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A Study of Changes in Montessori Early Childhood Teachers as a Result of Specialized Training

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A Study of Changes in Montessori Early Childhood Teachers
as a Result of Specialized Training

by
Ambar Judith Chavez Saleh-Cipolloni

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Approval Page

This applied dissertation was submitted by Ambar Judith Chavez-Saleh Cipolloni under the direction of the persons listed below. It was submitted to the Abraham S. Fischler College of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova Southeastern University.

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Statement of Original Work

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Abstract

A Study of Changes in Montessori Early Childhood Teachers as a Result of Specialized Training. Ambar Judith Chavez Saleh-Cipolloni, 2016: Applied Dissertation, Nova Southeastern University, Abraham S. Fischler College of Education. Keywords: early childhood education, Montessori method, developmentally appropriate practices, child care, caregiver child relationships

This qualitative study explored the changes in the practice of early childhood education (ECE) teachers in a specific Montessori program after a series of trainings. This study's purpose was to compare the teacher practices in a Montessori preschool program before and after specific pedagogical training. The ECE teachers were trained in a four-week series of didactic sessions on Montessori philosophy and pedagogy. On week days the teachers were mentored by observation, direct feedback, and guidance of practice. Classes met 15 hours per week for a total of 60 contact hours.

Prior to the beginning of the training classes a baseline of each teacher was established according to the qualities identified for the study. These qualities included the teacher's subjective view of young children, their perception of their teaching role, and their performance with children. Following the end of the training period this process was repeated and any changes were reviewed and described. The information for this review was collected by interview, ongoing documented observation, personal narratives, and personal journals.

Results of the study supported that specific Montessori training impacted the participant/teachers' subjective view of young children, the perception of their teaching role, and their performance with children. As compared to the beginning of the study, after the four weeks of training the participant/teachers recognized a more constructivist view of how young children learn; they expressed a more reflective perception of their teaching role; and engaged in more responsive, facilitative, and less interruptive performance with children. Conclusions of the study were that providing Montessori pedagogical and philosophical training can improve the qualitative relationships of teachers with young children.

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Chapter 1: Introduction

Statement of the Problem

Child care prior to the years of primary education is an established practice in the United States (Child Care Aware of America, 2016). Qualifications of teachers for early childhood programs (serving from infancy to kindergarten age) are typically unregulated with regard to formal education (French, 2010). Pay for child care teachers is usually low, averaging $21,320 nationally (French, 2010). In this career lack of education and low pay are likely associated with the challenges of attracting and retaining teachers with professional and personal values that are necessary for quality early childhood programs (Fenech, Waniganayake, & Fleet, 2009; Thorpe, Boyd, Allwood, & Brownlee, 2011). The problem is a workforce that is inconsistently prepared educationally, professionally, and personally for the unique developmental characteristics of young children.

Among the several pedagogical models that are applicable for early childhood programs, the teachings of Dr. Maria Montessori present an optimal framework that addresses the comprehensive range of developmental domains for this young age (Lillard, 2008; Miller, 2011; Platz & Arellano, 2011). Formalized training in this model is available, many which are recognized by the two major professional organizations that advocate for teaching standards; the Association Montessori Internationale (AMI) and the American Montessori Society (AMS).

Phenomenon of interest. The lack of consistent standards to determine the qualification for teachers of young children in childcare affect the quality of the socioemotional environment which is fundamental to a child's learning (Heller et al., 2012). Children's development occurs in the context of adults that is optimized by

respectful, responsive, personalized relationships and interactions that are consistently secure and trustful (Downer, Kraft-Sayre, & Pianta, 2009; Vorkapic, 2013), particularly for infants in their first year of life (Degotardi, 2010). In this regard, criteria for evaluating the qualifications of ECE teachers should emphasize the quality of teacher/child relationships even more than education or experience (Ferris Miller, 2014; Flores, Casebeer, & Riojas-Cortez, 2011).

Montessori teacher education models acknowledge and emphasize the uniqueness of the teacher role in early childhood development programs (Ferris-Miller, 2014). The purpose of these programs exceeds academic or educational measures alone by maintaining the philosophical perspective of respecting the whole child and the pedagogical principles of constructivism. These training programs are designed within principles of teacher-child relationships to facilitate the emergence of the self. To train or educate teachers within this model requires emotional sensitivity, observation skills, and responsiveness to the child, along with particular understanding of curriculum design and application (Miller, 2011; Smith, 2013). This study addresses the problem that traditional training of practicing ECE teachers does not sufficiently address the socio-emotional needs of young children (Alexander, 2014; Heller et al., 2012).

Background and justification. The inherent dependence of young children 0-5 years of age leaves them especially vulnerable to caretaking by strangers outside the home or family network. Developmental features f personality, behavior, cognition, communication, and socialization are impacted by the quality of relationships and interactions with adults (Ezell, 2013; Rhodes & Huston, 2012). According to attachment

theory, the internal working model of the self is a direct result of the relational patterns between the child and the adult as secure or insecure (Bretherton, 1992).

Childcare in the United States is largely custodial, managerial, or a scaled-down version of academic focused education (Dennis & O'Conner, 2013). The conventional model of teaching in childcare is grounded in a directive, authoritarian role and self-image which views the child as a passive, incomplete recipient of the knowledge and control of the adult; this model is associated with a more insecure attachment style and internal working model of self (Rutter & O'Conner, 1999). A Montessori approach to early childhood development as proposed by this study suggests the benefits of a constructivist pedagogy for young children and the corresponding role of the teacher. This approach views the child as an inherently intelligent person capable of learning through self-initiated experiences (Martin & Loomis, 2013). Consequently, this model regards the adult in a less directive role within a more facilitative perspective and authoritative practice (Larzelere, Morris, & Harrist, 2013). An authoritative teaching style provides the important balance of responsiveness to the child while maintaining reasonable, reliable expectations (Larzelere et al., 2013).

Successfully preparing teachers for adopting this perspective of their role and corresponding view of the child is promoted through an apprenticeship style of training (Chu, 2012). This emphasis on a mentor-mentee relationship is essential for learning and applying the comprehensive and specialized philosophy and methodology of Montessori pedagogy (Howell, Sulak, Bagby, Diaz, & Thompson, 2013). This personalized, ongoing, interactive context of learning contrasts greatly with the didactic in-service model that is

typical of traditional day care teacher training (Brown & Inglis, 2013; Howe, Jacobs, Vukelich, & Recchia, 2012).

There is no proprietary regulation of the use of the Montessori name or presenting oneself as a Montessori teacher. As with many educational credentials, there are a wide range of criteria or achievements to determine the level of knowledge of the Montessori model (Lillard, 1996). Among the several organizations and businesses that provide Montessori training, the American Montessori Society (AMS) is considered highly professional and has a process of accrediting teacher training programs (AMS teacher education programs, 2013). The standards of AMS accredited programs have been developed in the cultural context of American education and views of young children and will be the frame of reference applied in this applied dissertation study (Carey, 2010).

Deficiencies in the evidence. Studies have recognized the importance of responsive, respectful, and supportive characteristics of teachers for young children (Denny, Hallam, & Homer, 2012; Flores et al., 2011; Thomason & La Paro, 2013; Wagner et al., 2013). Others have addressed the preparatory education and training of early childhood teachers relative to the challenges of actual practice (Alexander, 2014; Brown & Inglis, 2013; Eisenbrey, 2013). Few studies have focused on the reality of identifying specific characteristics and behaviors of individual teachers and providing mentoring and training according to a particular pedagogy (Howe et al., 2012; Kopas-Vukasinovic, 2012). In addition, there is a gap in the literature regarding the importance of the comprehensive and long-term impact of early childhood experience on lifelong development and a corresponding gap in understanding the impact of ECE training (Howell et al., 2013).

The peaceful and harmonious atmosphere of a Montessori classroom is particularly important for the socio-emotional experience of the young child (Boulmier, 2014; Dore, 2014; Ferris-Miller, 2014); this emphasis is also shared by the pedagogy of Dewey and the Reggio Emilia model (Dodd-Nurfio, 2011). The specialized organization of the Montessori environment and the sophistication of the curriculum promote the unique and personalized development of the child across all domains (Gilder, 2012; Lillard, 2011b, 2013; Soundy, 2012; Woo, 2014). The Montessori model has been recognized to comprehensively meet the criteria of best practices for early child education (Donahoe, Cichucki, Coad-Bernard, Coe, & Scholtz, 2013), and in general has been demonstrated to effectively prepare young children for elementary school (Kayili & Ari, 2011). The individualized attention on each child and the use of visually and spatially stimulating materials has promoted the success of emergent readers at risk for learning disability in reading (Zascavage, McKenzie, Buot, Woods, & Orton-Gillingham, 2012),

Articles that specifically addressed the Montessori teaching styles included an autobiographical account (Thayer-Bacon, 2011) and a description of two case studies (Lockhorst, Wubbels, & van Oers, 2010). Byun, Blair, and Pate (2013) used a quasi-experimental design to compare the sedentary behavior of Montessori and traditional preschool classrooms. The significance of fundamental features in Montessori teacher training that relate to practice was discussed by Cossentino (2009) and Lillard (2011a). However, there do not appear to be any studies that measured the outcomes of training teachers in Montessori principles and practices.

Audience. As in Bronfenbrenner's ecological theory of development (Özdoğru, 2011), at the microlevel each individual child is affected by the quality of relational patterns on all aspects of development. In proceeding levels these patterns impact respective families, communities, and larger social spheres as the individual interacts and develops exponentially. The early experiences of children in childcare settings are shaped by their relational patterns and in turn affect their relational spheres throughout life. Therefore, the audience for this study is parents, educators, and administrators who are concerned about the qualitative experience of young children in childcare settings.

Definition of Terms

Alloparenting. A condition of care for a child by adults other than parents in out-of-home settings (Ferris-Miller, 2014).

Authoritarian. A style of teaching derived from Baumrind's parenting models that reflect an adult-child relationship pattern that is high in demand and control but low in responsiveness. Authoritarian adults rely on structure, rigidity, and punishment (Darling, 1999).

Authoritative. A style of teaching derived from Baumrind's parenting models that reflect an adult-child relationship pattern that is high in demand and also high in responsiveness; authoritative adults are supportive and promote self-regulation (Darling, 1999).

Childcare. In this study childcare refers to the caring for children by non-family adults in contexts that vary from custodial supervision to curriculum-based teaching (Child Care Aware of America, 2016).

Constructivist. A perspective of child development that recognizes the intrinsic nature of learning and acquisition of knowledge (Martin & Loomis, 2013).

Early childhood. For the purposes of this study early childhood refers to children from birth through the age of five years.

Montessori. The philosophy and curriculum founded by Dr Maria Montessori that promotes a comprehensive developmental model of children's holistic learning from infancy through adolescence (Lillard, 1996).

Pedagogy. Defined as "the study of being a teacher or the science of teaching." (Buster, 2011, p. 4).

Purpose of the Study

The purpose of this study was to explore if formally untrained teachers in a Montessori early childhood program improve the quality of their teaching practice after a sequence of specific training and mentorship experiences guided by Montessori pedagogy. In this proposal, teaching practice will be generally defined as the behaviors, beliefs, and attitudes of the teachers of 2-to-4-year-old children in a Florida Montessori program.

Chapter 2: Literature Review

This chapter will present the results of searching the contemporary research literature related to the proposed study. This study's purpose is to compare the teacher practices in a Montessori preschool program before and after specific pedagogical training. The chapter includes a review of work related to the conceptual framework of the study; the synthesis of the research and the importance of the problem; consideration of further research as related to prior studies, including the identification of research variables and identifying important questions; strengths and weakness in prior studies; and a methodological critique as a rationale for the proposed study design.

Conceptual Framework of the Study

The conceptual framework for this study concerns how young children acquire knowledge. The traditional view derived since the writings of Aristotle and Locke is that of *tabula rasa* and the resultant perspective of the child as a passive recipient of information (Platz & Arellano, 2011). This view is the prevailing rationale for an authoritarian parenting and teaching role of the dominating adult that dispenses information to a compliant child (Bedel, 2012). The contrasting epistemological belief is instead the child is born with an active mind and constructs knowledge within the dynamic of experience (Martin & Loomis, 2013). A constructivist approach to ECE is recognized as effective in facilitating the comprehensive, holistic development of the young child cognitively, behaviorally, socially, and emotionally (Dodd-Nufrio, 2011; Kayili & Ari, 2011).

The theoretical framework of this study is derived from constructivism and recognizes that how children acquire knowledge is intrinsic, as it is affected by the

socioemotional context of their relationships with adults (Howe et al., 2012). Beliefs of the capacity and ability of how children learn can impair or enhance this process (Bedel, 2012; Flores et al., 2011). The dynamic interaction of the ECE teacher with the child is guided by the teacher's view that the child actively constructs learning when provided appropriate opportunities and is facilitated by support, encouragement, responsive, and personalized relationships (Denham, Bassett, & Zinsser, 2012; Green, Malsch, Kothari, Busse, & Brennan, 2012; Martin & Loomis, 2013; Platz & Arellano, 2011). Constructivist theory recognizes that the relational climate not only affects learning, but influences the formation of personality, self-efficacy, and socioemotional competence (Gregoriadis & Grammatikopoulos, 2014; Heller et al., 2012)

This study acknowledges the philosophical and pedagogical contributions of Dewey, Locke, Pestalozzi, Montessori, Piaget, Vygotsky, and Malaguzzi to an understanding of early child development as an active, participatory, and constructivist process (Edwards, Gandini, & Forman, 2001; Lillard, 2008; Pound, 2014; Platz & Arellano, 2011; Tzuo, 2007). Constructivist theory relates to this study by exploring the epistemological beliefs of the participants and the relationship to their views of the young child and the role of the teacher. The purpose of the training component of the study is to present the constructivist philosophy and pedagogy of Maria Montessori and to review any changes of the teaching perspectives of the participants on how children learn, and of the importance of their interpersonal relationships with children.

This study recognizes the importance of understanding how children before school age are raised in this country. Many of the nation's children under school age spend some to most of their day in non-family center based care. Statistical estimates for

children less than six years old attending center based care range from 24.1% (Federal Interagency Forum on Child and Family Statistics, 2015), 57.4% (U.S. Department of Education, 2015), greater than 60% (Hillemeier, Morgan, Farkas, & Maczuga, 2013), to more than 80% (Abner, Gordon, Kaestner, & Korenman, 2013). Standards and regulations for the quality of the daily experience for the child are inconsistent (Crowley, Sangchoon, & Rosenthal, 2013).

Early childhood education (ECE) relates directly to a variety of developmental outcomes for the child that corresponds with quality. On average, ECE improves cognitive, language, and mathematic skills but the outcomes on social competence and behavioral self-regulation differ significantly according to the degree of quality. ECE that prioritizes academic performance over socio-emotional development is related to poor social and regulatory skills which are identified as necessary for successful school readiness, regardless of cognitive or language ability (Abner et al., 2013; Hillemeier et al., 2013).

Belsky and colleagues (2007) described findings from the National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network that provides data from its longitudinal study of the relationship between quality factors with children's developmental outcomes into young adulthood. Categories of measurements were academic achievement (including standardized testing of reading, vocabulary, problem solving, and mathematics), social skills, work habits, behavioral problems, teacher conflicts, and socio-emotional functioning. Compared with family daycare or in-home care settings, children's academic achievement was better in program based ECE. However, there was no consistent relationship between academic

achievement and the measures of social development and performance. These measures related directly with the interpersonal styles and patterns between children and teachers; those relationships that were congruent with positive parenting (that is, respectful, responsive, authoritative, etc.) correlated positively with successful social outcomes.

There is a relationship between the experience of a child in the home and in nonparental care settings. The quality of the home environment is predictive of socio-emotional outcomes of children (Heller et al., 2012). Another analysis of NICHD Early Child Care Research Network data found an exacerbating effect of increased problem behaviors, psychological disorders, poor school performance, and poor social skills for children from high-risk home environments who attend poor quality nonparental care (Watamura, Phillips, Morrissey, McCartney, & Bub, 2011). Factors related to the quality of the home environment included parent/child interactions (such as responsiveness and discipline practices), family experiences, demographics, parental stress, maternal depression, and single parent households. Importantly, high quality nonparental care that addressed the socio-emotional experience of the child mitigated the negative effects of a poor quality home environment. Importantly on the other hand, features of quality in the home seem to offset the deficits of poor quality in nonparental settings (Watamura et al., 2011). These findings were supported by another longitudinal study of the relationship of home circumstances and out-of-home care (Thorpe et al., 2011). Features of a poor quality home environment that were identified to impede child developmental outcomes included the socio-demographics of the household, poor maternal care practices, parental stress, and maternal mental health; these impediments were found to be offset by

focusing on behavioral and emotional support of the child (Stein, Malmberg, Leach, Barnes, & Sylva, 2013).

Identifying and understanding the predictive influences of family or non-family settings on a child's development is exceptionally complex. In addition to studying the features of a care setting and the characteristics of the home, other important factors include the dynamics of family circumstances such as changes in parental employment, finances, logistics of transportation, location of care settings, care options, and care availability and selection (Sosinsky & Kim, 2013). The common reality of many families is the need of nonparental care for their children and the many challenges of selecting an appropriate and affordable setting, leaving the possibility of limited choices for quality care (Huff & Cotte, 2013). For example, the pragmatic issues of a care setting's hours of operation, the work schedules of parents, and transporting a child may result in families having their child in multiple settings within a day or for different days. In these circumstances, the inconsistency of the child's experience results in an increase of problem behaviors and decreased prosocial behaviors (Morrissey, 2009).

Effects of non-parental care on child development. Yet regardless of this complexity and the variations of contributing factors, the findings on the outcomes of quality in non-parental care settings are consistently predictive of children's development across all domains (Sosinsky & Kim, 2013). A study of five state funded prekindergarten programs rated as high quality found one-year gains in vocabulary 31% greater than children in programs without state funding; 44% gains in math skills; and 85% increase in print awareness (National Institute of Early Educational Research, 2013). In these cases the increased effectiveness was attributed to the higher standards of quality that are

monitored in state funded programs. Quality ECE is predictive of educational achievement, socioeconomic status, and health maintenance; conversely, the American Academy of Pediatrics acknowledges that the negative effects of poor quality ECE impair these outcomes (Hillemeir et al., 2013).

The physical health of a child during the first five years is predictive not only of health into the adult years, but also of higher education, income, and general contribution to society (Crowley et al., 2013). Health status affects a child's readiness for learning and is positively correlated with socioeconomic family status, resulting in ethnic disparities for children in poor quality care and correspondingly poor health (Crowley et al., 2013); the United States is considered among the lowest of the developed countries in early childhood health (Rosin-Slater, 2015). Children in out-of-home care are more likely to develop respiratory problems and ear infections, which relate with increased learning difficulties (Abner et al., 2013). Health and safety of children in out-of-home settings are measures of quality that vary according to standards of monitoring, licensing, and administration that affect developmental outcomes (Crowley et al., 2013; Hillemeir et al., 2013).

Attachment theory. The early years of life are crucial to the child's emotional, psychological, cognitive, behavioral, physical, and social development. The quality and consistency of the relational patterns of the child and primary adults are respectively predictive of positive or diminished outcomes; these relational styles are formative of the child's subjective experience and establishment of identity (Bretherton, 1992). Bowlby extended Harlow's findings on the importance of intimate bonding during the early years of life and the developmental impairments that result when this is deficient (Cassidy,

1999; Suomi, 1999). Ainsworth's studies validated that socio-emotional security is a behavioral pattern of consistent responsiveness by the caregiver with the young child, and ambivalent, inconsistent, unpredictable, or absent behavioral responsiveness is predictive of psychological, social, and cognitive disruptions (Marvin & Britner, 1999). The attachment dynamics between the child and critical adults emerge as a secure or insecure personality which is largely shaped by the construct of an internal working model of self (Bretherton & Munholland, 1999).

The importance of secure attachment patterns for the optimal development of a child across all domains is especially impactful during the early years. Although a child's biological mother is statistically ideal for the establishment of a secure attachment, a secure attachment style can be developed by surrogate caregivers who are consistent in responsiveness and availability, referred to as alloparenting (Ferris-Miller, 2014). Alloparenting recognizes the importance of the relationship between teachers and children in non-home settings. A child who spends most of their waking hours in out-of-home care settings will be impacted by relationships with adults other than their parents (Gregoriadis & Grammatikopoulos, 2014). Caregivers that are responsive, sensitive, authoritative, attentive, and available will foster secure attachment styles that become internalized; unresponsive, insensitive, authoritarian or permissive, inattentive, and unavailable caregiver characteristics promote insecure styles (Larzelere et al., 2013; Rutter & O'Conner, 1999). Indeed, the fundamentally significant factor defining a young child's out-of-home care experience is the quality of adult-child relationships (Degotardi, Sweller, & Pearson, 2013; Rentzou & Sakellariou, 2011). This experience is impacted by the consistency and predictability of caregiver bonding and becomes more negatively

exacerbated by the multiplicity of caregivers which is often an indicator of poor quality

contexts with inconsistent schedules, the frequent use of substitutes, and high turnover

(Howes & Spieker, 1999). Other specific features that affect the ECE experience of the

child include the experience and education of the teacher, program and administrative

characteristics, facility and environment, and teacher pedagogy, practice, beliefs, and

view of the child (Bedel, 2012; Court, Merav, & Ornan, 2009; Dennis & O'Connor,

2013).

Within this societal and cultural environment is the historical and pedagogical

hypothesis of child development as a constructivist process, that is, the young child as an

active participant and antagonist of their unique interaction with their particular

environment rather than a passive unfolding of their genetic predisposition or recipient of

an extrinsic didactic shaping (Court et al., 2009; Platz & Arellano, 2011). The

pedagogical perspective of ECE as either predominantly teacher-directed or child-

centered has different organizational, instructional, and interpersonal realities (Tzuo,

2007). The traditional didactic, teacher-directed educational model is often applied within

ECE settings where the young child's learning is mediated strongly by socio-emotional

interactions and relationships and does not respond well to these authoritarian demands; a

constructivist model is more sensitive to the child's socio-emotional needs as

fundamental to cognitive development (Dodd-Nufrio, 2011).

The foundation of the child's experience is the quality of relationships. The

patterns of socio-emotional experiences are the phenomenological reality of the young

child, and in the absence of the child's primary source of bonding this is exaggerated for

the child in an out-of-home context. Socio-emotional development is considered the

bedrock of all other developmental domains; the success or impairment of a child's cognition, physical and behavioral functioning, and communication abilities are inextricably tied to socio-emotional processes (Green et al., 2012).

Importance of the Problem

As previously described, the contemporary reality of raising children involves the services of out-of-home programs that assume responsibility for much of the child's waking day. The program's purpose, experience, education, pedagogy, and philosophy will affect the child's day to day experience of learning and development. The consistency of the caregiver/teacher that functions as a supplement if not surrogate for the home family is important in the young child's emerging personality (Rutter & O'Conner, 1999). Therefore, the motivation of an individual to commit to this role is crucial for the child's stable experience (Thomason & La Paro, 2013; Thorpe et al., 2011). Rhodes and Huston (2012) point out that not only does a quality and motivated ECE workforce improve the comprehensive development of children across all domains, but has a critical impact on society as a whole; indeed, the skills and awareness of an individual child as part of a democratic community begin in the early classroom (Thayer-Bacon, 2011). The correlation of ECE and health outcomes in adulthood is highlighted by the direct relationship of poor quality early childhood experiences with increased teen pregnancy and abuse of alcohol and drugs (Muennig et al., 2011). In this perspective health can be defined as not just the absence of illness, but the observable and subjective psychological, emotional, cognitive, and social conditions of an individual that contribute to the formation of personality, motivation, and an overall quality of life (Surmach & Piecewicz-Szczęsna, 2014).

Personality characteristics such as sensitivity, responsiveness, patience, compassion, and care for others are a necessary but not sufficient feature of the ECE teacher (Vorkapić, 2013); the predominant dynamic is the ongoing qualitative interactions and relational patterns between teacher and child (Degotardi, 2010; Rentzou & Sakellaraou, 2011). Although academic and other cognitive abilities are important for children's learning, during this stage from birth through four or five years the child's socioemotional development is more significant as a foundation to nurture the child's inherent curiosity, motivation, autonomy, and social awareness which are necessary precursors to successful academic performance (Heller et al., 2012).

ECE teaching practice. Quality early experiences are predictive of successful social, behavioral, academic, psychological, and health outcomes (Alexander, 2014). These experiences in out-of-home programs are directly related to the consistency of best practices by ECE teachers. Best practices are a function of the knowledge base, education level, and pedagogical beliefs of the ECE teacher; for example, the perception and interpretation of the teacher-child role (Howe et al., 2012). Specific training in developmentally appropriate practice (DAP) positively impacts these relationships and in turn the socioemotional experiences of the young child (Alexander, 2014; Jisu & Neuharth-Pritchett, 2010).

With respect to the poor regard of the importance of early childhood out-of-home programs, seen as "daycare," ECE teachers are typically untrained in and unaware of DAP (Degotardi, 2010; Fenech, Sweller, & Harrison, 2010; Rentzou & Sakellariou, 2011). The American Academy of Pediatrics emphasizes the significance of DAP as emotionally supportive for the young child, and that poor quality relationships and

interactions impair future school success, with overall negative effects (Hagan, Shaw, & Duncan, 2008). Inadequately trained, educated, motivated, and compensated ECE teachers have a lifelong critical impact on the child (Thorpe et al., 2011) and ultimately on society (Rhodes & Huston, 2012).

Results of a meta-analysis of studies emphasize that an ECE teacher's educational level is not itself a predictor or indicator of teacher quality; far more important are interpersonal skills, sensitivity, and responsiveness for young children, an authoritative teaching style, and a constructivist view of children's learning (Early et al., 2007). Denham et al. (2012) emphasized the importance of ECE teaching that is focused on supporting and facilitating the young child's emotional competence. This is a slow process of the child in learning self-regulation of behavior, expression, and communication in order to develop an intrinsic understanding of self and others. Indeed, ECE has a significant effect on the transition of the child into kindergarten public education and the subsequent socio-behavioral outcomes, particularly in student/teacher relationships, social skills, and problem behaviors; the socio-emotional preparation of quality ECE successfully addresses these outcomes (Wildenger & McIntyre, 2012).

Reflective and responsive personal qualities are the essence of a teacher providing best practice (Thayer-Bacon, 2011). Reflective teaching includes an ongoing awareness of the subjective appraisal of the teacher-child dynamic, with evidence-based knowledge and evaluation of a child's developmental status (Lockhorst et al., 2010). The teacher of young children should be aware of the immense responsibility as a surrogate for the child's family in an out-of-home environment for the greater part of the child's waking day. Training for the ECE that encourages humanistic personality traits helps to develop

recognition of this important role (Ritblatt, Garrity, Longstreth, Hokoda, & Potter, 2013; Vorkapić, 2013). The purpose of the effective ECE is not to follow an adult-directed regimen of routines and lesson plans but to develop a holistic understanding of the unique developmental characteristics of the young child; effective ECE is consistent with an authoritative, constructivist perspective of the teacher-child relationships (Howe et al., 2012; Platz & Arellano, 2011).

Montessori Pedagogy

The Montessori approach to ECE is a comprehensive social environment for the individual child to development autonomy with the self-control, responsibilities, and emotional regulation necessary within a community of others. This approach recognizes the challenging dynamic between the practical assertion of teacher control and structure with the promotion and opportunities for the child's freedom, choices, and decisions (Tzuo, 2007). Thus, the child's freedom of choice is tempered by the order and structure of routines, practices, expectations, and environmental design that are monitored and maintained by the teacher (Rambusch, 2010).

The ultimate measure of successful ECE is the child's transition into primary education, which is predominately indicated by emotional regulation and social skills more so than academic or cognitive abilities alone; in this respect the social-centered environment of a Montessori program cultivates and prepares the child for what is considered higher learning (Donahue et al., 2013). The methodology of the Montessori curriculum fosters executive functions through several pedagogical principles which expand upon the intrinsic curiosity of the young child and its correlate of epistemological learning, that is, active acquisition of knowledge (Boulmier, 2014; Lillard, 2008). These

principles are incorporated into the design of the materials and classroom environment, the purpose of a specific activity, the presentation of a lesson, and the monitoring of the child's choices and behaviors. The principles are intended to maximize the successful learning of the child with the goal of self-directed engagement and discovery.

The curriculum design and sequence progresses from concrete examples to increasingly abstract concepts; from simple to complex; isolation of skills required for completion; inherent features that optimize successful learning through self-evident correction, that is, control of error (Dore, 2014; Lillard, 1996, 2013). The organization of the environment and the selection of materials are purposeful, arranged and chosen for the particular developmental characteristics of the individual child. Each activity is identified by the developmental skills necessary for successful learning, and the Montessori teacher's knowledge of the scope of the curriculum materials adjust and refine the selection according to the profile of the child.

A lesson is a carefully conducted presentation of an activity, with the teacher modeling the appropriate sequence of steps necessary for revealing the activity's purpose. This sequence is a visual frame of reference for the child, step by step, embedded in memory from beginning to end, as an example of the entire cycle of work for that given activity for the child's to attempt to replicate. Thus the child is encouraged to practice and repeat the lessons according to their interest. The teacher maintains a record of the lessons that are presented, practiced, and eventually mastered. This record depicts the individual child's process of learning across the areas of the curriculum and their corresponding developmental domains (Boulmier, 2014; Lillard, 1996, 2008).

Two key principles of teacher behavior that are distinctive to Montessori practice involve skills of observation for each child's performance: intervening versus interfering, and teacher facilitation versus teacher direction (Lillard, 2011a). Consistent with constructivist theory, the child maximizes learning by active exploration, manipulation, and discovery. Following an initial lesson presentation, the teacher role is to observe the child's patterns of interest and motivation to engage in that particular material. One of the purposes of encouraging the child to work individually is to assist in developing attention and concentration; therefore the teacher is to be mindful of interrupting the child's focus. Intervention may be necessary to facilitate the child's proper use of materials, or question if the child would like a repeated lesson presentation, but the teacher is to remain careful not to unnecessarily interfere with the child's learning process (Lillard, 2008). Contrary to the traditional authoritarian teaching role, the authoritative presence of the Montessori teacher is to facilitate the child's construction of knowledge rather than by following or imitating directives (Dore, 2014). This approach enhances the child's self-efficacy and autonomy in their learning, and avoiding the child being expected to simply comply or become dependent on the teacher (Montessori, 1994).

Montessori principles regard learning as a process of holistic development (Bone, Cullen, & Loveridge, 2007; Tice, 1991). Montessori pedagogy and philosophy are especially effective to address a comprehensive approach to the development of the whole child, that is, socially, cognitively, physically, and psycho-emotionally (Dodd-Nufrio, 2011). Lillard (2008; 2011b; 2013) and Lillard (1996) describe the principles of this approach and how they apply to the unique and particular characteristics and abilities of the child according to chronological and developmental stages. These principles

include an understanding of the curriculum as a vehicle for bridging the connection between teacher and child and for the child to construct their learning in a guided, supportive environment.

Development in the major domains of cognition, behavior, communication, and socialization are inherent within the Montessori curriculum areas. The curriculum is the vehicle for the child's social, emotional, and intellectual growth. It assists the child's learning of respect for others, politeness, conflict resolution, communication, and personal care, as well as cognitive, language, academic, and physical development. The curriculum design recognizes the unique and important developmental needs, interests, and abilities of young children, and provides a balance of learning opportunities.

The children are free to interact with a wide variety of developmentally relevant learning materials, from practice with dexterity, coordination, and discrimination skills to language, mathematics, concept formation, and cultural arts and sciences (Lillard, 2011b). Classrooms are designed as a purposeful place for children, prepared and arranged to facilitate their successful learning, independence, safety, and comfort. Room plans promote visual contact, flow of movement, and a balance of space for both social and individual activities. Program materials are directly accessible to children to select according to their individual preferences and abilities, fostering imaginative thinking, allowing curiosity and exploration, decision-making and discovery, and to promote responsibility and self-regulation (Lillard, 2008). The environments are attractive and organized without being over-stimulating, enhancing the child's motivation and appreciation of aesthetics. The display of materials is individualized to isolate specific

skills necessary for orderly and sequential development, and to assist in learning concentration, successful task completion, order, and self-direction (Boulmier, 2014).

Montessori program materials are arranged into the following classifications (Lillard, 1996):

Practical Life materials allow practice of everyday activities such as pouring, cleaning, and sorting while developing concentration, coordination, order, independence, equilibrium, and refinement of small and large muscle control. These skills provide a foundation for further academic success;

Sensorial materials refine the use of the senses in differentiating color, shape, size, weight, form, taste, smell, sound, tone, and texture. This promotes preparation for the perceptual and physical skills necessary for reading and writing, and for concepts of mathematics, geometry, algebra, and abstract thinking;

Mathematics materials provide a visual and kinesthetic experience of quantity and symbols while preparing the child for the operations of addition, multiplication, subtraction, and division;

Language materials present concrete experiences of the alphabet, phonetic sounding of letters, word construction, writing, and reading, encouraging comprehension, vocabulary development, articulation, and expression;

Art, Geography, Science, Music and Movement materials allow the child to expand a range of interests and to develop cultural awareness, creativity, and self-expression.

Montessori teacher training. Montessori pedagogy incorporates those best practices of other learning models and constructivist philosophies within a unique and

sophisticated structure (Donahoe et al., 2013; Miller, 2011). The Montessori Method is an integrated application of the sociocultural constructivism of Vygotsky and the cognitive constructivism of Piaget for a holistic development of the child (Bagby & Sulak, 2010). Training of an ECE teacher in a Montessori model is a process of learning the specialized methodologies and principles, understanding the appropriate view of the child and role of the teacher, and applying the essential features of pedagogy and philosophy (Cossentino, 2009; Dore, 2014; Howell et al., 2013).

Fundamental to the training of a Montessori teacher is the importance of developing a characteristic of mindfulness, which promotes personalized and purposeful knowledge, attention, and relationships with each child (Lillard, 2011a; Lockhorst et al., 2010). Specialization of this training emphasizes the teacher role of nurturance and responsiveness, which directly affects the young child's development of identity, personality, values, and social competence (Ferris-Miller, 2014; Smith, 2013).

The depth and range of Montessori teacher training is often reported as a personally transformative experience that results in the consistency of reflective practice (Chu, 2012; Cossentino, 2009; Ritblatt et al., 2013). Montessori teacher training emphasizes the interpersonal transactions of teacher and child rather than applying and following a recipe-oriented curriculum, challenging the traditional hierarchical adult-child relationship. A Montessori environment facilitates an almost spiritual ambiance that centers on the qualities of respect, care, responsiveness, compassion, and sensitivity among all children and adults which facilitates development of moral character (Bone, 2008; Rambusch, 2013; Smith, 2013). In this regard character development is central to the desired outcomes of an individual's social awareness and responsibility, ethics,

values, civics, and interdependence as a good human being in preparation for life; Montessori pedagogy recognizes that this development begins in the earliest years of life and is a primary role of education (Howell et al., 2013; Ludick & Waski, 2011). Maria Montessori was nominated three times for the Nobel Peace Prize and this reflects the humanistic principles of this pedagogy in a larger perspective as peace education (Baligadoo, 2014; Duckworth, 2006).

Issues of teacher training. There are three issues to consider in the training of teachers: models of teacher training; child development factors and their outcome measures; teacher characteristics and their learning measures. Each issue presents an important role in the design and content of the training component of this study. These issues will be discussed in the context of the relevance of the Montessori model.

Teacher training models. Important variables related to teacher training models include comparisons of training designs. Brown and Inglis (2013) studied the effectiveness of a didactic, direct teaching approach. Another model is a more individualized, practice-focused mentoring relationship (Chu, 2012), while Downer et al. (2009) utilized a web-based series of interactive teacher-child scenarios. La Paro, Maynard, Thomason, and Scott-Little (2012) incorporated a video review process that recorded vignettes of ECE teachers in classroom settings and applied a series of reflective critique. The typical format for teacher training is periodic in-service modules. Within this format Howe and colleagues (2012) compared three methods of teacher training and found that consultants' onsite observations were more effective in changing teacher practice than traditional workshops or reading of assigned material.

Training programs that provide certification for Montessori teachers typically incorporate a combination of models, including didactic presentation and lecture, participatory demonstration, video review, reading, and written assignments; however, the predominant method involves an internship component with mentoring (Carey, 2010; Chu, 2012). Within that context of mentored application, practice, and feedback the teacher's understanding of pedagogy is observed and refined (Cossentino, 2009; Lillard, 2008).

Child development factors. Measurable factors of child development that relate to this study evaluate the performance of children with activities and materials, including motivation, self-directed behavior, exploration, and problem solving (Platz & Arellano, 2011); specific developmental domains reviewed are cognitive, language, social, self-regulatory, and mathematic skills (Hillemeier et al., 2013). Children in Montessori programs show consistently positive outcomes in academics, social, and motor development (Dore, 2014), as well as evidence of curiosity, self-control, emotional regulation, building of character, and interpersonal ability (Boulmier, 2014). Rathunde and Csikszentmihalyi (2005a) compared two groups of middle school children and found a higher intrinsic motivation, affective expression, and maintained level of interest in those from Montessori versus non-Montessori environments. In another study using the same sample of children, Montessori children had a greater social interest, rated their teachers and school experience more positively, and were more likely to refer to other children as friends (Rathunde & Csikszentmihalyi, 2005b). Social and attentional skills were more efficient in a Montessori program compared with a traditional curriculum, as well as school readiness for primary school (Kayili & Ari, 2011). Lillard and Else-Quest

(2006) compared Montessori to non-Montessori children at five and 12 years of age with the Montessori children of both age groups showing statistically significant advantages in positive character traits, classroom community engagement, standardized test scores in reading and mathematics, social cognition, and awareness of and concern for fairness and justice.

The sensory engagement of the child with materials that are designed to isolate developmental skills and the methodology of a sequential cycle have been successful for addressing the learning difficulties of dyslexic children (Pickering, 2013). The individualized, respectful, inclusive, and personalized nature of the Montessori approach and the isolation of skills in materials design are especially conducive to the effective learning of children with special needs (Iwanowski, Stengel-Rutkowski, Anderlik, Pilch, & Midro, 2005). The visual-spatial experience and organization of language lessons has been particularly successful in young emergent readers at risk for learning disabilities (Zascavage et al., 2012). A Montessori classroom is highly active with spontaneous individual movement; children in non-Montessori preschool environments were found to be more sedentary with increased overweight and obesity than Montessori preschools (Byun et al., 2013).

Within the structure of the curriculum and the child's active engagement in the cognitive, perceptual, and behavioral involvement, the sophistication, purposefulness, and precision of the Montessori model addresses developmental factors that improve neurological development as evidenced by improved executive function, motor control, planning, decision making, problem solving, and memory (Gilder, 2012). As described earlier, the purposeful arrangement of the environment, the design of the materials, the

organization of the curriculum, and the methodology of teaching all contribute to the development of these executive characteristics (Roemer, 2013).

The individualization of learning that is central to Montessori teaching allows the child to select and explore activities which support the practice of order, coordination, concentration, and independence; these principles promote the intrinsic establishment of essential mental processes. The curriculum materials are concrete representations of abstract concepts that the child physically manipulates; Maria Montessori said that the hand is the tool of the mind (Montessori, 1994). Montessori pedagogy emphasizes learning by doing (Farné, 2005). This Piagetian principle of sensorimotor, preoperational, and concrete operational learning immerses the child in a multidimensional experience which promotes a range of skills: eye-hand coordination; small and large muscle manipulation; refinement of movement and balance; pincer grasp; language and vocabulary; awareness of quantity, seriation, categorization, and tracking; brain bilateralization; one-to-one correspondence; cause and effect; conservation of volume; physical properties of objects; and depth perception (Gilder, 2012). The processes of exploration, practice, and discovery that are inherent in the active use of the materials reinforce the child's attention, decision making, problem solving, and memory (Howell et al., 2013; Treffinger, Selby, & Isaksen, 2008).

The areas of the Montessori curriculum isolate respective skills while providing an interaction of concepts across their divisions, and the sequence of lessons allows a succession of preparation for increasing complexity. For example, the presentation of lessons follows a protocol of left-to-right and top-to-bottom which are the principles of reading and writing, and the manipulative activities help to refine the child's use of the

fingers and the pincer grasp. The fine motor development that is prevalent in a

Montessori program positively correlates with increased attention and concentration

(Stewart, Rule, & Giordano, 2007). The child practices with variations of quantity,

grouping, deletion, and sequencing as preparatory to mathematic skills of addition,

subtraction, multiplication, and division before introducing any numeric symbols (Dennis

& O'Conner, 2013). The math skills of children in a Montessori program were advanced

by the equivalent of one school year compared to equivalent children in a traditional

classroom (Saracho & Spodek, 2009). The Montessori approach is especially rich in the

development of language, including comprehension, articulation, vocabulary, and

grammar, as well as the social, cognitive, and emotional functions of language (Sterling-

Honig, 2014). The unique phonemic-based Montessori language curriculum establishes

the child's early awareness and practice of the sounds of the home language prior to their

alphabetic symbols, and the child learns to write before learning to read using three

dimensional alphabetic letters as pictures of sounds (Lillard, 2008).

 The engagement in selected activities promotes the child's imaginative play

which supports preparation for language and literacy (Soundy, 2003), as well as cognitive

skills of conceptualization, visualization, and creativity; these skills were more developed

in children in a Montessori classroom as compared with a traditional classroom

(Besançon & Lubart, 2008). The Montessori science curriculum integrates language and

mathematics along with executive skills, imagination, and creativity (Hall, 2011).

Dohrmann, Nishida, Gartner, Lipsky, and Grimm (2007) studied children that attended a

Montessori program from pre-kindergarten through fifth grade and a matched group that

did not; when they were followed into high school the Montessori group of children had more positive math and science performance.

Teacher characteristics. Relevant teacher characteristics and measures that reflect successful learning are promoted in the definition and principles of developmentally appropriate practice (DAP), particularly as identified by the National Association for Young Children (NAEYC) as best practices (Alexander, 2014). They include maintaining positive relationships with children; curriculum knowledge and implementation; cooperation with colleagues and administration; respectful communication with parents; preparation and maintenance of the physical environment. Effective teachers exercise reflective practice by regular observation of children and the classroom environment and ongoing personal critique, individualized attention to children, and emotional availability and responsiveness (Chu, 2012).

Early childhood settings are predominantly social environments and ECE attitudes and beliefs regarding children are known to affect teacher-child relationships and developmental outcomes of children (Flores et al., 2011), and the epistemological beliefs of the teacher are related to the effectiveness of the children's learning (Bedel, 2012). This social emphasis recognizes the importance of the patterns of teacher-child relationships, and the corresponding attachment response of the child (Gregoriadis & Grammatikopoulous, 2014; Rutter & O'Conner, 1999).

The role of the Montessori teacher as grounded in the view of the child supports the relational patterns for secure attachments of children, fostering their self-efficacy, resilience, and a confident internal working model of self with others (Boulmier, 2014). Characteristics of the Montessori teacher are especially nurturing and responsive (Ferris-

Miller, 2014), and the inherent nature of Montessori pedagogy promotes highly personalized instruction of the child (Donahoe et al., 2013). This pedagogy is based on respect and is the frame of reference for the teacher as a behavioral, social, and emotional model for the child, and in turn for the child's learning of respect of self and others (Huxel, 2013; Rambusch, 2010).

Overall, the Montessori teacher identity is distinctively authoritative, avoiding overly demanding authoritarian or excessively unstructured permissive roles of more traditional models (Larzelere et al., 2013). This authoritative perspective balances the inherent tension between teacher structure and control with the child's drive for unrestrained freedom (Tzuo, 2007). The Montessori teacher provides and facilitates opportunities for the child's exercise of autonomy within a social setting, shaping the child's choices and decisions for successful outcomes as a process for learning self-regulation and intrinsic motivation. Bandura's work with social cognitive theory recognized the significance of imitative learning, especially of young children (Henson, 2014). The Montessori teacher understands that young children learn by observing and imitating behavior of others, recognizing the importance of the teaching role as a model (Boulmier, 2014).

Qualitative Issues of Teacher Training

Issues that relate to this proposed study address the qualitative nature of ECE teacher characteristics, their knowledge base of Montessori pedagogy, and the empirical application of relational interactions with children. Reflective practice has been shown to increase teacher sensitivity to young children's needs (Ezell, 2013; Ferris-Miller, 2014; Flores et al., 2011). This study proposes to discuss, model, and monitor the development

and application of these practices with a group of teachers in order to facilitate more responsive relationships with children and a greater awareness of their personal views, behaviors, and subjective experiences as teachers. There are significant principles, concepts, and features of Montessori pedagogy and philosophy that are considered core elements in teacher training (Dore, 2014; Kayili & Ari, 2011; Lillard, 2011b; Smith, 2013). This proposed study will incorporate these elements in the training protocol of the teachers as an essential frame of reference for reviewing reflective practice. The training model that will be used intends to apply a predominately mentor-teacher relationship as (Chu, 2012; Downer et al., 2009), while including techniques from other models such as consultation, interactive workshops, and reading assignments (Howe et al., 2012); as well as didactic instruction (Downer et al., 2009).

Shortcomings and Strengths of Research

The study of identifying the relationship of ECE characteristics, knowledge, and practice with quality child outcomes is inherently complex, largely because of the diverse range of contexts, individual variation, and methods of measurement (Fenech et al., 2010; Thomason & La Paro, 2013). Howe and colleagues (2012) found the challenges of evaluating the effectiveness of professional development within constructivist curricula especially complicated. Characteristically, most research lacks conclusive generalizability due to difficulty of longitudinal designs and small sample sizes (Brown & Inglis, 2013; Chu, 2012; Court et al., 2009; Degotardi, 2010; Ezell, 2013; Howell et al., 2013). Court and colleagues (2009) discussed the limitations of relying on personal narratives from which to assess outcomes, which on the other hand presents challenges of selecting reliable and valid instruments or procedures (Thomason & La Paro, 2013).

Fenech and colleagues (2010) described the lack of precision and sensitivity to the nuances of teacher characteristics and their relationship to high or poor quality outcomes; they found greater consistency of determining low quality features but brushed too broad a stroke in order to usefully sort out the significant features of higher quality programs.

The shortcomings of interpreting findings are compromised by research designs that do not have comparative control conditions (Ezell, 2013), particularly when addressing the persistency in changes of ECE characteristics or practice over time; that is, how change is intrinsic versus contextual from the time of the study (Heller et al., 2012). Conclusions of studies have been criticized over the provincial nature of researching single sites or programs, yet similarly confounded by inconsistent measures across locations due to contextual features, such as experience and education of ECE teachers or variations in curriculum implementation (Howe et al., 2012). Thomason and La Paro (2013) also found interfering variables of ECE teacher prior experience and education on interpretation of results. Ishimine and Tayler's (2014) review found a consensus of studies that identified the relationship of ECE quality and enduring developmental outcomes, including those in language, numeracy, and overall socio-emotional development. However, these relationships are not necessarily causative or distinct; they occur in the complexity of contextual and family factors that can be difficult to validly research.

In the challenges of conducting research on these complex topics, a longitudinal component adds to the strength of a study's findings and applications (Fenech et al., 2010). In addition, it is often difficult to organize control conditions which leaves within-subjects comparisons more realistic (Howe et al., 2012). The use of standardized

instruments with reliability and validity help to minimize the subjective ambiguity of identifying and measuring teacher characteristics and their relationship with child outcomes (Alexander, 2014; Ezell, 2013). Alexander also utilized successful intervention models that emphasized reflective experiences for teachers to improve their practices, including review and critique of video recorded interactions. In order to sustain positive changes in teacher characteristics and developmentally appropriate practice, Ezell (2013) emphasized the importance of a well-structured, literacy focused curriculum.

Methodological Critique

There are design features from prior studies that apply to the proposed research, given some of the constraints as previously described. Eisenbrey (2013) implemented an organized curriculum as the framework for ECE teachers to improve characteristics, epistemological knowledge, and practice. This study measured these changes using a standardized rating instrument with a pre- and post-test design, as did other researchers (Fenech et al., 2010; Heller et al., 2012; Howe et al., 2012). The effect of mentored training with a Montessori curriculum on child outcomes also used a pre- and post-design after a six-week period (Kayili & Ari, 2011). These design features will be incorporated into the proposed study.

An ECE teacher is challenged to apply best practices in a demanding environment. ECE teaching is a highly specialized role that relies on a variety of interpersonal and intellectual skills for effective teaching and child outcomes (Ezell, 2013). Eisenbrey (2013) identified features of a quality ECE program and teacher characteristics, and others have emphasized the greater importance of ECE teacher motivation and relational sensitivity than curriculum or methodology (Rentzou &

Sakellariou, 2011; Thomason & La Paro, 2013). This differential presents an importance of relevant qualitative and quantitative research. Fenech et al. (2010) found that the selection of instruments to collect data that represent qualitative features can be affected by subjective reports or biases. Therefore, the measures that are used in studies should be sensitive to reflect the respective concepts or characteristics of interest.

Research Questions

1. After participating in specialized training in Montessori pedagogy, what changes will be observed and/or expressed in ECE teacher's constructivist views of how children learn?

2. After participating in specialized training in Montessori pedagogy, what changes will be observed and/or expressed in the level of importance ECE teachers place on establishing personalized relationships with young children as part of their teaching role?

3. Based on behavioral observations, after participating in specialized training in Montessori pedagogy, how will ECE teachers change their interactions with children in the following areas: a) responsiveness, b) intervention versus interruption, c) facilitation versus teacher direction?

Chapter 3: Methodology

Aim of the Study

This study intended to explore the experience of educators in a Montessori early childhood program regarding their perception of their teaching role and their views toward young children's learning. The aim of the study was to improve the quality of the teacher-child relationship by applying principles and practices of Montessori pedagogy.

Qualitative Research Approach

According to Creswell (2009), a qualitative design is appropriate for a topic of social or human concern. This approach aligns with Creswell's framework of a social constructivist worldview that is meant to arrive at an understanding of the area being studied as experienced by the individuals and of the meaning the experience has for them in its context. The specific strategy of inquiry was the case study method. This method applies to an in-depth exploration of a process or the experience of individuals, and a collection of data within a specified period of time. A case study method is particularly useful for research with limited sample size (Boyd, McDonough, Rupp, Khan, & Bodfish, 2011; Boyd, Tuckey, & Winefield, 2014); this approach is also appropriate for idiographic inquiries into the subjective experience of individuals undergoing personal change such as with psychological issues, medical conditions, or behavioral patterns (Möller & Nyman, 2005; Wanden-Berghe, Sanz-Valero, & Wanden-Berghe, 2011; Wright, 1998). Gilgun (1994) advocates for the case study method to explore effects of social intervention within the context of reality as interpreted by individuals. A case study design was used in a similar inquiry to the proposed research which examined the effects of in-service ECE training on teacher developmentally appropriate practice (Brown &

Inglis, 2013). These conditions are relevant to this proposed study and support the rationale to use a case study method.

Intended outcomes from a qualitative research approach are to improve the understanding of young children by teachers in an early childhood education program and to increase the quality of the relationships with the children as perceived by the teachers. A qualitative research approach is appropriate to this study as a way for the researcher to understanding the meaning of the intended training experience from the view of the teachers. This approach addresses a similar issue that Alexander (2014) studied regarding the inconsistencies between teachers' understanding about young children and of their teaching role with developmentally appropriate practice; the proposed study directly informed the teachers of these issues in order to encourage the reflective understanding of their subjective experience of teaching as a result of the training. This qualitative approach affected the types of questions and the collection of data based on the nature of the researcher's personal interactions with the teachers. The exchange of information was shaped and modified by the individual's responses, discussion, and subjective disclosure within the context of their experience. The analysis of data reviewed specific sources of information and searched for patterns of concepts, themes, or issues in order to arrive at a meaningful understanding of the training experience from the teachers' point of view.

The study is consistent with several characteristics of a qualitative research approach as described by Creswell (2009). The study was in the natural setting of an ECE program. The researcher was the key instrument in collecting data. There were multiple sources of data, including observations, interviews, narratives, and personal journals. The study used an inductive process of data analysis that organized and interpreted the data

into increasingly conceptual themes. There was an emphasis on the meaning of the experience to the participant teachers. The research design emerged as the study proceeded in order to adapt to any changes. The theoretical lens for this study was centered around the Montessori model and a constructivist perspective on child development. This study was an interpretive inquiry into the pertinent issues, and intended to provide a holistic, comprehensive account of the complex factors involved.

Participants

Consistent with the purpose of the study and the research questions, the participants in this research were four ECE teachers currently employed at a Montessori early childhood program in Florida that is owned and operated by the researcher. The teachers had the option not to participate in the study, without any repercussions. Seven teachers were invited to participate in the study; one teacher declined, and the other two teachers initially agreed but resigned prior to beginning the training due to reasons unrelated to the study. Of the four teachers who participated, Teacher 1 is a 50 year old female; Teacher 2 is a 33 year old female; Teacher 3 is a 24 year old female; and Teacher 4 is a 30 year old female. Because this case study design intended to explore the experiences of the participants within the context of the ECE program, it was appropriate to utilize a convenience sampling method of the teachers in the school setting. Convenience sampling is an effective technique to investigate the in-depth experience of individuals in a particular context such as receiving medical treatment, modulating their stress response, or developing behavioral strategies for psychological disorders (Boyd et al., 2011; Boyd et al., 2014; Möller & Nyman, 2005).

The setting for the study was an ECE program that follows the Montessori pedagogy and enrolls children between the ages of 10 months to six years. Consistent with a Montessori principle of mixed-age grouping, children are assigned to a classroom according to their chronological age and developmental ability; the preprimary group is from 10 months to three years, and the primary group is from three to six years. The ratio of teachers to children is 1:5 in the preprimary group and 1:8 in the primary group. The program is open weekdays from 7:30 am to 5:30 pm. Some of the children are enrolled for a few hours a day and some are enrolled for the entire day. The day is organized into a series of experiences for the children that includes classroom individualized lessons, snacks and meals, outdoor play, and small group activities.

In addition to their differing ages, the participants varied in their teaching experience, education level, and length of employment on the study site. None of the participants had any prior formal training in Montessori pedagogy. The researcher has Montessori teaching certification as well as a Master's degree in Montessori Education. Each participant was assigned to a respective group of children according to scheduled hours.

The activities of the study were conducted by the researcher. These events consisted of scheduled daily observations for various elements of the participants that were representative of teacher interactions with children at different segments of the day. The process of the study included weekly training sessions from April 1, 2016 to April 24, 2016 (see Appendices B & F) in accordance with the daily experience of teaching. Data collected included scheduled observations, interviews, daily journals, and personal narratives. The researcher interviewed each participant individually prior to and at the

conclusion of the training series. Each participant was expected to maintain daily journals describing their experience throughout the period of the study. Each participant wrote a personal narrative that reflected their view of their teaching role and of the features of early childhood development to be presented at the beginning and conclusion of the training series. Collectively this data was expected to reflect the changes of the participants' view of their teaching role and their understanding of early childhood development during and after completion of the training series. Each source of data was not expected to conclusively present information that would be sufficient, and each source had characteristics that enhanced the strength or clarified a weakness to the meaning of the participants' experience. The strength of each type was to provide a format of authentic and individual expression and a forum to respectively indicate the process of changes. The weakness of each type of data was the potential misrepresentation of information by the participant as fabrication, exaggeration, inhibition, or other distortion.

Data Collection Tools

No established instruments were used to collect data in the study. The process of the study included weekly training sessions from April 1, 2016 to April 24, 2016 (see Appendices B & F) in accordance with the daily experience of teaching. Each participant was observed by the researcher according to a schedule that represented the various segments of the daily routines. These observations were recorded in writing by the researcher with an observation protocol described by Creswell (2009) that separates objective and subjective information (see Appendix G). The researcher interviewed each participant individually prior to and at the conclusion of the training series. The interview

session was privately conducted as an open-ended discussion guided by the interview

questions in Appendix C and recorded in writing by the researcher. Each participant was

expected to maintain daily journals describing their experience throughout the period of

the study. A notebook was provided to each participant for this component. The

participant was asked to reflect on a significant episode with a child that occurred that

day and write their thoughts as guided by the instructions in Appendix E. The journals

were submitted at the conclusion of the training period. Each participant wrote a

narrative (see Appendix D) at the beginning and conclusion of the training series that

reflected their view of their teaching role and of the features of early childhood

development.

Collectively this data was expected to reflect respective changes after completion

of the training series. Each source of data was not expected to conclusively present

information that would be sufficient, and each had characteristics that enhanced the

strength or clarified a weakness to the meaning of the participants' experience. The

strength of each type was to provide a format of authentic and individual expression and

a forum to respectively indicate the process of changes. The weakness of each type of

data was the potential misrepresentation of information by the participant as fabrication,

exaggeration, inhibition, or other distortion.

Procedures

The procedures of this study were intended to provide sufficient information that

would answer the research questions regarding the effects on the practice, views, and

understanding of the participants receiving specific and comprehensive Montessori

training in an ECE program. The study began by sending an email message to each

teacher with a brief description of the study and an invitation to meet with the researcher in person to discuss voluntary participation. The teacher was asked to reply by email indicating their interest or disinterest to learn more about the study. This procedure intended to minimize any perception by the teacher of obligation or coercion to participate.

All seven teachers indicated an interest to discuss the study with the researcher. A meeting was arranged with each individual teacher for the researcher to present the purpose, procedures, and expectations of the study, including the scheduled days of training and consent to participate (see Appendices A & B). The researcher emphasized that participation was entirely voluntary, that a participant may withdraw from the study at any time, and that there would be no penalty for non-participation or withdrawal. Following the explanation of the study and the expectations of participation, one teacher declined due to concerns of family demands that would prevent her consistent commitment.

The researcher scheduled a baseline interview with each participant guided by specific questions (see Appendix D) to gather information relevant to the research questions. The participant was asked to provide a baseline written narrative within 48 hours that is relevant to teaching experience (see Appendix D). Beginning with the day of submitting the narrative the participant was expected to maintain a daily journal until the conclusion of the study that described their personal experiences related to the research questions (see Appendix E).

Appendix F presents the training schedule and curriculum which occurred weekly for four weeks. During each week the researcher observed each participant during their

scheduled teaching hours. Observations of participants were recorded in writing (see Appendix G). The researcher maintained notes during the process of the training sessions that reflected the mood of the participants, the degree of motivation and involvement, the topics and content of discussions, and the researcher's overall perception of the training process. Two teachers resigned from the school after the first week of training; their resignations were unrelated to the study.

After the completion of the four-week training series the researcher conducted a final interview with each participant (Appendix C) and requested a written narrative to be submitted within 48 hours (Appendix D). Each participant was asked to submit her (all participants were female) daily observation journal. The data collected during the process of this study were reviewed and analyzed accordingly.

Data Analysis

Following the conclusion of the training series all of the collected data was organized chronologically by data type, that is, interviews, narratives, observations, journals, and training notes. The data was read thoroughly multiple times to develop a sense of the meaning contained in the documents. Data was triangulated from the multiple sources of information to identify converging themes. A coding process was applied as patterns of themes emerged from specific data and identified into more general categories, both within the data of an individual participant across time and among the participants as a group. These categories defined the themes that reflected the qualitative findings of the study. The coding process was used to generate a narrative description of the process of the study and its results. This narrative was further analyzed for the interpretation of the study and its findings, exploring what was learned from the study,

recognizing any applications or implications, and consideration of new questions that may arise.

Ethical Considerations

The predominant ethical consideration related to the potential coercion implemented by the researcher or perceived by the participant as applied to their respective roles as employer and employee. This included the participants potentially misrepresenting their written and/or verbal information. Throughout the study as well as in the consent agreement and in the initial interview the researcher emphasized the entirely voluntary expectation of participation, and the anonymity of any data. The researcher also emphasized the importance to the study of the collected information as accurate, honest, and credible. The researcher clarified to the participants there would be no negative consequences of any sort for non-participation.

Other ethical considerations for the study related to issues of participant confidentiality. This concern applied both within the context of individual disclosures and what was revealed in a group setting. An early theme of the training was about professionalism and how confidentiality is expected in the teaching role regarding information about colleagues, administration, children, and families. The researcher emphasized to each participant that confidentiality would be respected at all times in the process of data collection. Similarly, information in the data analysis and subsequent dissertation writing and dissemination was presented anonymously; at no time was a participant referred to or identified by name or recognizable characteristic. Data remained in the sole possession of the researcher and maintained in a locked cabinet. The researcher was aware that as a case study method there was an expectation of trust in the

sharing and revealing of information, particularly in psychologically or emotionally sensitive disclosure.

Trustworthiness

The researcher applied reflectivity throughout conducting and analyzing the study in recognizing the inherent bias of her experience, education, and philosophy in pursuit of the research questions. This self-reflection was considered part of the mentoring and training protocol to reinforce the researcher's early childhood pedagogical and developmental knowledge. Within this awareness the researcher attempted to withhold or minimize her biases in the initial stage of data collection.

In order to address the reliability of the study the researcher maintained documentation of the procedures for data collection through the research period. The researcher reviewed all the collected data and identified themes from patterns of the information. The primary strategy for assessing the study's validity was triangulation of the data. Triangulation was inherent in the study by incorporating the several data sources and analyzing their convergent themes or patterns for corroboration.

Potential Research Bias

The researcher admits bias in the fundamental purpose of the study due to her professional history in the field of early childhood education and as a strong advocate of quality non-parental care for young children. Her frame of reference for ECE as well as all interpersonal relationships is Montessori pedagogy and philosophy, which she asserts has guided her life. This bias might have been conveyed in the course of this study, particularly in the conducting of the training sessions. Consequently, the researcher attempted to manage this bias mostly by a careful analysis of data.

Limitations

      Several factors may contribute to the limitations of this study. Above all, the small sample size will compromise the validity of the findings. The relatively short training period may not accurately provide sufficient information or experience for significant change. Resulting from the small sample size this study was not sensitive enough to determine the possible confounding individual features of the teachers, such as education levels and disciplines, ECE experience, and age. Any findings may arguably apply only to the studied location and not be generalizable to other settings. Lastly, the participation of the teachers and the content of their information may have been disingenuous or confabulated due to the employer-employee relationship.

Chapter 4: Results

The data used to analyze the results of the study came from several sources. All of these sources conveyed subjective information from each of the participants and the researcher over the four weeks of the study as guided by the respective open-ended topics or questions. As a qualitative study the process of analysis proceeded from gathering specific information from multiple sources and triangulating it into increasingly abstract themes or concepts that converged from patterns (Creswell, 2009).

Sources of data included an initial interview conducted by the researcher with each participant individually (Appendix C) and initial narrative questions that each participant was to answer in writing (Appendix D). This initial information was collected prior to the commencement of the training sessions. A final interview and final narrative were presented to each participant at the conclusion of the training sessions asking the same information. The initial and final versions were compared by analyzing their data for emerging themes or concepts that reflected changes relative to the weeks of training.

The other sources of data were daily journal entries written by each participant (Appendix E), observations of the teacher-participants conducted by the researcher (Appendix G), and notes written by the researcher during the training sessions. This data was organized and analyzed sequentially according to the correspondent four weeks of training. The pre and post information was reviewed with the weekly sequence data and analyzed accordingly.

Interviews

Patterns of information collected from all four of the initial interviews emphasized the participants' love for children, for example, "I love that both the child

and I learn from each other. I like to see their growth and their abilities unfold"; "Children are precious"; and "I've always wanted to be a teacher." Participants expressed views of their teaching role as imparting their knowledge to the children, for example, "I love the ability to shape young minds because their beginning is very important and to help them go far"; and "Children learn from adults who care." Participants described their recognition of the child's cognitive abilities, for example, "Children are very smart if we give them encouragement and not compare with other kids." All participants recognized the tendency of young children to imitate others, for example, "They learn by what they see the adult is doing"; "We have to be careful what we do"; "Children copy from one another"; and "They listen, they are watching you, they hear all that goes on around, they learn from what they see us do."

These patterns were synthesized into larger themes that reflected the participants' somewhat romanticized appreciation of children and view of their dependence on adults. The theme of teaching and learning emerged as a didactic process between the directive teacher and the receptive child. A consistent theme was the emphasis of the importance of academic learning, particularly reading, writing, and mathematics.

The final interviews revealed changes of emphasis as compared with the initial interviews. For example, all four participants included more attention to details of individual children rather than generalized responses. Their expressions of their interest in teaching identified the pleasure of relating to specific children in the school, for example, "I am happy to feel so close to him now; it seemed he did not like being with me when he first came here"; and "She is so happy to see me when she comes in the morning. When she was on vacation for a week I missed her a lot." All participants

explained the learning of children by describing their particular interests and achievements and recognizing appreciation of how much a child has changed, for example, "It is very rewarding for me as a teacher to see how he has learned so much since he has been here"; and "It is important that she recognizes her name in writing, that she is more independent, and that she cleans up after herself." Academic abilities were still considered important for children to learn, for example, "Math is important because it is necessary for life"; and "Being good in school will help him go above and beyond in life." The participants verbalized an understanding of the Montessori materials as a result of their training, for example, "Now I know the lessons on the shelves are not just for playing"; "I could see how the Practical Life work would help her in writing"; and "I was always insecure with the activities; it feels good now to know what the work is for." This promoted more facilitative rather than directive interactions with children to identify the developmental purpose of an activity, for example, "I knew how to suggest the Red Rods for him to learn counting"; and "He is so different with me now that I can show him lessons and not feel like I am just always correcting him."

A theme that emerged from an analytic comparison of the initial with the final sources was a clear depiction of children's constructive learning; learning as an active result of children choosing and exploring activities. Mastery is a result of the child's concrete experiences rather than being taught. The theme of a holistic recognition of children's social and communication abilities was consistent with all participants in addition to the importance of academics, for example, "This is not like the public schools; here they are learning how to get along and to express themselves"; and "I know he is smart but when he throws a fit he acts like a toddler and he can't explain why he is

upset." Particular acknowledgement was given to the child developing self-regulation, for example, "Punishment doesn't work. It makes both me and the child feel bad and does not help them control themselves." This was not the child just learning compliance or obedience, but the outcome of the child's emotional confidence and trust, for example, "I learned to be more sensitive to his feelings and understand why he gets so angry. I talk to him instead of trying to use time out"; and "Trust and security help them become more independent."

Narratives

The first narrative question was "Describe your experience as a teacher of young children," and the third narrative question was "Describe how you see yourself as a teacher." The responses of the participants to these two questions were consistent with their verbal replies to the first question of the initial interview, that is, the love of children and the teacher as the dispenser of knowledge. For example, "I enjoy being with children and seeing them learn"; "I feel it is an important responsibility. What we do here affects them for life"; "Children seem to connect with me easily"; and "To be a teacher is scary and exciting at the same time, especially when you have to deal with different ages at the same time; but it's easy when I do it full of love and care about all the children".

The second narrative question was "What do you think is the experience of children being in care settings outside their home?" Responses to this question emphasized the importance of providing a safe and comfortable setting for children, and to have loving relationships for children who are missing their parents, for example, "Children need to feel loved"; "Consistency is important"; "We should support a child who is crying when their parent leaves"; "I think the kids will be fine outside their home;

in a school they will learn to be independent"; "Every child should feel special. We have to help them when they are missing their parents." The patterns of these initial narrative replies suggested themes that were similar to the initial interview answers: the care for children was a rewarding experience for the teacher/participant; and it is the teacher's responsibility to provide a loving, adequate, and responsive place for a child.

The third narrative question was, "Describe how you see yourself as a teacher." The answers revealed similar replies as in the final interviews that related more to individual children than to general concepts. All participants described satisfactory experiences with particular children in response to the first narrative question, for example, "My experience with her is so special. I feel she trusts me and that's why she listens to me"; and "I really love my job because of how they make me feel." Participants recognized how the features of the Montessori environment promoted a positive experience for young children, for example, "The classrooms are beautiful"; "The children enjoy the materials; they are motivated without us having to tell them what to do"; "The routines help the children learn and keep them well behaved"; and "Now I know why it is important for us to have everything so prepared." Participants conveyed a reflective description to their role as a teacher, for example, "I am more patient"; "I try to understand why she misbehaves instead of just reacting to her"; "He really makes me think about the right way to reach him"; and "I have learned to talk in a low voice looking at her eyes." The themes that emerged from the patterns of changes between the initial and final narratives revealed a greater sensitivity to the individual child's differences and the importance of understanding their needs rather than expecting compliance. Teaching was reflected more as a vocation than a job, and the feeling of

competence as a teacher was a rewarding motivator. Teaching was appreciated as a special skill to be proud of and not just taking care of children.

Journals

Participants were instructed to maintain a daily journal by describing an incident of a child that occurred that day, why it was meaningful for the participant to select, and what was learned in the process. However, none of the participants followed the expected format and instead recorded a more open-ended narrative. Each participant's journal differed accordingly.

One participant wrote daily for the four weeks about each of the five children in her supervision. She did not explain what was meaningful about her selections or what was learned; she focused on descriptive anecdotes. Her descriptions included recognizing their habits and characteristics, for example, "He is a good eater and I love feeding him. He is growing up so fast"; "He loves to play hide and seek and is just a happy, wonderful boy"; "He is so smart and kind, just seeing him playing with the dolls you can see how loving and caring he is"; and "She is very quiet and easy going and hardly ever cries."

Another participant wrote one narrative each week about her five children expressing her appreciation of the child, for example, "In this short time she has been with us I have grown so attached to her. I was amazed the first time I saw her. So tiny and fragile yet so strong, active, and mature for her age." Other entries followed changes in the child over the four weeks, summarizing their weekly behaviors and achievements, for example, "He has learned to say his numbers"; "He stood up by himself today and took his first steps"; and "We have been observing her eye contact after we noticed that she does not follow strongly with her eyes."

Another participant wrote randomly about a single child from the group of her eight children, selecting a different child each day. This included commenting on the child's improvements, for example, "He is much more confident this week"; and "She learned to complete the Hundred Board on her own." The other participant wrote daily about the same individual child for four weeks, for example, "Today he handles all the transitions very well"; and "I don't know why he gets so upset; it hurts when he yells at me."

Despite the inconsistency in the format of these sources, patterns of information did emerge that were synthesized into larger themes. Some patterns of personal journal content were congruent with those from the initial interviews and narratives, particularly their love and appreciation of teaching and the importance of helping the children's learning. In addition, all participants expressed concerns about behavioral issues with some children, particularly regarding noncompliance and inappropriate social interactions.

The themes that emerged from these patterns related to teacher-participant management style; corresponding expectations of children's behavior; and overall goals for children's outcomes. Over the four weeks of training all of the participant's journals became more reflective, for example, "My experience with this child was not pleasant; a child who bit me, clawed other children. But above it all the totally racist comments of their mother about me, which hurt my work; I worried it would affect the perception of my boss. I feel very bad, very bad week"; "Sometimes I ask to myself, what can I do to be a most wonderful teacher? How I can help my students? How can I contribute in their lives positively?"; and "I feel a big responsibility because I'm a regular teacher. I feel I'm

not prepared to work with children with special needs. I hope to help and meet the expectations of the parents."

Although the patterns and themes remained consistent, that is, all entries addressed the topics and categories as described, the emphasis and interpretations reflected changes that paralleled the accumulation of training sessions. In particular, the themes progressively aligned toward the principles of the Montessori training regarding the role of the teacher, the view of the child, and the teacher's performance with the child. For example, "I try to educate and teach respect to their teachers and friends"; and "Every day is a new story to tell; human beings are incredible. The behavior and the emotions of the pre-primary level children's education are very complex. They are copying their parents, sisters, brothers, teachers, and friends. They are like big sponges and absorbent sponges; the little giants, winners of the attention." Themes elaborated on an awareness of the child's experience, for example, "The most important thing right now is that he can feel safe and love from other children and teachers"; "My reviews indicate that all my children learn about colors, farm animals, vegetables. And they do sensorial and practical life very well. I'm so proud for that and they make me very happy, because they are learning almost on their own"; and "In arts class I gave more attention to him. He loves painting, and he was free to paint however he wanted. He chose the blue and green color. He used different forms, very creative, and was helping his fine muscle".

Concern and care for the children was common, for example, "Another week one of my very special students cried every time her dad dropped her off. In this week she changed her attitude positively. I am very pleased because this week her father came surprised with the change of attitude of his daughter. She did not cry, placed the lunchbox

in the right place and said goodbye to her dad; he was surprised, smiled and said, okay, I'm losing the love of my daughter but I feel very happy because I see her growing."

The theme of management style as relating to children's behavior shifted from an authoritarian perspective to a more authoritative one; expectations of children's compliance shifted from categorizing, labeling, or blaming the child's noncompliance to a broader understanding of the child's socioemotional condition; goals for the child shifted from a focus on achieving benchmarks to facilitating the child in developing self-regulation and competence. Many entries were extensive and insightful, for example, "My unique concern is about one boy that he is not responding in the classroom. He scratches and bites all of his friends. I gave to him special attention and gave him advanced work. He started to count 1 to 40 with me. I realized he was bored and was not being mean"; and "One week of satisfaction and concerns; on the one hand a small group that participated in the Montessori teaching but on the other hand, my little Giant, making mischief; lentils spilled on the floor, running inside. During this week he was biting his friends again. My concern is the imbalance this is bringing to the group and worry that children may begin to copy this behavior. To my satisfaction the group paid attention to me to learn new vocabulary in the circle time and review shapes, the alphabet song, and numbers." Participants conveyed themes of increased self-review, for example, "I don't get all caught up in her drama anymore. I tell her I am sorry she is mad but she must wait until her friend is finished."

Observations

The researcher recorded her observations of each participant weekly according to her description and reflection on the three Montessori principles of responsiveness to the

child; purposeful intervention with a child versus insensitive interruption; and facilitation of children's learning rather than direct teaching. These principles were discussed in the training sessions not as categorical events but more along a subjective continuum, emphasizing a reflective approach for each teacher/participant to review her experiences and interpretations from an ongoing basis for continuing improvement. Concurrent information by the researcher was weekly notes recorded during each training session that identified topics of discussion, described teacher's responses and interests, and highlighted topics of debate.

Over the four weeks of the study the behavioral observations of the four teacher-participants progressively reflected an improved understanding and application of the three principles as they were addressed and discussed in the training sessions, that is, in responsiveness, in intervention versus interference, and facilitative learning versus direct teaching. The initial responsiveness of the participants to children was typically formal, for example, "She waited over five minutes to return after he sat where he was supposed to; she seems disconnected"; "He was crying at least ten minutes before she went to him. She told him he has to wait for the swing; it turned out he wasn't crying for the swing but had been bit by another child that she didn't see"; and "She reacted very impersonal to her questions and barely answered them." Over the next two weeks the participants became more attentive and available to the children, for example, "She has been more consistent with kneeling to the children's eye level"; "She went right to him when he called"; and "Her attitude is calmer when they are trying to get her attention." In the last week the participants remained sensitive to the context of the children's needs and demands, for example, "Her character is very much aligned with each child's

individuality. She shows genuine care and patience"; and "It is a very busy lunch time and she is all over the room tending to them asking for help. I did not see her ignore anyone or act frustrated."

In the first week all of the teacher/participants demonstrated interruption of individual children's work with little evidence of understanding the principle of intervention, for example, "She is constantly moving around the room and getting into the children's space without waiting or asking. It is as if she thinks it is her role to check on what the child is doing. I'm sure she means well but it is very imposing"; and "He has been working quietly by himself with the constructive triangles for over fifteen minutes and she just sat next to him and started showing the correct way to arrange them. He lost interest and got up. She called him back to put the work away. This was totally unnecessary." The next couple of weeks there were more episodes of the participants waiting before engaging with a child but still mostly interference, for example, "She began to kneel next to her but paused to ask if it was okay"; "It is as if she is randomly moving around the room from one child to the next. She is missing any cues of the child's concentration"; and "Wow! This is the first time I have seen her approach almost automatically, then pause, and actually walk away like she realized she did not have to involve herself." In the fourth week the participants displayed much more purposeful engagement with children who were appropriately working, and selectively becoming involved with those incidents of misbehavior or in anticipation of them. For example, "Today she sat in the observation chair for almost fifteen minutes and did not interrupt anyone. She only got up when he was about to go to his friend as if ready to join his work"; and "He was working with the Color Box III for a long time and started to

become distracted. She kneeled close to him and commented how proud she was he was working so well. She walked away and he returned to his work. This was great!"

The teacher/participants showed many examples of directive teaching in the first week of observations, for example, "She called everyone to circle time and showed them a lesson in the Number Rods and Numerals. She described every step instead of silently focusing on the steps. Then she asked the children to count the numeral or rod"; and "As she walks around the class she stops to sit and correct a child who is exploring the work but is still learning to master it. She probably thinks she is supposed to do that." As we discussed the concepts of directive teaching and facilitative learning during the training sessions, over the next two weeks the participants showed some understanding of this difference, for example, "She has not given any group lessons the past two weeks"; and "She was giving a lesson in the Bead Stair and he picked up the yellow bar and asked how many is it. She said, what do you think?" During the last week all participants showed more examples of facilitative learning than in the initial weeks, for example, "She has been consistent in following the lesson format of being a model for the child to copy. She encourages him to keep trying"; "He showed her the Teen Board he had been trying and asked if this is right. She answered if he would like her to show the lesson again"; and "I've noticed when a child asks her to help she always encourages them to become reengaged or sometimes will ask the child to ask a friend to help."

The triangulation of these sources revealed a convergence of specific writings, verbal explanations, and behaviors to support the expectations of the study as a result of basic Montessori training to improve the effectiveness of the teacher-child relationship that facilitates the child's holistic development. This convergence was most importantly

seen in the changes in the behaviors of the teacher-participants rather than in any written or verbal evidence. The particular behavior changes that demonstrated the effects of the training were from the researcher's observations of the teacher/participant's responsiveness, interventions, and facilitative learning as previously described. To reiterate, as observed all four participants increased their responsiveness, decreased their interference, and increased children's facilitative learning. Consequently, each of the three research questions was supported by the study's results.

Research Questions

Research Question 1. After participating in specialized training in Montessori pedagogy, what changes will be observed and/or expressed in ECE teacher's constructivist views of how children learn?

This was supported mostly by observed changes in teacher/participant interactions with children as related to positive increases in behaviors as presented in the third research question, and less so by any written or verbal expressions. As evidenced by the researcher's documentation of observations, all participants demonstrated increases in teaching behaviors that were consistent with constructivist principles of recognizing children's active learning processes, that is, a progressive increase in facilitative learning practices and reduction in directive teaching. These principles were consistently reviewed in the training sessions from topics of general philosophy, from discussions of how children learn, from presentations of lesson protocol, and from participant practice of lesson protocol.

Research Question 2. After participating in specialized training in Montessori pedagogy, what changes will be observed and/or expressed in the level of importance

ECE teachers place on establishing personalized relationships with young children as part of their teaching role?

Over the four weeks of the study, all of the sources of data reflected a consistent increase in the recognition of personalized interactions and relationships between the participants and the children. As described earlier, the content of the participant's answers to both the interview and narrative questions changed from a generalized view of the question to a focus on individual children. The participant's journals also progressed from generalized statements to appreciation of particular children. The researcher's observations of the teacher/participants' interactions with children over the four weeks of the study recognized increases in establishing and maintaining personalized relationships.

Research Question 3. Based on behavioral observations, after participating in specialized training in Montessori pedagogy, how will ECE teachers change their interactions with children in the following areas: a) responsiveness, b) intervention versus interruption, c) facilitation versus teacher direction?

Over the course of the study comparing the initial versus the final observation, each participant adjusted their teaching style according to the three respective areas. Each participant demonstrated more overall responsiveness to children, for example, attending to an upset child with sensitivity, or answering a child's question respectfully. All participants showed increases in differentiating their approaches to children as intervention, that is, informing or requesting the intent of the teacher to engage with the child who is working on an activity, for example, "Excuse me, can I show you how to complete these Constructive Triangles?", as opposed to unannounced imposition.

Similarly, all participants increased their teaching style as more congruent with facilitating the child's discovery or engagement rather than directives.

Chapter 5: Discussion

The findings of this study are consistent with the existing literature. The findings of this study generally supported the research questions in identifying changes of the ECE teachers in verbal expression, performance, and behaviors with children after four weeks of training in Montessori pedagogy and concurrent classroom mentoring. The first research question of the study stated: After participating in specialized training in Montessori pedagogy, what changes will be observed and/or expressed in ECE teacher's constructivist views of how children learn? The results of the study were unclear in finding changes in the teachers' constructivist views of how children learn. All of the four teacher-participants expressed the understanding in their initial interviews that young children learn primarily from observing and imitating adults, and from active experiences with concrete materials. From these descriptions the teachers conveyed an implicit understanding of constructivist learning. Yet in their initial written narratives (see samples in Chapter 4) the emphasis of their descriptions of the teaching role was traditional and directive, particularly with a focus on academic learning. Following the four-week training period in the follow up interviews there were minimal differences in the teacher's verbal expressions of constructivist views. However, there were notable differences in two other venues. From the researcher's observations as reflected from the samples in Chapter 4, there were changes of the teacher's behavior with children that reflected a more deliberate constructivist understanding; the researcher believes that these changes resulted more from the specific topics and concepts addressed by the third research question than by developing an explicit knowledge of constructivism. The other change was although the content was not notably different from the initial to the final

verbal interviews, the final written narratives did not have the traditionalist views of the teacher role as were in the initial narratives. To clarify, there was an initial disconnect between the teachers' understanding of the constructivism and its application in the classroom and that changed as a result of the professional development and reflections.

The findings of this study are consistent with the theoretical and practical structure of constructivism (Steiner, 2014; Thomas & Packer, 2013) as well as the appropriateness of reflective practice on teaching effectiveness and children's learning (Adagideli, Saraç, & Ader, 2015; Kılıç, 2015; Recchia & Beck, 2014). A pervasive theme of the training sessions, discussions, and mentored classroom interactions was the importance of the concept and practice of reflective teaching. Over the course of the study all four participants evidenced an increase in their understanding and demonstration of this introspective style. As shown from the samples in Chapter 4, their daily journals initially emphasized mostly descriptive accounts of events but increasingly expanded an interpretive, subjective component to their experiences; within the discussions of the training sessions over the four weeks the participants increased their expressions of self-awareness and review; and during classroom interactions with the researcher the participants increasingly applied thoughtful, purposeful analyses of their behaviors and reactions. This was an important outcome of the training process that was careful to maintain the perspective of qualitative teacher-child interactions against the potential of a recipe oriented methodology that led the child through the steps of a curriculum.

Thomas and Packer (2013) identified the importance of reflective teaching for effectiveness in ECE, particularly as a working concept for novice teachers. Reflective teaching inherently is consistent with constructivist learning and enhances the

socioemotional quality of the young child that the authors recognize significantly affect future developmental outcomes. Their design was similar to this study in how the authors developed their own reflective teaching model and in their data collection that included the subjective views of the teachers on their role with children and an emphasis on an analytic rather than descriptive evaluation of outcomes. Similarly, Westman and Bergmark (2014) utilized a qualitative data analysis in their phenomenological study of ways to strengthen ECE teacher effectiveness, using a collective depiction of the holistic, multidimensional understanding of their findings more than concentrating on individual experiences of the teachers.

The second research question stated: After participating in specialized training in Montessori pedagogy, what changes will be observed and/or expressed in the level of importance ECE teachers place on establishing personalized relationships with young children as part of their teaching role? This research question was not strongly supported by changes in either verbal expression or observed behavior of the teachers as seen from the samples in chapter 4 regarding the importance of establishing personalized relationships with children as part of their role. Yet the absence of demonstrable changes was not a reflection of the lacking of these respective characteristics in teacher-child interactions. Without exception each of the four teacher-participants displayed consistent emphasis of highly personalized and individualized relationships both at the beginning of the study and throughout its duration. Although this was not verbally expressed or identified by the participants, they maintained evidence of personalized styles of interactions with children seemingly unaffected by the training period. However, the importance of interpersonal relationships between teacher and child was a significant

theme underlying the training topics and discussions as reflected in the third research question.

Features of a qualitative ECE experience are grounded in the relational responsiveness and sensitivity of the teacher-caregiver. These features exceed the importance of other characteristics such as education level, curriculum, environmental setting, or credentials of the teacher (Huxel, 2013). ECE teacher training is most effective in promoting the child's optimal development when recognizing the dynamics of attachment and bonding in trusting, secure relationships (Bosmans, Braet, Heylen, & De Raedt, 2015; Bretherton, 1997). The present study supported the importance of socioemotional development in teacher training on improving the teacher-child relationship.

The third research question stated: Based on behavioral observations, after participating in specialized training in Montessori pedagogy, how will ECE teachers change their interactions with children in the following areas: a) responsiveness, b) intervention versus interruption, c) facilitation versus teacher direction? This question was clearly supported in the study's findings. Evidence of this question was solely dependent upon the observations by the researcher of any behavioral changes of the teachers in their interactions with children in three defined areas throughout their participation in the training period (see Appendix G). These areas are considered fundamental to Montessori philosophy, pedagogy, and methodology (Bagby & Sulak, 2010; Huxel, 2013) and were central to the content of the training sessions and discussions. Behavioral changes in teacher responsiveness, intervention v. interruption, and facilitation v. teacher direction were considered empirical evidence of the teacher-

participant's understanding and implementation of the respective concept. From the observations of the teacher-participants over the course of the training, all four demonstrated an increase in responsiveness to children, intervention as opposed to interruption, and facilitation as opposed to direction which is consistent with Montessori principles (Bagby & Jones, 2010). Therefore, the resulting improvement in the quality of teacher-child interactions as demonstrated by increased responsiveness, intervention v. interference, and facilitation v. teacher direction was anticipated

Interpretation of Findings

The meaning of these results suggests several interpretations. These results were anticipated in the design of the study and from the prior experience of the researcher. Regardless of the differences between teachers in educational level, experience, or personality the intent of the study was to present the particular pedagogy of Montessori ECE within the larger context of reviewing the role of the teacher and the view of the child. This study had the preconception of the relational quality between teacher and child as centered on and guided by the young child's socioemotional experience.

The use of pre and post data collection to study the impact on child learning focused on three domains that are consistent with this research: emotional support, classroom organization, and instructional support (Casbergue, Bedford, & Burstein, 2014). These domains are congruent with the principles and topics that were presented in the Montessori training, including teacher responsiveness, learning formats, reflective practice, and constructivism. Professional training was identified as important for effective teaching in the development of pedagogical knowledge, in clarifying the role of the teacher, and in the acquisition of reflective practice as a process of self-examination

(Adams-Kollitz, 2011; Bleach, 2014). A quasi-experimental design utilizing pre and post measures researched the influence of professional ECE training on teacher attitudes, behaviors, and sensitivities toward children (Başal, Özen, & Kahraman, 2015). The subjective experience of teacher's ECE effectiveness has been examined by interviews, open ended self-reports, and personal narratives (Broström, Johansson, Sandberg, & Frøkjær, 2014; Hall-Kenyon, Bullough, MacKay, & Marshall, 2014; McFarland, Saunders, & Allen, 2009). Recchia and Beck (2014) studied the impact of preservice teacher training in reflective practice on their understanding of young children's development and learning within a constructivist model. Qualitative designs of ECE effectiveness have incorporated subjective experiences, interviews, critique, reflective journals, didactic training, and self-evaluation as sources of data (Appl &Yorde, 2005; Shaila Banu, 2014; Balaban Dağal & Bayindir, 2016; Isikogu, 2007; Muñoz & Cruz, 2016). As in this study, these designs address issues of non-quantitative reliability, validity, and generalizability by the triangulation of multiple data sources into patterns and themes, and codifying them for analysis (Creswell, 2009; Isikogu, 2007; Peck, Maude, & Brotherson, 2015; Westman & Bergmark, 2014).

Implications of Findings

The immediacy of the study's findings directly applies to the research site by supporting the benefits of providing Montessori training to the teaching faculty to improve the quality of their relationships and performance with children. The overall positive findings of this study emphasize the significance of continuing education for the teachers in Montessori pedagogy and philosophy. Respectively, the absence of any

identifiable negative outcomes reinforces the appropriateness of providing such training for teachers regardless of their status.

As outlined in the introduction to this study, the impact of young children spending a large part of their waking day in out-of-home settings with non-family caregivers profoundly affects their development. The quality of this experience can enhance the socioemotional outcomes that are central to the child's holistic growth, learning, and development (Belsky et al., 2007; Degotardi et al., 2013; Denham, Bassett, & Zinsser, 2012; Heller et al., 2012).

The methodology of this study does not necessarily advance research design. The procedures used were adequate in their context and promoted support of the research questions. The restrictions of the design were reflected in the challenges of extracting measurable data from highly personalized, subjective sources.

Nonetheless, this study may offer attention to the exceedingly complex realities of the subject matter, that is, the matrix of early child development, out-of-home care settings, teacher qualities, pedagogy, philosophy, methodology, and professional training. Individually, each of these is a potential basis of study; together they are a staggering complication of research. From the small scale of this study other professionals may be motivated or inspired to review their own practices, and more specifically generate an interest in the Montessori approach to ECE.

Limitations

One of the limitations as speculated in Chapter 3 applies to this study. The foremost limitation was the small sample size; even in qualitative research sample size will affect outcomes. The relatively short training period did not appear to have limited

its outcomes on demonstrable changes. Any features of the participants such as education, experience, or age did not appear to confound the study. There was not any reason to doubt the veracity of the participant's written, verbal, or behavioral information. Although this study may be limited in its generalizability, the qualitative nature of the design and intent to conduct research in a natural setting support the particularity of its findings (Creswell, 2009).

Other potential limitations apply mostly to quantitative research. Lacking clearly identified independent and dependent variables, causation of the training sessions on the teacher-participant behavior cannot support its internal validity. As discussed above, external validity is similarly undetermined from a lack of generalizability. Validity and reliability of the assessment procedures were appropriate according to the qualitative methodology and analysis of the information within this design (Creswell, 2009). Statistical analysis was not conducted and not relevant.

Future Directions

Every young child deserves experiences that optimize holistic development for life-long success, happiness, and competence. Parents who find it necessary to utilize out-of-home care for their children deserve opportunities that provide these experiences. Early childhood education deserves to be respected as a professional career of immanent importance. It is not a cliché to recognize that young children are the society of tomorrow.

The effectiveness and quality of the educational system in the United States are questionable; the importance of early childhood development is only superficially acknowledged. A Montessori framework for child development and education offers a

significant and attainable model. This pedagogy challenges the traditions of ECE and invites an openness to maximizing both individual and collective potential of our children and our culture (Maskit & Firstater, 2016). More research such as this can provide the knowledge and incentives that can benefit us all.

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Appendix A

Consent Form

Consent Form

Consent Form for Participation in the Research Study Entitled "A Study of Changes in Montessori Early Childhood Teachers as a Result of Specialized Training"

Funding Source: None.

IRB protocol #: Exempt2016-02.

For questions/concerns about your research rights, contact:
Human Research Oversight Board (Institutional Review Board or IRB)
Nova Southeastern University
(954) 262-5369/Toll Free: 866-499-0790
IRB@nsu.nova.edu

Site Information:
53 N Old Kings Rd Ormond Beach FL 32174

What is the study about?
This study intends to explore the results of specific training of early childhood educator (ECE) training in Montessori pedagogy on the perspective of the teaching role and understanding of early childhood development.

Why are you asking me?
The researcher is requesting your participation in this study to understand if the principles of Montessori pedagogy will affect your views of yourself and of young children as a teacher. You will be asked to participate with five of your colleagues.

What will I be doing if I agree to be in the study?
If you agree to participate in this study, you will be expected to participate in a series of eight weeks of training scheduled for 22.5 hours each week. You will agree to be observed and videotaped in your teaching practices during your scheduled hours. You agree to provide the verbal and written information requested during interviews, discussions, and from personal reflections regarding your experiences of teaching during the study.

You have the choice not to participate in any aspect of this study at any time and understand that your withdrawal will not affect your position of employment.

Is there any audio or video recording?
There will be no audio or video recording of participants' in this study.

What are the dangers to me?
There are not any expected dangers or risks to your participation or choice not to participate in this study.

However, the procedures or activities in this study may have unknown or unforeseeable risks.

If you have any questions about the research, your research rights, or have a research related injury, please contact Ambar Chavez-Saleh Cipolloni, You may also contact the IRB at the numbers indicated above with questions as to your research rights.

Are there any benefits for taking part in this research study?
There are no direct benefits to participating in this study.

Will I get paid for being in the study? Will it cost me anything?
There are no costs to you or payments made for participating in this study.

How will you keep my information private?
All information obtained in this study is strictly confidential unless disclosure is required by law. Your participation will remain anonymous; your name, demographics, verbal or written contributions, or characteristics will not be personally identified in the written dissertation or any related reports. All collected data will be maintained by the researcher in a locked cabinet and kept for 36 months from the conclusion of the study. These records may be reviewed upon request by the IRB, regulatory agencies, or the dissertation chair adviser.

Use of Student/Academic Information:
No information will be collected from educational records for this study.

What if I do not want to participate or I want to leave the study?
You have the right to leave this study at any time or refuse to participate. If you do decide to leave or you decide not to participate, you will not experience any penalty or loss of services you have a right to receive. If you choose to withdraw, any information collected about you **before** the date you leave the study will be kept in the research records for 36 months from the conclusion of the study but you may request that it not be used.

Other Considerations:
If significant new information relating to the study becomes available, which may relate to your willingness to continue to participate, this information will be provided to you by the investigators.

Voluntary Consent by Participant:

By signing below, you indicate that
- this study has been explained to you
- you have read this document or it has been read to you
- your questions about this research study have been answered
- you have been told that you may ask the researcher any study related questions in the future or contact her in the event of a research-related injury
- you have been told that you may ask Institutional Review Board (IRB) personnel questions about your study rights
- you are entitled to a copy of this form after you have read and signed it
- you voluntarily agree to participate in the study entitled "A Study of Changes in the Practice of Montessori Early Childhood Teachers as a Result of Philosophical and Methodological Training."

Participant's Signature: _____ Date: _____

Participant's Name: _____ Date: _____

Signature of Person Obtaining Consent: _____

Date: _____

Appendix B

Training Schedule 2016

Training Schedule 2016

Week 1	04/01 Friday 6:00-8:00pm
	04/02 Saturday 9:00am-3:30pm
	04/03 Sunday 9:00am-3:30pm
Week 2	04/08 Friday 6:00-8:00pm
	04/09 Saturday 9:00am-3:30pm
	04/10 Sunday 9:00am-3:30pm
Week 3	04/15 Friday 6:00-8:00pm
	04/16 Saturday 9:00am-3:30pm
	04/17 Sunday 9:00am-3:30pm
Week 4	04/ 22 Friday 6:00-8:00pm
	04/23 Saturday 9:00am-3:30pm
	04/24 Sunday 9:00am-3:30pm

Appendix C

Participant Interview Questions

Participant Interview Questions

1. Tell me why you are interested in teaching?

2. Explain how you think children learn from ages 0-6.

3. Describe what you think is important for children to learn from ages 0-6.

Appendix D

Written Narrative Questions

Written Narrative Questions

1. Describe your experience as a teacher of young children.

2. What do you think is the experience of children being in care settings outside their home?

3. Describe how you see yourself as a teacher.

Appendix E

Personal Journal Instructions

Personal Journal Instructions

Every work day after you return to your home, take some time in a quiet, private setting

and write at least one page about the following:

1. Describe an episode involving a child today that was significant to you.

2. Explain why you selected this episode.

3. Explain what you learned from this experience.

Appendix F

Training Curriculum

Training Curriculum

Dates 2016	Topic
Week 1: April 1, 2, 3	
Friday	Montessori philosophy and principles
Saturday	Montessori philosophy and principles/ Pedagogy and methodology
Sunday	Pedagogy and methodology
Week 2: April 8, 9, 10	
Friday	Child development
Saturday	Child development/Practical life
Sunday	Practical life
Week 3: April 15, 16, 17	
Friday	Sensorial
Saturday	Sensorial/Mathematics
Sunday	Mathematics
Week 4: April 22, 23, 24	
Friday	Language
Saturday	Language/ Recordkeeping/observation/design
Sunday	Recordkeeping/observation/design

Appendix G

Observation Record

Observation Record

Description	Reflection
Responsiveness Intervention v. interruption Facilitation v. teacher direction	

Description: A factual account of the episode without personal views. Indicate date, time, and setting.
Reflection: Describe subjective understanding of the meaning of the episode.