THE EFFECTS OF AN INTERVENTION THAT INCLUDES IN-CLASS COACHING ON PRESCHOOL TEACHERS AND CHILDREN

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THE EFFECTS OF AN INTERVENTION THAT INCLUDES IN-CLASS COACHING ON PRESCHOOL TEACHERS AND CHILDREN

by

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A dissertation submitted to the College of Education and Human Services in partial fulfillment of the requirements for the degree of

Doctor of Education in Educational Leadership

UNIVERSITY OF NORTH FLORIDA

COLLEGE OF EDUCATION

April 2013
ACKNOWLEDGEMENTS

When I began the journey of obtaining this doctorate degree, I was an elementary school teacher in a poor, urban school who needed a better understanding of why I was frequently encountering children who were not prepared to meet the demands of fourth grade. I spent hours with these children, many of whom were preforming years below grade level, laying down the foundation that they never received. This desire to understand the earliest areas of development lead me to the field of early childhood education. Since then, I have become a mother to two extraordinary children, causing my passion for this important arena to grow exponentially.

To my beautiful children, Nicholas and Evelyn, everything that I strive for and achieve, including the completion of this degree, is for you. I want to be my best, so that you can be your best. There are no words to describe how much I adore you and how much you enrich my life. I love you to the moon and back.

To my husband, Mario Oliveira, I thank you for your patience and support throughout this process. You motivated me when I felt discouraged, you were honest when I needed to hear the truth, and you reminded me why I started the process when I had forgotten. Most importantly, you are a father that I am confident to leave our children with. Knowing Nick and Evie were having fun and being taken care of mattered the most on days I was researching when I would have rather been with the three of you. I love you.

Thank you to my dad and mom, Rick and Donna Silvia, for helping me create the sort of life that allows me to pursue my desires. I am who I am because of you both. I couldn’t ask for better parents. I love you.

Adam, Holly, Ricky, and Adrian: Just asking about my progress and future endeavors was a much needed spark throughout the years. Thank you for supporting me always!

Thank you to my mother-in-law, Eveline Manzella, for being an enormous support during the final months of writing this dissertation. Obrigada! Te amo!
To my dissertation chair, Dr. Kasten, thank you for lending me your brilliant mind. Your keen eye, astonishing knowledge, and ability to clearly articulate next steps were invaluable in accomplishing this goal. I sincerely appreciate you and wish you a perfect retirement!

To my dissertation co-chair, Dr. Hall, thank you for being so supportive! Your calmness and your work in the same field helped to assure me when I wasn’t feeling confident.

To my dissertation committee, Dr. Johnson and Dr. Fisak, thank you for spending your time and efforts on my quest to finish my dissertation. You have been so helpful and attentive.

To Dr. Robert Clark, of Florida State University, who may never read this: If you hadn’t stated during my undergraduate studies the potential you saw in me as a leader in my field, I wouldn’t have pursued this degree. You counseled me on possibilities. You instilled a sense of confidence that I could be more than I imagined. Thank you.

To my late grandpa, Leonard Silvia, and the woman he loved more than life, my grandmother, Hilda Silvia: You told me we hadn’t had anyone achieve this in our family. You challenged me to pursue this. And because of you, my maiden name remains on my diploma.

I am overflowing with gratitude, today and every day.
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ABSTRACT

The impact of high quality early learning experiences on a child's development is profound. Teacher quality has been deemed an important predictor of classroom quality, but currently teachers in Voluntary Prekindergarten (VPK) in the state of Florida are required to meet minimal training requirements.

The purpose of this study was to examine an intervention including in-class coaching as a means of professional development to better prepare preschool teachers. The present study included and examination of the changes in environmental quality, child outcomes, and teacher perceptions after the intervention. Scores obtained were compared before and after the intervention. A two-tailed t-test revealed that the post-test was significantly higher than the pre-test. In particular, two sub-scales were statistically significant, including Space and Furnishings and Activities. The other sub-scales, including a measure of Teacher-Child Interactions and Language-Reasoning were not statistically significantly changed. An ANOVA indicated no significant differences in kindergarten school readiness scores between centers that received coaching for varying amounts of time.
Teachers were interviewed to discover their perception of in-class coaching.

After examining in-class coaching from the varying angles, conclusions were drawn: In-class coaching may significantly affect the quality of classrooms, as related to environmental aspects of quality but may not be improving child outcomes. In-class coaching may increase teachers’ validation, inspiration and may contribute to the teachers’ understanding of developmental appropriateness. Conclusions suggest that teachers with a native language other than English may receive additional benefits from an in-class coaching and that effective coaches must have many skills in order to create change in the classrooms in which they work. The final conclusion was that despite its merits, coaching may not be a long-term solution to classroom and teacher quality in the context of low educational requirements, minimal pay, high turnover, and low job satisfaction. Recommendations for future practice and research are suggested.
CHAPTER 1

INTRODUCTION

The importance of quality educational experiences with preschool children is becoming more widely known and accepted. The impact of high quality learning experiences on a child's development is profound. Involvement in a high quality preschool program gives children a cognitive advantage (Belsky et al., 2007; Masse & Barnett, 2002; Sammons, Elliot, Sylva, & Melhuish, 2004), is associated with higher achievement test scores (Howes et al., 2008; Melhuish et al., 2008; Ou, 2005), and makes a crucial difference in preparing children for kindergarten (Gormley, Gayer, Phillips, & Dawson, 2005).

Positive effects of a high quality preschool experience endure. Many studies have supported the longevity of these benefits (Belsky et al., 2007; Gormley et al., 2005; Peisner-Feinberg et al., 2001; Schweinhart, 2004). In an educational climate of assessment and
accountability, these initial preschool gains are critical in preparing all children, of varying social and economic statuses, for school success (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002; Schweinhart, 2004).

In light of the importance of high quality early educational experiences, questions concerning the quality of preschool teachers are abundant. Research has indicated that the quality of a teacher is critical in terms of predicting a child's school readiness and preschool academic achievement (Howes, 1997; Howes et al., 2008; Mashburn & Pianta, 2006; Mashburn et al., 2008). However, debate over the most effective way to increase preschool teacher qualification is abundant.

Early childhood programs that receive state and federal monies emphasize the importance of the professional development of the early childhood education workforce (Martinez-Beck & Zaslow, 2006). Currently, teachers in the field of early childhood education are often under prepared, with little or no formal education and minimal training (National Institute for Early Education Research, 2008). Professional development implementation ranges from advancing the formal educational degree of teachers at a local college or university, attending varying workshops, receiving in-class support from an expert teacher, or
obtaining additional credentials from local agencies (Maxwell, Field, & Clifford, 2005).

Despite the agreement that professional development is critical for preschool teachers, the content and level of quality have yet to be determined (Winton, McCollum & Catlett, 2008). In fact, researchers have only recently begun to articulate quality standards for professional development of early childhood teachers (Buysse, Winton, & Rouse, 2009). There is a growing agreement that current early childhood professional development efforts at the national, state, and local levels are fragmented at best (Winton, McCollum, & Catlett, 2008).

The literature related to professional development in early childhood education suggests the need to define the kinds of professional development best suited for early childhood educators. Recent studies have suggested that interventions that include in-class coaching may help teachers connect the content of workshop trainings to their real-world practice (De Alba-Johnson et al., 2004; Grace, et al., 2008; Neuman, 1999; Raver, Jones, Li-Grining, Metzger, Smallwood, Sardin, & Young, 2008). According to Pierce, Abraham, Rosenkoetter, Summer, and Knapp-Philo (2008, in-class coaching is defined as a form of professional development that works in concurrence with
training, but directly in the classroom, with a focus to help teachers acquire, enhance, or refine specific intervention and teaching behaviors. Their findings note that coaching may be one of the most promising routes to increasing teacher quality. Investigations exploring the impact of an intervention that includes in-class coaching as a means of professional development on child outcomes, kindergarten readiness, appropriate preschool environments and interactions, and the instructional behaviors and practices of teachers will be beneficial to the knowledge of the field.

**Purpose and Research Questions**

The purpose of this study was to gain a better understanding of the impact of an intervention that includes in-class coaching as a means of professional development for preschool teachers. The impact of in-class coaching on the outcomes of children, the quality of classroom interactions and learning environment, and the perceptions of the teachers who participated were examined. Particularly, environmental ratings of preschool classrooms before and after receiving one or two consecutive years of intervention including in-class coaching were compared to see if any areas were changed after a year of the intervention including coaching. The kindergarten
readiness scores of prekindergarten classrooms with teachers receiving an intervention including in-class coaching and those of prekindergarten classrooms whose teachers did not receive the intervention were compared. Finally, the perceptions of the participating teachers as to the components of the intervention they found to be valuable and less valuable were examined.

Specifically, there were three central questions. The first two focused on the analysis of quantitative data to identify differences between those who participated in the intervention including in-class coaching and those who did not. The third question required qualitative methods to delve more deeply into the participating teachers' views of their intervention experience. The specific research questions are as follows:

1. Did an intervention including coaching of prekindergarten teachers improve the environmental quality in preschool classrooms as measured by Early Childhood Environmental Rating Scale - Revised (ECERS-R)? If so, which environmental elements were most improved?

2. Did centers receiving an intervention including coaching for varying amounts of time differ in levels of school readiness?
3. What were prekindergarten teachers’ perceptions of coaching?

**Research Design**

The context of the present study was Duval County, Florida. This was an opportune setting in which to find answers for the proposed research questions, as the county is home to programs dedicated to the coaching of preschool teachers. The Early Learning Coalition of Duval worked with the Jacksonville Children’s Commission and Episcopal Children’s Services in an effort to provide intensive coaching in preschool classrooms. The programs included the Jacksonville Early Literacy Partnership (JELP) and the Jacksonville Journey.

The Jacksonville Early Literacy Partnership (JELP) began in 2003 when Mayor John Peyton assembled a group of key child-focused agencies and asked them to develop a joint strategy to improve the school readiness of Jacksonville’s children by changing the focus of early child care from a custodial focus to an early learning focus (Jacksonville Mayor Peyton Announces, 2004). The Jacksonville Journey was founded in September of 2008 by the Jacksonville City Council. The Jacksonville Journey was initiated out of the need for a comprehensive citywide anti-crime initiative. Funding provided by this initiative
was also invested in improving children’s early literacy and school readiness through the Jacksonville Journey Early Learning Program. The Program began in 2009 with 35 child care centers located in Jacksonville’s downtown area. The mission of the program was not only to address children’s educational development but also their mental, social and emotional health (City of Jacksonville, 2009).

The main goals for both the Jacksonville Early Literacy Partnership (JELP) and the Jacksonville Journey are to increase the school readiness of the children they serve. An increase in child outcomes is the primary task of both groups. However, the program also has goals for increasing environmental quality, ratio and group size, staff development, curriculum implementation and family involvement.

There are key differences in the criteria for eligibility of sites for Jacksonville Early Literacy Partnership (JELP) and the Jacksonville Journey sites are the criteria used for eligibility. Any site in Duval County that agreed to commit to the JELP program for two years was eligible on a first come, first served basis. The Jacksonville Early Learning Partnership typically served around 90 centers in a given year. Half the JELP sites were overseen by the Jacksonville Children’s
Commission, and the other half were overseen by Episcopal Children’s Services. The sites included in the Jacksonville Journey were limited to the most high crime zip codes, which included 32202, 32204, 32206, 32208, 32209, and 32254. These were centers deemed the most at risk due to their location.

Both the Jacksonville Early Literacy Partnership (JELP) and Jacksonville Journey used a number of interventions designed to increase the quality of Jacksonville's preschool community. The projects included intensive, center-based coaching to preschool teachers (Wehry, 2009). Coaching activities constitute the vast majority of the overall intervention. The coaches working in these projects spent an hour or more per week coaching in each assigned classroom. They demonstrated, observed, and provided specific feedback on teaching strategies, focusing on the teachers' behaviors, interactions, and instructional techniques. The in-class coaches mentored the teachers on topics such as additional professional development opportunities and grants, setting and progressing through goals, assessing children and differentiating instruction based on the results, and developing a relationship based on trust and common goals (Episcopal Children's Services, 2009).
The coaches also focused on the classroom environment by providing classrooms with learning materials, helping teachers set up appropriate learning centers, and making each classroom an environment rich with print and literacy. The coaches ensured that the center director was using a research-based curriculum (Wehry, 2009) and encouraged ongoing assessment, individualized instruction based on the children's greatest needs, and parent-teacher communication (Episcopal Children's Services, 2009).

Finally, the intervention of both JELP and Jacksonville Journey included professional development sessions for center directors based on best practices in the field of early childhood education. Training topics ranged from improving classroom environments, early literacy acquisition, developing language, classroom management, social emotional development, fiscal management, risk management, and personnel management. These professional development sessions were recommended, though not required.

The in-class coaches who worked with the teachers of three and four-year-old children had a minimum of a bachelors's degree in an early childhood or a related education field. Coaches attended occasional professional development seminars to discuss, share, and apply research-
based strategies based on early learning skills with a literacy focus (Episcopal Children Services, 2009).

These professional development programs were the context for the study. The inquiry was a quantitative study with narrative component. This method was the most appropriate for answering my questions, as it allowed the effects of coaching to be observed using numeric data that were further supported by the thoughts and words of those who were intimately involved (Creswell & Plano Clark, 2007). Together, the quantitative and qualitative evidence formed a more complete picture of the effects of coaching on teachers and children.

To answer the first research question, archived pre-assessment scores measuring classroom quality were obtained. These measures were administered at the beginning of the intensive coaching process, for each center in the Jacksonville Journey coaching program. Then, the pre-test scores and post-test scores that were taken at the end of the year were compared. These assessments, using the Early Childhood Environmental Rating Scale - Revised (ECERS-R), were conducted by independent and trained assessors (see Chapter 3 for details about the ECERS-R). These data were analyzed using a t-test to look for differences between the pre-test and post-test ECERS-R scores. In addition to
analyzing whether the total scores changed, specific categories of the assessment were analyzed to see which areas were most affected.

To answer the second research question, Florida Kindergarten Readiness Screener scores were obtained. These scores are published by the Florida Department of Education. Using these secondary data, the scores of centers where teachers received two years intensive in-class coaching \((N = 78)\) for the year inclusive of the testing dates September 2010 - August 2011, centers where teachers received only one year of coaching \((N = 40)\) for the year inclusive of the testing dates September 2010 - August 2011, and centers where teachers did not receive intensive in-class coaching \((N = 226)\) were compared. This group also included centers where staff received only environmental assistance. An ANOVA was conducted in order to analyze any differences between the non-intervention class scores and classrooms where teachers received one or two years of the intervention including in-class coaching prior to the assessment. Due to unequal variances between groups, the Welch’s F-test was used to analyze differences between the groups.

Finally, to answer the third research question, in-depth interviews were conducted with a sample of teachers
who had participated in the coaching for a full two years. The interview included a variety of open ended questions designed to seek teacher perspectives about the coaching process.

**Significance of the Research**

The present study is important to the fields of early childhood education and professional development. The present study offers insight into the effects of in-class, intensive coaching in preschool classrooms of varying ethnic and socio-economic settings. The study addresses the relationship of intervention that includes in-class coaching and indicators of quality, including child outcomes for kindergarten readiness, environmental appropriateness, the quality of interactions and instruction, and the perceptions of teachers.

The present study advances knowledge in the field of professional development for early childhood teachers because, though coaching was not isolated from other important variables that could affect teacher performance, parallels that suggest further insight were revealed. This study serves as a preliminary investigation that provides motivation for an experimental study which could directly compare preschool classrooms, teachers, and children who
participate in an intervention including in-class coaching with those that do not.

Furthermore, the present study may have implications for policy development. There is a goal for all Voluntary Prekindergarten (VPK) teachers in Florida to eventually have at least one prekindergarten instructor who holds a bachelor's or higher in the field of early childhood education or child development (Florida Department of Education, 2008). Though this is a goal founded in good intentions, it is quite lofty, as funding to pay bachelor degreed preschool teachers is not readily available and may not be the answer for improved quality. Many recent studies have found minimal evidence that higher formal degrees appear to affect preschool teacher quality or child outcomes (Early et al., 2007; Phillipsen, Burchinal, Howes, & Cryer; 1997). It may be unwise to increase requirements without clear, empirical evidence that the increase in degree requirements results in an increase in quality. Higher educational requirements are desirable but perhaps not sufficient. This study may provide support for other forms of professional development in conjunction with increases in educational requirements.
Chapter Summary

This study is timely and relevant to the fields of early childhood education and professional development. This study will provide further insight into the value of interventions that include in-class coaching on child outcomes, classroom environments, interactions, and teacher perceptions. The structured coaching provided by the Jacksonville Early Literacy Partnership and the Jacksonville Journey is an appropriate platform with which to answer the proposed research questions. Chapter 2 will further demonstrate the importance of this proposed research to the field. An in-depth review of the importance of preschool education, the history and current state of Florida's prekindergarten program, the value of a high quality teacher, and the various types of professional development currently being offered to preschool teachers is presented in Chapter 2. In Chapter 3, details of ways the research methodology and design of this proposed inquiry meet the needs found in the review of literature are provided. In Chapter 4, the findings of the present study are discussed in detail. In Chapter 5, discussions, conclusions, and recommendations based on the findings of the present study are presented.
CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter presents an analysis of literature related to this study. Through the use of peer-reviewed journals and books, this review describes research that assesses the importance of early childhood education, explains the creation of Voluntary Prekindergarten (VPK) in Florida, and examines the way that effectiveness of Voluntary Prekindergarten is measured. Most importantly, for the purposes of the present study, this chapter includes a detailed review of literature that assesses the importance of high quality teachers, particularly in early childhood settings, and the means by which research suggests teacher quality might be improved. This section includes literature that explores the notion of effective professional development, in general terms and then specifically for early childhood education. The effects of
professional development on teacher practices, classroom environment, and student achievement will be discussed.

**Benefits of Early Childhood Education**

Numerous studies have confirmed the long-lasting effects of a quality preschool experience on a child’s life. The first notable study of this nature was the Perry Preschool Project (Schweinhart, Barnes, & Weikart, 1993), carried out from 1962 to 1967.

The Perry Project was characterized by very low attrition of students. Outcome data were obtained for 96% of the original sample in the follow-up studies at age 27 and for 94% of the original sample in the follow-up studies at the age of 40. In measuring the results, the study used both official school records and personal interviews to support the findings (Schweinhart, 2004).

The study included a randomized controlled trial of 128 children. The intervention group comprised half of the sample and received the preschool program. The other half who served as the control group did not receive high quality preschool education, as they were enrolled in lower quality preschool programs. All of the children in the study were three and four-year-old African-American children living in poverty who were considered to be at high risk for school failure (Schweinhart et al., 1993).
About 75% of the children participated for two school years; the remainder participated for one year.

The preschool was provided each weekday morning in 2.5 hour sessions taught by certified public-school teachers with at least a bachelor's degree. The average child-teacher ratio was 6:1. The curriculum emphasized active learning in which the children engaged in dynamic activities that involved problem solving. The teachers were required to complete 1.5 hour home visits each week to help the child’s caregiver connect the curriculum to the child’s home life. The program’s cost was approximately $11,300 per child per school year, in 2007 dollars. The results indicated that, 27 years afterward, the participants were still reaping the benefits of the program (Schweinhart, 2004). The study concluded that, on average, the Perry Preschool children completed an average of almost one additional full year of schooling, 11.9 years versus 11 years, than those in the control group. The Perry Preschool children also required less time enrolled in later special education classes. The Perry Preschool children achieved a higher high-school graduation rate than nonparticipants, 65% compared to 45% (Schweinhart, 2004; Schweinhart et al., 1993).
Furthermore, the Perry Preschool Project had significant social effects on the children. The findings showed that the students who participated in the high-quality preschool had a lower proportion of out-of-wedlock births, 57% compared to 83%. The control group had double the number of teenage pregnancies than those who participated in the Perry Preschool Project. Additionally, the Perry Preschool participants were significantly less likely to serve jail time or commit violent crimes (Schweinhart et al., 1993).

Moreover, there were significant long term economic differences between those who participated in the Perry Preschool Project and those in the control group. For example, the participants had a 42% higher median monthly income and were 26% less likely to be on welfare (Schweinhart, 2004).

Other landmark, longitudinal studies further have supported the long term benefits of high quality, early childhood education (Campbell & Ramey, 1995). The Carolina Abecedarian Project researchers randomly selected and placed 111 participants in the treatment and control groups. The treatment group participated in the high quality early childhood program, and the control group attended typical preschools, or stayed at home with a
caretaker. The evaluators measured the social and intellectual development of both groups at ages 3, 4, 5, 6.5 and 8-years old with the Stanford-Binet intelligence scale and the Wechsler Preschool and Primary Scale of Intelligence. The Woodcock-Johnson Psycho-Educational Battery was administered to the students at age 8, 12, 15, and 21 to measure math and reading achievement. Of the initial 111 participants in the treatment and control groups, 104 were available for testing and interviews at the age of 21 (Ramey et al., 2000).

Children who participated in the Carolina Abecedarian Project demonstrated persistent gains in IQ scores, and in reading and math achievement. Follow-up investigations, at age 21, showed that they were on average older at the time they had a child and were more likely to have gone to a four-year college than those not in the program (Campbell & Ramey, 1995; Ramey et al., 2000).

Children in the Chicago Child-Parent Centers study, a federally funded study designed with many replicated elements of the Perry Preschool Project, also indicated significantly higher math and reading scores for the 1,539 participants. By age 20, the participants were more likely to have finished high school and to have lower rates of
criminal activity than children not in the program (Reynolds, Temple, Robertson, & Mann, 2001).

The economic benefits of these high quality preschool programs have since been highlighted. Money invested in children during these critical early years has been shown to reap rewards later, in terms of lower public expenditures related to incarceration, costs of being a victim of a crime, and costs of later rehabilitation. In fact, for every $1.00 invested into high quality preschool, amounts ranging from $3.00 to $16.00 were recouped in terms of benefits over the entire time frame (Nores, Belfield, Barnett, & Schweinhart, 2005). High quality preschool is an investment that eventually benefits everyone.

Numerous recent studies further support the considerable effects of a high quality preschool experience in various areas. With regard to cognitive development, high quality preschool experiences have been shown to produce a cognitive advantage for children (National Institute of Child Health and Human Development Early Child Care Research Network [NICHD-ECCRN], 2000; NICHD-ECCRN, 2002; NICHD-ECCRN, 2005a; Ou, 2005; Peisner-Feinberg et al., 2001; Shonkoff & Phillips, 2000) over children who do not have high quality preschool experiences. Early childhood education is associated with persistent gains on
achievement test scores, particularly in reading and math (Gormley, et al., 2005; Howes et al., 2008; Magnuson, Meyers, Ruhm, & Waldfogel, 2004; Melhuish et al., 2008; Ou, 2005).

Preschool is critical for preparing young children to be ready for kindergarten (Gormley et al., 2005). In a 2005 study, Gormley, et al., studied the school readiness of a diverse group of children. There was a statistically significant effect among the children who attended prekindergarten in various prereading, cognitive, math reasoning, and problem-solving skills. The findings were also practically significant: children exposed to prekindergarten experiences gained seven to eight months on their letter-word identification age-equivalent score. The prekindergarten children also gained six to seven months in spelling concepts and four months in problem solving beyond the average gains of aging or maturation (Gormley et al., 2005).

Language and vocabulary, another critical component for being prepared for kindergarten, have been shown to be more developed and robust in children who have had early childhood education experiences (Belsky et al., 2007; Masse & Barnett, 2002; NICHD-ECCRN, 2000, 2002, 2005b; Sammons et al., 2004). This increase in language abilities was shown
to persist throughout the elementary years (Belsky et al., 2007).

Research has also indicated that preschool is critical for preparing a child for academic success beyond kindergarten (Gormley, et al., 2005; NICHD-ECCRN, 2005a; Reynolds et al., 2001). This critical preparation has led to reductions of grade failure and less need for special education services (Camilli, Vargas, Ryan, & Barnett, 2010). According to a comprehensive meta-analysis of 123 studies done on the effects of preschool experiences, the effects of preschool are persistent. When the findings for the meta-analysis were limited to studies that meet high standards of rigor, the effect size for immediate cognitive changes was .70 and the effect size for long term effects was .30 (Camilli et al., 2010). Further research confirmed that these advantages were often times long-term advantages (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Melhuish et al., 2008; Peisner-Feinberg et al., 2001).

Evidence particularly supports the benefits of preschool experiences for children who are economically disadvantaged (Campbell et al., 2002; Sammons et al., 2004; Schweinhart, 2004). Although the effects of preschool have been traditionally concerned with children of poverty, several childcare studies have indicated that effective
early education programs improve the learning and development of all children (Barnett, 1996; Shonkoff & Phillips, 2000).

The History of Florida Voluntary Prekindergarten (VPK)

At the same time that evidence began emerging about the impressive benefits of preschool education, evidence was also compounding that low-income and minority students were more likely to enter kindergarten ill-prepared in the area of language, literacy, and social skills (Carnegie Task Force on Meeting the Needs of Young Children, 1994; Child Trends & Center for Child Health Research, 2004). More than 50% of U.S. children were reported to have one or more risk factors for school failure, including too little exposure to stimulating language, reading, and storytelling, and too few trusting adult relationships (Carnegie Task Force on Meeting the Needs of Young Children, 1994).

Further, a strong correlation was found between risk factors and socioeconomic status (National Center for Education Statistics, 2000). The scores of mathematic achievement of new kindergarteners from the lowest socioeconomic group were 60% lower than the scores of the kindergarteners from the highest socioeconomic group. The reading scores were 56% lower. Powerful evidence showed
that economically disadvantaged children, on average, were lagging behind other children in literacy, numeracy, and social skills even before the first day of formal schooling (Child Trends & Center for Child Health Research, 2004).

In addition, the Carnegie Task Force on Meeting the Needs of Children (1994) issued the alarming statement that one-third of U.S. children entering kindergarten were not prepared to succeed in a kindergarten setting.

Following several other states, in 2002, the citizens of Florida voted to approve a constitutional amendment to establish a voluntary, high quality prekindergarten program for all four-year-olds by the year 2005. The purpose of the Voluntary Prekindergarten (VPK) program was to prepare young children for successful entry into kindergarten by focusing the Department of Education’s efforts on early literacy. The enabling legislation assigned responsibilities for the day-to-day management of the program to the Agency for Workforce Innovation. Licensing and credentialing responsibilities were given to the Department of Children and Families. The formation of standards, curriculum, and accountability was given to the Department of Education (Florida Department of Education, 2008). All three agencies were assigned to work together to provide support to the local early learning coalitions,
school districts, and providers to ensure the successful execution of the prekindergarten programs for Florida’s four-year-old children (Florida Department of Education, 2008).

In 2005, the first year of operation, Voluntary Prekindergarten (VPK) was available across the entire state and served more than 100,000 children. During the 2006-2007 school year, the number of providers increased by 15%, and the number of children rose by nearly 20,000 (National Institute for Early Education Research, 2008). By the 2008 school year, Florida had served 57% of the State’s 4-year olds in a state funded Voluntary Prekindergarten (VPK) program. That was the second highest percentage of four-year-olds in the country (National Institute for Early Education Research, 2008).

Under this Florida legislation, no child is required to participate. Preschools and day care centers do not have to participate in VPK. Eligible providers can be public or private schools, non-profit and for-profit early childhood providers, Head Start, and faith-based providers. The private prekindergarten providers must hold a Gold Seal Quality Care designation or be licensed and have their qualifications verified by an early learning council (Florida Department of Education, 2008).
Florida Kindergarten Readiness

Due to the fact that a large amount of state money is being invested in early childhood education, there is a demand to gain evidence of preschool education's effect on the readiness of children to enter kindergarten. The National Education Goals Panel (Kagan, Moore, & Bredekamp, 1995) set the lofty goal that by the year 2000 all children would start kindergarten with adequate readiness. In order to measure this readiness, outgoing preschool students in the state of Florida were required to take a test at the beginning of kindergarten.

However, the National Association for the Education of the Young Children (1995) issued a position statement on kindergarten readiness measures. The position statement questioned the idea of a single assessment that can determine if a child is ready for kindergarten. The position statement concluded that preschool children have a wide range of experiences, learning, and development that may make a single measure of readiness inappropriate. This proposed assessment of kindergarten readiness, they argued, did not support individual differences (National Association for the Education of the Young, 1995). Furthermore, when tests are used to label a child, it is
imperative that the test scores are reliable and valid. In 2004, Florida became one of 20 states that assess the readiness of kindergarten students at the beginning of the kindergarten year. The Education Commission of the States (2004) recommended to the Florida Department of Education that it establish a kindergarten readiness screening based upon Florida’s Voluntary Prekindergarten Education Standards.

The Florida Kindergarten Readiness Screener (FLKRS) is administered to assess the readiness of each child for kindergarten. The first portion of the FLKRS is a measure of phonological awareness and alphabet recognition. In addition to this measure of early literacy skills, there is also an observational tool that measures the child's readiness for kindergarten across all of the learning domains addressed in the kindergarten standards (Florida Department of Education, 2008). The Early Childhood Observational Screener (ECHOS) is the observational tool based on the whole child across the following seven developmental areas: language and literacy; mathematics; social and personal skills; science; social studies; physical development and fitness; and creative arts (Pearson Publishing, 2007). According to the publisher of the assessment, Pearson, the ECHOS scores have been
empirically shown to be valid and reliable (Pearson Publishing, 2007) though the study listed in their technical report was conducted by those with a vested interest in the assessment. The technical report with details concerning the validity and reliability is not available. Despite the lack of data to support the validity of this tool, it is worthwhile to investigate, as it is the tool chosen by the state.

The items included in the Florida Kindergarten Readiness Screener (FLKRS) are aligned to the VPK Education Standards. *The Florida Assessments for Instruction in Reading* include: Broad Screening, a Broad Diagnostic Inventory, and a Targeted Diagnostic Inventory. The Kindergarten Readiness Score is computed using the results of the Broad Screening which consists of measures of letter naming and phonemic awareness. These data are used to calculate a student’s "Probability of Success in Reading" score. The scores are used to decide if a preschool program is sufficient or a low performing provider (Florida Department of Education, 2008).

The Florida Assessments for Instruction in Reading is a new assessment. Empirical evidence that supports the validity and reliability of this measure has not been published. According to NAEYC, the higher the stakes for
programs and public investments, such as being deemed a low performing provider and losing subsidized funding, the more critical and rigorous the standards for assessment design, assessment quality, and analysis should be (National Association for the Education of Young Children, 2003). It is evident that this is not always the case in practice (Scott-Little, Kagan, & Clifford, 2003) and that it is not appropriate to emphasize the results of a test that has not been appropriately validated (National Association for the Education of Young Children, 2003).

The law states that the Department of Education must require each public school to administer a kindergarten readiness screening to all kindergarten students in the school district within the first 30 school days of each school year (Florida Department of Education, 2008). From those scores, each VPK provider receives a Kindergarten Readiness Rate which is calculated by adding together the percentage of children who are considered ready for kindergarten on each of the three parts of the assessment. The scores then go back to the providers to verify that they served each child listed on their prekindergarten roster, and then the scores are published by the Department of Education (Florida Department of Education, 2008).
These scores are used as an indicator of quality for the public, including parents looking for quality care.

When a preschool program is deemed as a low performing provider, the provider is put on an action plan which outlines the steps the provider plans to make in order to increase child outcomes. If a preschool is a low performing provider for a second consecutive year, the provider must use a curriculum from a specific state provided list and submit a more detailed action plan for improving. The third consecutive time a program is deemed as a low performing provider, the provider loses state funding and can therefore no longer be a provider (Florida Department of Education, 2008).

**Preschool Quality**

With so much being invested in early childhood education, there has been a growing demand to ensure the quality of these prekindergarten programs. Furthermore, the evidence that inspired the creation of voluntary prekindergarten program was based on the effects of high quality preschool experiences. A change in the quality variable would likely change the results that initially motivated the initiative.

Theoretical definitions of preschool quality generally reflect three broad areas: features of program design,
aspects of the structural classroom environments, and teacher-child interaction in classrooms.

The field of early childhood education is moving away from the focus on classroom environments and towards an emphasis on teacher-child interactions as the most important indicator of quality (Burchinal, Vandergrift, Pianta & Mashburn, 2010). Several factors contribute to a growing interest in focusing on improvements in the quality of teachers’ interactions with children. First, there is now compelling empirical evidence that one of the most prominent aspects of early childhood programs’ effects on children’s development is the nature and quality of teachers’ interactions with children (Brophy-Herb, Lee, Nievar, & Stollak, 2007; Curby et al., 2009; Dickinson & Brady, 2006; Guo, Piasta, Justice, & Kaderavek, 2010; Howes et al., 2008; Jackson et al., 2006; Mashburn et al., 2008; McCartney, Dearing, Taylor, & Bub, 2007; Pianta, Barnett, Burchinal, & Thornburg, 2009). Furthermore, national data suggest that the average preschool child is likely to experience teacher-child interactions of mediocre to low quality (Phillips, Gormley, & Lowenstein, 2009; Pianta et al., 2005).

Hamre and Pianta (2007) described three broad domains of teacher-child interaction that were theorized to aid
children’s developmental progress as a result of their experiences in classrooms. These three domains were Emotional Support, Classroom Organization and Instructional Support. The creation of the three domains of interactions in classrooms was based on an accrual of theoretical and empirical evidence about the particular types of classroom interactions that are most effective for promoting children’s social and academic development. It is important to note that before the development of the Classroom Assessment Scoring System (CLASS), no tool was available that measured the quality of teacher-child interactions. The classrooms assessments that were predominately used were those that focus on the environmental and safety aspects of the classroom. Though these aspects are certainly important, they tell very little about what the child will gain in terms of learning and developmental outcomes (Hamre & Pianta, 2007). The CLASS tool is based on evidence to suggest that each domain of interactions has either direct or indirect effects on children’s language and literacy development (Downer, Sabol, & Hamre, 2010).

Within the social and emotional domain, the positive effects of being in a kind, positive, sensitive preschool setting are well documented (McCartney et al., 2007;
McDonald-Connor, Son, Hindman, & Morrison, 2005), while children exposed to more child-focused instruction that promotes autonomy, report more optimistic feelings about school, show more motivation, and are more engaged in classroom activities (de Kruif, McWilliam, Ridley, & Wakely, 2000; Gutman & Sulzby, 2000; Pianta, LaParo, Payne, Cox, & Bradley, 2002; Valeski & Stipek, 2001).

Organizational interactions in the CLASS refer to teachers’ efficient use of time. Children learn more when they are more consistently exposed to instructionally rich activities; this is important given that the average preschool child spends about 44% of their time in non-instructional activities, such as waiting in line to wash hands or eating (Early et al., 2005). Therefore, ensuring that the teacher is prepared and has routines in place to increase productivity is vital in terms of classrooms quality.

Finally, teachers’ use of cognitively stimulating opportunities to learn and feedback about learning are key elements of instructional support. The focus on higher-order learning opportunities, in contrast to focusing on rote memorization and recall, results from research on children’s cognitive and language development (Catts, Fey, Zhang, & Tomblin, 2001; Fujiki, Brinton, & Clarke, 2002;

With features of program design in mind, the National Institute for Early Education Research (NIEER; 2008) defined “high quality” as the achievement of policy goals set forth in 10 domains: early learning standards, lead teacher degree qualifications, specialized teacher training, assistant teacher qualifications, in-service of teachers, maximum class size, staff-child ratio, support services, meal support, and monitoring. It is important to note that these 10 components are not purported to be equally important or comprehensive. They are simply a rough gauge of a state’s commitment to quality (NIEER, 2008). The present study was primarily concerned with Florida's policies pertaining to 2 of the 10 quality benchmarks: teacher qualification policy and the inservice training requirement policy. Thus, the policies that pertain to the present study are examined below.

Teacher quality has been deemed an important predictor of classroom quality (NIEER, 2008). Teacher quality has appeared to be one of the strongest predictors of a child's school readiness and preschool academic achievement (Howes,
When students have a teacher who is sensitive to emerging developmental skills, students generally achieve at higher levels (Howes, 1997). Teachers who are considered high quality in addressing early literacy skills are more likely to have students who show cognitive growth that carries into kindergarten (Mashburn & Pianta, 2006; Whitehurst & Lonigan, 1998). In fact, children typically identified as at risk, such as children whose families are poor, demonstrate average levels of development at entry into kindergarten when they have received support from high quality prekindergarten teachers (Landry, Smith, Swank, Assel, & Vellet, 2001). Teacher quality is the most consistent predictor of high quality learning programs (Bowman, Donovan, & Burns, 2000). Early childhood teacher quality research has been consistent with findings for first-grade classrooms in which high quality instructional and emotional support have been shown to reduce achievement gaps (Hamre & Pianta, 2005).

**Increasing Teacher Quality: Professional Development**

It is clear that there is general agreement about the importance of preschool experiences and the importance of quality teachers. However, ways to increase the quality of
teachers, particularly those in early childhood education, remains an area of controversy and ambiguity.

The literature related to professional development has defined professional development in very broad terms. Little (1993) defined professional development as "any activity that is intended partially or primarily to prepare paid staff members for improved performance in present or future roles in the school districts" (p.491). Professional development can consist of discrete activities, such as workshops, conferences, college courses, or special institutes or centers, or it can include more broad-based professional development, such as co-teaching, mentoring, coaching, or group reflection and discussion.

Research has identified the continuing development and learning of teachers as one of the keys to improving the quality of schools (Borko & Putnam, 1995; Darling-Hammond, 1999; Thompson & Zeuli, 1999). Beginning in the late 20th century, a great deal of emphasis has been placed on the promise of professional development to increase teacher quality. A groundbreaking study was published in 1989 that claimed professional development could improve teacher practices and student achievement. Forty randomly assigned first grade teachers were placed into two groups. The
control group participated in a 4 hour professional development program on ways to guide students' cognitive processes. The other group received an extensive, thorough, 80-hour program on the same topics. Findings indicated that students and teachers who received the 80-hour professional development outperformed the control group on the achievement measures that were examined. These achievement measures included eight open-ended questions that were designed to investigate basic mathematical conceptions, children’s learning difficulties, and knowledge of instructional practice (Carpenter, Fennema, Peterson, Chiang, & Loef, 1989).

The present study and others supporting the effectiveness of teacher professional development (McCutchen, Harry, Cunningham, Cox, Sidman, & Covill, 2002) have made professional development a continuing issue of policy and education reform (Desimone, 2009). In fact, professional development is supported under No Child Left Behind (Birman et al., 2007) as the primary plan to improve the quality of K-12 teachers by training them on the teaching strategies that are supported by scientifically based research. Further evidence of the confidence that is placed on the effectiveness of professional development is the substantial resources spent on k-12 professional
development at the local, state, and federal levels. In 2004-2005, the federal government alone spent about $1.5 billion on professional development for teachers (Birman et al., 2007).

**Professional Development of Early Childhood Educators**

As previously discussed, a number of studies have been done that demonstrated the effectiveness in improving teacher practices with K-12 teachers. However, it has been questionable whether those findings can be transferred to teachers of early childhood education who, unlike the K-12 teachers, did not typically have a bachelor's degree (Bowman et al., 2000). Limited research has focused on effective professional development with preschool teachers who have such varying educational experiences, starting as low as a GED. Examining professional development research that deals with preschool teachers has become critical in order to uncover appropriate content, context, and varying needs of early childhood educators (Winton et al., 2008).

Many recent state and federal initiatives were attempted to increase teacher quality in prekindergarten classrooms. For example, Early Reading First, established as a part of No Child Left Behind (2002), called for intensive professional development in both content knowledge and literacy instructional practices of
prekindergarten teachers. The Good Start, Grow Smart initiative (U.S. Department of Health and Human Services, 2002) emphasized the importance of aligning prekindergarten and primary grades by providing professional development and training in early literacy pedagogy.

Although these and other initiatives in early childhood education show that policy makers are beginning to understand the importance of early childhood education and improving teacher quality, there is still very limited knowledge about the issues that specifically qualify as effective professional development for prekindergarten teachers. Furthermore, there is work to be done to understand the impact professional development for teachers has on instructional practices and child outcomes (Buysse, Winton, & Rouse, 2009).

In addition, the issue of teacher turnover must be discussed as it relates to professional development. The high rate of teacher turnover is a major concern in the field of early childhood education (Cassidy, Lower, Kintner-Duffy, Hegde, & Shim, 2011; Mims, Scott-little, Lower, Cassidy, & Hestenes, 2008). An estimated 82% of child care teachers employed in 1994 and 76% employed in 1996 were no longer retained in the field in the year 2000 (Whitebook & Sakai, 2003). This concern must be discussed
in relation to professional development. When resources are spent developing teachers, and they subsequently leave the field, the resources spent on teachers' development are not effectively translatable into outcomes.

The link between teacher turnover and child outcomes is complex. Centers with higher teacher turnover rates and lower levels of child outcomes also have higher child-to-adult ratios, fewer educated teachers, and are characterized as poor-quality programs (DeVita, Twombly, & Montilla, 2002), which makes it difficult to attribute poor child outcomes to teacher turnover. There has also been extensive research about the reasons for teacher turnover, with a particular focus on low salaries, lack of benefits, and difficult working conditions, resulting in low morale, stress, and job burnout (Curbow, Spratt, Unagretti, McDonnell, & Breckler, 2001; Hale-Jinks, Knopf, & Kemple, 2006), as well as the organizational climate (Cassidy et al, 2011). With the complex overlap of variables it is difficult to confirm the relationship between quality, teacher turnover, and child outcomes.

**Defining Early Childhood Professional Development**

In *Critical Issues in Early Childhood Professional Development* (Maxwell et al., 2005), the authors concluded that there were no common definitions of professional
development terms, but that three components of early childhood professional development seem to consistently emerge in the literature: education, training, and credentials. Education is defined as professional development that takes place in a formal education system, such as a college or university and includes coursework for early childhood related majors (Maxwell et al., 2005). Training is defined as professional development activities that occur outside the formal education system and do not lead to a degree. This includes workshops, informal trainings, and other isolated courses related to early childhood education. The third component, credential, is the middle ground between the two previously mentioned types of professional development. Credentials are a series of trainings and classes that usually involve the teacher’s showing evidence of implementation over a few months. This type of professional development leads to a specific credential, such as a Child Development Associate (CDA), which is required to be the head teacher of a Florida Voluntary Prekindergarten class, or a Director's Credential, which is a requirement to be a director of a preschool center (Maxwell et al., 2005). Research pertaining to each type of early childhood professional development is discussed in the following sections.
Among the states that have prekindergarten programs, 17 of them require that lead teachers have a bachelor’s degree (NIEER, 2008). Florida is not one of those states. Therefore, according to NIEER, Florida’s prekindergarten program is not considered high quality in the area of teacher requirements because lead teachers are not required to obtain any formal education from a college or university.

Two distinct sets of beliefs concerning the importance and effects of early childhood teacher’s acquiring a formal degree have emerged. Throughout the first decade of the 21st century, numerous researchers reported a higher level of teacher education correlated with higher quality in preschool programs. In fact, the evidence was so convincing that the National Association for the Education of Young Children (NAEYC) has increased the educational requirements for early childhood teachers in programs seeking accreditation (NAEYC, 2008). The newly issued requirements for those seeking NAEYC accreditation are that 75% of teachers in the accredited programs have a bachelor’s degree by the year 2020 (NAEYC, 2008).

Fukkink and Lont (2007) reported results from a 16 study meta-analysis that supported the benefits of higher degrees for preschool teachers. A synthesis examined the
linkages between many classroom characteristics, including teacher education. Findings suggested that teachers with more education, particularly specialized in early childhood development, had higher quality programs and engaged children in best practices (Fukkink & Lont, 2007).

In a study of 1,313 preschool classrooms in North Carolina, a statistically significant difference ($p < .0001$) was found between teachers who had any college degree and those without in their ability to set up the classroom in a developmentally appropriate way and in their ability to use and develop reasoning skills, language, appropriate interactions, and discipline strategies (Cassidy, Hestenes, Hedge, Hestenes, & Mims, 2005).

Teachers with higher formal degrees were found to be more involved with the children (Burchinal, Howes, & Kontos, 2002; Clarke-Stewart, Lowe-Vandell, Burchinal, O’Brian, & McCartney, 2002), provided more language rich experiences (Howes, James, & Ritchie, 2003; Lee, Kinzie, Whittaker, 2012), and were more sensitive to the children's needs (Burchinal, Cryer, & Clifford, 2002; Clarke-Stewart et al., 2002; Ghazvini & Mullis, 2002). According to this body of research, there is a higher overall classroom quality when the teacher has a formal educational degree (Burchinal, Howes, Cryer, 2002; Ghazvini & Mullis, 2002;
The literature supporting the benefits of formal degrees for early childhood education teachers has reported differing views of the ideal degree for an early childhood education teacher. Howes (1997) reported that classrooms staffed by teachers with bachelor's degrees in early childhood education were of higher quality than those where teachers had an associate's degree in early childhood education. Hamre and Bridges (2004) reported that the teachers with associate's degrees provided higher quality care than teachers with no degrees and that there was no significant advantage to the associate's or bachelor's degree.

In more recent literature, findings on the importance of a formal degree have not been so favorable. In an examination of seven large-scale early education data sets, Early et al. (2007) found minimal meaningful or convincing evidence that higher formal degrees affect teacher quality or child outcomes. Phillipsen (1997) found that associations that appeared to exist between teachers' education level and teaching quality disappeared after taking into account other program characteristics, such as
adult-child ratio and earned wages. Other research confirmed that though it was apparent preschool produced educational gains for young children, those gains were not related to the formal degree of the teacher (Howes, et al., 2008; Mashburn et. al, 2008) The relationship between teacher education, quality practices and child outcomes is not agreed upon (Strickland, Snow, Griffin, Burns, & McNamara, 2002).

Other studies have produced mixed results. Early and colleagues found that teacher educational level was linked to children's mathematics outcomes across their prekindergarten year, but that all other indicators of quality had no relationship with the teacher’s formal education (Early et al., 2006). It is not yet clear whether outcomes for children are better when teachers have bachelor's degrees, which leads to policy debates about whether it is wise to increase requirements for a required bachelor degree in early childhood classrooms (Early et al., 2006, 2007; Kelley & Camilli, 2007).

It may be unwise to increase requirements without clear, empirical evidence because of the cost required from preschool programs. The higher the degree or specialization required for teachers, the more money the prekindergarten provider has to pay them. Nationwide, the
estimated 2.5 million adults who work in child care centers are among the lowest earners in the entire United States. According to the Bureau of Labor Statistics (2004), the average annual salary of a child care teacher was about $18,000 in 2004 - less than half the amount that kindergarten teachers made. A quarter of early childhood teachers had incomes below 200% of the poverty line (Herzenberg, Price & Bradley, 2005). Even early childhood teachers with a 4-year college degree earned only an average of $13.35 per hour, compared to nearly $20.00 an hour for female college graduates in other fields (Herzenberg et al., 2005).

Teacher salaries are one of the major costs for education programs. Salaries are typically closely related to educational levels (Cost, Quality, & Child Outcomes Study Team, 1995.) Therefore, as there is a push to increase education levels and professional development requirements of preschool teachers, there is also a push to increase the prekindergarten teacher salaries to make the job attractive for those who are highly qualified.

Workshop trainings have been defined as professional development activities that occur outside the formal education system and did not lead to a degree (Maxwell et al., 2005). This includes topic-specific workshops,
informal trainings, and other isolated courses related to early childhood education (Maxwell et al., 2005). NIEER (2008) has set a benchmark of 15 required hours of annual professional development training, yet Florida does not meet that goal. In 2008, Florida only required 10 professional development hours per school year and had therefore not met the recommended benchmark for high quality (NIEER, 2008).

The literature on the effects of teacher training, though not as controversial as the research on formal education, is also unclear. It is empirically difficult to separate the effects of teachers' education and specialized professional development training, as they are intertwined (Kontos & Wilcox-Herzog, 2001). Further confusing the research findings has been the fact that teachers with more education and training may have chosen to work at higher quality centers (Blau, 1997; Hamre & Bridges, 2004), making it harder to measure the effect of the professional development.

Furthermore, training, as a means of professional development, has been under scrutiny for being episodic and isolated (Gravani, 2007). Findings have indicated that preschool teachers have been likely to be more successful when training activities were tied to the individual needs
of the teacher (Garet, Porter, Desimone, Birman, & Kwang, 2001) and when they are sustained until mastery of the content has been obtained (Grace et al., 2008). Neither prerequisite has been consistently evident in most workshop style trainings offered to preschool teachers. Despite the disagreement on the appropriateness of workshop trainings, they remain the primary approach for providing professional development for early childhood teachers (Dickinson & Brady, 2006).

However, training has provided a cost effective and expedient way to increase and highlight specific skills in a systematic way (Albrecht & Engel, 2007) and has been shown to be effective in improving many early childhood teaching skills and behaviors. For example, Norris (2001) found that child care providers who continuously participated in training offered higher quality care than providers who only attended erratically or never.

In a Head Start study, a professional development literacy workshop series was used to measure the effect of professional development on preschool children’s literacy skills. Early childhood teachers, working in high poverty regions, joined in a 15-week satellite broadcast training program. Findings indicated that the workshop teachers significantly exceeded the control teachers on the quality
of their classroom literacy environments. Children’s literacy skills improved more in the experimental classrooms than in control classrooms as well (Jackson et al., 2006).

Other studies that have confirmed the positive effects of professional development on early childhood education teacher practices and student outcomes found that engaging preschool teachers in specialized training on ways to read stories aloud had a significant impact on children's receptive and expressive language and phonological awareness (Whitehurst, Arnold, Epstein, Angeli, Smith, & Fischel, 1994). Furthermore, as a result of a statewide professional development program for early childhood educators, children made significant gains in the early literacy skills in which the teachers were trained (Landry, Swank, Smith, Assel, & Gunnewig, 2006). The findings of Correnti (2007) indicated that teachers receiving intensive professional development in literacy offered more instructional time than those in the control group. Justice, Mashburn, Pence, and Wiggins (2008) reported that a language-focused curriculum, with the addition of several hours of language-focused professional development, accelerated the rate of language development in children.
The effects of trainings can be positive, despite the concerns of isolation from practice.

**In-Class Coaching**

With the understanding that professional development is likely to be more successful when the training activities are clearly and specifically tied to the needs of the preschool classroom and teacher (Foorman & Moats, 2004; Garet et al., 2001; Strickland, Kamil, Walberg, & Manning, 2003), interest has increased in the effects of "in-class coaching" on the professional development of preschool teachers. In-class coaching is a form of professional development that works in concurrence with training, but directly in the classroom (Pierce et al., 2008). The goal of in-class coaching has been to help teachers apply teaching strategies learned in trainings or to learn or improve specific teaching behaviors (Blachowicz, Obrochta, & Fogelberg, 2005; Pierce et al., 2008). In-class coaching by an expert mentor brings about positive growth in classroom practices and instructional strategies of preschool teachers (Costa & Garmston, 2002; Foorman & Moats, 2004). Some of the most powerful teacher learning experiences can occur in the teacher’s own classroom, through examination of the teacher's practice (Putnam & Borko, 2000). Teachers have been likely to
benefit from professional development situations with opportunities to watch other teachers interact in effective ways with children and to receive feedback about their own interactions with children (Pianta, Mashburn, Downer, Hamre, & Justice, 2008b).

Many studies indicate that intervention including in-class coaching, in addition to training, can be beneficial for both teacher practices and student outcomes in K-12 settings. Foorman and Moates (2004) examined teacher knowledge, effectiveness, and student outcomes in an elementary setting. One group had very limited professional development opportunities. The other participated in multidimensional professional development, including training and in-class coaching. Findings indicated a significant difference in teacher knowledge, favoring the teachers who received in-class coaching. A small effect was also found with student scores on a basic reading measure. The researchers concluded that the inclusion of coaches could bring about positive changes in classroom practice (Foorman & Moates, 2004).

The evidence indicating the success of coaching as a means to improving the behaviors, skills, and knowledge of preschool teachers has begun to emerge. A recent Head Start study investigating the impact of professional development,
in conjunction with other contributing variables, such as in-class coaching, parent involvement, curriculum extension activities, and the use of a high quality preschool curriculum, provided evidence that these interventions were worthwhile investments (Bierman et al., 2008). The preschool teachers in this study were provided with four days of training and an in-class expert who coached each teacher for three hours a week in the classroom and one hour outside the classroom to provide feedback. The treatment group showed intervention effects for 9 of the 11 language, literacy, and social skills that were targeted by the in-class intervention. The standardized differences effect sizes for the 9 skills ranged from .15 to .39 (Bierman et al., 2008). Though it was not possible to isolate the effects of coaching from other aspects of this intervention, the participants reported that they valued the contribution made by the in-class coaching.

Wasik, Bond, and Hindman (2006) studied the effects of professional development workshops paired with coaching on the effects of teacher practice. Teachers attended nine monthly two-hour workshops in addition to in-class coaching sessions in which the coach modeled and discussed specific teaching strategies to enhance instruction and promote comprehension. Post intervention observations indicated
that the experimental group integrated more language into lessons, asked more open-ended questions, and used more conversational teaching techniques. Seventy percent of the intervention teachers significantly changed the way they talked and listened to children during shared reading with subsequent improvements in children's vocabularies (Wasik et al., 2006).

An experimental study evaluating a state funded preschool program using on-line professional development with facilitation and in-class mentoring for teachers was conducted to evaluate the effectiveness of combining on-line teaching with in-class coaching. The professional development model maximized resources and focused on increasing teachers' use of best practices to improve both cognitive and social skills of the children. Teachers presented strong evidence supporting the use of classroom coaching for preschool teachers (Landry et al., 2006). Though the intervention was a full two year model, the teachers with the mentoring intervention were observed to have greater gains in their use of language building activities after only four months. The study confirmed that the children of the teachers in the mentoring program had higher literacy and language skills than those in the control group (Landry et al., 2006).
The National Center for Research on Early Childhood Education (NCRECE) is engaged in a program of research on professional development for early childhood educators that tests the efficacy of two specific approaches to increasing teachers’ effective use of social and instructional interactions as measured by CLASS (Hamre et al., 2012). These interventions include a semester-long course for teachers focused on high-quality interactions with children and in-class coaching in which teachers receive regular and focused feedback and support to improve their interactions with children, based on shared observation and analysis of their own teaching practice. Both interventions focused explicitly on enhancing teacher-child interactions to foster children’s language and literacy development. In the study half of the teachers were randomly assigned to a 14-week course while the others served as the control group (Hamre et al., 2012). This study was conducted among a very large and diverse population of teachers in 10 sites across the country. Teachers in the study had widely varying levels of experience. Results indicate that within the Emotional Support domain teachers in the course condition demonstrated more child-focused and autonomy supportive interactions. Within the Instructional Support domain, teachers in the course demonstrated more effective use of
strategies that encourage higher-order thinking, more frequent and intensive feedback, and more effective use of language facilitation strategies such as open-ended questions, contingent conversations, and expansion of child talk. Those exposed to the course reported more intentional teaching beliefs and demonstrated greater knowledge in detecting effective interactions. The course was equally effective across teachers with less than an associate’s degree as well as those with advanced degrees. These findings indicate that the teachers’ use of high quality interactions may increase from in-class coaching and instruction based specifically on teacher-child interactions (Hamre et al., 2012).

A recent analysis of seven major studies of early education (Early et al., 2007) was used to forecast classroom quality and educational outcomes through the amount and type of formal education obtained by the teachers. As previously mentioned, the findings indicated no meaningful correlations, leaving the authors to suggest that increasing the amount of formal education was not adequate for improving the state of early childhood education (Early et al., 2007). The authors proposed in the discussion portion of the findings that in-class coaching might be an appropriate means of assisting
teachers who are often overwhelmed as they transition from learning ways to be an effective teacher to applying that knowledge in their own classroom (Early et al., 2007; Hart, Stroot, Yinger, & Smith, 2005).

Another recent study that compared two groups of participants, one receiving professional development training, and the other receiving the training plus in-class coaching, showed that training alone produced only modest growth in comparison to in-class coaching (Neuman & Cunningham, 2009). Teachers working with the coaches demonstrated higher quality practices and more teacher knowledge pertaining to language and literacy (Neuman & Cunningham, 2009). The findings of this study further supported other studies that suggested that coaching, in conjunction with trainings, might provide preschool teachers with more growth and positive outcomes (De Alba-Johnson et al., 2004; Domitrovich et al., 2009; Grace et al., 2008; Hsieh, Hemmeter, McCollum, & Ostrosky, 2009; Neuman, 1999; Raver et al., 2008; Shidler, 2009).

In Duval County, the effects of the instructional support of in-class coaching, in addition to a curriculum enhancement focused on early literacy, were also deemed worthwhile. The analysis of the randomized field trial concluded that the children in preschool classrooms with
the coaching and other enhancements scored higher on measures of early reading ability (Wehry, Kasten, Cosgrove, Fountain, & Wood, 2010). Furthermore, a longitudinal study of the children who participated in these enhanced classrooms produced evidence of sustained effects of the instructional support. The children in the enhanced classrooms scored higher than children in the traditional, controlled classrooms on measures of alphabet recognition and overall early reading ability at the end of kindergarten (Wehry et al., 2010).

Though the previously cited studies indicated the improvement of student achievement, some studies did not follow the trend. O'Neal, Martin, Emfinger, and Snyder (2006a) reported that the impact of professional development that included literacy education and classroom coaching showed a statistically significant improvement in classroom literacy environments. In a separate study, O'Neal et al. (2006b) reported that even though an improvement in literacy environments was noted, there were no statistically significant differences in the performance of the children on two of three literacy measures.

Finally, the third component of early childhood professional development is a credential. A credential is the middle ground between formal education and workshop
trainings. Credentials require a series of trainings and classes that usually involve the teacher’s showing evidence of implementation over a few months. This type of professional development leads to a specific credential, such as a Child Development Associate [CDA]. A CDA is required to be a lead teacher of a Florida Voluntary Prekindergarten class.

Though credentials can obtained in only a few months, research findings have indicated that there may be a positive association between obtaining a CDA and higher classroom quality (Howes, 1997; Torquati, Raikes, & Huddleston-Casas, 2007). In fact, Early et al. (2006) found that children of teachers with a CDA as their highest credential (this excludes teachers with a college degree) gained more during prekindergarten on basic skills such as letter naming, rhyming, and color recognition than those in a classroom with a non-credentialed teacher. However, higher-order skills, such as language development and math, were not correlated with the CDA. These findings indicated that a Child Development Associate credential might be beneficial for teaching basic school readiness skills, but that a stronger and broader emphasis on language and math skills might be needed (Early et al., 2006).
The Needs of Early Education Professional Development

Although there has been agreement that early childhood teachers need more professional development, the nature of the quality and content have yet to be determined (Winton et al., 2008). Researchers have only recently begun to articulate quality standards for professional development of early childhood teachers (Buysse et al., 2009).

With in the first decade of the 21st century, the field has acknowledged a need to examine ways that professional development improves teacher practice and, subsequently, student achievement (Desimone, 2009). Before the emphasis of professional development by No Child Left Behind, professional development in K-12 teachers consisted mainly of documenting teacher satisfaction, attitude, or commitment to innovation rather than its results (Guskey, 2003) and was nearly non-existent in the field of early childhood education. Moreover, additional research needs to be done to understand how professional development with early childhood teachers specifically impacts the quality of their practices and promotes the development of young children (Buysse et al., 2009; Cochran-Smith, 2005; Early et al., 2007).
**Conceptual Framework**

The conceptual framework of this study is a product of the notion that children who participate in high quality experiences as a young child receive a host of benefits throughout their lives. This leads to the following question: What might lead to high quality experiences for children attending preschool? Literature presented in Chapter 2 suggests that the quality of a teacher greatly impacts the quality of the classroom. This leads to the following question: How can we assure our preschool teachers are highly prepared for quality interactions and instruction? The literature presented in Chapter 2 does not suggest that preschool teachers are well prepared. In fact, the evidence points to a lack of preparation that is a joint product of low pay, minimal training, and nominal educational requirements.

Therefore, the conceptual roots of this study are based on the question of how to ensure our teachers are prepared for the challenges of running a high quality preschool classroom. However, increases in educational requirements without an increase in salary will not be adequate. The result is turn-over, as teachers leave the field of early childhood education after earning a bachelor’s degree in order to earn more in an elementary
school setting. Furthermore, studies suggest that raising only educational requirements is not correlated with an increase in teaching quality (Early et al, 2006, 2007). The findings indicate that policies focused solely on increasing teachers’ education will not be sufficient for improving classroom quality or ensuring growth in children’s academic gains. However, a combination of increased educational requirements, with subsequent in-class coaching may provide sufficient knowledge, hands-on application and support to increase teacher quality in the field of early childhood education.

In order to raise the effectiveness of early childhood education long-term, a broad range of professional development activities, including in-class coaching, combined with well-educated teachers should become the standard. Furthermore, salaries commensurate with other educators will be necessary to make staying in the field of early childhood education as attractive as teaching jobs, requiring the same degree, in elementary education.

**Chapter Summary**

This review of literature indicated that the preschool years are immensely important for the development of cognitive, social, physical, and emotional skills (Gormley
et al., 2005; Magnuson et al., 2004; Ou, 2005). It was evident that the quality of the teacher significantly impacts the quality of the preschool experience for children (Barnett & Hustedt, 2003; NIEER, 2008). The research on professional development in early childhood education has suggested that it is possible to improve teacher quality through ongoing, comprehensive professional development (Grace et al., 2008; Strickland, 2005). Reviews on the issues that constitute effective professional development were mixed: the impact of a formal degree, workshop trainings, and credentials for early childhood teachers remain debatable (Early et al., 2007). Research suggested that intervention including in-class coaching might help teachers connect the content of workshop trainings to their real-world practice (De Alba-Johnson et al., 2004; Grace et al., 2008; Neuman, 1999; Raver et al., 2008). Investigations exploring the impact of interventions that include in-class coaching as a means of professional development on child outcomes as it relates to kindergarten readiness, appropriate preschool environments and interactions, and the thinking and instructional behaviors of teachers is needed to produce a more solid foundation of understanding. The present study’s focus specifically on exploring the effects of an intervention that includes in-
class coaching was designed to develop a deep understanding of how preschool teachers and children may or may not benefit from the professional development. In Chapter 3, details of the research methodology and design of this proposed inquiry will be provided.
CHAPTER 3

Methodology

As discussed in Chapters 1 and 2, inquiries regarding the nature of professional development for early childhood educators and the effect on child outcomes, classroom environment, and teachers are needed. Federal, state, and local dollars are spent to improve the quality of early childhood education, and attempts to do so must be evaluated for effectiveness. This investigation explored the impact of interventions that include in-class coaching as a means of professional development on child outcomes, kindergarten readiness, appropriate preschool environments, interactions, and the instructional practices of teachers.

This chapter details the research methods used in answering the research questions below. It includes a description of the instruments, the way data were collected, and data analysis procedures.
A quantitative design with a narrative component was used. This was the best method to use for answering my questions, as there are relatively independent questions, in which the first two are answered using quantitative methods, and the third is best answered with a descriptive narrative. However, inferences made on the basis of the results from each question were synthesized to form meta-inferences at the end of the study (Teddlie & Tashakkori, 2006).

**Research Questions**

Three central research questions were of interest. The first two focused on the analysis of quantitative data to identify differences between those who participated in the intervention that included in-class coaching and those who did not. The third question required the use of qualitative methods to delve more deeply into the participating teachers' views of their experiences with the intervention that included in-class coaching. The specific research questions are as follows:

1. Did an intervention including coaching of prekindergarten teachers improve the environmental quality in preschool classrooms as measured by Early Childhood Environmental Rating Scale - Revised (ECERS-R)? If so, which environmental elements were most improved?
2. Did centers receiving an intervention including coaching for varying amounts of time differ in levels of school readiness?

3. What were prekindergarten teachers’ perceptions of coaching?

**Data Collection**

Protecting participants is of utmost importance during a research study (Marshall & Rossman, 2011). Several precautions were taken to ensure the protection of all participants and centers. The following are strategies that were used to ensure ethical treatment of everyone involved in the study.

First, a proposal was submitted and met the criteria of the Institutional Review Board (IRB) at the University of North Florida. The proposal was presented to the Executive Vice President of Episcopal Children’s Services and of the Early Learning Coalition of Duval to request approval for moving forward with the study. For the first research questions, written permission was obtained from the agency involved, the Early Learning Coalition of Duval, to use their data and disclose results obtained from analyzing the data. For the second question, data were publically available and did not require permission for use. For the third portion of the study, the teacher and
director interviews, written permission from Episcopal Children’s Services agency was acquired, as they were the agency that provided oversight for the JELP coaching project. All questions were explained orally and in writing to teachers and directors who agreed to be interviewed. All questions the participants had were answered before the interview began. Signed consent letters from each participant were collected. Participants received clear explanation, verbally and in writing, that their participation was voluntary and that they had the option to stop participating in the study at any time. Pseudonyms were used for participants and organizations in the report of the study. All data were coded to protect the name of the individual, as well as the center. This helped to protect the privacy and preserve the confidentiality of the participants and organizations. Information collected from centers and teachers was not shared with other participants. Finally, all documents, forms, and data were stored onto a limited access secure UNF server and only I had access to these files.

To answer the first research question, pre-coaching and post-coaching Early Childhood Environmental Rating Scale (ECERS) scores were obtained. Archival data were obtained from the Early Learning Coalition of Duval on all
centers that participated in the intervention that included in-class coaching provided by Episcopal Children's Services through the Jacksonville Journey. Only centers and classrooms that had both a pre and post scores were included. It is important to note that there were numerous extraneous factors that also impacted the before and after scores of these classrooms. First of all, teacher turnover made it difficult to control the variable of the teacher. In addition, the Early Learning Coalition of Duval did not always conduct the post test in the same classroom as the pretest. This is because coaching happened center-wide and should have affected the classrooms in a similar manner.

These assessments were completed by individuals whose sole responsibility is conducting the Early Childhood Environmental Rating Scale assessments. They are trained and scores generated from the assessments have consistent inter-rater reliability. Using these scores ensures that there is consistency in the use of the tool.

The Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 2005) was first published in 1980 based on the philosophy of developmentally appropriate practices for preschool children. It was revised in 1998 and updated in 2005 with additional notes and a new expanded version of the score
sheet. It is an observational assessment that is widely used to evaluate the overall quality of a preschool classroom. It is an appropriate tool to measure change. Over 70 program improvement projects nationwide are using the ECERS-R to measure change in their program as of 2005 (Harms et al., 2005).

Furthermore, ECERS-R is an appropriate tool to use in an examination of the coaching intervention for the present study because it is the tool used by the intervention to assess classroom quality. Therefore, the ECERS-R was an appropriate measure of the construct of interest.

The ECERS-R is comprised of seven subscales with 43 items. These seven subscales include space and furnishings, personal care routines, language-reasoning, activities, interaction, program structure, and parents and staff. A detailed description of each subscale follows. Space and furnishings covers the quality of indoor space, arrangement, space for privacy and gross motor play, and the appropriateness of the child-related display. Personal care routines measures a teacher's ability to greet parents and children appropriately, conduct meals and snacks in a clean, efficient, and developmentally appropriate manner, conduct suitable nap times, and adhere to toileting, health and safety provisions. Language-reasoning focuses on the
teacher's ability to encourage and model formal and informal language development and reasoning skills through book reading and play. The Activities portion evaluates the children's access to plentiful, diverse, and meaningful learning materials and free-choice activities. The interactions portion assesses the teacher's supervision of the children, discipline, staff-child interactions, and interactions among children. Program structure addresses the appropriateness of the classroom’s schedule and daily structure.

The subscales are scored on a seven-point scale of inadequate (1), minimal (3), good (5), and excellent (7). A set of protocol for each rating is provided with specific guidelines on how to assign the scores. An overall score between 1 and 3 is considered poor; scores between 3 and 5 are considered average; and scores of 5 or greater are considered good.

The ECERS-R has been said to produce both reliable and valid scores. The authors reported inter-rater correlations of .921 (Pearson) and .865 (Spearman) for data collected before the subsequent revisions. These figures were well within acceptable ranges (Landis & Koch, 1977). The internal consistency reliability of scores on the subscales ranged from .71 to .88 in studies conducted by the creators.
of the tool in the summer of 1997 in 21 classrooms (Harms et al, 2005). This range was considered reasonable (Cortina, 1993). The total scale score’s internal consistency reliability was .92 and considered high in a study completed by Harms et al. (2005).

The original version of the ECERS has been demonstrated to have good predictive validity (Peisner-Feinberg & Burchinal, 1997), indicating that ECERS-R scores for quality of preschool classrooms was related to preschool children’s concurrent cognitive and socioemotional development (measured using the Peabody Picture Vocabulary Test-Revised and the Woodcock-Johnson Tests of Achievement-Revised).

Information regarding the validity of the ECERS-R score was not provided. Instead, it was noted that the original version was found to have adequate predictive validity and therefore the revision should maintain that level. The reviewer for the Buros Mental Measurements Yearbook recommended more sustained empirical support of these claims (Paget, 2001).

Content validity is the degree to which elements of an assessment instrument are pertinent to and representative of the particular assessment’s purpose (Haynes, Richard, & Kubany, 1995). The content validity of the original ECERS
was established when the authors contacted seven nationally recognized experts in day care and early childhood (Harms, Clifford, & Cryer, 1980). These experts rated the importance of each item in early childhood programs. Overall, 78% of the items were rated as of high importance. The authors then made slight modifications to the scale intended to increase the content validity (Harms & Clifford, 1983).

The Early Childhood Environment Rating Scale (ECERS-R) has a long history of use in research projects that were also used to provide validity data for ECERS-R scores. The original ECERS was used in large, national studies such as the 1997 Head Start FACES study which included a nationally representative sample of 3,200 children and their families in 40 different Head Start programs across the nation (Administration for Children and Families, 2001). In addition, the ECERS was used as the comprehensive quality measure in the National Child Care Staffing Study (Whitebook, Howes, & Phillips, 1989). The study was conducted longitudinally, beginning in 1988 with a cross-section of 227 child care centers in Atlanta, Boston, Detroit, Phoenix, and Seattle. These metropolitan areas were selected because they varied greatly in four characteristics: level of quality required by each state’s
child care regulations, geographic regions, relative distributions of for-profit and non-profit child care centers, and the attention accorded child care staffing issues in state and local policy initiatives. A two-part strategy was used in each study site to generate a sample of child care centers serving low, middle, and high income families in urban and suburban neighborhoods. The final sample of participating centers was selected from the eligible pool using a stratified, random sampling strategy. In each center, three classrooms were randomly selected to be observed. Data collection for the original study consisted of classroom observation and interviews with center directors and teaching staff. In Atlanta, children’s socioemotional, language, and cognitive development were also assessed (Whitebook, Howes, & Phillips, 1989).

Data from the Cost, Quality, and Child Outcomes Study (Peisner-Feinberg & Burchinal, 1997) were also used to generate validity relative to the ECERS. In the first phase of this study, detailed information about operating costs, structural characteristics and process quality was gathered from randomly selected child care centers. The longitudinal outcomes phased began in spring of 1993 when 826 preschoolers in their next to last year of child care were recruited from 183 of the classes in 151 centers in
which quality data had been collected. Of this sample, 30% were considered racial minorities, and gender was divided evenly (Peisner-Feinberg & Burchinal, 1997).

The studies mentioned above were considered major studies of their time. The data from these studies helped shape revisions for the ECERS-R and to establish validity and reliability for data collected using the tool. In addition, an extensive set of non-published field tests of the ECERS-R were conducted in the spring and summer of 1997 in 21 classrooms in North Carolina in locations with varying demographics. These field tests served as the final examination before the revised edition was released in 1998 (Harms et al., 2005).

The ECERS-R was an appropriate tool to use for assessing the impact of coaching because it measures many of the factors associated with quality and can be used as a framework for those involved in the coaching project.

**Florida Kindergarten Readiness Data Collection**

In order to answer the second research question, Florida Kindergarten Readiness scores for each of the 118 coaching and 226 non-coaching centers in Duval County were obtained. Centers considered coaching sites were limited to those where teachers received intensive coaching through either the JELP or Journey coaching programs. Centers
where teachers received no coaching or only environmental assistance were grouped together in the non-coaching category. The composite scores for children who attended each center are available on the Florida Department of Education website. The test scores are a numeric representation of how "ready" for kindergarten the children are as they enter kindergarten. This score is based on 19 indicators, represented in the ECHOS, which are matched to a sample of the VPK standards and observed by the kindergarten teacher during the first 30 days of kindergarten. This score is combined with the child's score on the Florida Assessments for Instruction in Reading (FAIR) which is a 20 item individually administered test on alphabet recognition and phonological awareness.

According the publisher of the Early Childhood Observation Screener, the ECHOS has been empirically tested for validity and reliability (Pearson Publishing, 2007) though the study listed in their technical report was conducted by those with a vested interest in the assessment.

The Florida Assessments for Instruction in Reading was implemented for the first time for the 2008-2009 school year. Empirical evidence that supported either the validity or reliability of data collected using this
measure could not be found. Despite the lack of confirmation concerning the quality of this test, it is still used to deem preschool programs effective or ineffective and whether or not programs will continue to receive state funding. Therefore, the assessment results are worthwhile to investigate. The data are available on the Florida Department of Education website. The data are presented by preschool center, not by individual classroom or child.

The Florida Kindergarten Readiness Screener is an appropriate tool to use in an examination of the coaching intervention in terms of school readiness for the present study because it is the tool used by the state to assess classroom quality. Therefore, it was an appropriate measure of the construct of interest.

To answer the third question, qualitative interviews were conducted with a sample of teachers who had participated in coaching for an entire two year span. The interviews focused on teachers’ perceptions of the effects of coaching. Recruitment consisted of both a hand delivered flier and an email to each teacher and director that had participated in the coaching project for two years. The email and flier described the purpose of the study and asked for volunteers. The informed consent form
was also attached. A face to face meeting and interview were conducted with 12 teachers who were interested in participating. Informed consent was discussed in detail at the first meeting. All interviews occurred in the fall of 2011. All interviews were recorded on a digital voice recorder and later transcribed.

The participant’s identity was never recorded on any document. The name of the center was never recorded on any document. All data, including digital recordings were only accessible to the researcher. These measures were to ensure the participants’ identity was never disclosed to anyone before, during, or after the study.

Data Analysis

Data concerning the first research question, the Early Childhood Environmental Rating Scale - Revised, were analyzed in the following way. Only data from the Jacksonville Journey coaching sites were used. These data were only kept on the centers participating in the Jacksonville Journey program. The pre-score, which was obtained before the implementation of coaching, and the post-score, which was obtained after a year of coaching, were compared using a t-test. Further testing was done to isolate certain domains of the test to look for changes on more specific indicators, in addition to overall scores in
order to identify which elements of the environment might have been particularly affected by coaching.

To analyze data related to the second research question, the most current Florida Kindergarten Readiness Screener scores were analyzed in the following ways. First, the scores from the 2010-2011 school year were gathered from the public database found at https://vpk.fldoe.org. Second, the scores were divided into three groups: centers where teachers received a full two years of coaching as of August of 2010, centers where teachers received one year of coaching as of August 2010, and centers where teachers received no coaching, or only environmental coaching with the children tested as of August of 2010. The amount of coaching teachers at each center received was identified by working closely with those who lead the coaching project. Records were kept detailing the amount of assistance that was provided to each center.

Florida Kindergarten Readiness Screener scores are reported by center, not by classroom or teacher. Though this is a limitation, this did not affect the value of the analysis, as coaching occurred center wide, and the length of coaching in classrooms did not vary. The amount of coaching received by each group was analyzed with the
Florida Kindergarten Readiness Screener scores by performing Welch’s F-test to capture any differences across the three groups.

Data concerning the third research question were analyzed by inductive code analysis of the interview. This allowed for an inductive examination of the effects of coaching. The interview questions were edited several times. Questions were carefully prepared to assure use of words that would make sense to the interviewee with careful attention to the use of jargon (Patton, 2002). Questions focused on the experience and behavior of the teachers while working with in-class coaching and their resulting opinions on how their own behaviors may have changed (Patton, 2002).

First, an initial read through of the transcribed text took place. Next, specific segments of the information were identified and labeled to create categories of like themes (Berkowitz, 1997; Creswell, 2002). Reduction of overlap among categories took place in order to eliminate redundancy. Within each category, subtopics were considered, including contradictory points of view and new insights (Creswell, 2002).
Limitations

As with any study, the present research study has limitations. The most notable limitation of this study was the small selective sample dealing with the first research question, which pertains to the effect of coaching on the learning environment. These classrooms had to meet the criteria of having the same teacher for the full two years in the program. The participants for these questions were also limited due to the fact that periodically the Early Learning Coalition did not always assess the same classroom for the post-test. The sample size regarding the first research question was originally 30 centers, but was reduced to 19 after any classrooms that didn’t maintain the same teacher or did not get assessed two times were removed.

The second notable limitation was that like most early childhood classrooms, many of the classrooms that receive coaching were subject to teacher attrition. Teacher turn-over may have affected the results of both the first and second research inquiries. Despite efforts to eliminate those classrooms that were affected by attrition for the first research question, a lack of a consistent teacher may affect child and classroom outcomes for several months following the turn-over. Furthermore, eliminating centers
that experienced teacher attrition for the second research questions was not possible, as that information is not reported to the state.

The third limitation was in the implementation of coaching to the classrooms being identified as classrooms that received coaching. Though coaches were accountable to a team leader, and reported to be held to a high standard of quality, varying degrees of expertise, diligence, and overall effectiveness must be expected. There is also the related issue of coach turnover. Losing a coach, and the process of replacing the coach, interrupts the coaching process for up to several weeks.

The fourth limitation was that the participants may or may not have been candid with their answers concerning their viewpoint on the value of coaching. The answers they gave may not have reflected their true opinion, due to a fear of being identified or reprimanded.

Furthermore, like every assessment tool, the Florida Kindergarten Readiness Screener and the Early Childhood Environmental Rating Scale-Revised have inherent limitations that were discussed previously.

Finally, this study faced the same dilemma faced by other researchers attempting to measure the effects of coaching on early childhood educators and children: it is
impossible to isolate the effects of coaching from the effects of coexisting variables. For example, extraneous variables such as amount of parent involvement, demographic information, resources available, coaching quality, and teacher commitment were all factors that influenced the data collected. It is a clear limitation that the effects of coaching were not isolated from the effects of the other variables.

When analyzing and reporting the data, caution concerning the obvious constraints on generalizability and the utility of findings was exercised. Any conclusions drawn by this research were clearly limited to the constructs of the setting I have defined and may not be generalizable to all centers, even throughout Duval County.

Chapter Summary

The present study was designed to investigate the effects of interventions that include in-class coaching with preschool teachers as a means of professional development. More specifically, present study was designed to examine multiple dimensions of the effects of intervention including in-class coaching, by analyzing child outcomes as defined by the state of Florida, and appropriate learning environments and interactions as defined by the Early Childhood Environmental Rating Scale-
Revised. The present study also designed to provide insight into the perceptions of the teachers who received coaching and the aspects they deemed valuable about the intervention including in-class coaching.

Chapter III reports the methodology used in the present study. Data collection procedures were explained. Data Analysis methods were detailed. Finally, limitations of the present study were discussed.

Chapter IV reports the findings of the present study, including the details of the interpretation and analysis of the data to address each research question.
This chapter is a report of the findings for the present study. Specifically, this study sought understanding of the effects of an intervention including in-class coaching on teachers and children. As stated in Chapter 1, the first two research questions focus on the analysis of quantitative data to identify differences between those who participated in an intervention including in-class coaching and those who did not. Answering the third question required qualitative methods to delve more deeply into the participating teachers' views of their intervention experience. This chapter is organized into three sections, each reporting the findings related to one of the three research questions. The specific research questions are as follows:

1. Did an intervention including coaching of prekindergarten teachers improve the environmental
quality in preschool classrooms as measured by Early Childhood Environmental Rating Scale - Revised (ECERS-R)? If so, which environmental elements were most improved?

2. Did centers receiving an intervention including coaching for varying amounts of time differ in levels of school readiness?

3. What were prekindergarten teachers’ perceptions of coaching?

**Research Question 1**

The first research question was designed to examine the effects coaching may have on the quality of the preschool classroom environments as measured by the Early Childhood Environmental Rating Scale - Revised (ECERS-R). Data from the Jacksonville Journey project were used. A paired-samples t-test was conducted using the pre-score, which was obtained before the implementation of coaching, and the post-score, which was obtained after a year of coaching. The data analysis addressed the following null hypothesis: There will be no statistically significant (p = .05) difference between the pre-score and post-scores in classrooms participating in an intervention including coaching as measured by Early Childhood Environmental Rating Scale - Revised (ECERS-R).
Of the 30 centers assessed, many were eliminated from the study due to teacher turnover. Only centers with at least one consistent teacher in each assessment period were used. Nineteen classrooms in 19 centers were included. All of the classrooms were preschool classrooms. The classroom sizes varied from 8 to 19 children.

The alpha coefficient for the items used from the ECERS-R in the present study was .90, suggesting that scores on the items have a high internal consistency (Kline, 1999). The inter-subscale correlation showed little to no correlation between items, indicating that the items were measuring different constructs, with little overlap (Kline, 1999).

First, the overall scores were compared. There was a statistically significant difference in the ECERS-R overall pretest and posttest scores. A two-tailed paired samples t-test revealed that pre-scores ($M = 3.586, SD = .906$) and the post-scores ($M = 4.1626, SD = .494$), differed to a statistically significant degree, $t(18) = 2.618$, $p = .008, 95\% \text{ CI}[1.03, .11]$. The $p$ value was <.05. The confidence interval for the difference between the means allows for 95% certainty that the true value lies between 1.03 and .11. The posttest score was statistically
significantly higher than the pretest score; therefore, the null hypothesis was rejected.

Next, further testing was done using the scores of each subscale to identify which elements of the environment may particularly be affected by an intervention that included coaching. A paired t-test was also conducted on the pretest and posttest scores of each of the six subscales. It is important to note that the ECER-S has a total of 43 sub-items that can be used. However, in Duval County, only the first six subscales are used, representing 36 sub-items to assess classrooms. These scores are presented in Table 1.

Table 1

ECERS-R Pre and Post-Score Means Per Subscale (n=19)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pretest</th>
<th>Posttest</th>
<th>t</th>
<th>p</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Space and Furnishings</td>
<td>2.89</td>
<td>.58</td>
<td>3.56</td>
<td>.54</td>
<td>3.36*</td>
</tr>
<tr>
<td>Personal Routines</td>
<td>2.35</td>
<td>.79</td>
<td>2.65</td>
<td>.64</td>
<td>1.36</td>
</tr>
<tr>
<td>Language and Reasoning</td>
<td>4.51</td>
<td>1.34</td>
<td>5.03</td>
<td>.85</td>
<td>1.51</td>
</tr>
<tr>
<td>Activities</td>
<td>3.95</td>
<td>1.0</td>
<td>5.21</td>
<td>.73</td>
<td>5.48*</td>
</tr>
<tr>
<td>Interactions</td>
<td>4.31</td>
<td>1.76</td>
<td>3.83</td>
<td>1.07</td>
<td>.99</td>
</tr>
<tr>
<td>Program Structure</td>
<td>4.47</td>
<td>1.62</td>
<td>4.49</td>
<td>1.39</td>
<td>.02</td>
</tr>
</tbody>
</table>

Note. * = p < .05
The first subscale is Space and Furnishings. The items represented in this subscale include, indoor space, furniture for routine care, play and learning, furnishings for relaxation and comfort, room arrangement for play, space for privacy, child-related display, space for gross motor play, and gross motor equipment. The post-score was higher than the pre-score, and the difference was statistically significant ($t(18) = 3.36, p < .001, 95\% \text{ CI} [1.09, .25]$). The effect size was measured using Cohen’s $d$, which is an appropriate test to measure the effect size between two means (Cohen, 1988). It indicates the standardized difference between two means, and expresses this difference in standard deviation units. The effect size for the difference in means between the pre-score and post-score was .51 for the overall ECERS-R measure, which is considered a large effect size (Cohen, 1988).

The second subscale is Personal Care Routines. This subscale is comprised of items including greeting and departing, meals and snacks, nap and rest, toileting and diapering, health practices and safety practices. This subscale did not show any statistically significant changes in the personal care routines present in the classroom from pre-score to post-score.
The third subscale is Language Reasoning. This subscale includes books and pictures, encouraging children to communicate, and using language to develop reasoning skills and informal use of language. This subscale did not show any statistically significant change from pre-score to post-score.

The fourth subscale is Activities. This subscale is comprised of items related to the activities offered to the children. There was statistically significant growth between the pre-score and post-score in this subscale, \( t(18) = 5.48, p < .001 \), 95% [1.74, .77], with a large effect size \( (d = .58) \) according to Cohen (1988). The items in this subscale include fine motor, art, music and movement, blocks, sand and water, dramatic play, nature and science, math and numbers, the use of television and computers, and promoting acceptance of diversity. The fifth subscale is Interactions. This subscale includes items related to supervision of gross motor activities, general supervision of children, discipline, staff-child interactions, and interactions among children. This subscale showed no statistically significant change from pre-score to post-score.

The final group is Program Structure. This subscale includes items related to schedule, free play, and group
time. This subscale showed no significant change from pre-score to post-score.

The first research question was to determine if an intervention including coaching of prekindergarten teachers affect the environmental quality in preschool classrooms as measured by Early Childhood Environmental Rating Scale - Revised (ECERS-R). The results indicated that the intervention including coaching may have led to an increase in items related to the learning environment of the children and the activities available to them. However, statistically significant change was not obtained in the subscales related to interactions, language and reasoning, personal care routines, and program structure.

**Research Question 2**

In order to answer the second question, data were obtained from the Florida Department of Education. Data were obtained from all 361 centers that served children in Voluntary Prekindergarten in Duval County during the 2010-2011 school year. Of these centers, Head Start centers and the Child Development Resource Center were eliminated due to the likelihood that the teachers of these centers received additional coaching beyond that offered through the programs identified previously. After eliminating those centers, 344 centers remained. The centers were
sorted into three groups, including centers where teachers received no coaching in the two years previous to the testing \((N = 226)\), centers where teachers participated in one year of coaching directly preceding the testing \((N = 78)\), and centers where teachers participated in two years of coaching directly preceding the testing \((N = 40)\). The data analysis addressed the following null hypothesis: There will be no statistically significant \((p = .05)\) difference among centers participating in an intervention including in-class coaching for one year, those participating for two years, and those that have not participated in an intervention including in-class coaching, as measured by the Florida Kindergarten Readiness Screener (FLKRS).

An ANOVA was conducted to determine if there were differences among the three groups. The ANOVA results indicated that there were no statistically significant differences among the three groups, \(F(2,341) = .73, p = .48\). Levene's rest for equality of variances was calculated to determine if the variances of the groups were similar. However, the Levene's Test for Equality of Variances was statistically significant \((p = .041)\) which violates the assumptions of an ANOVA. Therefore the Welch's \(F\)-test was used. A Welch’s test can be used with
samples having possibly unequal variances (Sawilowsky, 2002; Welch, 1951). The Welch test was not significant (p = .535), indicating that there were not statistically significant differences among the three groups. Therefore, the evidence did not support rejecting the null hypothesis.

**Research Question 3**

The third research question focused upon teachers’ perspectives of in-class coaching. The semi-structured interview (Patton, 2002) served as the best means to collect descriptive data, using both structured and flexible questioning. All individuals who volunteered to be interviewed, as a result of electronic invitation, were welcomed to participate and to share their experiences, opinions, and insights related to in-class coaching. Twelve participants, from four different preschool facilities, volunteered to partake in an interview, with each interview taking place at the preschool center in which the participant was employed. Teachers experience varied from 2 to 20 years of working with preschool aged children. Only teachers who had worked with an in-class coach for 2 or more years were interviewed. The number of years each teacher worked with an in-class coach varied from 2 to 8 years. Of the 23 teachers, 3 spoke Spanish as their first language. The teachers varied greatly in age. Pseudonyms
were used to identify each teacher. Centers were labeled with a letter to avoid identification. Table 2 shows information about the 12 participants.

Probes and follow-up questions were used frequently to obtain more detail or additional information. My knowledge and experience in the field helped in both constructing the open-ended interview questions and analyzing the participants' responses. My own professional knowledge helped me to develop good follow up questions to clarify the participants' explanations (Marshall & Rossman, 2011). However, my expertise also made it critical that I allowed the participants the autonomy and opportunity to express their own perspectives without my influence.

Each interview took place in the early afternoon, by request of each participant. Center directors monitored the participants' classrooms while the interviewees and I stepped into a private location at the center. The first two center directors requested that interviews take place in the empty recreational space, and the final two directors requested that the interviews take place in a break lounge. All other interviewees were encouraged to choose the place that they would find most comfortable. Each interview began with natural small talk concerning the weather and upcoming center events. Introductions took
place casually, including an exchange of names, a review of the purpose of the interview, and a review of the consent form. As I gained experience as an interviewer, my strategies improved in regards to being able to prompt additional information based on the response to the original questions, resulting in longer and more insightful interviews taking place last. Interviewees were given opportunity to express their perceptions without interruption or influence other than an occasional smile or nod to encourage continuing the conversation.

Table 2

Demographic Information of Participants

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Center</th>
<th>Native Language</th>
<th>Number of years working with an in-class coach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jennifer</td>
<td>A</td>
<td>Spanish</td>
<td>3</td>
</tr>
<tr>
<td>Janet</td>
<td>A</td>
<td>English</td>
<td>2</td>
</tr>
<tr>
<td>Jona</td>
<td>A</td>
<td>Spanish</td>
<td>2</td>
</tr>
<tr>
<td>Debbie</td>
<td>B</td>
<td>Spanish</td>
<td>5 (intermittently)</td>
</tr>
<tr>
<td>Donna</td>
<td>B</td>
<td>English</td>
<td>8 (intermittently)</td>
</tr>
<tr>
<td>Dana</td>
<td>B</td>
<td>English</td>
<td>6 (intermittently)</td>
</tr>
<tr>
<td>Carol</td>
<td>C</td>
<td>English</td>
<td>5</td>
</tr>
<tr>
<td>Catherine</td>
<td>C</td>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Christen</td>
<td>C</td>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Connie</td>
<td>C</td>
<td>English</td>
<td>5</td>
</tr>
<tr>
<td>Meagan</td>
<td>D</td>
<td>English</td>
<td>2</td>
</tr>
<tr>
<td>Mallory</td>
<td>D</td>
<td>English</td>
<td>2</td>
</tr>
</tbody>
</table>
Howe and Eisenhart (1990) argued that the process of data analysis should be made transparent in an effort to enhance the study’s credibility. The actual process of data analysis proved to be laborious and complex. When data collection was completed, transcription of recorded interview sessions began. This took several full days. I listened to each interview several times in order to ensure accurate transcription.

As Patton noted (2002, p.480), “Interpretation means attaching significance to what was found, making sense of findings, offering explanations, drawing conclusions, extrapolating lessons, making inferences, considering meanings, and otherwise imposing order.” My knowledge and experiences as a former in-class coach and a professional in the field of early childhood education were beneficial in doing just this, though the process proved to be more tedious and difficult than I had imagined.

After I transcribed the interviews into text, the task of reading the transcript of each interview session began. I read the transcripts several times to gain a sense of the whole (Hatch, 2002) and to become intimate with the words of the participants (Patton, 2002). After reading the transcripts, I wrote memos in the margins to begin organizing thoughts. Wolcott (1994) purported that the
stage of reflective memo writing is critical in order to move the analysis from the obvious to the unobvious. This was the case while completing this exercise. Ideas for codes began to become clearer.

Inductive analysis allows researchers to be immersed in the details of data to discover important themes and relationships (Johnson & Christensen, 2004; Patton, 2002). Hence, inductive analysis was employed in order to make sense and derive meaning from the voices of the participants. In order to identify salient themes, reoccurring ideas, and patterns of belief, the process of coding began, line by line (Strauss & Corbin, 1998). I began by highlighting with various colored markers words that could be grouped together under the same category or theme. The text was chunked into portions that were closely related to one topic or theme. Sometimes the chunked text was as small as a word, while other passages continued for as long as a several sentences before the participant shifted focus. Often times the same chunk of text fit into more than one category. Each category was named using content-characteristic words (Strauss & Corbin, 1998). Color coding only lasted for the first several pages of the transcript and then numbers were used to keep better track of emerging themes and categories, as the
limited color options were making it difficult to
differentiate between the many constructed categories.
This process continued several times, as I refined
categories with each read through (Strauss & Corbin, 1998).

Words that occurred frequently were seen as being
salient in the minds of respondents. D'Andrade (1995)
noted that "perhaps the simplest and most direct indication
of schematic organization in naturalistic discourse is the
repetition of associative linkages" (p. 287). When words,
phrases, and ideas began to appear again and again, I began
to group them and label them based on the concept they had
in common.

Many themes emerged that were anticipated. These
predictable themes are items listed in the mission
statements of the coaching project. They represent the
fundamental processes of in-class coaching. The 10 themes
are presented below, listed from those anticipated to those
that were unexpected. The first four were those themes
that were expected, as they are nearly identical to the
definition of what coaches provide and the purpose of the
coaching program. The four anticipated themes were the
helpfulness of providing materials, assistance in setting
up and planning for an appropriate classroom, providing
high-quality examples of instruction, and giving teachers suggestions to promote best practices.

The next four themes, validation, inspiration, supporting English language learner teachers, and promoting developmentally appropriate practice, were themes classified as being both unexpected and positive. The final two themes, lack of individualization and coaches’ level of competence, were classified as being unexpected and negative.

The first four themes were direct goals of the coaching program including the helpfulness of providing materials, receiving assistance in setting up and planning an appropriate classroom, receiving high quality examples of high quality instruction, and giving the teachers suggestions to promote best practices. These themes were expected and are not expanded upon because they represent the basic goals of the coaching program and therefore were expected. They are inherently present because they define in-class coaching. In-depth explanations of the unexpected themes follow.

Of the 12 interviews, 5 of the teachers perceived the coaches to offer experiences that were categorized under the theme title “validation.” The teachers each offered tidbits that illuminated how their coaches somehow provided
them with a sense of validity as a teacher. Many of these teachers had never been observed or offered feedback on their strategies. For example, Janet, who worked with an in-class coach for two years, explained how her working with her in-class coach validated her.

When the coaches first came to me, I felt that there weren’t a lot of expectations with any of our teaching. Nobody ever said how you were doing. So, when the coaches came in at first, I finally had positive feedback. . . . They were encouraging and told me how impressed they were. It meant a lot!

Janet mentioned that she would often keep the written feedback forms that coaches would leave to reread on days she wasn’t feeling valuable.

This perception of coaches giving a sense of validation was shared by several others including Christen. Christen’s face changed when we reached this point of the conversation:

I am now confident that I am a good teacher. I used to be so nervous for anyone to watch me. Now I get proud and excited. I used to be considered a babysitter, and now I feel like a teacher. They helped me know that I can teach with the best of them!

Christen went from slightly reserved to beaming with pride while discussing her pride in her profession.

Another theme that emerged was the theme labeled “Inspiration.” Of the 12 teachers, 4 described instances related to how the in-class coach somehow stimulated the
desire to either return to school or pursue related credentials. Debbie recalled,

Honestly, it made me want to go back to school to learn more. I had a class with ADD children, children with learning disabilities and some of the children had major problems. The coaches gave me resources from the county’s guidance office and helped me implement their suggestions. That motivated me to go further. I wanted to be a behavior specialist. . . . So I am back at school to get my bachelors [degree]. The coach was a major reason for that.

Debbie had completed more than half of her bachelor’s degree program at the time of the interview.

Mallory, a teacher with over 20 years of teaching, was inspired to go back to school to get her AA degree,

I was happy where I was. I didn’t even think that going back to school was an option. I never wanted to teach school age children, so I didn’t know a degree would be available to me in preschool education. I saw how young and excited my coach was, and I started to ask her about her degree. She encouraged me to go back to school. I did it very slowly because that is my style. But, I did it.

Mallory decided she would not continue her education beyond her AA degree because her center director stated that she would not be able to afford a pay increase to compensate her for her higher degree.

A theme that was salient across all 12 interviews was for items that I coded under the term “promoting developmentally appropriate practice.” This theme was the label given for each teacher who referenced an example of
the coach helping her better understand what a child should be capable of doing depending on the child’s age and developmental abilities. Because this theme was created from many diverse examples, several supporting illustrations will be given.

Donna leaned forward and grabbed her lesson plans from the administrative desk to show me as she fervently explained how the coach taught her a more appropriate way to instruct small children.

We never did small groups, but now we know how important it is for them to be in small groups when working with them. We had the mindset that we were taught with all twenty something kids at once, so that is how to do it. . . . The coach asked that we start to plan for small groups as well. The coach showed doing lessons from the curriculum with four or five children and I really could see that they were learning more. It was easier to keep their attention.

Donna was able to point our several examples on her lesson plan in which she decided to take certain content to a small group setting.

Dana giggled as she described a way that her in-class coach made a major change in her classroom.

We changed from using dittos. We were happy using worksheets, but now we know we cannot use them. At first we would sneak them on the days we knew the coach wouldn’t be there. The coach would see a worksheet and tell us a way we could have taught the same skill and why it would have been better. After a while we started to think outside the box. So now we use hands on ideas and allow them to glue, paint, everything. They even use scissors. We didn’t know 3
year olds could use scissors! At first it made me upset that we had to change, but soon it made me excited to try new things with the children. Now even the director goes by the no ditto rule, and we are just fine with it.

Carol had been a teacher for just over four years. In those four years she had worked with both toddlers and preschoolers. Carol shared how changing from working with preschoolers to toddlers was challenging at first and how the coach assisted in the transition.

I remember a time when I expected two-year-olds to sit and listen to a book sitting nicely and quietly. I thought that my class was just bad because they wouldn’t. . . . My coach helped me get that most two-year-olds can’t sit and listen. She gave me the idea of keeping activities for sitting still really short and to read to them when they wanted to read one at a time, or with a few friends. Man, it changed my world! No more pressure to keep their attention. Impossible!

Though Carol was a degreed teacher she went on to discuss that in her coursework the majority of content was focused on preschool age and that she only felt prepared to work with toddlers after her work with her in-class coach.

Jennifer decided interviewing in the administrative office wasn’t enough. She wanted to show me her classroom. As we entered her classroom, it was dark with soft music playing. Children in cots were sleeping. Though it was difficult to see, she was determined to show me what she
wanted to explain. She brought me to a bulletin board hung low at the children’s eye level.

These are the children’s favorite part of visiting the zoo. We went two weeks ago with all of the 4-year-old children. You see how each one is different? The letters are backwards when they attempted to write. This is because of coaching here at this center. Before coaching I can guarantee we would have corrected the letters. Before coaching everyone would have looked the same because we would have done something like ‘Z is for Zebra’ and had the children copy our example. If every child didn’t do black and white stripes, we would have helped them make it look perfect. Now we know learning is about making it. Looking perfect is not what matters. It sounds simple, but it was a change. We like things perfect around here! But it’s not what is best for kids.

Jennifer continued to point out examples in her classroom of the children’s work, displayed authentically.

These teachers were all grouped together under the theme of “promoting developmentally appropriate practice” because they each illustrate examples of how coaching transformed the behaviors and sometimes beliefs of a preschool teacher in a way that is more appropriate for young children.

Three teachers who spoke English as a second language offered a unique insight on coaching. The contribution was both unexpected and valuable. I referred to this theme as “supporting English language learner teachers.” Jona, in particular, explained that her coach enriched her
culturally. Jona explained that because she was a preschool teacher everyone assumed she knew popular nursery rhymes and children’s games. Often times she would come across a lesson in the curriculum that referred to one of these childhood staples. However, because Jona grew up in South America, most of these nursery rhymes and games were unfamiliar to her. “I was afraid to tell anyone.” She said, “I thought they would wonder why they hired someone who doesn’t know kids. But I did know kids! I just didn’t know American traditions for kids.” Jona reminisced about the measures she would go through to try to pick up on the traditions without others knowing her dilemma. “One day my co-teacher wanted to play a game with the children.” Jona paused to remember the name of the game. “You know, with the squares and the jumping.” I asked if she was referring to hopscotch. “Yes!” she laughed, “You see! I still need help!” She described pretending her ankle hurt in order to be an observer rather than a participant in this game that she didn’t understand. “When we got a coach, it was just what I needed. The coach showed me how to do these things. I felt comfort with her. She never questioned my abilities to be a teacher in the United States. She just showed me and helped me.”
Debbie had a similar experience. She described saying the wrong words in front of the coach during an observation.

I was so embarrassed. It was the Itsy Bitsy Spider. I will never forget. The children knew it better than me. The coach was so gentle. She never said a word to me about it, but the next week she brought me print-outs of nursery rhymes with pictures and words. She said that it was to help teach about print and to connect the poem to the pictures to help them understand, but I knew it was to help me too.

Debbie became noticeably emotional at this point. “Look at me!” she exclaimed, “You can tell it meant a lot.”

Not all of the interview data painted the picture of a perfect coaching system. However, the way the teachers approached the negative perceptions of coaching lead me to an unexpected finding. Each teacher paused before disclosing anything that didn’t shed a positive light on coaching. When asked why they hesitated, the respondents’ comments included a range of answers that varied from fear of sounding ungrateful or being too meticulous to not being able to think of anything at all. “Look, we went from having nothing to having a person who really wanted to help us.” Mallory explained. “I hate to be critical about it. They say you don’t bite the hand that feeds you!” I assured all of the participants who hesitated to discuss improvements that could be made that it would be presented
in the way it was intended: The teachers felt that the coaching had many more positive contributions than negative. However, because they were asked and because I clearly explained that their suggestions would make my findings more realistic and make me more capable of understanding how coaching is and how coaching should be, the participants felt comfortable to open up.

One of these topics that emerged in more than half of the interviews fit into the theme of “lack of individualization.” This is the category into which I placed examples citing an approach to coaching that lacks customization based on the needs of the teacher. Christen expanded on her confidence expressed above by stating her desire to be challenged more.

The coaching can be improved by working with me on things I need rather than things I already know. For example, the coach brings me things that I already am good at. I don’t want to waste time talking about teaching letters because I know that. I already know about reading with expression. Let’s move on to something I still need.

Christen was able to point out items she was aware that she needed help with that were not addressed in depth by her coach.

Meagan offered many statements that were also coded into this category.
The coaches have told us to stop teaching children like they all need the same things. They say we need to use their portfolios and stuff to learn what to teach them next, but it’s funny because they don’t know that about us. Really, they are teachers to us, so they should know what we need too. But, they don’t. Don’t get me wrong. It’s always valuable but usually a repeat of what I already know.

Donna mentioned that she has been getting coaching on and off since the beginning of the program.

I’ve been getting coaching for a long time. When a new coach comes in, which has happened several times, it’s like they don’t know what I know. So, we often start from the beginning. I think I’ve heard things again and again because they don’t necessarily know my strengths and weaknesses. Sometimes it feels that they have a script or something they need to get through.

Donna cited several examples in which her second coach repeated items her first coach had already addressed.

Furthermore, 4 of the 12 teachers expressed a concern regarding differences between coaches. As a result of working with various different coaches over the years, many of the teachers felt it natural to compare the coaches’ abilities, attitude, and ability to provide helpful advice and feedback. This category was referred to as “coach’s level of competence.” Jennifer recalled a clear example of this. “I started with the most fabulous coach you can imagine. She had energy for days! She walked in the room ready, and that made me ready!” Jennifer’s voice became
significantly lower at this point. “Well, she left the agency for some reason or another and we had no coach for about a month. Well, when they found a replacement, we thought she would be the same as our other coach.” Jennifer paused, shaking her head.

The new coach, I understand had to be trained. But, it wasn’t even her knowledge. It was her attitude. She wasn’t excited. She just went through the motions. Boy, all us teachers still talk about our first coach.

Catherine expressed similar sentiments,

The actual coach makes all the difference. If the coach feels like a part of the work family and is kind and willing to do what it takes coaching goes from a little helpful to life saving. It’s that simple. There are okay and better teachers, and there are okay and better coaches.

Catherine and Jennifer both were able to specifically express that the differences between the coaches were a major factor in the overall value of the coaching experience.

The teachers all seemed grateful to be able to express their perspectives and thoughts concerning in-class coaching. Each of them thanked me eagerly, though I assured them that the gratitude was owed to them. It was clear that they had not been asked to share their perspectives as a teacher in the past and participating seemed to make them feel important. The insight they
provided is a testament to how valuable information that comes directly from the field can be. They were able to assess an intervention including coaching in a way that formal assessments, evaluations, and outside observations could not.

Table 3 illustrates the themes, the categories in which they were classified, and examples of the codes that led to the theme.

Table 3

<table>
<thead>
<tr>
<th>Category of Theme</th>
<th>Theme</th>
<th>Sample of Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected</td>
<td>Helpfulness of providing materials</td>
<td>• Purchased furniture to increase comfort</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Purchased books that display diversity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Purchased CDs for CD player</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Purchased puzzles</td>
</tr>
<tr>
<td>Expected</td>
<td>Assistance in setting up and planning for an appropriate classroom</td>
<td>• Creating centers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Encouraging weekly changes to the environment to maintain interest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Encouraging displays related to children</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Using thematic units to interest children</td>
</tr>
<tr>
<td>Expected</td>
<td>Providing high-quality examples of instruction</td>
<td>• Showing how to read with expression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Showing how to incorporate classroom management techniques</td>
</tr>
</tbody>
</table>
### Expected

**Giving teachers suggestions to promote best practices**

- Showing how to model advanced language
- Teacher understood curriculum better when teacher gave demonstrations of lessons

### Unexpected Positive

**Validation**

- Encourage sitting with children at lunch
- Encourage talking and singing with children
- Coach gave teacher information on different areas of literacy development
- Coach gave teacher sample lesson plans

### Unexpected Positive

**Inspiration**

- Teacher received positive feedback
- Coach recognized teacher improvement. Teacher feels like a “teacher.”
- Increase in confidence.

### Unexpected Positive

**Promoting developmentally appropriate practice**

- Teacher stopped using worksheets
- Teacher began to conduct small groups
- Teacher understood that some topics were too abstract to teach preschool children
- Teacher’s expectations for behavior became more
<table>
<thead>
<tr>
<th>Unexpected Positive</th>
<th>Supporting English Language Learner Teachers</th>
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<tbody>
<tr>
<td></td>
<td>• Teacher unfamiliar with American traditional children songs and finger-plays</td>
</tr>
<tr>
<td></td>
<td>• Teacher not confident in her ability to communicate in English</td>
</tr>
<tr>
<td></td>
<td>• Teacher learned American songs and nursery rhymes with children as coach demonstrated</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Unexpected Negative</th>
<th>Lack of Individualization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Coaching content the same for all teachers</td>
</tr>
<tr>
<td></td>
<td>• Hearing the same things over despite being ready to move onto new content</td>
</tr>
<tr>
<td></td>
<td>• Coaching not based on teachers’ needs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unexpected Negative</th>
<th>Coaches’ level of competence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Teacher expressed her first coach was much more helpful than the ones that followed</td>
</tr>
<tr>
<td></td>
<td>• New coaches seem to need more training</td>
</tr>
<tr>
<td></td>
<td>• Coaches vary in passion</td>
</tr>
<tr>
<td></td>
<td>• Coaches vary in knowledge</td>
</tr>
<tr>
<td></td>
<td>• Coaches vary in commitment</td>
</tr>
</tbody>
</table>

**Chapter Summary**

Chapter 4 discussed the findings of the current study. To answer the first research question pertaining to the effect of an intervention including in-class coaching on the ECERS-R score, a paired-samples t-test was conducted.
using the pre-score, which was obtained before the implementation of coaching, and the post-score, which was obtained after a year of coaching. The overall score showed statistically significant growth, as well as the subscales of Space and Furnishings and Activities. Statistically significant pretest to posttest differences were not found for the other subscales.

While analyzing the data for the second question pertaining to the effects of an intervention including in-class coaching on the Florida Kindergarten Readiness Scale child outcomes, a Levene's Test for Equality of Variances was calculated to determine if the variances of the three groups of centers were similar. The Levene's Test for Equality of Variances was statistically significant ($p = .041$). Therefore the Welch's $F$-test was used because it is intended for use with samples having possibly unequal variances. The Welch test was not statistically significant ($p = .535$), indicating that there was no statistically significant difference among the groups.

Finally, the process of analyzing the interviews was described in detail. Themes that emerged during the open-coding process include the contribution of coaching in terms of understanding developmentally appropriate practice, the validation teachers feel from coaches, and
the inspiration gained by teachers during the process. Teachers learning English as a second language offered insight on the value of coaching in terms of learning a second language while teaching children to develop their own language skills. The issue of inequality between coaches and a one-size-fits all coaching model were identified as important themes in the data.

Chapter 5 presents a discussion of the findings of the present study, including conclusions drawn, limitations, recommendations for practice, and implications for further research.
CHAPTER 5
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the current study was to gain a better understanding of the impact of intervention that included in-class coaching as a means of professional development for preschool teachers. The impact of in-class coaching on the quality of classroom interactions and learning environment, the outcomes of children, and the perceptions of the teachers who participated were examined. In this final chapter, the findings are summarized and discussed, conclusions are drawn, and recommendations are made for practice and for future research.

Summary of Results

The current study was comprised of three research questions. Answers to each of the three questions contributed to answering the overall question pertaining to the impact of an intervention that includes in-class coaching on the teachers and children.
The first question was posed to determine if an intervention including coaching of prekindergarten teachers affected the environmental quality in preschool classrooms as measured by Early Childhood Environmental Rating Scale - Revised (ECERS-R). After a year of an intervention including in-class coaching results for a sample of 19 classrooms showed a statistically significant increase between pre-score and post-score in overall quality as measured by the ECERS-R, $t(18) = 2.62, p < .05, 95\% \text{ CI } [1.03, .11]$.

Of the six subscales used in Duval County, the subscale Activities had a statistically significant increase after a year of an intervention including coaching. The Activities portion evaluates the children's access to plentiful, diverse, and meaningful learning materials and free-choice activities $t(18) = 5.48, p < .001, 95\% \text{ CI } [1.74, .77]$, with a large effect size (Cohen, 1988). The other subscales showed no statistically significant increases.

The Space and Furnishing subscale score pretest-posttest difference was statistically significant, $t(18) = 3.36, p < .001, 95\% \text{ CI } [1.09, .25]$ with a large effect size (Cohen, 1988), indicating that the appropriateness of the physical classroom, set up, and furnishings showed
statistically significant growth in the means from pretest to posttest.

The second question was posed to determine if centers receiving an intervention including coaching for varying amounts of time differed in levels of school readiness as measured on the Florida Kindergarten Readiness Screener. Data were obtained on incoming Kindergarteners and scores were connected to the centers the children attended for Voluntary Prekindergarten. The centers were sorted into three groups, including centers where teachers received no coaching in the two years previous to the testing, centers where the teachers participated in one year of coaching directly preceding the testing, and centers where the teachers participated in two years of coaching directly preceding the testing. Because the populations being tested had unequal variances, a Welch’s Test was conducted. The test showed no statistically significant differences between groups participating in coaching and those not participating in coaching.

Finally, the third question sought to better understand prekindergarten teachers’ perceptions of coaching. An inductive analysis involving open coding was conducted to look for patterns and themes in the participants’ perspectives. Many common perspectives
emerged, including the theme of coaching helping teachers better understand what is developmentally appropriate for children, coaches serving as models of language for those learning English as a second language, and coaches serving as mentors who both validate and inspire the practices of their teachers. Teachers expressed the desire to have coaching more customized to their individual needs and a concern about inequalities noticed in coaching quality.

Conclusions from the Study

Based on the results of the present study, I have drawn seven conclusions. The first conclusion is that an intervention that includes in-class coaching may significantly affect the quality of classrooms. The changes noted in the first research question were only distinguished on subscales related to environmental and programmatic aspects of quality, such as setting up classroom centers to reflect materials for various content exposures and to reflect diversity. Findings of the present study reflect a statistically significant improvement in the classroom space in terms of appropriate furnishings and set up. Findings of the current study also show statistically significant growth in encouraging teachers to use media such as television and computers in ways that are developmentally appropriate for young
Findings for the present study also highlight the changes coaches encouraged in terms of promoting acceptance of diversity in classrooms. These items are all important in terms of offering children a robust experience. There is value in the changes noted.

The second conclusion of the present study is that the change in quality seems to only affect certain aspects of quality. As discussed in Chapter 2 of the current study, quality can be assessed in different ways. Some define quality in terms of structural, programmatic, or environmental terms (NIEER, 2008), while others focus on teacher-child interactions as the key factor for quality due to a growing body of empirical evidence that child-teacher interactions may affect child outcomes both in the short and long term (Burchinal et al., 2010).

Differences on the subscales related to interactions and encouraging children to use higher-order thinking skills were not statistically significant. When relating the findings of the first research question to the related research, the results of research question two are not surprising. Research has indicated that teacher-child interactions and encouraging children to use higher-order thinking skills are predictors of gains in child outcomes (Brophy-Herb et al., 2007; Curby et al., 2009; Dickinson &
Brady, 2006; Guo et al., 2010; Howes et al., 2008; Jackson et al., 2006; Mashburn et al., 2008; McCartney et al., 2007; Pianta et al., 2009). Because the findings of research question one indicate that coaching may not increase these teaching behaviors, one would expect the second research question, pertaining to the effects of an intervention including in-class coaching on child outcomes, to show no significant differences between centers receiving coaching and those not receiving coaching.

The third conclusion of the present study is that participating in an intervention including in-class coaching can increase the validation and inspiration of teachers. This may be more powerful than only an increase in confidence. Guo, Justice, Kaderavek & McGinty (2010) found that teachers' self-efficacy served as significant and positive predictors of children's gains in print awareness and vocabulary gains for children. Therefore, though an increase in validation for teachers may at first seem to be a nicety, there appears to be a potential advantage in terms of child outcomes for teachers with a high level of self-efficacy.

The reported increase in confidence perhaps coincides with the reported levels of inspiration teachers felt while working with in-class coaches. Nearly half of the teachers
said that working with an in-class coach inspired them to return to school to obtain a higher credential or degree. As discussed in Chapter 2, though results are mixed, there are research results that indicate that additional credentials and higher degrees may increase the quality of preschool teachers (Burchinal et al., 2002; Ghazvini & Mullis, 2002; Howes, 1997; NICHD ECCRN, 2002; Phillips et al., 2000; Tout et al., 2005; Vu et al., 2008; Whitebook, 2003). Therefore, perhaps the inspirational quality of the coaches is adding to the teachers’ desire to increase their credentials or degrees.

The fourth conclusion from present study is that coaches contribute to the teachers’ understanding of developmental appropriateness for young children. Developmentally appropriate practice involves knowing what is typical at each age and stage of early development and then deducting which experiences are best for children’s learning and development depending on that age and stage (NAEYC, 1995). Oftentimes teachers have steadfast and engrained beliefs about how children learn based on how they learned. Being able to alter the belief that children are passive learners and learn best by memorizing or completing mundane tasks is a major contribution. The fact that children learn best through play, hands-on
exploration, and scaffolding by an adult who can help them connect the new experiences to their own limited background knowledge has been theorized and empirically tested for decades. However, as discussed in previous chapters, teachers in preschools often do not have theoretical knowledge of the field and often have to rely on how they were taught as their foundation for belief and practice. All 12 of the teachers interviewed mentioned ways in which coaches helped them understand and implement activities, rituals, and behaviors that are best for children based on their age and stage of development. Though none of the teachers used the words “developmentally appropriate,” their stories and examples painted a clear picture: Coaches who understand child development were able to change the practice of the teachers based on their knowledge. This is perhaps one of the greatest successes discovered in the current study.

The fifth conclusion of the present study is that teachers with limited knowledge of the English language may receive additional benefits from an intervention including in-class coaching. Of the 12 teachers interviewed, three had learned English as a second language as an adult. All three of these participants made mention of ways the coach was able to help them deal with being an English language
learner while simultaneously attempting to develop the language skills of children. As discussed in Chapter 2, the credentials required to be a preschool teacher are very limited. Some teachers are recruited because they represent the population served by that center. Bilingual teachers are invaluable in terms of being able to better serve children and families who are learning English as a second language. They serve as experts on the families’ cultural norms and can serve as interpreters when needed. However, this often means that the teacher, though fluent in speaking English, may not be as familiar with English in its print form or with culturally driven childhood traditions. It is important to notice that the coaches helped with the language acquisition and confidence of these teachers.

The sixth conclusion drawn from this study is that effective coaches must have many skills in order to create change in the classrooms in which they work. A coach must have more than just knowledge of the field. Coaches must be able to get the teachers motivated by showing that they are a team. Coaches must display a passion that allows the teacher to share in that enthusiasm.

Research reviewed indicated that teachers are likely to benefit from professional development situations with
opportunities to watch others interact in effective ways with children and to receive feedback about their own interactions with children (Pianta et al., 2008a). The teachers that worked with a variety of coaches felt as though there was a noticeable difference in the passion, abilities, and knowledge demonstrated by the various coaches they had worked with. This is concerning due to the fact that the findings of Pianta et al. (2008a) emphasize that teachers benefit from watching effective teaching practices. If coaches are unequal in their abilities, the coaching teachers receive is also likely to be irregular, therefore producing uneven levels of positive change.

Effective coaches also must be able to assess the current abilities and knowledge of the teacher in order to provide customized coaching based on the teachers’ needs. This is in agreement with the findings of Garet et al. (2001) who reported an increase in teacher’s growth when training activities are tied to the individual needs of the teachers. Perhaps a more individualized approach to coaching, based on classroom assessment results that measure quality in terms of teacher-child interactions, would provide goals for teachers based on their own needs. This would personalize coaching in a way that would be more
authentic for the teachers participating and could possibly lead to growth in child-teacher interactions, which, in turn, may affect child outcomes.

The final conclusion drawn from the present study is that despite its merits, coaching may not be a long-term solution to classroom and teacher quality. In the current context of early childhood education, there is a cycle of low pay, turnover, and constant short-term training of the teachers who rotate through the classrooms. As seen by the turnover in literature reviewed, and in the present study, teachers are not staying in the preschool classrooms long-term. Therefore, efforts that are being made to provide training to these teachers are often not fruitful in the current program because the teachers do not stay long enough to employ the skills and behaviors that are being taught and demonstrated for them. However, in the unstable, current context of early childhood education, coaching makes sense, as it is one of the few forms of professional development that can begin working immediately; assuming that a high quality coach is being used in the classroom.

**Delimitations**

A notable delimitation of the present study is the accessible population used. The samples used for research
question 1 and research question 2 were samples that were accessible. Random selection was not used to determine which centers and classrooms would contribute to the data of the present study.

**Limitations**

As with any study, the present research study has many limitations. As mentioned in Chapter 3, the small selective sample dealing with the first research question \((N = 19)\), which pertains to the effect of coaching on the learning environment is not large enough or representational enough of all preschool settings to generalize the findings. These classrooms had to meet the criteria of having the same teacher for the full two years in the program. The participants for these questions were also limited due to the fact that periodically the Early Learning Coalition will not always assess the same classroom for the post-test. This resulted in having some pre-tests that were not followed up with post-test due to the assessment taking place in another classroom in the same center.

The second notable limitation is that like most early childhood classrooms, many of the classrooms that receive an intervention including in-class coaching are subject to teacher attrition. Teacher turn-over may affect the
results of both the first and second research inquiries. Despite efforts to eliminate those classrooms that were affected by attrition for the first research question, there were instances of the lead teacher remaining the same, and the assistant teacher changing. Furthermore, eliminating centers that experienced teacher attrition for the second research questions was not possible, as that information is not reported to the state. Therefore, it is safe to assume that teacher attrition may have affected the outcomes of the present study.

The third limitation is that what was defined as coaching may have varied across classrooms. Though coaches were accountable to a team leader and were reported to be held to a high standard of quality, varying degrees of expertise, diligence, and overall effectiveness must be expected. This factor actually appeared in the findings of the present study, as the teachers discussed the differing quality represented by varying coaches. Turnover among the coaches may also be an issue. Losing coaches, and the process of replacing them, interrupts the coaching process for up to several weeks. All of these factors play a role in the findings drawn from the present study.

The fourth limitation is that the participants may or may not have been candid with their answers concerning
their viewpoint on the value of coaching. The answers they
gave may not reflect their true opinion, due to a fear of
being identified or reprimanded. Though I discussed in
detail with them that their perspectives were confidential,
it is still human nature to share only what one is
comfortable with sharing.

Furthermore, like every assessment tool, the Florida
Kindergarten Readiness Screener and the Early Childhood
Environmental Rating Scale-Revised have inherent
limitations that were discussed previously. All of these
limitations may affect the results of the present study. In
addition to the inherent limitation of the tools, each is
also a limited measure of what it purports to quantify.
Though the Florida Kindergarten Readiness Screener is the
measure the state adopted to determine if children are
ready for kindergarten, little training was provided to the
kindergarten teachers who gave the test to children. The
measure represents a very narrow definition of school
readiness, as it only consists of two very narrow literacy
measures and an observational account of children only
known to the administrator of the test for at most 30 days.

The fifth notable limitation is the precision of the
coaching durations assigned to each center for the second
research question pertaining to the Florida Kindergarten
Readiness Scores. There are instances when teachers at a center will not receive services for a full year due to uncontrollable variables or the center will drop out of the intervention at midyear, yet the records do not show the exact times these instances occur. It is likely that some centers purported to have 2 years of coaching could have had several months more or less.

The sixth notable limitation is the fact that some levels of support, referred to as "maintenance," continued in some centers after the intensive coaching ended. This very limited support usually consisted of once a month visits with only reminders, updates to best practices, and other limited help. It does not include any demonstrating of teaching skills, assessing of teachers, or providing detailed feedback following an observation, so it is not classified as coaching. However, it is important to note that the limited help was not deemed enough to be included in the category of receiving coaching for that school year. This cloudiness of categorizing is a limitation.

Another limitation of the present study is that there is a possibility of selection bias for those interviewed. The teachers who volunteered to participate in the interviews inherently differ than those who did not volunteer. It may be assumed that the ones who were
willing to participate are those who had an inclination to communicate their perspectives.

Finally, in the present study, I faced the same dilemma faced by other researchers attempting to measure the effect of coaching on early childhood educators and children. It is impossible to isolate the effects of coaching from the effects of coexisting variables. For example, extraneous variables such as amount of parent involvement, demographic information, resources available, coaching quality, and teacher commitment are all factors that will influence the data collected. It is a clear limitation that in the present study the effects of coaching could not be isolated from the effects of the other variables.

When analyzing and reporting the data, caution concerning the obvious constraints on generalizability and the utility of findings was exercised. Any conclusions drawn by this research were clearly limited to the constructs of the setting I have defined and are not representative of coaching in general.

**Recommendations for Practice**

Despite the recognized limitations, the findings of the present study lead to conclusions, implications for coaching, and recommendations for further research.
The first recommendation is limiting the use of measures that focus on environmental quality. It is recommended that the coaching model reduce the use of the ECERS-R. Though it is an appropriate tool for measuring change in the environment, it may not be the most appropriate tool for measuring quality that will produce gains for children. These aspects of quality do not necessarily affect the developmental and learning outcomes for children. Limiting the use of the ECERS-R would free up resources that could be used for better measures. The subscales that were changed in the present study were those limited to the structural and environmental aspects of quality. According to the results of the second research question, coaching may not affect child outcomes as measured by the Florida Kindergarten Readiness Screener (FLKRS).

A second recommendation is that the coaching model use a classroom assessment tool that has been shown to affect child outcomes. Based on the overwhelming empirical evidence that using the philosophies of CLASS may increase child outcomes, I recommend the use of CLASS. According to the research presented previously there is a strong conceptual and empirical justification for the value of
improvements in teacher-child interactions and how they may affect child outcomes.

Many early childhood education authorities have adopted the use of CLASS for the reasons mentioned above. For example, the Office of Head Start has adopted the CLASS (Pianta, LaParo, & Hamre, 2008b) as a part of its triennial monitoring process, focusing on three broad domains of interaction—Emotional Support, Classroom Organization, and Instructional Support. Thus, every Head Start grantee across the country will be reviewed based in part on the quality of interactions observed within their classrooms. Several states are also including the CLASS or other measures of teacher-child interactions as one component of their Quality Rating and Improvement Systems (Tout et al., 2010) or other improvement efforts.

The Florida Department of Education has decided to introduce CLASS to the state in two phases. In phase one, which started in 2012, 10 early learning coalitions representing the diversity of Florida were asked to participate in using the CLASS tool as the state prepares to use it in all sites receiving school readiness funds (Florida Office of Early Learning, 2012). The purpose of introducing the use of CLASS in two phases to test different models is to measure the impact these approaches
have on early childhood programs, providing preliminary data on quality improvement efforts that can be shared during the 2013 legislative session. Thus, not only is there strong justification for the value of teacher-child interactions for promoting young children’s development, but in addition, the current policy context of accountability is pushing early childhood programs toward a focus on the interactions teachers have with children.

A third recommendation is the acknowledgment to coaches that they are in fact changing the lenses through which teachers look at themselves and the children they teach. Perhaps this finding will both validate and inspire the coaches in the same way they have validate and inspired the teachers they serve. The results of the third research question underline the importance of building a relationship of trust and respect between each coach and teacher. This relationship is what fosters the ability to be able to validate and inspire in the ways reported during the interview process. The message of what is developmentally appropriate for children is being delivered and received in a manner that is effective, as all of the teachers were able to describe an instance of change brought about by the coaches’ shared knowledge of developmentally appropriate practice.
A fourth recommendation is that additional checks and balances are needed to ensure that coaching is of high quality. It is recommended that a formal coach mentoring system, including coach-to-coach mentoring, shadowing, brainstorming, and evaluating could be put into place to ensure that coaches are creating a network of peer assistance and guidance within the coaching system. New coaches, in particular, would benefit from the additional monitoring and support. Results of the interviews support the finding that the teachers do not perceive the coaches as equal in terms of providing quality coaching.

The fifth recommendation from the present study is the need for the coaching provided to fit the needs of the particular teacher and classroom the coach is working with. The findings of the present study indicate that the coaching model as used by the agencies studied in the present study often lacks individualization. However, due to the varying levels of experience, education, and needs of the teachers being served, an individualized model would be more valuable, and perhaps lead to gains in outcomes for children if paired with an appropriate measure of child-teacher interactions, such as CLASS. Certification of a CLASS assessor can be obtained by completing a fairly inexpensive and local three-day course. The first day is
an in-depth look at the philosophies and practices that drive the assessment. The second day consists of completing multiple practice scenarios using the tool and the philosophies put forth the previous day. The final day is a certification exam consisting of rating several 20-minute video clips of real classroom experiences. It is recommended that each coach become a CLASS certified assessor. This would allow each coach to assess each teacher at the beginning of the year. Based on the assessment, personalized and individual goals could be made for each teacher. Coaches would then spend the next several months focusing on the teacher’s CLASS-related needs by demonstrating, providing feedback, and allowing the teacher to practice the strategies with the support of the coach. Each teacher would be reassessed during the year in order evaluate progress toward meeting the goals and to establish new CLASS related goals as needed. Not only would this make the coaching individualized for the teacher’s needs, but the coaching content would be directly related to teacher-child interactions, which have been shown to have a direct relationship with child learning and development outcomes.

Furthermore, because the CLASS tool is very comprehensive and could be overwhelming to a coach or
teacher who is not familiar with it, I recommend that the coaching loads be limited to 10-15 classrooms per week, with the expectation that the coach spend more time in each of their classrooms with the specific focus of increasing teaching strategies that are aligned with the child-teacher interactions of the CLASS framework. Grace et al. (2008) found that when coaching efforts are focused and sustained until mastery of the content has been obtained, the effects of coaching are more clearly attributed to the coaching and more likely to be long term. Focusing more time and energy on a smaller amount to classrooms may allow the value of coaching to be more clearly seen.

The final recommendation from this present study is that issues related to teacher turn over, lack of teacher satisfaction, certification, licensure, and salaries are closely linked and need to be examined closely by stakeholders. These issues must be addressed systematically over the long term to create an environment that is attractive to teachers and encourages them to stay in the field. Until then, all professional development, including interventions including in-class coaching, are only developing individuals who may not be able to use their improved knowledge and practices to change outcomes for the children they serve.
Implications for Further Research

Future studies that examine the practice of coaching as a means of professional development for preschool teachers are needed in order to better understand which coaching behaviors, attributes, and models best increase the quality of the teachers the coaches assist. Studies that control for other outside variables are imperative in order to understand if coaching is responsible for the changes found.

Furthermore, studies that seek to understand for whom and under what conditions coaching might be most effective would allow for an understanding of what teachers need at entry level to subsequently be professionally developed into a high quality teacher. This would be helpful for recruitment of teachers, and especially for future policy recommendations.

Studies that seek to further understand the phenomenon of teacher turnover, particularly in early childhood classrooms, would be invaluable in terms of improving the field as a whole. The limited resources spent on improving the teachers in the field are often unproductive due to teacher attrition. Studies that seek to discover what may make a teacher stay at a center long-term, other than
direct fiscal compensation, would help the leaders in the field provide effective incentives for longevity of service.

Furthermore, studies that use measures that focus on practices that increase child learning outcomes would be valuable to the field. The change in the child’s outcomes, with the teaching practices and behaviors as the independent variable would be a valuable contribution to the understanding of the value of child-teacher interactions.

In addition, studies that seek to better understand the perspective of coaches in the field of early childhood education may compliment the findings of the present study. Coaches face their own challenges, frustrations, and victories. Their voices would help policy makers, teachers, and others understand the perspectives of those who work closest with teachers.

Finally and perhaps most importantly, systematic reform to address the problem of teacher turnover must occur. All efforts of professional development are unproductive when the recipient leaves the field and the time and resources do not produce change as intended. A close look at lack of teacher satisfaction, working conditions, certification, licensure, and salaries must
take place to best address how to combat the issue of teacher turnover.

**Summary**

This chapter included a summary of the results pertaining to the effects of an intervention including in-class coaching. A discussion of the results preceded the conclusions. Limitations were discussed. Finally, recommendations drawn from the present study were presented.

In light of the overwhelming evidence that early childhood experiences are critical to the development of children and the fact that the quality of the teacher significantly impacts the quality of the preschool experience for children (Barnett & Hustedt, 2003; NIEER, 2008) it is very important that attention be given to preschool teacher quality. The educational and training requirements are very low, resulting in unprepared teachers. This lack of preparation often leads to teachers who fail to provide children with high quality developmental experiences that prepare them for kindergarten and a strong foundation for future development.

These obstacles clearly point to the need for educational requirements and professional development for
early childhood educators that are cost effective and focused on improving classroom and teaching quality, and in turn, child outcomes. It seems that raising educational requirements is desirable, but not sufficient. Furthermore, it seems that professionally developing individuals who are not well educated is not sufficient. Therefore, a combination of educational and professional development efforts need to be further investigated and evaluated.

An intervention including in-class coaching has been shown to increase many aspects of quality, including environmental features, activities provided, and teacher knowledge and sense of validation. However, interventions including in-class coaching need to be fine-tuned to result in increases in child outcomes. These changes include an assurance that the coaches are high quality, with the ability to customize coaching based on the needs of their teachers and the emphasis on tools that have been empirically linked to higher teacher-child interactions, and child outcomes.

An intervention including in-class coaching seems to be a worthwhile undertaking given the current context of early childhood education. However, the long term attainment of a successful early child educational entity
must include a systemic change in how we recruit, train, certify, and retain teachers. Intermittent coaching is not enough to change child outcomes in a wide spread manner because the foundation of early childhood education, including teacher preparation, funding, and teacher retention is in such disarray. In the present context, coaching serves as a temporary means of giving teachers some of the knowledge and skills they need to be successful.
Appendix A

Interview Questions for Teachers

Have you worked with a coach?

How long have you worked with an in-class coach?

What kinds of help does the coach provide?

How have you made changes in your classroom environment because of the coaching you received? Can you tell me more? Can you give me examples?

How have you made changes in your interactions with children because of the coaching you received? Can you tell me more? Can you give me examples?

How have you made changes in your classroom management because of the coaching you received? Can you tell me more? Can you give me examples?

How have you made changes in your literacy instruction because of the coaching you received? Can you tell me more? Can you give me examples?

What is the most profound way that in-class coaching has impacted you as a teacher? Can you tell me more? Can you give me examples?

How could the coaching process be improved? Can you tell me more? Can you give me examples?

What additional training and/or coaching do you feel you still need that has not been addressed as a part of in-class coaching?
MEMORANDUM

DATE: September 19, 2011

TO: Ms. Amber Oliveira

VIA: Dr. Marcia Lamkin
LSCSM

FROM: Dr. Katherine Kasten, Chairperson
On behalf of the UNF Institutional Review Board

RE: Review by the UNF Institutional Review Board IRB#11-070:
“The Effects of and Intervention Including In-Class Coaching”

This is to advise you that your project, “The Effects of and Intervention Including In-Class Coaching,” has undergone “expedited, category #7” review on behalf of the UNF Institutional Review Board and was approved.

This approval applies to your project in the form and content as submitted to the IRB for review. Any variations or modifications to the approved protocol and/or informed consent forms as they relate to dealing with human subjects must be cleared with the IRB prior to implementing such changes. Any unanticipated problems involving risk and any occurrence of serious harm to subjects and others shall be reported promptly to the IRB within 3 business days.

Your study has been approved for a period of 12 months. If your project continues for more than one year, you are required to provide a Continuing Status Report to the UNF IRB prior to 8/19/2012 if your study will be continuing past the 1-year anniversary of the approval date. We suggest you submit your status report 11 months from the date of your approval date as noted above to allow time for review and processing.

As you may know, CITI Course Completion Reports are valid for 3 years. Ms. Oliveira’s completion report is valid through 1/23/2012 and Dr. Lamkin’s completion report is valid through 9/16/2012. If your completion report expires within the next 60 days or has expired, please take CITI’s refresher course and contact us to let us know you have completed that training. If you have not yet completed your CITI training or if you need to complete the refresher course, please do so by following this link: http://www.citiprogram.org/. Based on your research interests we ask that you complete either the “Group 1 Biomedical Research
Investigators and Key Personnel” CITI training or the “Group 2 Social Behavioral Researcher Investigators and Key Personnel” CITI training.

Should you have questions regarding your project or any other IRB issues, please contact Kayla Champaigne at 904-620-2312, or K.Champaigne@unf.edu.
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Resume of Amber K. Oliveira

Education

**Doctorate of Education in Educational Leadership**  
Cognate: Early Learning (April, 2013)  
University of North Florida, Jacksonville, FL

**Master of Elementary Education, Literacy Emphasis**  
University of North Florida, Jacksonville

**Bachelor of Science in Elementary Education**  
Florida State University, Tallahassee, FL

Work Experience

**Director of Education for Head Start and Early Start Grant at Episcopal Children’s Services**  
(March, 2010-present)

- Provide high quality instruction, training, and in-class mentoring for 120 teachers
- Ensure progress in child outcomes for over 600 children
- Use assessment tools to accurately measure the progress of teacher quality and child development
- Analyze, aggregate, and report outcomes for classroom quality data and child outcomes data
- Supervise and mentor staff of in-class instructional coaches

**Lead Instructional Coach for the Jacksonville Early Literacy Partnership**  
(June, 2007-March, 2010)

- Delivered Professional Development training to over 30 early literacy coaches from Episcopal Children’s Services and collaborating agencies
- Analyzed the professional needs of early childhood instructional coaches to create and implement trainings in the area most needed, based on current research and instructional abilities of teachers and children.

**Elementary School Teacher, Duval County**  
(August, 2003-June, 2007)

- Experienced success as a fourth grade teacher at Gregory Drive Elementary, working with low-income children in a culturally diverse, Title I, setting
- 100% FCAT (state assessment) pass rate in an ESE Inclusive setting – 4 consecutive years.