead and assistant teachers involved in the grant over the course of the

three year period. The teachers were coded as before into three levels. A one-way

between groups analysis of variance was conducted to explore the impact of educational

levels on how teachers rate professional development strategies as measured by the three

year average for each teacher on the Self-Administered Survey: Literacy Enrichment

Support for Teachers. As shown in table 9, the overall professional development model

approached, but did not reach a significant level. There was no significant relationship

was found for four out of the five individual components: the use of and training related

to the Classroom Literacy Enrichment Model, college coursework, in-service workshops,

and conferences.

Table 9

ANOVA for Effects of Educational Levels on Professional Development Strategy Ratings

	Sum of Squares	df	Mean Square	F	p
Overall Professional Development					
Between Groups	2.240	2	1.120	2.863	0.076
Within Groups	9.779	25	0.391		
CLEM					
Between Groups	4.702	2	2.351	2.408	0.111
Within Groups	23.428	24	0.976		
College Coursework					
Between Groups	0.057	2	0.028	0.251	0.783
Within Groups	1.135	10	0.114		
In-service Workshops					
Between Groups	3.148	2	1.574	2.411	0.110
Within Groups	16.323	25	0.653		
Coaching					
Between Groups	9.232	2	4.616	4.158	0.028*
Within Groups	26.646	24	1.110		
Conferences					
Between Groups	1.712	2	0.856	1.940	0.167
Within Groups	9.704	22	0.441		

*<.05.

However, there was a statistically significant difference at the p<.05 level in how teachers at different educational levels rated coaching [$F_{(2, 24)}$= 4.616, p=.028]. The effect size, calculated using eta squared, was .26. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 (M=4.10, SD=.900) was significantly different from Group 3 (M=2.81, SD=1.362) with p=.043. Group 2 (M=3.04, SD=.971) was not statistically different from either Groups 1 or 3. These relationships are depicted in the means plot in figure 13.
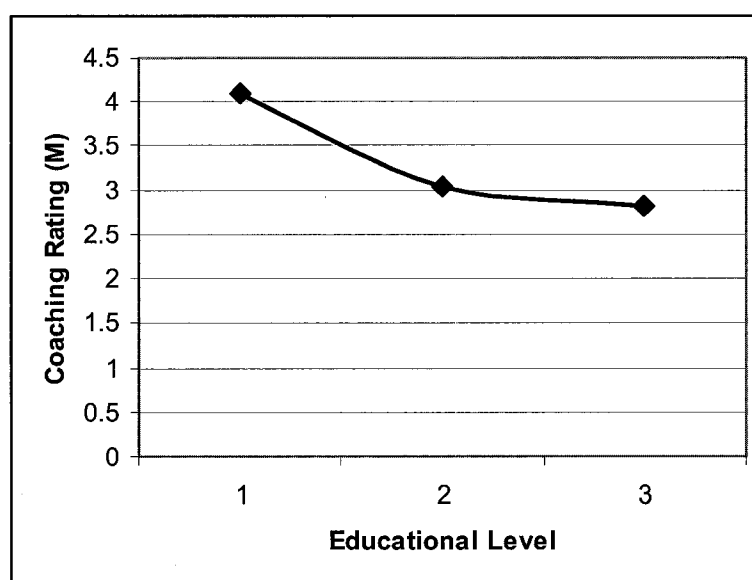
Figure 13. Means plot comparing educational levels and three year coaching rating.

Comparing Years of Experience Teaching with Ratings of Professional Development Strategies

The next hypothesis states: teachers with less experience will rate components of the professional development model higher. This was also examined by a one-way between groups analysis of variance. A comparison was made between teachers with different levels of experience and their rating of strategies as measured by the three year average for each teacher on the Self-Administered Survey: Literacy Enrichment Support

for Teachers. As noted, subjects were divided into three groups according to the number of years they had taught in early childhood classrooms. This hypothesis is rejected as there was not a statistically significant difference at the $p < .05$ level in ratings for the three levels of experience.

Comparing Levels of Participation with Ratings of Professional Development Strategies

The final hypothesis related to research question three is stated as: teachers participating at greater levels will rate components of the professional development model higher. A comparison was made between teachers' attendance at in-service workshops and their rating of strategies as measured by the three year average for each teacher on the Self-Administered Survey: Literacy Enrichment Support for Teachers. This hypothesis is rejected as there was not a statistically significant difference at the $p < .05$ level in ratings for the three levels of experience.

Quantitative Research Summary

In review, the main findings brought to light in the quantitative phase of this study revolve around increases in ELLCO scores, variations in perceptions of the role of coaching based on the year of the grant and educational levels of the teachers, and differences in baseline ELLCO scores related to the educational level of teachers.

The findings related to research question one noted significant improvements in the ELLCO mean scores from the baseline scores to the final scores in year three in all areas: Literacy Environment Checklist, General Classroom Observation, Language, Literacy and Curriculum Observation, Overall Classroom Observation, and Literacy Activities Rating Scale.

In research question two, a review of the Likert scores resulted in College Coursework receiving the highest ratings each of the three years. Conferences and In-service Workshops were rated second and third, respectively, the first two years. There was a significant increase in the coaching ratings from the first to the third year. Teachers' answers to short answer questions provided interesting context to their ratings in all of these areas. Themes were identified in Table 7 that are explored further in the qualitative results section and the discussion in Chapter 5.

Finally, in research question three, factors such as teachers' educational levels, years of experience and attendance at in-service workshops were considered in terms of the data identified in questions one and two. One way between groups ANOVA found a significant difference between baseline ELLCO mean scores when comparing the lead teachers' level of education for the following areas: Literacy Environment Checklist, General Environment, Language, Literacy and Curriculum Observation, and Overall Classroom Observation. There was not a significant difference in the Literacy Activities mean score. There were also no significant differences when comparing teachers' educational levels with the final ELLCO scores or when comparing years of experience or attendance at in-service workshops with baseline or final ELLCO scores. In terms of teachers' perceptions of Professional Development strategies, the only significant difference related to the three factors was that teachers with lower educational levels rated coaching higher than teachers with higher educational levels.

Research Question 4: The Intensive Professional Development Experience

As indicated earlier, the research question was stated as follows: What is the meaning and value of the overall intensive professional development model and its

formal components experienced by the preschool teachers during the EARLY project

including: (a) what are the underlying themes and contexts that account for the

experience, (b) what influenced the cognitive process of developing as a teacher, and (c)

what are the universal structures related to feelings and thoughts about the experience?

Purposive sampling was used by the external evaluators to identify eleven

participants with whom to conduct interviews. All of the teachers interviewed

participated in the grant for the entire three years, both assistant teachers and lead

teachers were included, and teachers from each of the four sites were chosen. Details

regarding the teachers' educational level, years of experience, and participation in in-

service workshops, conferences and college coursework are provided in Table 10.

Table 10

Characteristics of Teachers Interviewed

ID	Position	Beginning/ Ending Educational Level	Years of Experience	Workshops Attended	Conferences Attended	No. of College Courses
3	Assist. Teacher	BA/BA	5	13	3	0
5	Lead Teacher	BA/MA	6	19	1	1
6	Lead Teacher	BA/BA	10	10	2	0
10	Lead Teacher	BA/MA	20	12	2	6
11	Lead Teacher	BS/BS	8	16	4	0
20	Assist. Teacher	CDA/CDA+	27	19	1	0
43	Lead Teacher	CDA/CDA+	25	16	5	6
47	Assist. Teacher	CDA/CDA+	16	21	3	0
48	Assist. Teacher	BS/BS	25	20	5	0
54	Lead Teacher	AA/BA+	13	20	2	10
55	Assist. Teacher	CDA/CDA+	7	17	3	5

Taped interviews of these eleven teachers were transcribed, and the answers to

questions related to the professional development model compose the main raw data for

analysis for the fourth research question. The interview protocol is included in Appendix C. These questions revolve around three main topics: the use of the CLEM, the coaching support, and the formal professional development components, including in-service workshops, college courses and conferences. Short answers from the Pre-school Teacher Self-Administered Survey, Section 2 Literacy Enrichment Support for Teachers, given at the end of each of the three grant years, were presented earlier and provided a context for looking at these responses. An initial read-through of the interview responses was conducted by the researcher revealing that participants provided rich and complete responses.

From these interview and survey questions, significant statements were extracted and it became apparent that in the area of coaching, the meaning of the experience shifted significantly over the course of the three year period so separate lists were made related to the coaching process at the beginning and end of the grant. This ties directly to the results related to research question 2 described earlier. This data triangulation process points to the consistency of the data related to professional development collected by both the interviews and surveys.

Next, the data were coded broadly according to themes and patterns. Inductive coding was used based on multiple readings of the interview transcripts. The researcher focused on identifying what Creswell (1998) refers to as "meaning themes" (p. 65) and reviewed for the general description of the experience by the participants. The analysis of the short answer responses in research question two were addressed by looking specifically at the overall professional development model and each of its components. This section takes a different approach and focuses on the nature of the questions that

were used in the interviews across the strategies. These questions and their responses addressed three general areas regarding professional development: influences on thinking about teaching, changes in practices with children, and benefits to the children. Individual components are identified within each section, where it was appropriate to do so. Quotes by teachers are followed by the teacher's identity number placed in parentheses.

Influences on Thinking about Teaching

As identified in the conceptual framework, this project took a constructivist approach and focused on how teachers construct their own knowledge. The coaching process clearly focused on engaging teachers in inquiry-based decision making and reflection. The interviews sought to learn about how this process worked with teachers. Table 11 defines some of the themes that emerged related to this and some of the phrases that were used for each one.

As in the short answer responses earlier, teachers continually referred to "new ideas." These ideas were related to all aspects of teaching from activities to theories and values. Several teachers commented on the importance of tying research to their teaching. One said: "Workshops and conferences kept me current on the research and it gave me new ideas to be able to implement in the classroom" (ID# 8). Another teacher talked about how she was able to apply what she learned in her classroom and see a difference.

> Like I work with a group of kids and Spanish is their second language and I was able to take some of the materials from the CLEM and work with them and bring their literacy scores up in the classroom. (ID# 48)

Table 11

Influences on Thinking About Teaching

Theme: New Ideas

"find different ideas" (ID# 43)

"opens my eyes a little bit more" (ID# 6)

"encourage me to try different things with new tools in the classroom" (ID# 5)

"new ways to look at things" (ID# 54)

"able to share ideas with other teachers" (ID# 20)

"nice to hear other people's perspectives" (ID# 3)

Theme: Curriculum Planning Process

"CLEM provided me with tools for planning" (ID# 54)

"CLEM it is a great resource to refer to" (ID# 6)

"CLEM really helped with planning" (ID# 43)

"CLEM reinforces planning" (ID# 55)

"specifically met with coaches each week to work towards a goal" (ID# 3)

Theme: Integrating Literacy

"literacy needed to be everywhere" (ID# 10)

"easy to incorporate literacy in everyday activities" (ID# 11)

made us more aware of literacy everyday" (ID# 47)

Theme: View of Self as a Professional

"it just drove me to believe that what we did was extremely important" (ID# 10)

"you know that you have done a good job" (ID# 55)

"the 0 to 5 time is seen as important" (ID# 5)

"I like the reflective piece" (ID# 43)

The "new ideas" theme came up frequently with coaching. Teachers talked about

coaches as a resource and how coaches would bring in new ideas and/or a different

perspective. One teacher said, "You know sometimes you don't see what you are doing

wrong and someone else can help you out with it" (ID# 20). Several of the teachers gave

very detailed descriptions of how coaches supported them in expanding their own ideas.

> She comes in the classroom and if you have an idea, she helps you grow and
> expand that idea to make it stay in your classroom to benefit the children and
> yourself. So you know that you've done a good job at developing your ideas. (ID#
> 55)

Teachers frequently focused on planning and being "an intentional teacher." The

professional development aspects that came into play most often were related to the use

of the CLEM and the coaching process. One teacher said: "Well it just opens my eyes a

little bit more to why we are doing things, because the CLEM is showing the research –

it's right there in front of you" (ID# 8). Many of the teachers focused on the importance

of weekly planning meetings with coaches as a way to be focused, move forward, and be

accountable. This teacher's description of the process provides an illustration:

> We sit down once a week with our coach and go over our goals – what we see as
> our challenges for that week. We think about what we can do to overcome those
> challenges, so it really helps us to focus on areas in our classroom and our
> curriculum. It is great to have a sounding board and it helps us overcome our
> challenges and be a better program. (ID# 43)

Many of the teachers expressed a new understanding of the role of literacy in

early childhood classrooms. Two such statements by teachers were: "I think in using the

CLEM ... it was amazing to remind ourselves and to realize that you know literacy

needed to be everywhere. That every activity in the day went back to literacy" (ID# 10)

and "It really made me see how easy it was to incorporate literacy in everyday activities,

which I hadn't really thought about before" (ID# 11).

The emphasis on cognitive processes and how they were influenced by the steps

in the coaching model came to light in these descriptions of teachers' thinking about

teaching in all these areas: new ideas, curriculum planning, and literacy. It also came

through in this teacher's statement about using reflection:

> I like the reflective piece that we did. We really have to understand even after the grant is over, that we still need to do it. If we don't have a coach, I would still like to do it with our staff and on my own. (ID# 7)

The final theme related to influences on thinking about teaching focused on how

teachers see themselves and the field they work in professionally. One teacher

commented on what impressed her about going to conferences, saying: "It was very

enlightening to go because I didn't realize that there were so many educators here, in the

city or in the country that were working on the same problems that I had" (ID# 48). The

strongest statements in this area were from teachers furthering their education.

> EARLY paid for a lot of my master's work, which was wonderful because it was all built for early childhood literacy. I think it just drove me to believe that what we did was extremely important and I guess that's it. (ID# 10)

> I really had no intention of taking any additional courses. But after attending workshops and you know you get inspired by learning all of these different things and I was inspired to do more. Because of the workshops, it encouraged me to take more college courses. I think that was a great benefit, it encouraged me to go back to college. (ID# 43)

> I completed my degree and am working on my masters in early childhood, so these are ways that will help me become a better teacher so that my kids can benefit from it too. I will be a more educated teacher. I got my bachelors in June and so I just started on my masters. Well they influenced my decision to go on for my masters, but getting my bachelors degree I was going to do anyway. (ID# 54)

Changing Practices with Children

The second focus of the interview questions is on changes teachers made in their

practices with children. The main themes and some key phrases by teachers related to

each one are summarized in table 12.

Table 12

Changing Practices with Children

Theme: Intentionality

"being more intentional with our use of literacy" (ID# 3)

"seizing the opportunity" (ID# 47)

"driven into understanding the different levels and types of literacy" (ID# 10)

"more aware of individual children" (ID# 55)

"encouraging parents" (ID# 43)

Theme: Respecting Children as Learners

"think outside the box and become more creative" (ID# 6)

"expanding – broadening my horizons" (ID# 54)

"giving children more options" (ID# 3)

"listen to kids and see what they are interested in" (ID# 5)

"giving children the tools to be critical thinkers" (ID# 54)

Theme: Changes in Specific Skill Building

"putting books in all areas" (ID# 54)

"incorporating more rhyming" (ID# 3)

"making more writing tools available everywhere in the classroom" (ID# 48)

"introducing younger children to reading and literacy" (ID# 20)

"incorporate music styles with literacy" (ID# 5)

"get the boys more involved" (ID# 55)

The theme of intentionality resonated within many of the teachers responses

related to influences on changing practices with children. This intentionality touched

upon planning, individualizing instruction, and even teachers' work with parents. Several

teachers talked specifically about planning:

> Our children, being high risk have missed many of the basic things that we have
> provided our own children. Their needs couldn't just be met in the casual manner,
> but our lesson planning, unit planning and daily planning all went back to really

overwhelming the kids with exposure with literacy. Yeah, I guess that's it. We just can't be casual about it. (ID# 10)

Kids sign in with their names and the ABC's, you know we have them in all of the areas in our room. And everywhere we talk about them. You know, seizing the opportunities. (ID# 47)

We are very specifically, very intentionally meeting children's needs in literacy areas. With literacy, everyday if there were kids struggling in a certain area, we would expand on that area - whether it was letter recognition or there was another group ready for an early reader. (ID# 3)

Well I think it just really made us narrow our focus and have some goals in mind that we wouldn't have had, had we not had the coaching. We were going through and we were doing the CLEM, but for example like right now, I have the goals of writing and so it is kind of making me narrow my focus in setting those goals. (ID# 11)

Intentionality was also connected with recognizing children's different needs and individualizing instruction. One teacher summarized this, saying: "We planned more intentional activities meeting different needs. We didn't focus on the whole group, we focused on individual children to help them" (ID# 3). Teachers often tied this need to the context of their classroom. For example, one teacher said:

I think I became more aware of the differences that children have in learning, as far as literacy goes. And the different steps you can take with different children and their learning styles. I took the Spanish children who were working on learning English one by one and worked with them on vocabulary and their letters. (ID# 48)

Another area where intentionality was discussed related to teachers' interactions and role with parents. One very powerful statement sums this up well:

After taking workshops and the classes, I could see over and over again the importance of exposing children to literacy and books from infancy on. It's something that you naturally do with your own children, but you don't see the effects of it until you come into a classroom setting and you see a child who is really comfortable with books and one that is not. You can see that difference. So that's one thing that is a change in my practice. I'm really trying to encourage my parents to really be conscious of what they are doing with their kids, reading with

them a lot, getting them books. You know, really encouraging literacy at home. (ID# 43)

Several teachers described how their views of children as capable learners grew through their professional development experiences. This was true of very experienced teachers as well as new teachers. The following excerpts provide examples of this.

> Coaching changed the way I look at things. Before I was like a traditional theme type of person. I would set-up one thing at the beginning of the year and we did those things, you know according to the same way every year. But now with the coaching, she gives me ideas on how to listen to the kids and see what they are interested in and expand my ideas based on their interest. I was so set that the lesson plans that I did like five are six years ago, I was still using. My things were so set into order. Now ... I'm expanding – broadening my horizons, if you will. (ID# 54)

> A particular person was brought in and she changed my way of doing things. I give kids more options as opposed to "you do it this way." I'm letting them become critical thinkers – giving them the tools to become critical thinkers. (ID# 54)

Many of the changes related to practices with children were tied to specific skill building activities. The influence of coaches, instructors and external speakers could often be seen in the areas teachers chose to explore. For example, a particular cohort in-service workshop by an popular external speaker on using music and movement as a tool to engage boys in literacy activities clearly made an impression on several participants. A number of teachers were also inspired by a coach's skill with puppets and stepped out of their comfort zone to try using character puppets in their classrooms. Table 13 gives many specific examples of this.

Table 13

Changes in Practices Related to Skill Building

Writing:

> The CLEM provided me with tools to become a literacy enriched teacher. Providing writing in all areas of the classrooms and having books in all areas of the classroom – this was stuff that I was not aware of beforehand. ... Now I am constantly using writing tools everywhere in the classroom. (ID# 54)

Books:

> We added more books in different areas than just on bookshelves. Books in like housekeeping, doll house area, computers, and just books in every area. The kids know that they don't have to look at a book at a certain time, they can always look at them whenever they want to. (ID# 20)

Rhyming:

> Through reading and research and knowing how children develop and learn their language, we learned to incorporate more rhyming activities. We used rhyming games and those types of things during circle. (ID# 5)

Story Time:

> We saw the coach modeling a different way of doing story time. We find a lot of kids were not paying attention to our stories. The coach had the kids very active. She had like a dialogue going back and forth while she read the story... And afterwards, asking about the story, they knew what the story was about. They knew the characters in the story. So just in the way that she did her story time and modeled it, we learned that her way was a lot more effective, you know they remembered the storyline much better. (ID# 43)

Music, Movement and Boys:

> Our challenge was to get the boys more involved in classroom learning. We have CD's that help us with that through music and movement. We are giving them the sounds of the letter, but also letting them move at the same time. (ID# 55)

Puppets:

> The puppets are one thing that I have been really working on with the kids. I have seen a lot of growth in the kids in their work with puppets and their imagination as far as having puppets in the classroom. (ID# 5)

Cooking:

> We have always done cooking activities in the classroom, but now we have made recipe cards, step by step directions for the children. This makes it more literacy based. Obviously we have always had the conversations with children, but now they also have the visual of how much of each ingredient goes in each recipe. (ID# 8)

Benefits to Children

Teachers' responses to questions related to the benefits to children were very enthusiastic and reflected a great deal of pride in children's accomplishments. The two main themes related to this area are focused on children's overall growth and benefits in specific skill areas. Some phrases teachers used related to this are included in table 14 to set the stage for more comprehensive descriptions.

Table 14

Intensive Professional Development Benefits to Children

Theme: Overall Growth and Success

    "observing where our children are is the most exciting part" (ID# 6)

    parent quote: "you've raised me a reader" (ID# 10)

    "they are doing things on their own" (ID# 47)

    "they became more confident" (ID# 48)

    "they were more attentive" (ID# 43)

    "overall growth of their academic skills" (ID# 11)

    "they absorb everything" (ID# 20)

    "children feed off our excitement" (ID# 6)

Theme: Changes in Specific Skills

    "kids are writing all over the room" (ID# 3)

    "writing is showing up a lot earlier" (ID# 5)

    "they now want to look at books" (ID# 20)

    "more knowledgeable about their A, B, C's" (ID# 47)

    "they are rhyming a lot more" (ID# 11)

    "they developed more in oral language" (ID# 43)

Teachers' responses clearly reflected pride in children's overall growth. One teacher said: "Seeing our classroom and observing where our children are at is the most

exciting part so far. ... You just have to come and see it for yourself to believe the strides that the children have made" (ID# 8). Teachers noted this success as coming through in district wide comparisons reflecting on both the children's achievement and their own growth as well.

> They are doing better. They are kindergarten ready. We got beginning and end of the year test scores of our children who went to kindergarten compared to the other children in the district and our kids did score higher – which is kind of fun. (ID# 3)

> I think we overwhelmed staff from other places. We did a workshop for all of the preschool teachers in our district and things that we felt were pretty common place, we are pretty special at. I think that it just makes us want to keep building on it. (ID# 10)

Another source of pride at children's growth came from parents. One teacher quoted a parent as saying: "you've raised me a reader because my child just loves books" (ID# 10). Another teacher said that children "are leaving the classroom and bringing what they learn home" noting that parents are talking about new skills children have gained and "that it's not just at school, it's other places too" (ID# 8). A third teacher provided a specific example of this related to how comfortable children are with books.

> We have parents who are actually asking, okay we are having problems at home with sister and brother fighting, what books would you recommend? This is something that our parents wouldn't have thought of, using books to solve a behavior problem, but now they do. (ID# 43)

Teachers were also very enthusiastic in sharing children's accomplishments related to specific skill development in literacy based areas. They were able to give many examples of children's growth both in terms of individual children and the group as a whole. Often they compared behaviors they saw from children before participating in EARLY to what they saw during the grant in their classrooms. Examples related to writing, books, rhyming, story time and library usage are provided in table 15.

Table 15

Benefits to Children Related to Skill Building

Writing:

> Our returning kids this year are more into writing all the time. And they are writing more than just the letters and their name. They can tell you what words say. (ID# 55)

> They have really had a lot more opportunity to write so their writing is showing up a lot earlier. They are interested in it a lot sooner than they have been in the past. (ID# 5)

Books:

> They like the tapes with the music and they sing when they are in library. We don't have to tell them to get a book, they automatically do that. When we break up for our transition time, they go get a book right away and start reading it and looking at the pictures. (ID# 20)

Rhyming:

> When you look at the TROLL (child literacy assessment), you could see the growth and changes that related to the activities, especially with things like rhyming. Like we would start doing the first TROLL, they would all score like they didn't know anything about rhyming. By the time we did a third one, almost 80% of the class knew rhyming. And I think that is a direct result of the activities that we do from the CLEM. (ID# 43)

Story Time:

> Children know more about story line. They developed more in oral language because once they remember the story, they will go back in and when they have choice time, they will go to a flannel area or the magnetic area and reenact the story. (ID# 43)

Library:

> Our library area used to be an area where they just go jump on the beanbags and stuff like that. Whereas now, our library area is a place where they can go to look at books and read books. It empowers us to create our own books, so there are kids really interested in book that we all made together and stuff like that. (ID# 54)

Qualitative Phase Summary

The teachers' rich responses throughout the interviews paint a clear picture of the meaning and value of the intensive professional development model. The short answer responses from a larger sample of the teachers, presented with the quantitative data in research question two, were explored within the context of each component of the professional development model. The interview responses lent themselves to a more integrated view of the teachers' responses based on three main areas related to the teaching and learning experience: influences on thinking about teaching, changing practices with children, and benefits to children.

Chapter IV Summary

This chapter has presented the results of both the quantitative and qualitative phases of this research study. Each research question was addressed individually with some notes regarding overlapping data. Many quotes by teachers were included in the final section to fully convey the voice of the teachers who experienced this grant project.

The final discussion chapter elaborates on these results, providing an overview of significant findings, tying the findings to existing research and literature, discussing implications for current practice, and delineating recommendations for further research.

CHAPTER V
DISCUSSION

The National Evaluation of ERF programs described earlier in chapter 2 examined the impact of those ERF grants awarded in 2003, and focused on those programs in reference to children's literacy skills and instructional content and practices. That national report looked at increases in hours of professional development that teachers received and the use of mentoring as a mode of training. However, because the professional development strategies used by each of the grants varied as did the mentoring or coaching models, the national report did not examine such issues in detail. To this end, this dissertation study revolves around a specific professional development model used in one earlier ERF grant (not evaluated within that national evaluation study). The focus is on specific professional development elements and a coaching model not necessarily analyzed in the larger report.

The significant findings in this study fall into two main areas. First, discussion in this chapter focuses on findings related to the scores on the Early Language and Literacy Classroom Observations (ELLCO) pretest-posttests. This begins with reviewing the increase in mean scores on the ELLCO from the baseline scores of year one to the final scores at the end of the third year, as well as teachers descriptions of these changes in practices and children's skills in the qualitative phase. It also includes examining the impact on those scores of the factors studied in research question three, with particular emphasis on the role played by educational levels of teachers. The second area of discussion revolves around the teachers' experiences with and perceptions of the professional development model and its relevant components such as college coursework, coaching, conferences, in-service cohort workshops and training and use of the

Classroom Literacy Enrichment Model. Both of these discussions will review significant findings, connect them to existing research studies, and begin to explore implications of the study for current theory and professional practice.

Increases in Mean Scores on the ELLCO

Areas of ELLCO Score Improvements

As described in the results chapter, the findings related to research question one noted positive increases deemed statistically significant in the ELLCO mean scores from the baseline scores to the final scores in year three in all areas: Literacy Environment Checklist, General Classroom Environment, Language, Literacy and Curriculum Observation, Overall Classroom Observation, and Literacy Activities Rating Scale.

The Classroom Literacy Enrichment Model used in this study focused on integrating literacy in learning centers and emphasizing the role of play and child choice. The effectiveness of this focus is clearly illustrated by the significant gains over the three year time period in all three components of the ELLCO as they contain items related to the organization and contents of the learning centers and opportunities for child choice and initiative. This connects with research pointing towards the need to actively engage preschoolers in play within a child-centered environment focusing on all areas of development as they act as a major influence on early literacy development (Bergen, 1998; Gardner, 1993; Johnson, Erschler, & Lawton, 1982; Morrow, 1990; Piaget, 1963; Strickland & Schickedanz, 2004; Vygotsky, 1962).

Two of the six main goals of the EARLY project focused specifically on changes related to measurements on the ELLCO: (1) implement a "best practices" emergent literacy curriculum model and (2) increase teachers' knowledge and skills through

professional development. Teachers were debriefed after each ELLCO assessment and professional development was tied to results in terms of coaching emphasis in individual classrooms, in-service cohort workshop topic planning based on aggregate areas needing improvement, and choosing outside conferences to match teachers' needs. Therefore, it is clear that the intentionally planned strategies that were a part of this concentrated intervention did result in significant improvements in literacy in classroom environments and teacher practices.

While all areas of the ELLCO showed significant improvement, the areas with the greatest difference were the Literacy Environment Checklist measuring items related to books and writing materials, the Language, Literacy, and Curriculum segment of the Classroom Observation focusing on areas such as oral language and teacher practices related to literacy, and the Literacy Activities Rating Scale assessing book reading and writing. These segments match the classroom opportunities researchers identify as being necessary to develop oral language, phonological awareness, print concepts, written expression, and letter knowledge to enable children to build a foundation for later success with reading and writing (Adams, 1990; National Reading Panel, 2000; Neuman & Dickinson, 2006; Snow, Burns, & Griffin, 1998; Strickland & Schickedanz, 2004; Wasik, 2001).

Learning Community Influence

These results also speak to the power of team-based learning communities committed to continuous improvement based on goals of student learning. Sparks and Hirsh (1997) advocate using new approaches to professional development focused on results-driven education, systems thinking and constructivism. In the current culture of

high stakes testing, there is a push for results-driven education, but too little emphasis on providing teachers with the tools and support to be able to use these results successfully. Teachers need to receive assessment results in timely manner, be provided with professional development opportunities directly tied to students' and their own learning needs, and be supported to enact change in classrooms. In this project that support was provided through systems support as well as specific strategies such as coaching and providing necessary classroom materials and supplies.

The significant increases in ELLCO scores reinforce the importance of using assessment results as a basis for professional development. They also demonstrate how coaching can be effective in helping preschool teachers to successfully transfer knowledge gained through professional development to improve classroom environments and teacher practices.

<div align="center">Factors Impacting ELLCO Scores</div>

Educational Levels of Teachers

The other significant finding related to ELLCO scores emerged from the third research question that looked at how factors such as educational levels, years of experience, and attendance at in-service workshops impacted these scores. The only area where one of these factors played a significant role was when ELLCO baseline scores for year one were analyzed based on the educational level of the lead teacher. There was a significant difference between baseline ELLCO mean scores when comparing the lead teachers' levels of education for the following areas: Literacy Environment Checklist, General Environment, Language, Literacy and Curriculum Observation, and Overall Classroom Observation. Although there were positive increases there was not a

significant difference in the Literacy Activities mean score. There were also no significant differences when comparing teachers' educational levels with the final ELLCO scores or when comparing years of experience or attendance at in-service workshops with baseline or final ELLCO scores.

These results resonate with numerous research studies that have found that the quality of early childhood education programs is strongly tied to the educational qualifications of the teacher (Ferguson, 1991; Honig & Hirallel, 1998; Howes, 1997; Howes, Phillips, & Whitebook, 1992; Snider & Fu, 1990). The population of this study was a good representation of the "disjunction" between teacher preparation and what is best in terms of pedagogy for children's language and literacy development described in the National Research Council Committee on Early Childhood Pedagogy report (Bowman, Donovan, & Burns, 2001). As described in the literature review, there is clear consensus in terms of research related to effective early childhood literacy programs. Research has identified the importance of curriculum approaches that provide rich environments and intentional skill building related to oral language, phonological awareness, print concepts, written expression and letter knowledge (Adams, 1990; Hart & Risley, 1995; Neuman & Dickinson, 2006; Strickland & Schickedanz, 2004). There is also strong agreement that this is especially true for children considered to be at risk. However, requirements related to teacher qualifications continue to be very low. This results in a distinct difference in what research indicates should be happening and what is occurring in many classrooms. Lead teachers' educational levels in this study ranged from a Child Development Associate Credential to a Masters degree and the difference

this makes in the classroom was clearly evident in the baseline ELLCO scores (Figures 9-12).

Yet, there were no significant differences related to the educational level of the lead teacher and the ELLCO scores at the end of the three year grant period. This is promising as it shows that an intensive program of training and education related to language and literacy development can be effective in changing teachers' practices and creating optimal programming for preschoolers. This validates state and national early childhood advocates' calls for improving teacher qualifications, teacher preparation programs, and professional development experiences (Barnett, 2003a, Dole, 2004; Howes, James, & Ritchie, 2003; Strickland & Riley-Ayers, 2006).

Currently, one of the largest barriers to increasing educational qualifications of preschool teachers and addressing the disjunction between research proven practices and current classroom practices is the low wages in the field. Policy recommendations by organizations such as the National Institute for Early Education Research [NIEER] (Barnett, 2003b) call for increases in preschool teachers' salaries and benefits. The recommendations call upon programs such as Head Start and state funded preschool programs to raise teacher qualifications and compensation to the levels of k-12 teachers. NIEER also warns that state policies aimed at improving the quality of preschool teachers will only succeed in the long run if those policies address adequate pay and benefits.

Teachers' Years of Experience

It is also interesting to note that teachers' years of experience did not make a significant difference in ELLCO scores at either the beginning or end of the grant period. At first this appears to contradict the literature review which discussed researchers'

contention that when teachers work in a classroom, without a formal educational background, it can make it more difficult for these teachers to master new skills because their current teaching behaviors may interfere with new models (Bowman, Donovan, & Burns, 2001; Joyce & Shower, 1982). Yet there was other evidence in some areas of this study that supports previous research. Short answer responses over the course of the three years revealed some initial push back by teachers, who often noted that they had been teaching for many years and were not learning anything new at workshops or felt that they already did everything included in the Classroom Literacy Enrichment Model. By the third year, there was a shift in their responses towards identifying their own areas of growth and pride in both changes in their classroom practices and in their children's accomplishments. This evidence points to a need for intensive professional development programs to be sustained over a longer period of time to enable teachers to truly transfer knowledge into practice.

Teachers' Level of Participation in Professional Development

Finally, teachers' attendance at in-service cohort workshops did not make a significant difference in the ELLCO scores. However, the operational definition of level of participation in the professional development model was a poor choice and therefore, the lack of significant differences may have been influenced by this factor. The in-service workshops were just one component of the professional development model. Level of participation should have been defined in a way which measured all of the components including college coursework, conferences, and coaching. The data did not lend itself to this. For example, the most intensive component of the professional development model was coaching. However, information was not captured related to the amount of coaching

each teacher or classroom received so it could not be used to differentiate levels of participation.

Teachers' Perceptions of the Professional Development Model

Comparing Likert Ratings and Short Answer Responses

Quantitative statistics used to rank the mean ratings teachers gave professional development model components on Likert scales, in general, matched the accompanying short answer responses on the Literacy Enrichment Support for Teachers section of the Preschool Educator Self-administered Survey. For example, College Coursework received the highest ratings each of the three years and teachers' comments related to this component all echoed their perceptions about its positive impact. Conferences and In-service Workshops were rated second and third, respectively, the first two years, and again, teachers' short answer responses matched this with the majority of teachers using very favorable terms to describe these experiences. There was a significant increase in the coaching ratings from the first to the third year. Teachers' answers to short answer questions clearly matched this as the number of negative comments decreased and positive comments increased over the three year period.

The only area where there was some discrepancy between the Likert mean scores and the short answer responses was in terms of the training and use of the Classroom Literacy Enrichment Model. While the mean scores did not change significantly from year one to two and three, the teachers' short answer responses did. Clearly there were many more positive responses to the second edition of the CLEM than the first one. The first edition focused more on theory, whereas the second edition was what teachers' repeatedly referred to as "user friendly" with an emphasis on practices aimed at

integrating literacy through classroom routines and learning centers. The other major change in the CLEM was that the content was tied very strongly to the teachers' own classrooms and experiences. Activities were derived from best practices research, implemented in the EARLY project and descriptions in the CLEM were accompanied by photos of participating children, teachers and classrooms. Researchers focused on the importance of collaborative groups of teachers working on improving teaching, with teachers in the middle of the process to make changes (Corcoran, 1995; DuFour & Eaker, 1998; Fullan & Hargreaves, 1991; Garmston & Wellman, 1999; Lieberman & Miller, 1999).

The second edition of the CLEM reflected growth of the learning community. Sweeny (2003) describes learner-centered professional development as supporting teachers through three phases: (1) vision building focused on modeling high quality literacy instruction, (2) implementation through in-classroom coaching, observing other classrooms, and continuing to study research, and (3) development of a self-managing learning community that sustains the work. While the first edition of the CLEM strived to provide the vision, it was the second edition that helped to move the professional development model into the second phase as teachers saw tangible evidence of their progress. The CLEM also provided a vehicle to sustainability as it included templates in the back for teachers to continue to add to it as they continued to expand on literacy enriched curriculum experiences.

College Coursework

As noted earlier, teachers' perceptions regarding the effectiveness of college coursework on impacting their teaching practices and children's outcomes were very

positive and strongly supported. Teachers emphasized the importance of financial support. Prior to the grant funding, two of the four sites involved had very limited resources in terms of providing financial support for teachers to continue their education. Teachers from these sites clearly saw the chance to receive financial support (from the grant) as critical to making it possible for them to continue their education. Teachers also emphasized the importance of emotional support and encouragement. This support came from different arenas such as the learning community as a whole, program site leaders, coaches, and in-service experiences led by college instructors. Teachers found that as they engaged in these experiences, they were motivated to pursue further education. This exemplifies research related to the need for programs to provide transformational leadership that can lead to a culture of inquiry and engage teachers in acting on their own motivation for improvement (Burns, 1978; Collins, 2001; Lambert, 1998; Schmoker, 2006; Senge et al. 2000).

In-service Cohort Workshops

The most frequently commented on theme related to in-service cohort workshops was the role they played in providing teachers with new ideas. Many of these "ideas" were directly related to specific content such as literacy components or pedagogy techniques. However, the statements from teachers that seemed the richest spoke of the sense of the community that was built and the power of professional speakers who addressed larger issues such as diversity, gender, and cultural competence.

Learning community. Teachers clearly valued having opportunities to network with teachers from other programs. Early childhood teaching positions rarely afford teachers with these types of opportunities as classroom activities demand full attention,

work days in full day childcare settings can be very long, and time outside the classroom is very limited. This supports the need for ongoing learning communities with systematic support at the organizational level.

Diversity issues. All of the programs involved in this study serve children who have "risk factors" such as poverty, single parenthood, divergent language and cultural backgrounds or having parents with low educational levels. In the literature review, Comer's (2001) contention that a lack of staff training can result in professionals adopting a deficit rather than a strength-based model was introduced. Some of the most emotional responses by teachers focused on their own realizations related to the distinctive differences between children's experiences and characteristics and their own need to better understand these differences. The workshops focusing on Boys and Literacy, African American Issues, and Cultural Competence were mentioned most frequently. Teachers were drawn to the idea of building on strengths and reaching out to parents in new ways.

Conferences

While some teachers noted the importance of conferences in terms of being up to date on research, in general teachers identified the difficulties in locating sessions to specifically meet their needs. This affirms research that describes isolated training and workshop experiences as being ineffective in improving instruction (Corcoran, Fuhrman, & Belcher, 2001; Guskey, 2003). However, conferences did provide another avenue for networking and more importantly, sent a strong message to teachers about the importance of what they do and their own value within their organization and as a professional. This may make such opportunities important to include in a professional development

program. Teachers' responses do point to a need to carefully identify appropriate conferences and specific sessions that match the teachers' needs.

Developing Effective Coaching Models

Coaching is a key area on which this study focused. Teachers' perceptions related to the effectiveness of coaching and the evolving nature of this process throughout the project provide critical information related to coaching models, the role of coaches, importance of relationship building, and cognitive processes that need to be emphasized in the coaching process.

Type of Coaching, Roles and Responsibilities

This project utilized an expert or technical coaching model, requiring coaches to be well versed in early childhood practices, literacy and language, and working with adult learners. This was very challenging at the beginning of the project as finding coaches with all of these strengths was difficult. Teachers clearly indicated the importance of coaches knowing what they were doing in all of these areas. Their responses mirrored the International Reading Association's (2004a) position statement identifying specific criteria to use to ensure that literacy coaches are well qualified, including criteria related to knowledge and skills in these three areas.

Teachers provided clear advice related to the roles and responsibilities of the coach. During the first year of the project, coaches were very involved in activities outside the classroom such as developing libraries, attending meetings and trainings, developing curriculum, and ordering materials and supplies. Teachers' responses to the first year's Literacy Enrichment Support for Teachers section of the Preschool Educator Self-administered Survey were loud and clear about the need for coaches to spend more

time in the classroom. In identifying the three big ideas or duties for coaches, Dole (2006), insists that the coach's first duty is to teachers, students, and reading instruction, the second is to be in the classroom, collaborating with teachers, offering assistance and modeling new skills, and the third is to establish herself as someone who is viewed by teachers as a valuable asset. Clearly, this was not the case during the first year of coaching in this project. During the second and the third years of the project, the duties as described by Dole (2006) were emphasized. The teachers' responses to the coaching component then changed dramatically.

Relationship Building

Another area where teachers' responses were in step with current research on coaching is in terms of the importance of relationship building. The problems described above in the coaching model prohibited the development of these relationships and contributed to the number of negative comments related to coaching in the first year's survey. This resonates with research identifying the development of relationships as a key component of effective professional development (Hayes, Grippe, & Hall, 1999; Scroggins & Powers, 2004; Smith, 2002). By the third year of the project, teachers described their relationships very positively and rated the coaching much higher in terms of Likert scores. Similar to other research, teachers in this study needed time to develop relationships with resource staff and to practice new skills in their own classrooms (Dole, 2004; Guskey, 1995; Hodges, 1996). This need for relationship building over time has serious implications in terms of the ongoing intensive level of professional development required to truly transfer training into the classroom.

Emphasis on Cognitive Processes

The coaching model for this project was designed to emphasize cognitive processes. This was directly influenced by research indicating that to improve the quality of teaching, professional development should focus on cognitive processes, be comprehensive and systematic and meet the challenges of the field by responding effectively to the scientific research base (Corcoran, 1995; Garmston, 1987; Garmston & Wellman, 1998; Guskey, 1994, 2003; Hirsh, 2004; Joyce & Showers, 1983; Rasmussen, Hopkins, & Fitzpatrick, 2004). The coaching model provided in Chapter 3, figure 2 outlined the steps included in the coaching model. The goal of this model was to provide teachers with an inquiry-based method to drive decision making. Teachers' survey and interview responses illustrated the transfer of some of these steps. In thinking about their teaching they strongly identified the need for intentionality, goal setting, identifying outcomes and selecting strategies using terms and practices identified through scientifically based reading research.

One of the greatest challenges in teaching is to develop reflective practices. Friedman (2004) emphasizes that as teachers develop reflection skills they are strengthened as both learners and teachers. Therefore, it was especially powerful to have teachers in this study describe their discovery of the importance of reflection and a desire to continue to use this process as a teacher. As described in the literature review, this focus on reflection is strongly tied to priorities in the early childhood field and used in exemplary child-centered teaching approaches such as Reggio and the Project Approach (Carter & Curtis, 1996a, 1996b; Edwards, Gandini, & Foreman, 1993, 1998; Katz & Chard, 2000).

Impact of Teacher's Level of Education on Perceptions of Coaching

As indicated in the results chapter, there was only one significant finding related to the impact of the teachers' educational levels, years of experience, and attendance at in-service cohort workshops and teachers' perceptions of professional development strategies. The data indicated that teachers' with the lowest level of education (CDA or AA degrees) rated coaching significantly higher than teachers at the highest educational level (MA degrees). This makes coaching a particularly promising strategy to use in the Early Childhood field where standards and requirements for teachers' educational qualifications are substantially lower than that of elementary and secondary teachers.

Connecting Professional Development to a Learner-centered Theoretical Framework

In Chapter 1, Figure 1, a Learner-centered Theoretical Framework was provided as the foundation of the Conceptual framework for this dissertation study. This theoretical base evoked the theories of Jean Piaget (1963), Erik Erikson (1968), Howard Gardner (1983), Urie Bronfenbrenner (1979), and Lev Vygotsky (1962). The results of this study are aligned with these theories. The value of Piaget's constructivist approach is visible in the nature of the professional development model in terms of teachers' feeling empowered as they used their own classrooms as the focus of their learning. They vividly described the growing connection they saw between their changes in thinking, changes in practices and benefits to children.

Bronfenbrenner's ecological theory influenced the in-service cohort workshops in two important ways. First of all the format of the workshops was built on around building an interactive system of support for the teachers to help energize and sustain their work. The content of in-service cohort workshops revolved around topics that were chosen to fit

the context of the programs. Teachers' survey and interview responses clearly reflected a growing understanding of the influence of family and culture and their connection with the classroom. Several teachers' expressed their desire to strengthen the home-school partnership with parents.

The focus on individualizing professional development through coaching and by offering a myriad of professional development strategies to best suit the needs of individual teachers connects strongly to Howard Gardner's theory of multiple intelligences. Teachers' survey and interview responses clearly reflected differences in the types of strategies they each found to be most effective. While there was certainly some group consensus on specific strategies, individual differences were also evident.

Lev Vygotsky's theories related to language as a means to scaffold cognition was a strong component of the coaching model. Teachers' frequently referred to the coach as encouraging them to "expand" on their own ideas. This function of coaching seems particularly relevant in teaching literacy as it mirrors the role teachers play with children in a learner-centered classroom.

Teachers' qualitative responses regarding their changing practices with children connect with Katz and Chard's (2000) description of teacher dispositions that strengthen through successful implementation of the project approach. The theme of respecting children as learners contained comments related to taking risks, being more flexible, focusing on problem solving, facilitating critical thinking and becoming more creative.

In summary, the learner-centered theories this study was based on were well suited as a foundation for professional development. Guidelines from the National Staff Development Council (2001) stress the differences between adult learners and younger

learners and emphasize the importance of teachers experiencing first hand the instructional approaches they in turn will be using with their students. This project provided that type of experience and teachers felt it was effective in influencing their practices with children.

Recommendations for Further Research

This study utilized a pre-experimental design reviewing pretest-posttest and survey data to measure the extent of change over the course of the three year project period. The nature of the project tied the researcher to a single group study of a small population. It used an explanatory longitudinal design to study a phenomenon and explain how it operates by identifying factors that produce change. Further studies employing an experimental design with a larger sample would provide quantitative data that would be able to be generalized to other programs.

Further in-depth research on the use of learning communities and coaching with preschool teachers in diverse settings could focus on types of coaching used, role of the coach and the process of coaching. This could inform the development of this relatively new strategy in the early childhood field. Investigators could look specifically at measuring the time spent on coaching activities with each teacher and classroom and follow teachers and programs longitudinally to examine the sustainability of this type of intensive professional development.

Implications for Professional Practice

There are a number of implications for professional practice that have emerged through the results and discussion sections of this study. All of these are rooted in and connected to current research.

Support Results-driven Education

Using assessments such as the ELLCO as a base for instruction can be a powerful tool for teachers as was demonstrated by this study. Assessments of classroom environments, teacher practices and child outcomes, collected and analyzed in a timely fashion, all provide valuable information. It is critical that teachers receive training and support to perform assessments and plan from them. Teachers in this study made it clear that this requires systems support to provide necessary classroom materials and professional development directly tied to student outcomes and individual teachers' needs through effective strategies such as coaching.

Raise Preschool Teachers' Qualifications and Improve Professional Development Experiences

The urgent need for federal and state policies to raise preschool teachers' educational qualifications and skill levels can not be overstated. The significant influence lead teachers' higher levels of education had on baseline ELLCO scores in this study illustrates why increased educational requirements are needed. For teachers who do not meet these higher educational levels, intensive professional development and coaching can provide a means to developing the skills necessary as was evident by the increased ELLCO scores in all classrooms by the end of this study. Preschool teachers must be prepared to meet the critical demands of their positions to enable them to meet the needs of the children and families they serve. This necessitates a two pronged attack of raising educational qualifications and providing intensive professional development experiences for practicing preschool teachers.

Build Strong Learning Communities

Learning communities are being used effectively at primary, secondary and post-secondary levels of education (Corcoran, 1995; Garmston & Wellman, 1999; Sweeney, 2003). This study presents a strong case for using learning communities at the preschool level as well. Such a learning community needs to engage transformational leadership and be supported at an organizational level. The community needs to focus on collaborative groups of teachers working on improving the teaching and learning process. Sustainability requires long term support with teachers at the center of the process to make change.

Focus on Issues and Challenges Related to Context

Professional development needs to be closely tied to the context of the community and classroom. Preschool teachers in this study clearly expressed their growth in terms of learning more about at-risk populations and the differences this made in their teaching. Family engagement is a critical part of early childhood programming. Teachers need opportunities to learn about and adopt strength-based additive models that will enable them to engage families effectively. In addition, they need specific information related to teaching and learning strategies in the classroom focused on language and literacy that embrace cultural pluralism.

Support Teachers Growth as Professionals

Leaders in early childhood education need to continue to strive to professionalize the field. Programs send clear messages to teachers about their value as a professional by financially and emotionally supporting them in furthering their education, joining professional organizations and providing opportunities to attend professional

conferences. Teachers' interview and survey responses poignantly articulated the difference these opportunities made in how they viewed themselves as professionals. Continual communication efforts both internally and externally, and looking at the history of other professions, such as nursing, that have successfully made progress in this area can be a place to begin this process.

Use Effective Coaching Models

The close scrutiny this study paid to the coaching process through qualitative forms of data leads to implications for professional practice in the areas of type of coaching, role of coaches, time commitments for the coaching process, focus on cognitive process and the need to prioritize coaching with teachers at lower educational levels.

Type of coaching. Effective coaching at the early childhood level requires expert or technical coaches with expertise in early childhood pedagogy, language and literacy and adult learning. Preschool teachers responses in this study made it clear that expertise in all of these areas was essential. Colleges and universities need to develop programs that will prepare coaches in all of these areas and meet the standards put forward by the International Reading Association (2004b) related to literacy coach qualifications. In-service programs need to work closely with current and new coaches to help them to develop this expertise and be able to effectively fulfill the challenging position of coach.

Role of coaches. Programs utilizing coaches need to be very deliberate in making decisions about the role coaches will play in the organization. Coaches' efforts need to be focused on teachers, students and literacy instruction and clearly rooted in the classroom. Administrative and organizational responsibilities need to be kept to a minimum and

scheduled around classroom coaching time. In this study, preschool teachers' Likert

scores and positive responses on the annual survey increased dramatically in this area in

the later part of the project when the coaching role was shifted to more of a classroom

focus.

Long term time commitments. Programs need to make long term commitments to

the coaching process. Teachers and coaches require time to develop relationships. They

also need time to make changes in the classrooms and see the results through student

achievement. Comparisons between year one and year three quantitative and qualitative

data illustrated this need for time. This was evident in the significant increase in the

Likert scores related to coaching as well as the teachers' descriptions of the importance of

having time to build relationships in order for coaching to positively influence teaching

practices.

Emphasis on cognitive processes. Coaching models must aim at cognitive

processes. Teachers need opportunities to engage in inquiry-based decision making and

develop reflective processes. As teachers develop these skills, they are able to see how

changes in their thinking impact their practices and benefit children. Preschool teachers'

survey and interview responses in this study moved from talking about how coaches gave

them new ideas, to how coaches "expanded" their ideas, and finally to planning how to

continue to be reflective practitioners and continue their own learning once the project

ended and the coaches were no longer there. These processes are the key to sustainability

in providing quality teaching based on a continuous improvement model.

Prioritize coaching with new teachers and teachers with less formal education.

The teachers with lower levels of education rated coaching the highest and had the largest

gains in ELLCO scores in their classrooms. These teachers benefited the most from coaching and intensive professional development efforts. Systems with limited resources need to target teachers with lower educational levels in professional development planning.

Base professional development on learner-centered theories. Using a learner-centered theoretical framework is especially important in the early childhood field. Teachers in this study expressed their enthusiasm for working with a coach in their own classroom and having a variety of learning opportunities that they could choose from. They were very proud of both their own and their students' accomplishments. Preschool teachers benefit from experiencing first hand the instructional approaches that form the basis for the curriculum and interactions they are using with their students. This requires professional development opportunities to be carefully planned, classroom focused and varied in terms of strategies used with individual teachers. Content needs to be contextually relevant. Teachers need to be given the time necessary to construct their own knowledge and make changes in thinking and practices that will benefit the children and families they serve and lead to continuous improvement.

Conclusions

This study provides insights and adds to the dialogue focused on addressing the discrepancy between what researchers have identified as instructional strategies and environments that promote literacy development for preschoolers and the current state of many programs. There is a critical need to improve the quality of early literacy programs, especially for children and families with identifiable risk factors for academic difficulties. The key to improving programs is the teacher. This requires a concerted effort to raise

educational qualifications and provide intervention in the form of effective professional development to practicing teachers.

The intensive professional development model used in this study resulted in significant improvements in ELLCO mean scores from the baseline scores to the final scores in year three in all areas: Literacy Environment Checklist, General Classroom Observation, Language, Literacy and Curriculum Observation, Overall Classroom Observation and Literacy Activities Rating Scale. These changes in the environment and in teacher practices produced classrooms that researchers contend are necessary to promote literacy development in preschoolers. These results point to the need for programs to invest resources in providing preschool teachers with these types of professional development opportunities.

In reviewing teachers' Likert score ratings for specific components of the professional development model, college coursework received the highest ratings each of the three years, with conferences and in-service workshops being rated second and third respectively, the first two years. There was a significant increase in the coaching ratings from the first to the third year. Qualitative data revealed that this increase was tied to improvements made in refining the coaches' role and responsibilities and in the relationships that built over time between the teachers and the coaches. Therefore, programs need to provide long-term commitments to utilizing an effective coaching model. This model needs to rely on expert or technical coaches whose primary focus is on using assessments as a base for instruction and engaging teachers in inquiry-based decision making and reflective practices. Coaching must be rooted in and tied to the context of the classroom and center around students and literacy instruction.

In addition, this study found that the educational level of the teacher was a critical factor influencing baseline classroom ELLCO scores. Lead teachers with a higher educational level had significantly higher baseline ELLCO scores in the areas of: Literacy Environment Checklist, General Environment, Language, Literacy and Curriculum Observation and Overall Classroom Observation. This underscores the need for raising standards and requirements related to preschool teachers' educational qualifications. The study also found that there was not a significant difference based on teachers' educational levels in the final ELLCO scores in year three. These findings point to the effectiveness of the intensive professional development model in helping teachers with less education to develop appropriate learning environments and instructional practices related to literacy.

There was also a significant difference related to educational level in terms of teachers' perceptions of coaching. Teachers with lower educational levels rated coaching higher than teachers with higher educational levels. This makes this professional development strategy of particular interest to preschool programs where teachers often have lower educational levels than in k-12 programs.

The teachers' rich responses in the qualitative phase of this study eloquently articulated the meaning and value of the intensive professional development model. They provided a clear view of their experiences as a part of this project and how it influenced their thinking about teaching and learning, changed their practices with children and benefited the children they were working with. Their responses provide insights related to all of these areas which can certainly inform programs as they develop professional plans for preschool teachers.

Findings from this study add to the existing research base highlighting the importance of higher educational levels for preschool teachers and for intensive coaching and professional development support for those within the profession without such formal education. Both the quantitative and qualitative analysis provide direction for strategies using scientifically based reading research and assessment as a basis for intensive professional development programs utilizing learning communities, coaching focused on cognitive processes and a learner-centered theoretical framework.

REFERENCES

Ackland, R. (1991). A review of the peer coaching literature. *Journal of Staff Development, 12*(1), 22-27.

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

Adams, M. J., Foorman, B. R., Lundberg, I., & Beeler, T. (1998). *Phonemic awareness in young children: A classroom curriculum.* Baltimore, MD: Paul H. Brookes Publishing Co.

Administration for Children and Families, Office of Planning, Research and Evaluation, (2006). *"Friendly FACES" - FACES findings: New research on Head Start outcomes and program quality.* Washington, DC: Author.

Anderson, N. A., & Radencich, M. C. (2001). The value of feedback in an early field experience: Peer, teacher, and supervisor coaching. *Action in Teacher Education, 23*(3), 66-74.

Barnett, W. S. (2003*a*). Better teachers, better preschools: Student achievement linked to teacher qualifications. *Preschool Policy Matters, 2.* New Brunswick, NJ: National Institute for Early Education Research.

Barnett, W. S. (2003*b*). Low wages = low quality: Solving the real preschool teacher crisis. *Preschool Policy Matters, 3.* New Brunswick, NJ: National Institute for Early Education Research.

Barnett, W. S. , Lamy, C., & Jung, K. (2005). *The effects of state pre-kindergarten programs on young children's school readiness in five states.* New Brunswick, NJ: National Institute for Early Education Research.

Bean, R. M. (2004). Promoting effective literacy instruction: The challenge for literacy

coaches. The *California Reader, 37*(3), 58-63.

Bellm, D., & Whitebook, M. (2003). *Universal preschool in california: An overview of workforce issues.* (Report No. PS 031-561). CA: (ERIC Document Reproduction Service No. ED481220)

Benedetti, T. A., & Reed, M. K. (1998, April). *Supervising student teachers using peer coaching.* Paper presented at the annual meeting of the National Council of Teachers of Mathematics, Washington, DC.

Bergen, D. (Ed.). (1998). *Using schema for play and learning.* Newark, New Hampshire: Heinemann Educational Books, Inc.

Bloodgood, J. W. (1999). What's in a name? Children's name writing and literacy acquisition. *Reading Research Quarterly, 34*, 342-367.

Bodrova, E., Leong, D. J., Norford, J. S., & Paynter, D. E. (2003). It only looks like child's play - Preschoolers and kindergartners reading and writing? When teachers use appropriate supports, even at-risk children gain the literacy skills they need for future academic success. *The Journal of Staff Development, 24*(2), 47-51.

Bowman, B., Donovan, M. S., & Burns, S. (Eds.) (2001). *Eager to learn: Educating our preschoolers.* National Research Council, Committee on Early Childhood Pedagogy. Washington, DC: National Academy Press.

Bowman, B., & Stott, F. (1994). Understanding the development in a cultural context: The challenge for teachers. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education.* New York: Teachers College Press.

Bradley, L., & Bryant, P. (1983). Categorizing sounds and learning to read - a causal connection. *Nature, 301*, 419-421.

Brochu, A. M., Concannon, H., Grace, L. R., Keefe, E., Murphy, E., Petrie, A., & Tarentino, L. (2006). *Creating professional learning communities.* Dorchester, MA: Project for School Innovation.

Bronfenbrenner, U. (1979). Beyond the deficit model in child and family. *Teachers College Record, 81*(1), 95-104.

Bronfenbrenner, U. (1992). Contexts of child rearing: Problems and prospects. *Child and Youth Care Adminstrator, 5*(1), 59-64.

Bruner, J. S. (1996). *The culture of education.* Cambridge, MA: Harvard University Press.

Burns, J. M. (1978). *Leadership.* New York: Harper & Row.

Bus, A., Van Ijzendoorn, M., & Pelegrini, A. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research 65,* 121.

Carter, M., & Curtis, D. (1996a). *Spreading the news: Sharing the stories of early childhood education.* Saint Paul, MN: Redleaf Press.

Carter, M., & Curtis, D. (1996b*). Reflecting children's lives: A handbook for planning child-centered curriculum,* Saint Paul, MN: Redleaf Press.

Coggins, C., Stoddard, P., & Culter, E. (2003). *Improving instructional capacity through school-based reform coaches.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Collins, J. (2001). *Good to great.* New York: Harper Business.

Comer, J. P. (2001). Schools that develop children. *The American Prospect, 12*(7). 30-35.

Copeland, K. A., & Edwards, P. A. (1990). Towards understanding the roles parents play
in supporting young children's development in writing. *Early Child Development
and Care, 56*, 11-17.

Corcoran, T. (1995). *Transforming professional development for teachers: A guide for
state policymakers.* Washington, DC: National Governors' Association Center for
Policy Research.

Corcoran, T., Fuhrman, S. H., & Belcher, C. L. (2001). The district role in instructional
improvement. *Phi Delta Kappan, 83*(1), 78-84.

Costa, A. L., & Garmston, R. (1985). Supervision for intelligent teaching. *Educational
Leadership, 42*(5), 70, 72-80.

Costa, A. L., & Garmston, R. J. (2002). *Cognitive coaching: A foundation for
renaissance schools.* Providence, ME: Christopher-Gordon Publishers.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five
traditions.* Thousand Oaks, CA: Sage Publications, Inc.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods
approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching.*
New York: Teachers College Press.

Dean, A. V. (1992). The other side of the story: A critical look at narrative and
autobiography in education. *Review of Education, 14*, 235-241.

Denzion, N. K. (1978). *The research act: A theoretical introduction to sociological
methods* (2nd ed.). New York: McGraw-Hill.

Deussen, T., & Riddle Buly, M. (2006). Connecting coaching and improved literacy.

    Northwest Education, 12(1), 30-35.

Dickinson, D. K. (1994). Features of early childhood classroom environments that

    support development of language and literacy. In J. Duchon, L. Hewitt, and R.

    Sonnmeier, *Pragmatics: From theory to practice.* Englewood Cliffs, NJ: Prentice

    Hall, 1994.

Dickinson, D. K., & Smith M. W. (1994). Long-term effects of preschool teachers: Book

    readings on low-income children's vocabulary and story comprehension. *Reading*

    Research Quarterly, 29(2), 105-122.

Dickinson, D., & Tabors, P. (2001). *Beginning literacy with language: Young children*

    learning at home and school. Baltimore, MD: Paul H. Brookes Publishing.

Dole, J. A. (2004). The changing role of the reading specialist in school reform. *The*

    Reading Teacher, 57(5), 462-471.

Dole, J. A. (2006). What am I supposed to do all day? Three big ideas for the reading

    coach. *The Reading Teacher, 59,* 486-488

DuFour, R., & Eaker, R. (1998). *Professional learning communities at work: Best*

    practices for enhancing student achievement. Bloomington, IN: National

    Educational Service and Alexandria, VA: Association of Supervision and

    Curriculum Development.

Duke, N. K., Pressley, M., & Hilden, K. (2004). Assessment of reading comprehension.

    In C.A. Stone, E. R. Silliman, B. J. Ehren, & K. Apel (Eds.). *Handbook of*

    language and literacy: Development and disorders (pp. 521-540). New York:

    The Guilford Press.

Duncan, G. J., & Brooks-Gunn, J. (1997). *Consequences of growing up poor*. New York: Sage Foundation.

Edwards, C. P., Gandini, L., & Foreman, E. F. (1993). *The hundred languages of children: The Reggio Emilia approach to early childhood education*. Norwood, NJ: Ablex Publications Corporation.

Edwards, C. P., Gandini, L., & Foreman, E. F. (1998). *The hundred languages of children: The Reggio Emilia approach – advanced reflections*. Greenwich, CN: Ablex Publications Corporation.

Edwards, J. (2005). *Cognitive coaching: A synthesis of the research*. Highlands Ranch, CO: Center for Cognitive Coaching. *Dissertation Abstracts International, 63* (05), 1769A. (UMI No. 3051831)

Erikson, E. H. (1968). *Identity, youth, and crisis*. New York: W.W. Norton.

Ferguson, R. F. (1991). Paying for public education: New evidence on how and why money matters. *Harvard Journal on Legislation, 28,* 465-498.

Fox, S. (1997). The controversy over ebonics. *Phi Delta Kappan, 79*(3), 237-241.

Friedman, D. L. 2004. When teachers participate, reflect, and choose change. *Young Children 59* (6): 64-70.

Fullan, M., & Hargreaves, A. (1991). *What's worth fighting for in your school?* New York: Teachers College Press.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.

Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century.*

New York: Basic Books.

Garmston, R. J. (1987). How administrators support peer coaching. *Educational*

Leadership, 44(5), 18-26.

Garmston, R. J. (2000). Glad you asked. *Journal of Staff Development, 21*(1), 73-75.

Garmston, R. J., & Wellman, B. (1998). Teacher talk that makes a difference.

Educational Leadership, 55(7), 30-34.

Garmston, R., & Wellman, B. (1999). *The adaptive school: A sourcebook for developing*

collaborative groups. Norwood, MA: Christopher-Gordon Publishers, Inc.

Goodlad, J. I. (1994). *Educational renewal: Better teachers, better schools.* San

Francisco: Jossey-Bass.

Gonzalez-Mena, J. (2008). *Diversity in early care and education: Honoring differences.*

5th edition, New York: The McGraw-Hill Companies, Inc.

Grinder, M. (1996) *Envoy: Your personal guide to classroom management.* Battle

Ground, WA: Michael Grinder Associates.

Guskey, T. R. (1994). Results-oriented professional development: In search of an optimal

mix of effective practices. *Journal of Staff Development, 15*(4), 42-50.

Guskey, T. R. (1995). *Professional development in education: New paradigms and*

practices. New York: Teachers College Press.

Guskey, T. R. (2003). What makes professional development effective? *Phi Delta*

Kappan, 84(10), 748-750.

Hale, J. (1991). The transmission of cultural values to young African American children.

Young Children, 46, 7-15.

Hart, B., & Risley, T. (1995). *Meaningful differences in the everyday experience of young American children.* Baltimore, MD: Paul H. Brooks Publishing.

Hayes, C., Grippe, P., & Hall, G. H. (1999). Firmly planted: Building resource teacher program puts roots of professional development into the school building. *Journal of Staff Development, 20*(4), 17-21.

Hiebert, J., & Stigler, J.W. (2004). A world of difference: Classrooms abroad provide lessons in teaching math and science, *Journal of Staff Development, 25*(4), 10-16.

Hirsh, S. (2004). Putting comprehensive staff development on target. *Journal of Staff Development, 25*(1), 12-15.

Hodges, H. L. B. (1996). Using research to inform practice in urban schools: Ten key strategies to success. *Educational Policy, 10,* 223-252.

Honig, A. S., & Hirallel, A. (1998). Which counts more for excellence in childcare staff-years in service, educational level or ECE coursework? *Early Child Development & Care, 145,* 31-46.

Howes, C. (1997). Children's experiences in center-based child care as a function of teacher background and adult-child ratio. *Merrill-Palmer Quarterly, 43*(3), 404-425.

Howes, C., James, J., & Ritchie, S. (2003). Pathways to effective teaching. *Early Childhood Research Quarterly, 18*(1), 104-120.

Howes, C., Phillips, D. A., & Whitebook, M. (1992). Teacher characteristics and effective teaching in child care: Findings from the National Child Care Staffing Study. *Child & Youth Care Forum, 21*(6), 399-414.

Hull, J., Edwards, J. L., Rogers, M. S., & Swords, M. E. (1998). *The Pleasant View experience*. Golden, CO: Jefferson County Schools.

International Reading Association, (2004*a*). Coaches, controversy, consensus. *Reading Today, 21*(1), 18.

International Reading Association, (2004*b*). The role and responsibilities of the reading coach in the United States: A position statement of the International Reading Association. Newark, DE: Author.

Johnson, B. (2001). Toward a new classification of non-experimental quantitative research. *Educational Researcher, 30*(2), 3-13.

Johnson, B., & Onwugbuzie, A. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14-26.

Johnson, J. E., Ershler, J., & Lawton, J. (1982). Intellective correlates of preschoolers' spontaneous play. *Journal of General Psychology, 106*, 115-122.

Joyce, B., & Showers, B. (1980). Improving in-service training: The messages of research. *Educational Leadership, 37*(5), 379-385.

Joyce, B., & Showers, B. (1981). Transfer of training: The contribution of "coaching." *Journal of Education, 163*(2), 163-172.

Joyce, B., & Showers, B. (1982). The coaching of teaching. *Educational Leadership, 40*(1), 4-8, 10.

Joyce, B., & Showers, B. (1983). *Power in staff development through research on training* (No. 611-83304). Arlington, VA: Association for Supervision and Curriculum Development.

Joyce, B., & Showers, B. (1996). Staff development as a comprehensive service

organization. *Journal of Staff Development, 17*(1), 2-6.

Joyce, B., & Showers, B. (2002). *Student achievement through staff development.*

Alexandria, VA: Association for Supervision and Curriculum Development

Katz, L. & Chard, S. C. (2000). *Engaging children's minds: the project approach.*

Stamford, CT: Alex Publishing Corp.

Kise, J. (2006). *Differentiated coaching: A framework for helping teachers change.*

Thousand Oakes, CA: Corwin Press.

Lambert, L. (1998). How to build leadership capacity. *Educational Leadership 55*(7), 17-

19.

Lee, V., & Burkam, D. (2002). *Inequality at the starting gate: Social background*

differences in achievement as children begin school. Washington, DC: Economic

Policy Institute.

Leithwood, K., Louis, K. S., Anderson, S., & Wahlstrom, K. (2004, September). *How*

leadership influences students learning. The Wallace Foundation. Retrieved

September 18, 2005, from http://www.wallace foundation.org/WF/Knowledge

Center/KnowledgeTopics/EducationalLeadership/How Leadership

InfluencesStudentLearning.htm

Lenski, S. D., & Johns, J. L. (2000). *Improving writing: Resources, strategies,*

assessments. Dubuque, IA: Kendall/Hunt Publishing Co.

Lewis, A. C. (1996). Breaking the cycle of poverty. *Phi Delta Kappan, 129*(18), p. 186-

187.

Lieberman, A. F. (1989). What is culturally sensitive intervention? *Early Child*

   Development and Care, 50, 197-204.

Lieberman, A. F. , & Miller, L. (1999). *Teachers--Transforming their world and their*

   work. Alexandria, VA: Association for Supervision and Curriculum

   Development.

Lyons, C. A., & Pinnell, G. S. (2001). *Systems for change in literacy education.*

   Westport, CT: Heinemann.

Mason, J., & Allen, J. (1986). A review of emergent literacy with implications for

   research and practice in reading. *Review of Research in Education, 13,* 3-47.

Maxwell, K. L., Lim, C. I., & Early, D. M. (2006). *Early childhood teacher preparation*

   programs in the United States: National report. Chapel Hill, NC: The University

   of North Carolina, FPG Child Development Institute.

Mayer, S. E. (1997). *What money can't buy.* Cambridge, MA: Harvard University Press.

McCardle, P., Scarborough, H. S., & Catts, H. W. (2001). Predicting, explaining, and

   preventing children's reading difficulties. *Learning Disabilities: Research &*

   Practice, 16(04), 230-39.

McCarrier, A., Pinnell, G. S., & Fountas, I. C. (2000). *Interactive writing: How*

   language and literacy come together. Portsmouth, NH: Heinemann.

McCarthy, J., Cruz, J., & Ratcliff, N. (1999). Early childhood teacher education licensure

   patterns and curriculum guidelines: A state by state analysis. *(Report No. PS 028-*

   621) Washington DC: Council for Professional Recognition (ERIC Document

   Reproduction Service No. ED441605)

MDRC Social Policy Research Organization. (2007). *The reading first impact study.*

Retrieved April 20, 2007 from http://www.mdrc.org/project_28_65.html.

Meuter, R., Humphreys, G., & Rumiati, R. (2002). Bilingual language switching and the

frontal lobes: Modulatory control in language selection. *International Journal of*

Bilingualism, 6(2), 109-124.

Moche, R. (2000, Fall/2001, Winter). Coaching teachers' thinking. *Journal of Jewish*

Education, 66(3), 19-29.

Morrow, L. M. (1990). Preparing the classroom environment to promote literacy during

play. *Early Childhood Research Quarterly, 5,* 537-554.

Morrow, L. M., O'Connor, E. M., & Smith, J. K. (1990). Effects of a story reading

program on the literacy development of at-risk kindergarten children. *Journal of*

Reading Behavior, 22(3), 255-275.

Nagy, W. E., & Scott, J. A. (2000). Vocabulary processes. In Pearson, D., & Bar, R.

(Eds.), *Handbook of reading research: Vol. 3.* (pp. 269-284). Mahwah, NJ:

Erlbaum Associates.

National Council for Accreditation of Teacher Education. (2006). *Standards, procedures,*

and policies for the accreditation of professional educational units. Washington,

DC: Author.

National Reading Panel. (2000). *Teaching children to read: An evidence-based*

assessment of the scientific research literature on reading and its implications for

reading instruction. Washington DC: National Institute of Child Health and

Human Development.

National Staff Development Council. (2001). *Standards for staff development.* Oxford, OH: Author.

Neufield, B., & Roper, D. (2003). Coaching: A strategy for developing instructional capacity: Promises and practicalities. Cambridge, MA: Education Matters, Inc.

Neuman, S. B., & Dickinson, D. (2006). *Handbook of early literacy research.* New York: Guilford Press.

Newman, S. B., & Roskos, K. A. (1998). *Children achieving best practices in early literacy.* Newark, DE: International Reading Association.

Nowak, R. (2003). The discourse of coaching: Teacher-coach interactions during summer school practicum. *Dissertation International Abstracts, 13*(01), 411. (UMI No. 3117361).

Paley, V. G. (1979). *White teacher.* Cambridge, MA: Harvard University Press.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Payne, R. (2005). *A framework for understanding poverty.* Highlands, TX: Aha! Process, Inc.

Piaget, J. (1963). *The origins of intelligence in children.* New York: W. W. Norton.

Poglinco, S. M., Bach, A. M., Hovde, K., Rosenblum, S., Saunders, M., & Supovitz, J. A. (2003). *The heart of the matter: The coaching model in America's choice schools.* Philadelphia: The Consortium for Policy and Research in Education.

Rasmussen, C., Hopkins, S., & Fitzpatrick, M. (2004). Our work done well is like the perfect pitch. *Journal of Staff Development, 25*(1), 16-25.

Reed, B., (2006). Serious play: An early Reading First grant helps five Oregon Head Start programs implement an innovative curriculum. *Northwest Education, 12*(1), 22-25.

Reeves, D. B. (2006), *The learning leader: How to focus school improvement for better results.* Alexandria, VA: Association for Supervision and Curriculum Development.

Riddle-Buly, M., Coskie, T., Robinson, L., & Egawa, K. (2006). Literacy coaching: Coming out of the corner. *Voices from the Middle, 13*(4), 24-28.

Russell, J., McCoy, A., Pistorino, C., Wilinson, A., Bughardt, J., Clark, M., Ross C., Schochet, P., & Swank, P. (2007). *National evaluation of Early Reading First: Final report.* Washington DC: U.S. Department of Education, Institute of Education Sciences.

Russo, M. (Winter 2005/2006). Teacher professional development: How do we establish it and know that it's working? *The Evaluation Exchange, 11*(4), 6-7.

Scarborough, H. S., Dobrich, W., & Hager, M. (1991). Preschool literacy experience and later reading achievement. *Journal of Learning Disabilities, 24*(8), 508-511.

Scharer, P. L., Desai, L., Williams, E. J., & Pinnell, G. S. (2003). *Literacy collaborative: A multiyear analysis.* Columbus, OH: Literacy Collaborative.

Scharer, P. L., Williams, E. J., & Pinnell, G. S. (2000). *Literacy collaborative 2000 research report.* Columbus, OH: Literacy Collaborative at The Ohio State University.

Scharer, P. L., Williams, E. J., & Pinnell, G. S. (2001). *Literacy collaborative 2001 research report.* Columbus, OH: Literacy Collaborative at The Ohio State University.

Schickedanz, J. A. (1999). *Much more than the ABC's: The early stages of reading and writing.* Washington, DC: National Association of Education for Young Children.

Schlosser, J. L. (1998). The impact of cognitive coaching on the thinking processes of elementary school teachers. *Dissertation Abstracts International, 59* (01), 45A. (UMI No. AAT 9821080)

Schmoker, M. (2006). *Results now: How we can achieve unprecedented improvements in teaching and learning.* Alexandria, VA: Association for Supervision and Curriculum Development.

Schultz, A. (1970). *On phenomenology and social relations.* Chicago: University of Chicago Press.

Schultz, A., & Luckmann, T. (1974) *The structures of the life world.* London: Heinemann.

Scroggins, J., & Powers., L. (2004). Seven steps to better reading – A district wide approach. *Journal of Staff Development, 25*(1), *38-41.*

Senge, P. M., Cambron-McCabe, N., Lucas, T., Smith, B., Dutton, J., & Kleiner, A. (2000). *Schools that learn,* New York: Doubleday.

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

Shore, R. (2003). *Rethinking the brain: New insights into early development.* New York: Families and Work Institute.

Slinger, J. L. (2004). Cognitive coaching: Impact on students and influence on teachers. *Dissertation Abstracts International, 59* (01), 45A. (UMI No. 9821080)

Smith, J. R., Brooks-Gunn, J., & Klebanov, P. K. (1997). Consequences of living in poverty for young children's cognitive and verbal ability and early school achievement. in G. J. Duncan, & J. Brooks-Gunn. *Consequences of growing up poor.* New York: Sage Foundation.

Smith, M. C. (1997). Self-reflection as a means of increasing teacher efficacy through cognitive coaching. *Dissertation Abstracts International, 35* (04), 935. (UMI No. 1384304)

Smith, S. (2002). Teacher Mentoring and Collaboration. *Journal of Special Education Technology, 17*(1), 47-48.

Snider, M. H., & Fu, V. R. (1990). The effects of specialized education and job experience on early childhood teachers' knowledge of developmentally appropriate practice. *Early Childhood Research Quarterly, 5*(1), 69-78.

Snow, C. E. (1983). Literacy and language: Relationships during the preschool years. *Harvard Educational Review. 53*(2), 165-189.

Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children.* Washington DC: National Academy Press.

Sparks, D. (1998, March/April). Professional development. *AEA Advocate,* 18-21.

Sparks, D., & Hirsh, S. (1997). *A new vision for staff development.* Alexandria, VA: Association for Supervision and Curriculum Development and National Staff Development Council.

Sparks, D.,& Loucks-Horsley, S. (1989). Five models of staff development for teachers. *Journal of Staff Development. 18*(4), 20-23.

Spencer, S. S., & Logan, K. R. (2003). Bridging the gap: A school based staff development model that bridges the gap from research to practice. *Teacher Education and Special Education, 26*(1), 51-6.

Stahl, S. A., & Miller, P. (1989). Whole language and language experience approaches for beginning reading: A quantitative research synthesis. *Review of Educational Research, 59*(1), 87-116.

Stigler, J. W., & Hiebert, J. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom.* New York: Free Press.

Strickland, D. (1998). *Teaching phonics today: A primer for educators.* Newark, DE: International Reading Association.

Strickland, D. S., Morrow, L. M., Neuman, S. B., Roskos, K., Schickedanz, J. A., & Vukelich, C. (2004). Distinguished educator: The role of literacy in early childhood education. *The Reading Teacher, 58*(1), 86-104.

Strickland, D. S., & Riley-Ayers, S. (2006). Early literacy: Policy and practice in the preschool years. *Preschool Policy Brief,* New Brunswick, NJ: National Institute for Early Education Research.

Strickland, D. S., & Schickedanz, J. A. (2004). *Learning about print in preschool: Working with letters, words, and beginning links with phonemic awareness.* Newark, DE: International Reading Association.

Sulzby, E., & Teale, W. (1991). Emergent literacy. In R. Barr, M. L. Kamil, P. B. Mosenthal, & P. Pearson (Eds.). *Handbook of reading research* (pp. 727-757). New York: Longman.

Sweeney, D. (2003). *Learning along the way: Professional development by and for teachers.* Portland, MA: Stenhouse Publishers.

Taylor, B., Pearson, P. D., Peterson, D., & Rodriguez, M. (2005). The CIERA school change framework: An evidence-based approach to professional development and school reading improvement. *Reading Research Quarterly, 40*(1), 40-69.

Teale, W. H., & Sulzby, E. (1989). Emergent literacy: New perspectives. In D. S. Strickland & L. M. Morrow (Eds.). *Emerging literacy: Young children learn to read and write* (pp. 1-15). Newark, DE: International Reading Association.

Thompson, D. (1994). Family values and kinship bonds: An examination of African American families in selected picture books, 1974-1993. In S. Lehr (ED.), *Battling dragons: Issues and controversy in children's literature* (pp. 87-103). Portsmouth, NH: Heinemann.

Tivnan, T., & Hemphill, L. (2005) Comparing four literacy reform models in high-poverty schools: Patterns of first-grade achievement. *Elementary School Journal, 105*(5), 419.

Van Kleeck, A. (1990). Emergent literacy: Learning about print before learning to read. *Topics in Language Disorders, 10*(2), 25-45.

Vygotsky, L. S. (1962). *Thought and language.* Oxford, England.

Walpole, S., & McKenna, M. C. (2004). *The literacy coach's handbook: A guide to research-based practices.* New York, NY: Guilford Press.

Wasik, B. (2001). *Summary of research on Even Start.* Washington, DC: U.S. Department of Education.

West, J., Denton, K., & Germino-Hausken. (2000). *America's Kindergartners.* Washington, DC: National Center for Educational Statistics.

West, W. W., & Tivnan, E. K. (1974, May). *What seems to be the most effective way of disseminating reading research in a meaningful and useful manner to classroom teachers?* Paper presented at the Annual Meeting of the International Reading Association, New Orleans, LA.

Whitehurst, G. D., Arnold, D., Epstein, J., Angell, A., Smith, M., & Fischel, J. (1994). A picture book reading intervention in day care and home for children from low-income families. *Developmental Psychology, 30*(5), 67-89.

Williams, E. J. (1998). *Literacy collaborative 1998 research report.* Columbus, OH: Literacy Collaborative at The Ohio State University.

Williams, E. J. (1999). *Literacy collaborative 1999 research report.* Columbus, OH: Literacy Collaborative at The Ohio State University.

Wurm, J. (2005). *Working in the Reggio way: A beginners guide for American teachers.* Saint Paul, MN: Redleaf Press.

Zeichner, K. M., & Liston, D. P. (1996). *Reflective teaching: An introduction.* Mahwah, NJ: L Erlbaum Associates.

Appendix A

Human Subjects Institutional Review Board Letter

WESTERN MICHIGAN UNIVERSITY

Date: June 11, 2007

To: Rebecca Brinks, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: Approval not needed

This letter will serve as confirmation that your project "Early Reading First" has been reviewed by the Human Subjects Institutional Review Board (HSIRB). Based on that review, the HSIRB has determined that approval is not required for you to conduct this project because your research involves only coded private information and the link between the codes and the identities of subjects is not available to the researchers. Thank you for your concerns about protecting the rights and welfare of human subjects.

A copy of your protocol and a copy of this letter will be maintained in the HSIRB files.

Appendix B

Pre-school Educator Self-Administered Survey:
Literacy Enrichment Support for Teachers

Early Accent on Reading and Learning in Young Children (EARLY)

ID CODE:

Pre-school Educator Self-Administered Survey

This survey will help the EARLY project better understand the extent to which and ways that teachers have been served by their efforts over the past school year. This information will be used to help inform and improve the project's work on behalf of early literacy enrichment.

Your responses to this survey are voluntary and confidential. No individuals will be cited by name in reports drawn from this survey.

The survey has both multiple choice and open-ended questions. We request that you answer each question completely. Your individual feedback is desired. We estimate that it should take approximately an hour to complete this survey.

There are 3 sections:
1. Classroom Literacy Enrichment Practice Inventory
2. Literacy Enrichment Support for Teachers
3. Literacy Enrichment Support for Parents

Please put your completed survey in the envelope provided, SEAL, and return to _____ by no later than _____.

We thank you for your participation.

SECTION 2: Literacy Enrichment Support for Teachers

This set of questions is both multiple choice AND open-ended. Please indicate your response by filling in the appropriate circle to the right AND respond as fully as possible in the spaces provided below. *Use the space marked "Not Applicable" marked as NA if you have not yet had opportunity to participate in or use a listed support option. If NA is selected, skip to the next question.*

1.	A Great Deal				Not at All	NA
Overall, to what extent has the EARLY project contributed to your ability to successfully develop the early literacy skills of the preschool children in your class?	⑤	④	③	②	①	⑩

What do you value most overall about the EARLY project?

Why?

Suggestions for improvement?

2.	A Great Deal			Not at All		NA
To what extent has the Classroom Literacy Enrichment Model (CLEM) component of the EARLY project contributed to your ability to successfully develop the early literacy skills of the preschool children in your class?	⑤	④	③	②	①	⓪

Describe in detail how your knowledge and/or classroom practice have been strengthened through your involvement with the CLEM?

What do you value most about the CLEM?

Why?

Suggestions for improvement?

3.	A Great Deal			Not at All	NA
To what extent has the COLLEGE LEVEL COURSE(S) component of the EARLY project contributed to your ability to successfully develop the early literacy skills of the preschool children in your class? ***Answer this section only if classes have been taken, and if not skip to #4***	⑤ ④ ③		② ① ⓪		

Describe in detail how your knowledge and/or classroom practice have been strengthened through your involvement with the EARLY COLLEGE LEVEL COURSE(S)?

What do you value most about EARLY COLLEGE LEVEL COURSE(S)?

Why?

Suggestions for improvement?

4.	A Great Deal				Not at All	NA
To what extent have the IN-SERVICE WORKSHOP(S) component of the EARLY project contributed to your ability to successfully develop the early literacy skills of the preschool children in your class?	⑤	④	③	②	①	⓪

Describe in detail how your knowledge and/or classroom practice have been strengthened through your involvement with the EARLY IN-SERVICE WORKSHOP(S).

What do you value most about EARLY IN-SERVICE WORKSHOP(S)?

Why?

Suggestions for improvement?

5.	A Great Deal				Not at All	NA
To what extent has the COACHING component of the EARLY project contributed to your ability to successfully develop the early literacy skills of the preschool children in your class?	⑤	④	③	②	①	⓪

How much time per week do you spend working with your coach(es) on literacy related classroom practice issues? _____ (time in hours and/or minutes)

Describe the relationship that you have formed with the coach at your site.

Describe in detail how your knowledge and/or classroom practice have been strengthened through your involvement with EARLY COACHING.

Describe how the coach(es have) has been helpful, or not helpful, in meeting your goals set from the ELLCO debrief.

What are the strengths your coach(es) brings to the classroom?

What is one thing you would like to work on with your coach(es)?

Is the coaching experience something you would recommend to others? Suggestions for improvement?

151

7.	A Great Deal			Not at All	NA
To what extent has the CONFERENCE support component of the EARLY project contributed to your ability to successfully develop the early literacy skills of the preschool children in your class. *Select NA and skip to #8 if you have not yet attended.*	⑤ ④ ③	②	①	⓪	

Describe in detail how your knowledge and/or classroom practice have been strengthened through your involvement with EARLY support for CONFERENCE attendance.

What do you value most about EARLY support for CONFERENCE attendance?

Why?

Suggestions for improvement?

Appendix C

Teacher Interview Questions and Protocol

Teacher Interview Questions and Protocol, 45-60 minutes

1. Would you please share a little about your background:

    a. Experience in early childhood education

2. Thinking back, what were the most urgent challenges you faced relative to your thinking about enriching early childhood literacy and/or practices? What are they now?

3. How did the CLEM inform or influence your thinking about teaching? (1 CLEM Thinking)

4. How did the CLEM change your practice with children? (2 CLEM Practice) What benefits to children could you observe? (3 CLEM Benefits)

5. What other comments or opinions can you share about your experience with the CLEM and how you made use of it? (4 CLEM Comments) Do more of, less of, change? (5 CLEM Changes)

6. How did coaching support or inhibit your work (and explain why)? (6 Coaching Support)

7. How did coaching change your practice with children? (7 Coaching Practice) What benefits to children could you observe? (8 Coaching Benefits) Describe the connection to early childhood literacy enrichment.

8. What other comments or opinions can you share about your coaching experience? (9 Coaching Comments) Do more of, less of, change? (10 Coaching Changes)

9. How did having access to the classroom resources inform your thinking about teaching?

10. How did the classroom resources change your practice with children? Please describe the differences in your practice. What benefits to children could you observe? Describe the connection to early childhood literacy enrichment.

11. What other comments or opinions can you share about your experience with the classroom resources? Do more of, less of, change?

Reflecting on Formal Professional Development[1]

12. How did participation in EARLY formal Professional Development such as in-service workshops, conferences and college classes inform your thinking about teaching? (11 Formal PD Thinking)

13. How did participation in EARLY formal PD change your practice with children? (12 Formal PD Practice) Please describe the differences in your practice. What benefits to children could you observe? (13 Formal PD Benefits) Describe the connection to early childhood literacy enrichment.

14. What other comments or opinions can you share about your experience with EARLY formal PD? Do more of, less of, change? (14 Formal PD Comments and Changes)

Reflecting on Informal Professional Development[2]

15. How did participation in EARLY informal PD inform your thinking about teaching?

16. How did participation in EARLY informal PD change your practice with children? Please describe the differences in your practice. What benefits to children could you observe? Describe the connection to early childhood literacy enrichment.

17. What other comments or opinions can you share about your experience with EARLY informal PD? Do more of, less of, change?

Kindergarten Transition and Family Participation

---

[1] Includes courses, workshops, conferences define up front?
[2] Includes classroom visits, peer-to-peer partners, e-blackboard – ce's will not all have done all – better to limit to monthly cohort workshops

18. What changes did EARLY generate in how children are prepared for Kindergarten? District, sites, teachers and/or yourself. Benefits to parents and children? Describe the connection to early childhood literacy enrichment.

19. Do you have suggestions for strengthening Kindergarten preparation? Do more of, less of, change?

20. Do you value family participation in enriching early childhood literacy differently because of EARLY?

21. What changes in family participation have you witnessed because of EARLY? Benefits to parents and students Describe the connection to early childhood literacy enrichment.

22. Do you have suggestions for strengthening Family participation? Do more of, less of, change?

Wrap-up

23. What do you think it will take to sustain and continue to build on the learning for preschool teachers that EARLY has begun?

24. What other comments and/or suggestions for improvement do you have from your experience with EARLY?