AN ECOLOGICAL UNDERSTANDING OF TEACHER QUALITY IN EARLY CHILDHOOD PROGRAMS: IMPLICATIONS AND RECOMMENDATIONS

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This research examined whether or not relationships exist between preschool teacher quality and parent involvement as indicated by the Hoover-Dempsey and Sandler Model of Parent Involvement Survey. Additionally, the study also considered family income and child membership in special education as predictors of parent involvement. The survey instruments included the Early Childhood Environmental Rating Scale, Revised (ECERS-R) and the Hoover-Dempsey and Sandler Parent Involvement Survey. A total of 306 parents across 35 preschool classrooms participated in the study. Effect sizes, beta weights and structure coefficients from a series of multiple regression analyses measured the relationship between variables. A regression equation comprised of teacher quality, family income and child membership in special education was statistically significant in predicting parent school-based involvement. In the school-based involvement model the predictors teacher quality and child membership in special education accounted for a greater percentage of variance than did family income. Teacher quality demonstrated a small, negative beta weight but accounted for the greatest amount of variance among the three predictors within the school-based parent involvement model. A negative relationship between teacher quality and school-based parent involvement suggested that as teacher quality improved, parents reported less involvement in school-based activities and events. Findings for special education membership, however, demonstrated a reverse effect in the model and appeared to have a positive significant effect on school-based involvement of parents. The study contributes to the literature on the relationship between teacher quality and parent involvement in early childhood preschool programs.
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CHAPTER 1
INTRODUCTION

Existing research demonstrates the importance of early experiences, particularly the link between child participation in early childhood programs of high quality and long-term academic and social outcomes (Burchinal, Peisner-Feinberg, Bryant, & Clifford, 2000; Peisner-Feinberg et al., 2001; Pianta, La Paro, Payne, Cox, & Bradley, 2002). Teacher quality as a variable in student achievement is a critical issue in education and there appears to be general agreement that the teacher is an important variable in the success of a student (Clifford et al., 2005; Pianta et al., 2005). Additionally, current research identifies a number of factors as critical to the overall success of children in school, including parental involvement and the teacher (Baker, Denessen, & Brus-Laven, 2007; Fan & Chen, 2001; Xu & Gulosino, 2006).

The influences of a child’s home and family experiences are significant to the achievement and success of children in school (Flouri & Buchanan, 2004; Flowers, 2007; Knopf & Swick, 2007; Sheldon & Epstein, 2005). Numerous research studies cite parental involvement as a contributing factor in the academic achievement and social adjustment of their children (Ferguson, Ramos, Rudo, & Wood, 2008; Junttila, Vauras, & Laakkonen, 2007; Phillipson & Phillipson, 2007). Additionally, researchers consider parental involvement a remedy for alleviating many challenges in education including the achievement gap, early vocabulary acquisition, and general knowledge at school entry (Fan & Chen, 2001).

Prevailing beliefs in early childhood suggest that the family is at the core of efforts to meet a child’s needs (Bredekamp & Copple, 1997; Bridge, 2001;
Bronfenbrenner, 1999). Because a child develops within the environment of the family, it is necessary to create programs and practices in early childhood that provide continuity for a child entering the new environment of the prekindergarten classroom. Therefore, the family and the school serve as contexts for children’s development and learning. Although many consider maintaining a connection with the home and family best practice in early childhood, it remains marginalized in teacher quality evaluations and definitions.

In early childhood research an examination of the relationship between teacher quality and parental involvement represents a largely unexplored topic. Although there is evidence that both teacher and parent individually influence a child’s experience “most of the research does not seek to capture interactions among multiple dimensions of teacher quality, and as a result there are major gaps in the research that still need to be explored” (Xu & Gulosino, 2006, p. 347). Teacher-parent relationships affect student achievement, and a consideration of teacher behaviors that influence this relationship represent “the quality of teacher input. . . . Teaching is a dynamic process, and it is what teachers do, rather than static credentials, that should matter” (Xu & Gulosino, 2006, p. 346). Teaching behaviors serve as a dimension of teacher quality in the classroom with children. However, teaching behaviors that affect parent-teacher relationships, and consequently parental involvement, are largely unexplored in the existing research on teacher quality.

According to the ecological systems theory, environments for young children include multiple layers of places, people, and experiences (Bronfenbrenner, 1999). Best practices in the field of early childhood education reflect this idea and encourage a
strong connection, or continuity, between home and school. Parent involvement in preschools depends on the existence of natural continuity between home and school for young children. Preschools maintain continuity for children through uninterrupted experiences including shared values, beliefs, knowledge, practices, and a relationship between the teacher and parents (Bredekamp & Copple, 1997; Bridge, 2001).

The current study considers teacher quality and parent involvement as influences in children's school experiences and the unexplored relationship between them as another layer of influence. Additional research on the relationship between teacher quality and parental involvement during these formative years is necessary to consolidate efforts and resources for supporting the success and achievement of all children.

Parental Involvement, Teacher Quality and Educational Policy

Parental involvement and teacher quality mandates are prevalent in policy initiatives including the Goals 2000: Educate America Act (National Education Goals Panel, 1999) and special education policies through the recent updates to the Individuals with Disabilities in Education Improvement Act (IDEIA, 2004). Additionally, the No Child Left Behind Act of 2001 also promoted these two constructs as cornerstones of its legislation (NCLB, 2001).

Nationally, influential organizations such as the National Association for the Education of Young Children (NAEYC, 2005) and the National Parent-Teacher Association (NPTA, 2010) have taken strong positions on teacher quality and parental involvement. For example, NAEYC’s most recently published criteria for excellence in
early childhood programs includes one standard dedicated to teachers (Standard 6) and another standard dedicated exclusively to work with families (Standard 7). Standard 6 on the quality of teachers states that “teachers who have specific preparation, knowledge, and skills in child development and early childhood education are more likely to engage in warm, positive interactions with children, offer richer language experiences, and create more high-quality learning environments” (NAEYC, 2005, p. 11).

NAEYC Standard 7 for early childhood programs includes a provision encouraging programs and teachers work to with families to support young children. The standard states that relationships and partnerships with families are central to children’s early experiences, noting that

Children’s learning and development are integrally connected to their families [and programs must] establish trusting relationships with families based on mutual trust and respect, support and involve families in their children’s educational growth, and invite families to fully participate in the program. (NAEYC, 2005, p. 11)

The NAEYC standards for program accreditation provide a framework of best practices in school programs and many preschool programs nationwide follow them. These standards of quality are consistent with those outlined by the NPTA, which include multiple layers of involvement between parents and schools, partnerships between parents and teachers, and the importance of the relationship between parents and teachers (NPTA, 2010). At the school level standards such as those developed by NAEYC and the NPTA are part of many school-based plans to support children’s learning experiences and school success (Henderson & Mapp, 2002).
At the federal level, economic and continued program support for early childhood education focuses on high quality programs and practices in education. Recent funding for education through the American Recovery and Reinvestment Act of 2009 (U.S. Government, 2009) recognizes quality by including access to funding for schools that make improvements in teacher effectiveness through improved teacher quality, one of five guiding principles of the current administration’s goal to provide high quality of education for all children (U.S. Government). Additionally, the NCLB Act has influenced organizations such as the NPTA to promote continued integration of parent and family engagement into the law and to continue to strengthen provisions for parent involvement (NPTA, 2010). The emphasis on improved education through both teacher quality and parental involvement is evident in policy.

Background of the Study

Considerable evidence points to critical periods during early childhood when the environment can have long-lasting, positive consequences for children’s success in school and in life (Dunst, 2002; Bredekamp & Copple, 1997; Bronfenbrenner, 1999). For children who enroll in preschool programs the transition from home to school represents a disruption to the child’s family or community-based social interaction (Bridge, 2001). However, as research suggests, the influence of a child’s home and family experiences are significant factors in the achievement and success of children in school (Flouri & Buchanan, 2004; Flowers, 2007; Knopf & Swick, 2007; Sheldon & Epstein, 2005). School variables such as invitations for parents to become involved play a tremendous
role in how families become involved in their child’s education (Anderson & Minke, 2007; Green, Walker, Hoover-Dempsey, & Sandler, 2007; Pianta et al., 2005).

NCLB (2001), a reauthorization of the ESEA originally signed into law by President Lyndon Johnson in 1965, defined standards of quality for teachers of compulsory educational programs in the United States. Definitions of highly qualified teachers, according to the law, included requirements such as demonstration of content knowledge, college degree, and a state license or certification (Center for Public Education, n.d.). Although these standards do not directly affect teachers of noncompulsory, state-funded prekindergarten programs, many states have established standards for prekindergarten programs and teachers (Clifford & Maxwell, 2002) and many state standards reflect the current best practices promoted by NAEYC (NAEYC, 2005). The NAEYC guidelines for teacher quality include a consideration of qualifications, knowledge, and professional commitment by the teacher professional (NAEYC, n.d.). These standards equally emphasize the importance of high levels of professional knowledge and training specific to the field and the ability to apply that knowledge to classroom interactions, structure, and planning (NAEYC, 2005; NAEYC, n.d.).

A current understanding of teacher quality in early childhood education includes school and classroom variables such as the physical environment as well as teacher characteristics and teaching practices. One such perspective defines teacher quality through standard lists of qualifications such as certifications, preparation programs, and the successful completion of professional tests reflected in the NCLB Act (Borman & Kimball, 2005; Hill, 2002; Kimball, White, Milanowski, & Borman, 2004). For example,
qualifications can include degree or certifications held, years of experience, aptitude tests, or verbal ability (Hooks, Scott-Little, Marshall, & Brown 2006). Another perspective measures teacher quality through student outcomes and products such as test scores (Gallagher, 2004; Milanowski, 2004). In contrast, a process-oriented definition of quality reflects the behaviors teachers demonstrate in the classroom such as how they interact with classroom students (LoCasale et al., 2007; Hamre & Pianta, 2005; Harrison, Clarke, & Ungerer, 2007).

A process-oriented definition of quality measures the quality of teaching in the classroom as teacher behaviors including decisions teachers make regarding instructional and emotional support (Borman & Kimball, 2005; Hamre & Pianta, 2005; Pianta, 2007; Rimm-Kaufman, La Paro, Downer, & Pianta, 2005). This approach examines what teachers do through behaviors, language, and interactions with children in the classroom to carry out their goal of teaching.

Multiple Perspectives on Quality

Ideas about what constitutes teacher quality range from measurement of teacher qualifications to the evaluation of teaching behaviors (Harms, Clifford, & Cryer, 1987; 2003; Sylva et al., 2006; Warash, Markstrom, & Lucci, 2005). The range of definitions for preschool teacher quality reflect federal guidelines related to policy initiatives meant to improve the quality of children’s school experiences or on national policy positions developed by leading early childhood organizations (e.g., NAEYC, NPTA).

Definitions of teacher quality reflect two distinct categories. The first is a qualifications approach that includes static variables such as teacher degree,
certifications held, or teacher aptitude test scores. A second approach reflects a process quality approach. The process quality approach includes teacher behaviors that influence child learning (i.e., emotional climate, teacher-child interaction, language use, and instructional support provided). Teacher behaviors in the classroom influence student learning, and the degree to which this occurs is evident through a consideration of process quality that includes teacher-child relationships, teacher decisions about classroom instruction, and the overall emotional climate of early childhood classrooms (Blanton, Sindelair, & Correa, 2006; Hamre & Pianta, 2005; Pianta, Belsky, Houts, & Morrison, 2007). Additionally, teacher behaviors influence parental involvement, another significant variable in the child’s school experience.

Process Quality and Parental Involvement

The recognition of process quality as a component of teacher quality is a multidimensional and dynamic rather than a uni-dimensional and static construct. The dynamic and multidimensional nature of teacher quality is evident in teacher-parent relationships that are dependent on perceptions, attitudes, and perceived efforts of both members of the dyad (Caspe & Lopez, 2006; Hoover-Dempsey & Sandler, 2005; Wong & Hughes, 2006). Teacher efforts to establish a welcoming environment, share ideas about parental involvement, and create an environment that encourages parental involvement all support the teacher-parent relationship and positively influence parental involvement (Anderson & Minke, 2007; Phillipson & Phillipson, 2007).

Select studies examine how teacher and school behaviors strongly influence parental involvement in children’s school experiences (e.g., Green et al., 2007; Hoover-
Dempsey et al., 2005). For example, in the development of the Urban Teacher Selection Interview, a profile developed to distinguish extraordinary or star teachers from quitter/failure teachers, parental relations is one category of questions included on the profile (Haberman, 2005). Prevalent attitudes toward parents and families among star teachers reflected positive beliefs about “shared responsibility . . . respectful relationships . . . and perceiving of parents as partners” (Haberman, p. 202). Process quality, or teacher behaviors, appears to be a consistent influence over the child’s experience in the classroom. Although existing research addresses process quality in the context of direct work with children, the role of teacher behaviors as an influence on parent involvement remains unclear.

Parental involvement is a significant influence on the academic and developmental outcomes of children (Anderson & Minke, 2007; Dearing, Kreider, Simpkins, & Weiss, 2006; Epstein, 2001). Partnerships between families and schools positively influence academic achievement, social-emotional quality of life among children, and serve as a protective factor for children considered at-risk for school failure (Bridge, 2001; Caspe & López, 2006; Dryfoos, 2000; Flouri & Buchanan, 2004; Jordan, Snow & Porche, 2000). When parents are engaged in the school process in ways that are meaningful to them, this involvement leads to gains in student achievement (Knopf & Swick, 2007; Sheldon & Epstein, 2005; Xu & Gulosino, 2006).

Theoretical Underpinnings

The concept of overlapping spheres of influence which provides a framework for the complex and interwoven relationships between the home, the school, and the
community supports research connecting parental involvement to student outcomes (Epstein, 2001). Consistent with an ecological systems theory of development and growth, the overlapping spheres framework suggests that while students are at the center of these interactions, the various settings in which a child grows and develops interact and collectively influence the child’s learning and growth (Bronfenbrenner, 1999; Epstein). An increase in the frequency and quality of those interactions will bring the spheres closer together, thereby reducing the discontinuity produced by the introduction of a new school or classroom setting (Bridge, 2001). Greater continuity between the various spheres, represented as the home, school, and community, increases opportunities for children to experience success.

Early childhood teacher quality is complex and dynamic. It reflects an understanding that immediate settings influence growth and development, and also that it is possible for the child’s various settings to interact and act upon the child’s experience in new and unexpected ways (Bronfenbrenner, 1979). The potential influence of teacher behaviors on the parent-teacher relationship and consequently parent involvement demonstrates this point. Bronfenbrenner’s ecological systems theory suggests that interdependence exists between individuals and the various contexts that surround them throughout development (see Figure 1). The first level, or microsystem, reflects the inner-most set of influences the child interacts with such as the home, school, or childcare setting. The second level, or mesosystem, reflects the dynamics or the relations between the contexts of the microsystem.

Interactions between families and teachers that occur within the mesosystem have the potential to influence the parents and teachers. Most importantly, there exists
the potential of leveraging these interactions to improve children’s educational experiences.

Figure 1. Bronfenbrenner’s ecological system: Multiple influences in a child’s life influence development. These influences also have the capacity to interact with one another. From “Theories of Child Development,” by J. Trawick-Smith, 2003, Early Childhood Development: A Multicultural Perspective, p. 57. Copyright 2003 by Pearson Education. Reprinted with permission.

Early childhood programs have a long history of implementing interventions to support children’s development and school readiness through cooperation with families (Haskins & Rouse, 2005). The field of early childhood education reflects a philosophy that child development and growth occurs within a broad context of influences including both the home and school environments (Bredekamp & Copple, 1997; Bronfenbrenner, 1999). In a school setting, research recognizes the teacher as a considerable influence on the child’s experiences through both qualifications and teaching behaviors (Fryer &
Levitt, 2006; Hamre & Pianta, 2005; Wilkinson, 2005). In early childhood education, those behaviors fall along a spectrum of quality and demonstrate how teacher interactions with children are most crucial to the child’s success.

Studies demonstrate teacher quality and parental involvement as potential means to increase academic outcomes among children and to reduce the existing achievement gap for young children entering into school-age programs (Borman & Kimball, 2005). A multidimensional view of quality and an ecological systems theory of child development together set the groundwork for considering the multiple layers of influences in a child’s life. This perspective provides a foundation for acknowledging the teacher as an important influence on multiple levels for children during the earliest years of school. The relationship between teacher quality and parental involvement is one small facet of teacher process behaviors and becomes a more significant issue within these theoretical contexts (Xu & Gulosino, 2006).

Statement of the Problem

Although researchers have started to examine some teacher behaviors as one measure of quality including responsiveness to the child, teacher-child relationships, teacher language, and interactions between the teacher and child, considerably more work needs to be done to examine the multidimensional nature of how teacher quality affects children’s experiences in school. An understanding of the relationship between teacher quality and parent involvement could lead to more effective strategies to build and maintain relationships between teachers and parents and could contribute to the goal of supporting children.
There is ample evidence to demonstrate significant effects of teacher and parental involvement on the educational experiences of young preschool children and consequent policies and recommendations for practices to promote both in preschool programs. There is a lack of research investigating the dynamics between teachers and parents as a third level of influence on the child’s early school experiences and eventual academic and developmental outcomes. Several studies have explored the relationship between teacher quality and parental involvement (Bridge, 2001; Halgunseth, Peterson, Stark, & Moddie, 2009; Knopf & Swick, 2007, Xu & Gulosino, 2006). There have also been several additional proposals and recommendations to examine this intersection (Borman & Kimball, 2005; Bronfenbrenner, 1999; Fenstermacher & Richardson, 2005; Kochhar-Bryant, 2002). However, the relationship between teacher quality and parental involvement remains a largely unexplored topic in early childhood education.

The study reported herein explored teacher quality as a variable in parent-reported involvement practices among four different preschool programs located in Phoenix, Arizona. Relying on two sources of data, including the Hoover-Dempsey and Sandler model of parental involvement survey (1997) and the Early Childhood Environmental Rating Scale-Revised (Harms et al., 2003), the study determined what, if any, relationship exists between teacher quality and parent-reported involvement.

Purpose of the Study

The purpose of this study was to understand if variance in parent-reported involvement, as measured by parent perceptions about their role in their child’s education, parent perceptions of invitations for involvement and parent involvement
practices, could be attributed to teacher quality ratings. The study built on a multidimensional view of quality with an emphasis on teacher behaviors and interactions that influence parental involvement. The research may expand the field’s understanding of quality in prekindergarten programs.

Significance of the Study

Contributions of the current study to the existing body of literature on teacher quality are important for three specific reasons. First, the study examines teacher behaviors that potentially influence parental involvement practices. Second, it further clarifies early childhood education’s current conceptualization of quality for early childhood education teachers. Finally, it more clearly delineates the relationship between parental involvement and teacher process quality.

An examination of process quality among prekindergarten teachers makes possible the exploration of how teacher behavior contributes to overall quality and is an important variable in children’s school experiences. Those who work in the field may find this study useful as it may help them to better understand how it is possible to overlap efforts to create more meaningful and effective experiences for children in their preschool programs.

A complex relationship can exist between these two constructs, and the study explored whether a statistical relationship exists between teacher quality and parental involvement. The study considered the importance and unique philosophical foundation in early childhood education, including an ecological systems theory of development.
and growth, and considered whether teacher quality is relevant to parent-reported involvement practices.

Research Questions

Multiple settings in a child’s life overlap to influence the child’s growth and development. By answering the question, “To what extent, if any, does teacher process quality predict parent-reported involvement behaviors,” this study sought to understand the relationship between existing measures of teacher quality and parental involvement. Research questions include:

1. To what extent does teacher quality predict parent involvement?
2. To what extent do additional variables, including family income and child membership in special education, predict parent involvement?

Overview of the Methodology

A series of multiple regressions explored the relationship between teacher quality and parent-reported involvement data. The Early Childhood Environmental Rating Scale-Revised (ECERS-R) (Harms, Clifford & Cryer, 2003) and the Hoover-Dempsey and Sandler model of parental involvement survey (Hoover-Dempsey & Sandler, 1997; 2005) provided data for analysis. Additionally, family income and child membership in special education represented independent variables. The ECERS-R assesses quality of teachers and programs in the areas of space and furnishings, classroom routines, interactions between teachers and children, activities available for children, and general program structure (Harms et al., 2003). The Hoover-Dempsey and Sandler model
includes a parent survey that rates a range of motivational factors that influence parent involvement including invitations for involvement, ideas about their role in the child’s education, and actual involvement behaviors at school and at home (Hoover-Depmsey & Sandler, 2005). The participants included 306 parents of preschool students enrolled in 35 classrooms within four school districts in and surrounding Phoenix, Arizona. Participants completed paper and pencil surveys and participating school districts provided existing classroom ECERS-R scores.

Delimitations of the Study

Delimitations of the research include geographic location, age range served by prekindergarten programs, use of specific teacher quality assessment measures and time frame. The study limited participating preschool classrooms to center-based programs using the ECERS-R as a measure of quality and located within the greater metropolitan area of Phoenix, Arizona. Parental participation was limited to those parents or guardians with one or more child enrolled in the participating preschool classroom.

Limitations of the Study

Limitations include the use of self-reported involvement data and voluntary participation from both parents and eligible centers. Surveys provided parent-reported involvement and demographics data. Any inaccuracies in self-reports may have impacted study results. Prekindergarten center and parent participation was voluntary.
Any refusals to participate could be considered a limitation to the study (Mertens & McLaughlin, 2004). Additionally, the study did not control for:

1. Differences in the communities of the targeted geographic variances of the prekindergarten programs.
2. Differences in home environments and family demographics.
3. Individual prekindergarten environmental climates with regard to parental involvement practices.
4. District level parent involvement policies and practices.
5. Broad generalization of results across all state-funded preschool programs.

Definitions of Key Terms

Critical to any discussion of complex constructs is the clarification of terms that further define research questions. This section defines key constructs relevant to the research.

*Parental involvement*: A combined definition of parental involvement reflects the choices families or parents make to become involved with their children’s education including both home and School-Based Involvement. According to the Hoover-Dempsey and Sandler model, parent involvement includes: parent behaviors such as volunteering, communicating with teachers, helping children with homework, remaining aware of school events and news, and talking with other parents of the school (Walker, Wilkins, Dallaire, Sandler, & Hoover-Dempsey, 2005).

*Prekindergarten programs*: Prekindergarten programs are state-funded, program-based environments that serve 3- and 4-year-old children. Public schools or community
agencies administer many of these programs. This definition omits home-based, kin care and other private or non-state-funded prekindergarten programs (Pianta et al., 2005).

Teacher process quality: Teacher process quality, as discussed in this study, refers to the classroom setting including teacher behaviors and actions as a part of teaching. Process quality includes interactions between teachers and children, interactions facilitated by the teacher between children, and the manipulation of environmental features that influence those interactions including space, scheduling, and time. According to Pianta et al. (2005), “conceptually, process quality . . . [refers to] elements reflected at several levels of the classroom environment: moment-to-moment displays of discrete behaviors as well as global characterizations of the overall setting” (p. 145). Process quality includes those interactions that take place between individuals, materials, and other environmental features of the classroom. Two of the nine subdomains within the ECERS-R specifically describe process quality: interactions and language-reasoning (Burchinal, Howes, & Kontos, 2002; Peisner-Feinberg et al., 2001).

Teacher quality (TQ): An exploration of quality in the field of early childhood education must be rooted in some definition of quality. Teacher quality refers to behaviors and practices that result in both student academic and emotional learning as measured through academic and emotional growth outcomes, and knowledge or expertise of the teacher (Fenstermacher & Richardson, 2005).
Summary

Assumptions about the ecology of development coupled with research on family-school connections in early childhood education reflect the importance of continuity and the need for multiple perspectives on teacher quality. An evaluation of quality includes the process of interpreting which factors are of more or less value than others (Fenstermacher & Richardson, 2005). Existing studies on teacher quality emphasize a broad yet inconclusive range of values, defining quality as either qualifications or as process behaviors. Federal policies appear to emphasize the former while views in early childhood, as well as in an emerging body of literature, reflect the latter.

There is a need to investigate the role of the teacher as an influence on parental involvement in early childhood programs, a time when young children are vulnerable to discontinuity in their lives as a result of the transition to school life (Bridge, 2001). Teachers influence the decisions of parents to become involved in a child’s school experience and the extent to which they become involved. However, the current conceptualization of a teacher of quality minimally includes a consideration of the dynamic between teachers and parents. The relationship between teacher quality and parental involvement reflects one dimension of teacher behaviors but a very important one when set against a theoretical backdrop including a systems theory of development as well as a multidimensional view of teacher quality.

Outline of the Study

Chapter 1 provides an introduction to the study and establishes the relevance for its consideration in the field of early childhood education. Chapter 2 includes a
discussion of the evolving construct of quality in early childhood education and the field's philosophical roots in a holistic understanding of early childhood experiences. The chapter describes the foundation for considering quality from a process-oriented approach and establishes the necessity for a clearer understanding of the relationship between quality and parent involvement. Chapter 3 represents an analysis of the relationship between a measure of quality in early childhood education and parent-reported survey data describing involvement behaviors. Chapter 4 of the study includes an examination of the analysis of the relationship between quality and parent involvement in a sample of publicly funded preschool programs. Chapter 5, the final chapter, reconsiders the constructs of quality and parental involvement in early childhood from an ecological perspective. Additionally, this chapter offers recommendations based on results and discusses implications for future research and policy decisions.
CHAPTER 2
REVIEW OF THE LITERATURE

The review of the literature examines two key determinants of children’s educational experiences: parental involvement and teacher quality. The theoretical underpinning of a systems theory of development and human growth provide a justification for further exploring process variables in teacher quality, and how those variables also must include a consideration of parent-reported involvement. A systems theory perspective allows researchers to consider more than one layer of influence as important at any given time in children’s development and learning. Next, the review provides definitions for teacher quality in early childhood education and addresses the present mixed use of terminology related to quality. A discussion of variables associated with process quality demonstrates the importance of considering teacher behaviors as a contributor to both children’s immediate classroom experiences as well as parental involvement behaviors. Additionally, a presentation of current trends in the early childhood field provides a supportive framework for considering the family as a part of the overall quality of prekindergarten programs. The review considers several models of parental involvement and explores the relevance of each model to the proposed study. Definitions, theories, and policies regarding quality and parent involvement are reviewed along with selected theoretical models and empirical research.

Theoretical Foundations

The field of early childhood education relies on a foundation of beliefs that describe family, community, and schools as collaborative forces that shape the
education and the development of young children (Bredekamp & Copple, 1997; Bronfenbrenner, 1999). An additional assumption includes that the work of early childhood programs is best met by working to address the needs of the whole child. Central to this idea is the ecological systems theory, more recently referred to as the bioecological systems theory of human development.

The ecological systems theory proposes that development occurs within a broad context of settings and interactions and these multiple layers of influence interact between and within the settings simultaneously (Bronfenbrenner, 1999). The home setting as well as the prekindergarten school setting represents two a layer of influence impacting development through a process of complex and reciprocal interactions between teacher and parent. There are two key propositions of the ecological systems theory: (a) the range of developmental influences for any given child continuously evolves and at the onset of enrollment in school includes the setting of the classroom, and (b) the ecology of teacher process quality in the classroom is complex and interacts with the child’s other settings including parents or home.

Bronfenbrenner’s (1979) work on the ecological systems theory emphasized the significance of the inter-setting influences:

Seldom is attention paid to one’s behaviors in more than one setting or to the way in which relations between settings can affect what happens within them. Rarest of all is the recognition that environmental events and conditions outside any immediate setting containing the person can have a profound influence on behavior and development within that setting. (p. 18)

A recognition of how the behaviors in one setting can influence persons in another setting is relevant to the study and consistent with the basic propositions of the
ecological systems theory of development. Expanding on a discussion of the ecology of human development, Bronfenbrenner wrote:

Since the environment also exerts its influence, requiring a process of mutual accommodation, interaction between person and environment is viewed as two-directional, that is, characterized by reciprocity. . . . The environment . . . is extended to interconnections between influences from the larger surroundings. (p. 22)

The necessity of considering how individuals within each of the child’s environments interact is key to the ecological systems theory. Teachers influence children in the school settings and parents do so in the home setting. However, interactions between mesosystem influences, or parents and teachers, also affect the child through related parent involvement behaviors.

**Applied Ecological Systems Theory**

Interactions between parents and teachers broaden the child’s surroundings and extend the complexity of influences that ultimately shape the child’s development and growth. The relationships between parents and teachers influence how parents make decisions about involvement in the child’s school and classroom (Bridge, 2001). Parent experiences with the teacher and school are meaningful to a young child who is influenced by parent attitudes, perceptions, and beliefs about the child’s school.

NAEYC, a leading organization in the field of early childhood education, includes the home and school settings as key influences in children’s developmental and educational outcomes. Further, NAEYC includes families, community relations, and the physical school environment as 3 of 10 standards in the accreditation of early childhood programs of high quality (NAEYC, 2005). NAEYC considers supportive environments
high quality if they result in improved academic and developmental outcomes for children (Hamre & Pianta, 2005; Pianta, 2006; Schweinhart et al., 2005). Current federal policies also promote high quality through established recommendations and standards for teacher quality (Blanton et al., 2006; Hill, 2002; NAEYC, 2005). For example, the recent No Child Left Behind Act of 2001 (NCLB) requires teachers in state-supported schools to meet requirements as highly qualified teachers (HQT), including possession of bachelor’s degrees, possession of state certification, and knowledge of subject taught (Hill; U.S. Department, 2006). However, one challenge to the NCLB Act is the lack of distinction between quality of secondary teachers and quality of elementary teachers (Blanton et al.). Even more problematic is that this policy does not directly addresses the multitude of state-funded early childhood programs.

Quality in preschool programs is defined differently from that of school-age programs serving children kindergarten through grade 12. Because academic assessments are inappropriate for young preschool-age children, measures of quality in preschool partly rely on quality assessments of the environment including the teacher, the physical environment, and common program policies (Hooks et al., 2006).

Defining Quality

An applied definition of teacher quality is challenging because of the complex nature of teaching in a classroom. Fenstermacher and Richardson’s (2005) discussion of quality in teaching suggests that quality must include both a consideration of student outcomes and also a degree of knowledge, expertise, or qualifications to teach. The 2004 No Child Left Behind Act defined high quality teachers as those holding a
bachelor’s degree, a state-defined certification, and state-defined competency in their specific field of teaching. According to this policy, teachers who meet the NCLB qualifications for quality are more effective, and students will likely demonstrate improved learning in their classrooms.

Early childhood standards of quality also reflect the national trend of increased emphasis on professional development and educational background requirements for early childhood professionals. For example, Head Start recently released a requirement for all center-based teachers to hold associate’s degrees in a field related to early childhood (Tout, Zaslow, & Berry, 2006). Definitions of teacher quality in the early childhood research include identification of standards such as formal education, professional development, and content knowledge as significant to child outcomes in early childhood (Burchinal et al., 2002).

The challenge to define and assess quality in prekindergarten programs is evident from a wide range of literature on the topic (Bredekamp & Copple, 1997; Pianta, La Paro et al., 2002; Pianta et al., 2005). With regard to definitional and conceptual differences in the field’s understanding of teacher quality, it is clear that quality is influenced by a broad range of variables including the teacher, the classroom physical environment, program policies, and various other stakeholder settings that interact with the school such as the home and the community. Through the study of focus groups to assess early childhood program quality in one midwestern state, Ceglowski (2004) considered the perspectives of various stakeholders in defining quality. The author found both similarities and differences among the responses of parents, early childhood staff, program administrators, and early childhood licensers. For example, parents
exclusively indicated that quality included communication with and providing resources for families.

NAEYC has defined quality through standards reflected in its early childhood program accreditation process. The NAEYC program accreditation standards define the organization’s beliefs about and vision for programs of high quality that will support the learning and development of young children (NAEYC, 2005). These standards reflect quality through the following factors: relationships, curriculum, teaching, assessment, health, teachers, families, community relationships, physical environment, and leadership management. Although varied perspectives and ideas about quality persist, these differences should serve to expand rather than replace or eliminate the current ideas about teacher quality in early childhood (Ceglowski, 2004; Sylva et al., 2006).

How Does the Teacher Matter?

Although the degree to which the teacher influences student learning is unclear, teacher effectiveness is one of the most important factors in children’s academic growth (Darling-Hammond, 2000a; Ding & Sherman, 2002; Rowan, Correnti, & Miller, 2002). Teacher influences on student learning are dependent on a number of factors including the individual student, student age or grade level and academic subject. There appears to be a differential sensitivity among some students to the effectiveness of the teacher and classroom experience (Borman & Kimball, 2005; Hamre & Pianta, 2005). This presents a question of how or in what ways teachers matter in the school experiences of students. Various attempts to explore this question of teacher quality provide a wealth of literature relying on a range of definitions of quality and on two distinct constructs of
teacher quality: static quality and process quality. No Child Left Behind, which outlined key provisions of teacher quality such as content mastery and verbal ability, further influences various approaches to understanding teacher quality (Blanton et al., 2006; NCLB, 2002).

Static Variables and Qualifications

Research on teacher qualifications broadly addresses how teaching experience, certification, and pedagogical knowledge influence student learning. However, the literature is inconsistent in its findings of the effects of qualifications on student outcomes. For example, teacher certification demonstrates mixed results including both significant positive and somewhat negative effects on student learning.

Teacher certification. An analysis of teacher certification on reading and math scores found mixed results with no significant effects on reading and math growth (Rowan et al., 2002). Additionally, the researchers reported that students taught by teachers with a specialized certification in math did worse than peers with teachers who did not hold this certification. Darling-Hammond’s (2000b) review of certification effects on student achievement indicated that any benefits, where found, did not appear to last beyond 5 years. Another recent study examining the effects of certified teachers on kindergarten children reported a small yet significant effect. However, the study shows that teacher certification has a significant effect over time on reading gains (Easton-Brooks & Davis, 2009). An interesting result included their finding that students had the greatest potential for growth per year when they were with certified teachers continuously for at least 2 of 3 years.
Teaching experience has also been considered as one measure of teacher quality. In a study of measures of student achievement among third, fourth and fifth grade students in math and reading, researchers did not find a statistically significant relationship to teacher experience and education on student scores (Kimball et al., 2004). Additionally, they reported weak effects on fifth-grade reading and math and insignificant effects for third and fourth graders. This research is consistent with other studies reporting weak or mixed effects of teacher education and experience on student outcomes (Early et al., 2007; Wayne & Youngs, 2003).

Several studies of knowledge pedagogy measured by performance-based evaluation methods have demonstrated strong relationships between teacher evaluation scores and student achievement scores. In a study of performance-based, subject-specific teacher evaluations, Gallagher (2004) found a strong and statistically significant correlation between teacher scores and student achievement in reading in addition to a positive, although not significant, relationship in mathematics. In follow-up analyses, Gallagher suggested that the stronger influence on student achievement in reading over math was likely a function of the pedagogical knowledge of teachers and their consequent ability to align standards to assignments and assessments in math. Wilkinson (2005) also found that pedagogical knowledge and application of theory mediated student achievement. Among variables Wilkinson associated with quality was a high degree of agency in interviews among teachers. Teacher actions and teaching associated with pedagogy resulted in improved literacy outcomes for students.

Additionally, a 2004 research study among elementary schools reported that teachers who used sound pedagogy, including connecting learning to student
experiences and logical presentation of new information important to a lesson resulted in greater student achievement in reading, math and language (Schacter & Thum, 2004). One common factor in the research on teacher pedagogical knowledge and student achievement is the belief that teacher quality is directly related to teacher knowledge of theory and application of that theory (Wilkinson, 2005).

There is significant variance and mixed results from the research on teacher qualifications including certification, pedagogy and teaching experience. While some studies have demonstrated significant effects of various teacher qualifications on student achievement, the results appear to vary by age, grade, or years in specific types of classrooms.

Teacher Process Quality

Teacher process quality refers to direct interactions and exchanges between the teacher, materials, and the children (Bronfenbrenner & Morris, 1998; Frank Graham Porter, n.d.; Pianta, 2003). A variety of methods capture and measure these interactions including the early childhood environmental rating scale-revised (ECERS-R) (Harms et al., 1998), the classroom assessment scoring system (CLASS) (La Paro, Pianta, & Stuhlman, 2004) and various other methods such as observation and children’s drawings (Harrison et al., 2007).

Supportive emotional climate. The role of a supportive emotional climate reduces risk for school failure. Among kindergarten students identified at-risk for academic failure based on demographic characteristics and teacher-reported problem behavior, children in classrooms with strong emotional and academic support demonstrated
achievement scores and teacher-child relationships similar to their low-risk peers (Hamre & Pianta, 2005). Among the group of 910 children, students who experienced less emotionally supportive classrooms experienced increased conflicts with teachers as well as lower achievement by the end of first grade. The success with which children are able to relate to or create a relationship with their teacher might be an indicator of how successfully children are able to “use the teacher as resource in the classroom” (Hamre & Pianta, 2005, p. 953).

Emotional support through close teacher-child relationships contributes to children’s improved social adaptation. An examination of the role of teacher-child relationship quality among a group of 95 preschoolers revealed that these relationships were significantly related to children’s academic readiness for kindergarten (Palermo, Hanish, Martin, Fabes & Reiser, 2007). The study demonstrates a positive and significant relationship between children’s kindergarten school readiness and their prekindergarten teachers, including their ability to “perform academic tasks, such as counting, recognizing letters, and communicating effectively . . . an important precursor of school adjustment in the primary years” (Palermo et al., 2007, p. 408). Teacher-child relationships and teacher responsiveness through academic instruction both represent aspects of teacher quality that define high quality prekindergarten environments (Harms et al., 1987; Pianta, La Paro et al., 2002; Raver et al., 2008).

Instructional practices. Teacher instructional practice, a component of process quality, potentially influences student achievement. Kindergarten students whose teachers reported a greater emphasis on student-centered instruction demonstrated statistically significant mathematics achievement gains (Guarino, Hamilton, Lockwood,
The study also revealed similar significant gains in reading scores for students whose teachers reported greater use of time on subject. This consideration of how teachers use classroom time is also evident in reported results of observations of more than 200 kindergarten classrooms for components of quality (Pianta, La Paro et al., 2002). Although there appeared to be variability in experiences offered to children across classrooms, a factor analysis revealed two dimensions of high-quality settings: an instructional aspect and an emotional aspect. The instructional aspect of the classroom included interactions between teachers and children, an emphasis on feedback to improve performance, and other indicators consistent with developmentally appropriate practice recommendations defined by NAEYC (Bredekamp & Copple, 1997). The emotional aspect of the classroom was notable for child-centered practices including providing choice for children as well as warm and positive interactions.

School adjustment and children’s behaviors. A study exploring the relationships between young children and their teachers reported that there is a link between children’s relationships with their teachers and problems with early school adjustment (Harrison et al., 2007). Through an analysis of children’s behaviors in the classroom and drawings that captured children’s perspectives of relationships with their teachers, researchers noted that children who demonstrated closer relationships with their teachers also demonstrated positive classroom behaviors, were more capable learners, and were able to adjust more easily to the expectations of the classroom. Although it was unclear whether the closer relationships between teacher and students were the cause of children’s positive adjustment or whether better adjusted children were already more comfortable with teachers, the findings are consistent with the perspective that
“children must be socially engaged with classroom teachers to acquire the prerequisite knowledge & skills for learning within the classroom environment” (Burchinal et al., 2002, p. 432). When students have access to an emotionally supportive classroom climate, supportive of social interactions and academic learning, students appear to benefit (Hamre & Pianta, 2005; Odden, Borman, & Fermanich, 2004).

One frequently used measure of children’s success in school is the complexity of children’s behavior with objects, materials, and peers (Kontos, Burchinal, Howes, Wisseh, & Galinsky, 2002). Complex behaviors, also considered “accelerator behaviors” because of their ability to predict developmental status and their link to enhanced learning or development, include level of play, competence with materials and peers, and the type of language, creativity, and involvement observable through peer interactions. Observations of children’s interactions with peers and objects in a prekindergarten classroom revealed that sensitive teacher interaction, focused on child-specific type of involvement, positively promoted children’s higher level of play in the classroom.

Positive, supportive, and engaging teacher interactions are consistent with developmentally appropriate practices as defined by NAEYC and are found to be reliable predictors of later school achievement (Bredekamp & Copple, 1997; Pianta, Stuhlman & Hamre, 2002). Children exposed to classrooms of higher quality, as defined by high emotional and instructional support, demonstrate higher engagement and greater academic achievement (Raver et al., 2008).
Teacher Quality and Parental Involvement

Past research links the importance of credentials, such as degree held and years of experience or courses in the field, to the successful outcomes of young preschool children (Xu & Gulosino, 2006). Although the influence of the teacher is clear, an ecological framework of early childhood and child development requires that the field of early childhood necessitates the consideration of another layer of teacher influence on the child. Within the mesosystem, interactions between the teacher and parent or family might also influence children's school experiences (Bronfenbrenner, 1999; Epstein, 2001; Xu & Gulosino, 2006). A small but relevant research base exists for this context and considerable support exists for the ecological and systems theories. This section will review the literature that addresses relationships between families and teachers and the resulting influences, if any, on children's early school experiences.

The relationship between parents and teachers in children’s lives influences the connection between the child and school (Pianta, Stuhlman et al., 2002). Conceptualized through an overlapping spheres of influence model that describes children’s close social environments as forces that individually include goals, practices, messages, and resources for children, this relationship is part of a complicated network (Epstein, 2001). Consistent with Bronfenbrenner’s ecological systems theory, the overlapping spheres of influence model demonstrates that connections and overlap between spheres requires compatibility or coordination and benefits the child. This network of relationships between home and school has the potential to either support or disrupt a child’s educational experience and transition into a new school or program (Bridge, 2001; Rimm-Kaufman & Pianta, 2000).
The combined effects of teacher quality and family involvement contribute to children’s academic and school success (Epstein, 2001; Xu & Gulosino, 2006). Factors such as teacher outreach (Patrikakou & Weissberg, 2000), classroom and school sense of welcoming (Caspe & López, 2006; Hoover-Dempsey et al., 2005) and misconceptions between families and teachers about what constitutes parental involvement (Anderson & Minke, 2007; Caspe & López, 2006; Wong & Hughes, 2006) all include significant teacher roles in parental involvement behaviors (Ferguson et al., 2008). Teacher quality plays an important but rarely examined role in how and to what degree families become involved in their children’s education and in parent motivation to become involved (Halgunseth et al., 2009; Xu & Gulosino).

Sense of welcome. The sense of welcome families feel from a program serves as one important influence in the degree to which families become involved in their child’s education (Hoover-Dempsey et al., 2005). Additionally, teachers’ use of effective strategies, including practices for parent-child bonding and culturally-relevant home-based games and experiences, was an important element of models that improved family engagement with schools (Caspe & López, 2006). Parent perceptions about Specific Teacher Invitations for involvement also played an important role in parent involvement (Anderson & Minke, 2007). However, it is unclear as to whether specific modes of communication and the quantity of those communications were of significance in the perceptions of parents.

Perceptions of parent role. One challenging variable in establishing and maintaining teacher-parent relationships includes misconceptions about parent and teacher roles in a child’s education. Anderson and Minke (2007) demonstrated that
parent perceptions of teacher outreach did not clarify the degree to which parents and teachers agreed about overall involvement. Additionally, interpretation of communication forms between teachers and parents is often inconsistent (Hasley, 2005; Simon, 2004). For example, differences exist between involvement activities and descriptions of involvement described by language and ethnically diverse families and their children’s teachers (Wong & Hughes, 2006). These differences included the respective groups’ definitions of parental involvement, expectations of quality, quantity of involvement, and beliefs about involvement responsibilities.

Teacher behaviors. Xu and Gulosino (2006) identified teacher-parent relationships as one determinant of student performance. Using a value-added approach to examine the impact of teacher quality, the authors found that common identifiers of quality -- including college classes taken, certification status, and level of educational attainment -- were not valid or served as inconsistent predictors of children’s success in mathematics, reading, and general knowledge. However, teacher behaviors such as building and maintaining relationships with parents consistently improved early childhood student performance. These behaviors included sending information home explaining how to support the child’s learning at home, making home visits, providing parent orientations or creating a welcoming environment for parents. More specifically, sending home information about the school or school programs and creating a welcoming environment had significant positive effects on children’s mathematics performance in public kindergartens.

Parent behaviors and perceptions about school strongly influence children’s educational experiences (Patrikakou & Weissberg, 2000; Henderson & Mapp, 2002).
For example, parent beliefs that teachers have strong outreach programs or work to involve them in their children’s education can influence the degree to which a parent becomes involved, and this relationship appears to be more critical in urban and low-income areas. (Patrikakou & Weissberg). This is consistent with the finding that there might be disconnect between parent and teacher perceptions about what involvement means in the schools (Knopf & Swick, 2007; Mann, 2006).

Perceived teacher support. Among elementary students making a transition to middle schools, the combined role of parental involvement and perceived teacher support appeared to significantly impact student overall grade point averages. Students with both supportive factors present had better grade point averages than their peers who had high levels of one or the other but not both (Gutman & Midgley, 2000). Researchers suggested that exclusive focus on only one of these factors, teacher support or parental involvement, might not be as effective as focusing on the effectiveness of both factors as a combined approach to improving students’ early school experiences.

However, teacher attitudes and beliefs have the capacity to both deter and encourage parental involvement. For example, Hoover-Dempsey and Sandler proposed a number of foundational variables in their parental involvement model, including role construction and self-efficacy, which initially influence parent decisions to become involved in their child’s education (Anderson, 2005). Sense of efficacy includes a belief that that parents or family members are capable and competent not only to help the child but also to positively influence the child’s school success.
According to the Hoover-Dempsey and Sandler model, role construction involves both the behaviors and the beliefs about who is responsible for various aspects of a child’s education (Anderson, 2005; Walker et al., 2005). Gutman and Midgley (2000) suggested that the overlap of these two critical variables, parental involvement and teacher influence, are evident through teacher and school efforts such as teacher ability “to encourage parents’ sense of efficacy by recognizing their involvement and contribution as valuable resources for student achievement” (Gutman & Midgley, p. 243). Additionally, teachers have the authority and ability to create meaningful roles for families to potentially increase parent connection with the school.

Transitions between programs. Transitions between programs, services, and schools involve changes to routines, expectations, behaviors, and roles. For young children, the transition between preschool and kindergarten or home and preschool includes the construction of new social connections (Bridge, 2001; Kraft-Sayre & Pianta, 2000). Social connections have the capacity to provide resources or support for children and families (Gutman & Midgley, 2000). Additionally, the actual context of this transition and the associated ecology that develops between teacher and parent are important elements for study (Rimm-Kaufman & Pianta, 2000).

School and teacher behaviors are important and particular behaviors that “encourage parental involvement are seen as important process indicators to support positive transition” from home to early school. Consistent with an ecological framework of child development, Kraft-Sayre and Pianta (2000) suggested that when stakeholders establish and maintain these connections, or interactions among children, teachers, parents and peers, children might have more positive school experiences. Guiding
principles of these connections include: fostering and surrounding the child with supportive relationships as resources, promoting continuity or a bridge from one program to another between family and school, focusing on school-initiated positive and supportive interactions between school and the family, and forming collaborative relationships between stakeholders including family members, teachers, and other school personnel. These guidelines suggest that connections between school and home and the engagement of families are the foundation for children’s academic success. Family engagement reflects a relationship between the family and school that is reciprocal, ongoing, and based on a family’s strengths (Halgunseth et al., 2009).

Ecologies of transition, or the circumstances surrounding a child’s entry into a new school environment, either positively or negatively influence the presence or perception of social resources for children and families (Kraft-Sayre & Pianta, 2000; Rimm-Kaufman & Pianta, 2000). A positive transition reflects mutual connections, communication, and contact between family and teacher while a less healthy transition lacks of these essential elements and represents a mismatch between stakeholder efforts (Bridge, 2001; Halgunseth et al, 2009; Henderson & Mapp, 2002).

Multidimensional Perspectives of Quality

Several studies have noted a potential differential in the effect of the teacher on students. These studies have questioned whether it is possible for teachers to affect individual students differently. For example, although various teacher characteristics sometimes support student achievement, these effects are inconsistent and have yet to independently demonstrate effectiveness among all students across grade levels.
Differential Sensitivity

In a study of school failure and supportive classroom environments, Hamre and Pianta (2005) found that at-risk students in a supportive classroom made greater academic gains in achievement than at-risk peers in a less supportive environment. This study considered teacher ratings of their relationships with students as a measure of supportive environments. According to the authors, supportive factors included appropriate instructional support as well as emotional support, both aspects of process quality. However, the results suggested that emotional support might have been more important than instructional support for some students. The authors proposed that different children might respond to school settings in different ways based on developmental needs. This finding was consistent with Borman and Kimball's (2005) study of teacher quality distribution and student achievement. Researchers reported that some teacher qualities had more influence on student achievement than others, suggesting not only that one characteristic is not a reliable predictor of student achievement, but also that some students might exhibit different sensitivity to high quality of instruction or interactions than their peers.
Parent Involvement

Defining Parent Involvement

Family involvement in schools strongly influences student academic achievement (Epstein, 2005; Ferguson et al., 2008; Michael, Dittus, & Epstein, 2007). The relationship between school and home is consistent with the overlapping spheres of influence model and theory that overlies a framework of parental involvement (Epstein, 2001). The theory assumes “models of inter-institutional interactions and ecological designs that emphasize the natural, nested, and necessary connections between individuals and their groups and organizations” (Epstein, 2001, p. 22). The overlapping spheres model depicts the perspective that goals for children are most effective when teachers and families work collaboratively. Through a literature review of family involvement practices, Halgunseth et al. (2009) outlined a comprehensive definition of family engagement including elements of communication between home and school, collaborative relationships based on the exchange of knowledge, an extension of learning through both the home and school, and a continuous system for providing support to an existing family engagement model. This definition is most reflective of a social exchange model of family engagement (Figure 2), which represents social partnerships as an exchange of resources between partners. Applied to the school-home environments, partners include families, school programs, and teachers.

The model suggests that strong family partnerships or exchanges of resources through a welcoming environment, bi-directional communication, family volunteering, and shared decision making, among other interactions, result in positive family and child outcomes because of feelings of engagement (Halgunseth et al., 2009).
One challenge to defining parental involvement includes the varying perspectives on what constitutes parental involvement. For example, parents often define involvement from a community-centered perspective while teachers tend to define it as a parent’s physical presence at the school (Anderson & Minke, 2007). The Hoover-Dempsey and Sandler model of parental involvement (Hoover-Dempsey et al., 2005) however, reflects a consideration of variables that influence parents in their decisions to become involved in their children's education. The model includes a consideration of motivational variables that influence parent involvement such as how parents view their roles as parents of children in school, parent beliefs about their abilities to effectively
parent children, and how parents perceive teacher and school invitations to become involved. Consistent with the overlapping spheres model, home-based efforts include talking to children about school and encouraging them while school-based efforts might reflect actual attendance at conferences, back-to-school nights, or other formal school functions.

Policy and Family Partnerships

The National Association for the Education of Young Children supports the role of families in programs and intervention services for young children. In fact, NAEYC's statement on family involvement in early intervention services for young children indicates that parent involvement might result in a number of positive outcomes including greater involvement, higher homework completion, and improved attitudes about school (NAEYC, 2006). The Goals 2000: Educate America Act positively impacts parental involvement in public schools through the requirement of increased levels of parent participation as a condition for continued funding (Goals 2000, 2001; Lumsden & Hertling, 2002). Additionally, the 2001 reauthorization of the Individuals with Disabilities Act (IDEIA) and the 2001 No Child Left Behind Act (NCLB) emphasized the role of parents in the development of individualized learning programs for children receiving special education services. Existing research and current federal policies define how public schools should interact with families. Lumsden and Hertling suggest this interaction should reflect increasing outreach to families and the consequent partnership with families and communities to improve schools and programs.
Although the involvement of families in public schools is an issue driven by laws and knowledge of research, a number of factors affect how successfully schools and programs for young children are able to achieve the goal of family partnerships and collaboration. The boundaries that prevent successful partnerships between schools and families include perceptions of schools and families about partnerships, teacher knowledge or skills in developing relationships with families, and school perceptions of the needs of families. Further, a lack of definition or consensus regarding the meaning of family-school partnerships and relationships makes it difficult to evaluate resulting outcomes of efforts.
CHAPTER 3
METHODS
Introduction

Chapter 3 describes the methodology selected including location, data collection procedures, study participants, and general overview of the study. A discussion of the data collection tools, including a review of tool integrity, is provided.

General Overview of the Study

High teacher quality and parental involvement are two powerful variables associated with positive outcomes for young children. The combined resources of high quality teachers and parent involvement positively influence children’s early school experiences. Findings are limited regarding the interactions between teacher quality and parental involvement, and the potential influence of the teacher in shaping or influencing parental involvement in children’s early school experiences. Teacher-parent relationships affect student achievement, and a consideration of this relationship can serve as an important indicator of the quality among teachers. The purpose of this study was to examine the relationship between teacher quality and parental involvement and to make recommendations for optimal approaches to support involvement behaviors.

This study examined teacher quality using extant data from the Early Childhood Environmental Rating Scale-Revised (ECERS-R) (Harms et al., 2003) across 35 preschool classrooms, and 306 parent-reported involvement surveys using the Hoover-Dempsey and Sandler model of parent involvement survey (Hoover-Dempsey &
Sandler, 2005). Participants represented parents of preschool children enrolled in one of the four targeted school district preschool programs.

Parent participants provided involvement data using a brief survey sent home with and returned by children. Final scores from the Hoover-Dempsey and Sandler survey, as well as extant ECERS-R data, was used to answer the following questions:

1. To what extent does teacher quality account for variance in parent involvement?
2. To what extent do additional variables, including family income and child membership in special education, account for variance in parent involvement?

Research Design

The research design employed nonexperimental survey research. Survey method research is common in educational research (Fraenkel & Wallen, 2000) and allows the analysis of how variables, either individually or in combination, affect patterns of parent involvement. This research design explored the relationship between teacher quality and parent involvement.

Data collection included two forms of data: teacher quality ratings from the Early Childhood Environmental Rating Scale-Revised (ECERS-R) and parental involvement data using the Hoover-Dempsey and Sandler Parental Involvement Survey. Participating districts provided existing ECERS-R scores and parent participants completed paper and pencil Hover-Dempsey and Sandler surveys.

The use of multiple regression provided a means of analyzing data in an effort to better understand the relationship between teacher quality and parent involvement in preschool programs. Additionally, family income, and child membership in special education also served as predictor variables. Multiple regression is common in studies with multiple predictor variables and where the primary question is one of prediction of
some outcome (Stevens, 1999). This study attempted to understand which predictor variable, among teacher quality, family income and child membership in special education, provided the greatest predictive value of several parent involvement variables including perceptions of invitations, role construction and involvement practices.

The benefit of understanding the relationship between teacher quality and parent involvement was to identify in what way teacher behavior influenced motivating factors for parent involvement. From an applied perspective, an understanding of whether teacher quality predicts parent motivation for involvement could lead to more appropriate evaluations of teacher quality with an emphasis on promoting parent involvement. One disadvantage of multiple regression relevant to this study is that it is not possible to establish cause-and-effect relationships between variables through correlational design.

Survey methods provided parent involvement data. Survey research methods are widely used in education and allow the researcher to gather information including frequencies to attitudes (Isaac & Michael, 1997). Surveys are also relatively inexpensive, simple to complete and collect and allow participants to remain anonymous. Data collected from surveys also make it possible to examine trends across groups of respondents and to understand what attitudes exist and in which classrooms or districts. There are also a number of disadvantages to survey methods. Surveys are typically completed by participants who have interest in the research or topic and who are available for participation. Additionally, surveys are vulnerable to user bias including over- or under-rating responses and the possibility of artificial responses.
due to unnatural prompts from the survey.

Participants

Four school districts in and surrounding Phoenix, Arizona participated in the study. Table 1 describes the number of classrooms, teachers, and parent participants across districts.

Classroom and District Participation

Thirty-five classrooms participated in the study within four school districts across Phoenix, Arizona. District 1 is located in central Phoenix and in 2009-2010 served 14,166 pre-kindergarten through eighth grade students across fifteen elementary, primary and middle school campuses. During the 2009-2010 school year, this district served a student population with 77.78% Hispanic students, 8.14% White students, 7.58% African American students, 3.72% Asian students, and 2.78% Native American students. District wide, 90% of students qualified for the free and reduced lunch program based on federal guidelines.

District 2, a rural school district, served 2,467 pre-kindergarten through eighth grade students across four elementary and middle school campuses. The district served a primarily Hispanic population with 94% Hispanic students, 2.83% White students, 1.98% African American students, .12% Asian students, and .7 Native American students. Across District 2, 98% of students qualified for the free and reduced lunch program.
District 3, a rural school district, served 4,651 pre-kindergarten through eighth grade students attending five elementary and two middle schools. The student population across this district reflected 3,727 Hispanic students, 430 White students, 352 African American students, 61 Asian students, and 45 Native American students. Within District 3, 91% of the student population qualified for the free and reduced lunch program.

District 4 covered 367 square miles. Thirty-seven schools served 35,887 pre-kindergarten through high school students, of which 28.3% qualified for the free and reduced lunch program. District 4 extends across 367 square miles from the city limits of Phoenix into rural areas and includes thirteen kindergarten through eighth grade schools, sixteen kindergarten through sixth grade schools, three middle schools, and five high schools. This district’s student population included 17.9% Hispanic students, 3.8% White students, 72.9% African American students, 4.4% Asian students, and 1% Native American students. Table 2 represents the demographic make up of each of the five districts.

Table 1

**Number of Participating Classrooms, Teachers and Parent Survey Respondents Across School Districts**

<table>
<thead>
<tr>
<th></th>
<th>Classroom</th>
<th>Teachers</th>
<th>Parent Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>District 1</td>
<td>15</td>
<td>7</td>
<td>104</td>
</tr>
<tr>
<td>District 2</td>
<td>12</td>
<td>7</td>
<td>109</td>
</tr>
<tr>
<td>District 3</td>
<td>4</td>
<td>4</td>
<td>52</td>
</tr>
<tr>
<td>District 4</td>
<td>4</td>
<td>4</td>
<td>41</td>
</tr>
<tr>
<td>TOTALS</td>
<td>35</td>
<td>22</td>
<td>306</td>
</tr>
</tbody>
</table>
Table 2

*Ethnic Distribution Among Total School Student population Across Participating School Districts, 2009-2010*

<table>
<thead>
<tr>
<th>School District</th>
<th>Ethnicity (%)</th>
<th>Total District Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Native American</td>
<td>Asian</td>
</tr>
<tr>
<td>1</td>
<td>2.78</td>
<td>3.72</td>
</tr>
<tr>
<td>2</td>
<td>0.7</td>
<td>0.12</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Parent Participants

The study population represented parents of 3-5 year old preschoolers within the four target school districts during the 2009-2010 school year. The study selected parents based on the use of the ECERS-R teacher quality rating scale in their children's preschool classrooms. Of the 630 parents within 35 classrooms who met these qualifications 306 parents returned surveys to yield a return rate of 50.1%.

Instruments

Traditional measures of teacher quality relate to student performance measures such as standardized assessments or testing. However, a number of studies address total environmental quality or process quality using measures such as the ECERS-R (Warash et al., 2005). This study used two instruments to gather data: existing ECERS-
R measures of teacher quality and the Hoover-Dempsey and Sandler model of parental involvement survey.

**Early Childhood Environmental Rating Scale-Revised (ECERS-R)**

The Early Childhood Environmental Rating Scale-Revised (ECERS-R) evaluates the global process quality of early childhood programs serving children ages 2½ to 5 years old. The measure assesses program variables, teacher characteristics, and process quality. The ECERS-R consists of 43 items divided into 7 subscales including (a) classroom space and furnishings, (b) personal care routines, (c) language-reasoning, (d) classroom activities, (e) interactions, (f) program structure, and (g) connections/communications with parents and staff (Harms et al., 2003). The developers of the tool recommend that observers completing the ECERS-R for classrooms undergo several hours of observation training with a facilitator. The tool utilizes a 7-point scale including ratings from 1, *inadequate*; 3, *minimal*; 5, *good*; and 7, *excellent*. Teacher process quality is included through the language-reasoning and interaction subscales (Warash et al., 2005). A score of 1 generally indicates there was not an opportunity to observe the item. A score of 7 indicates that all requirements of a 5 are met and the teacher or physical environment also provides encouragement for children to engage independently as well as explicit teacher planning to meet that provision (Harms & Clifford, 1983).

A process of expert ratings and independent users and ratings established content validity for the original ECERS tool. As a part of the original testing of the tool, a panel of experts in the field of early childhood reviewed the original ECERS instrument.
for content validity. This panel evaluated and rated the importance of each item. Based on this evaluation several items were either dropped or modified. A second measure of content validity of the original tool included independent ratings of classrooms by different observers using the ECERS tool. Classroom ratings based on these observations reflected a .74 correlation in ratings with child development professional rank ordering of the items and .70 among nonprofessional observers (Harms & Clifford, 1983).

The reliability of the measure includes an examination of interrater reliability as well as test-retest reliability across a sample of 35 classrooms within 17 centers. A comparison of independent ratings of each classroom provided a rank-order correlation of total scores of .88 (Harms & Clifford, 1983). Additionally, test-retest reliability included a sample of 31 classrooms across 12 daycare centers. The comparison, completed by trained child development professionals, yielded a correlation of .96 between first and second ratings.

Although the authors did not report total reliability, they suggested that the validity of the original scale carries over to the revised version of the ECERS (Harms et al., 2003). A comparison of quality using the original ECERS and the revised ECERS-R among 68 additional early childhood programs confirmed the two measures were acceptably similar measures of quality with highly correlated and similarly distributed scores (Sakai, Whitebrook, Wishard, & Howes, 2003). Table 3 provides the reliability of each subscale for the ECERS-R. The ECERS-R shows acceptable reliability as single total scale as well as for individual subscales (Harms et al., 2003).
Table 3

Internal Consistency for the ECERS-R Subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space and furnishings</td>
<td>.76</td>
</tr>
<tr>
<td>Personal care routines</td>
<td>.72</td>
</tr>
<tr>
<td>Language and reasoning</td>
<td>.83</td>
</tr>
<tr>
<td>Activities</td>
<td>.88</td>
</tr>
<tr>
<td>Interaction</td>
<td>.86</td>
</tr>
<tr>
<td>Program structure</td>
<td>.77</td>
</tr>
<tr>
<td>Parents and staff</td>
<td>.70</td>
</tr>
</tbody>
</table>

Note: Data from Harms, Clifford & Cryer (2003).

The Hoover-Dempsey and Sandler Model of Parental Involvement

The Hoover-Dempsey and Sandler model (see Appendix A) is an appropriate choice for the data collection for several reasons. First, it presents a comprehensive model that works to partially explain parental involvement using variables that support and influence parent involvement. Second, the model is simple for parent participants and provides an opportunity for parent-reported data.

Several studies identify teacher behaviors as influential to the development or maintenance of parental involvement (Hoover-Dempsey et al., 2005). More specifically, the Hoover-Dempsey and Sandler model of parental involvement provides a model for understanding how various factors influence the motivation for involvement and the ways in which parents become involved in their children’s educational experiences (Green et al., 2007).
The Hoover-Dempsey and Sandler model includes 5 levels focused on understanding why parents become involved in children's schools (Level 1), what they actually do once involved (Level 2), and how their involvement ultimately affects student outcomes (Level 5). Level 1 of the scale includes seven subscales. These subscales reflect parent’s initial decisions to become involved in the education of their children based on a number of influences:

1. Parents’ role construction for involvement (belief that they should be involved)
2. Parents’ sense of efficacy for helping children learn (belief that they are capable of helping child learn)
3-5. Parents’ perceptions of general, teacher and child invitations for involvement (belief that the school/teacher/child wants them to become involved)
6. Parents’ perceived knowledge and skills (belief that they have the skills to help their child)
7. Parents’ perceived time and energy for involvement (belief that they have the time and energy to help their child)

The second level of the scale includes six subscales. These subscales reflect the types of involvement parents choose once they make the decision to become involved:

1. Forms of involvement: child-specific involvement
2. Forms of involvement: school-general involvement
3. Parent reports of involvement: encouragement
4. Parent reports of involvement: modeling
5. Parent reports of involvement: reinforcement
6. Parent reports of involvement: instruction
Scales within Levels 1 and 2 assess parent-reported beliefs and practices related
to involvement in children’s education. The model reflects the belief that an
understanding of parent involvement requires the direct input or perspectives of the
parent or family (Hoover-Dempsey & Sandler, 2005). Although the full model includes a
total of 5 levels, only the following levels were examined: Level 2, parent-reported forms
of involvement, and Level 1 (Figure 3), role construction and parent perceptions of
invitations which represent psychological factors that influence parents’ decisions to
become involved in their child’s education (Walker et al., 2005). These factors reflect
motivational beliefs for involvement and are therefore potentially subject to the influence
of the teacher-parent relationship (Anderson & Minke, 2007; Mann, 2006; Palermo,
Hanish, Martin, Fabes & Reiser, 2007). Personal beliefs of parents influence
perceptions of relationships as well as interactions with teachers and consequently
shape involvement behavior (Hoover-Dempsey et al., 2002).
Level 2

Parent Mechanisms of Involvement

<table>
<thead>
<tr>
<th>Encouragement</th>
<th>Modeling</th>
<th>Reinforcement</th>
<th>Instruction</th>
</tr>
</thead>
</table>

Parent Involvement Forms

<table>
<thead>
<tr>
<th>Values, goals, etc.</th>
<th>Home Involvement</th>
<th>School Communication</th>
<th>School Involvement</th>
</tr>
</thead>
</table>

Level 1

<table>
<thead>
<tr>
<th>Personal Motivation</th>
<th>Invitations</th>
<th>Life Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Role Construction</td>
<td>Parental Efficacy</td>
<td>General School Invitations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific Teacher Invitations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific Child Invitations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Knowledge and Skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time and Energy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Family Culture</td>
</tr>
</tbody>
</table>

*Figure 3.* The Hoover-Dempsey & Sandler model of parental involvement, partial model. Adapted from Hoover-Dempsey & Sandler, 1997; 2005. Reprinted with permission from the Family School Partnership Lab, Vanderbilt University.

Level 1 and Level 2 scales yielded reliable and valid measures of those factors believed to affect parent decisions about school involvement (Hoover-Dempsey & Sandler, 2005). Factors within Level 1 influence parents’ decisions about becoming involved in children’s education and include personal motivation (parental role construction and parental efficacy), invitations (General School Invitations, specific school invitations, and specific child invitations) and life context (knowledge and skills, and time and energy). Level 2 factors represent involvement forms chosen by parents once they have made the decision to become involved and include Home and School-Based Involvement, encouragement, modeling, reinforcement and instruction (Walker et al., 2005). The constructs within Level 1 explain 33% of the variance in Home-Based Involvement while they explained 19% in School-Based Involvement. The present
research specifically explored those subscales within Levels 1 and 2 potentially influenced by the teacher-parent relationship.

Variables

Teacher Quality Variables

Predictor variables included a teacher quality rating score for each teacher reported by the ECERS-R, comprised of six subscales. Trained observers within each school district evaluated each teacher and assigned a score along a 7-point Likert scale ranging from 1 to 7 for each item. Each district reported familiarity and compliance with recommendations for observer training from the ECERS-R tool developers prior to completing formal ECERS-R evaluations of classroom teachers. Districts reported that between 1 and 2 within-district employees completed the observations and subsequent scoring for each classroom. The total score reflected the mean calculated from the sum of individual scale items for the full scale. The teacher quality ECERS-R scores collected from each district reflected extant data. Family income and child membership in special education programming also served as independent variables within the study model.
Table 4

Reliability for Hoover-Dempsey and Sandler Model of Parent Involvement Level 1 and Level 2 Variables

<table>
<thead>
<tr>
<th>Select Subscales: Level 1 and 2</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
<td></td>
</tr>
<tr>
<td>Personal motivators of involvement</td>
<td></td>
</tr>
<tr>
<td>Parental role construction</td>
<td></td>
</tr>
<tr>
<td>Role activity beliefs (10 items)</td>
<td>.80</td>
</tr>
<tr>
<td>Valence toward school (6 items)</td>
<td>.85</td>
</tr>
<tr>
<td>Parental perceptions of invitations to involvement</td>
<td></td>
</tr>
<tr>
<td>General invitations from the school (6 items)</td>
<td>.88</td>
</tr>
<tr>
<td>Specific invitations from the teacher (6 items)</td>
<td>.81</td>
</tr>
<tr>
<td><strong>Level 2</strong></td>
<td></td>
</tr>
<tr>
<td>Parent’s report of involvement forms</td>
<td></td>
</tr>
<tr>
<td>Child-specific involvement activities (5 items)</td>
<td>.85</td>
</tr>
<tr>
<td>School-general involvement activities (5 items)</td>
<td>.82</td>
</tr>
<tr>
<td>Total involvement activities (10 items)</td>
<td>.76</td>
</tr>
</tbody>
</table>

*Note* Hoover-Dempsey and Sandler (2005).

Dependent Variables

Several dependent variables were used to examine parent involvement. Variables reflect subscales of the Hoover-Dempsey and Sandler Parental Involvement Survey (1995, 1997). This scale included questions about parental role construction for
involvement, perceptions about school and teacher invitations for involvement, and Home and School-Based Involvement behaviors along a 6-point Likert scale.

Parent role construction. Role construction included two subscales: Role Activity Beliefs and Valence. Parent role construction includes two subscales within Level 1 of the Hoover-Dempsey and Sandler Parental Involvement Survey. Level 1 reflects motivational factors found to influence parent decisions to become involved in their children’s education. Former work with the two subscales during scale development demonstrated a nondependent bivariate correlation between the two scales ($r = .25$, $p < .01$) (Hoover-Dempsey, Wilkins, Sandler, & O’Connor, 2004; Hoover-Dempsey & Sandler, 2005). Combined, the two subscales reflect both parent beliefs and behaviors about their involvement. High role construction is consistent with active involvement in the child’s education.

Role Activity Beliefs (rolebeliefs). Role Activity Beliefs reflect parent ideas about whether or not it is their responsibility to actively involve themselves in their child’s education. The Role Activity Beliefs subscale included 10 items scored along a 6-point Likert scale from 1 (disagree very strongly) to 6 (agree very strongly). Higher scores on this subscale indicate parent beliefs in the necessity of a more active role in the child’s education (Hoover-Dempsey et al., 2004).

Valence towards school (valence). Valence measures parent feelings about their own school experiences. Parent attitudes toward school and dispositions toward engagement with their child’s school contribute to the overall definition of parents’ role in the child’s education and influences involvement choices (Hoover-Dempsey et al.,
The study measured Valence through six questions along a 6-point Likert scale ranging from 1 (disliked or negative experience in their own school) to 6 (liked or positive experiences). Questions included feelings about former teachers, feelings about school experience, perceptions of attention, overall feelings and feelings about former schools.

Invitations. Invitations for involvement in a child’s education influence parental involvement. Responses to the questions in the Level 1 invitation subscales reflect parent perceptions about general school or Specific Teacher Invitations (Anderson & Minke, 2007). Three subscales comprise this motivating variable; however, only two were within the scope of the present study: General School Invitations and Specific Teacher Invitations.

General School Invitations (sinvites). The General School Invitations subscale used a 6-point Likert scale from 1 (disagree very strongly) to 6 (agree very strongly). The scale posed questions dealing with parent perceptions of teacher interest in their involvement, sense of welcome they felt, school efforts to make them aware of events or child’s progress, and child-related needs.

Specific Teacher Invitations (tinvites). Specific Teacher Invitations evaluated parent perceptions about the teacher’s desire for their involvement. Questions focused on parent perceptions of frequency of teacher requests for involvement in various activities, events, and interactions with the child. The scale used a 6-point Likert scale from 1 (never) to 6 (daily).

Parent Involvement Forms. Forms of parental involvement reflect choices parents make about what to do once they have decide to become involved in their
child’s education. These Level 2 variables reflect the types of activities parents select ranging from school-based to child or home-based activities. Two subscales make up the measure: Child-Specific or Home-Based Involvement (hbinvolve) and School-General Involvement (sinvoke). Responses reflect frequency measures.

Home-Based Involvement (hbinvolve). The Home-Based Involvement subscale included a range of education-oriented activities parents and families participate in with the child. The Home-Based Involvement subscale measures child-specific activities that any member of the family experienced with the child. The scale used a 6-point Likert scale ranging from 1 (never) to 6 (daily). The activities in this scale included items such as helping the child with school activities or projects, talking with the child about the school day, and reading with the child.

School-General Involvement (sinvoke). The School-General Involvement subscale reflected activities such as helping out at the school, volunteering for events, and attending meetings and school programs. This subscale used a 6-point Likert scale ranging from 1 (never) to 6 (daily).

Data Collection Procedures

The Institutional Review Board (IRB) at the University of North Texas (UNT) and each of the targeted school districts approved the study. After receiving approval for data collection, the researcher made formal requests of each district for the release of existing ECERS-R records for participating classrooms.

Parents of target classrooms received letters of request to participate in the study (see Appendix B). Parent participants received and completed the letter of consent (see
Appendix C) and the Hoover-Dempsey and Sandler survey in both Spanish and English. Communication and survey correspondence occurred in accordance with existing classroom procedures such as children’s backpacks and parent-teacher conferences. In two cases, previously scheduled parent meetings provided the opportunity to share surveys and consent forms with parents. Response rates to survey data collection significantly improve with the use of some form of communication with participants both before and after sending out surveys to participants (Mertens & McLaughlin, 2004). Furthermore, some teachers opted to use reminder stickers to encourage families to return surveys. Parent respondents completed informed consent statements before completing the surveys and returned all documents to the researcher through the classroom teacher.

Data Analysis

This model examined the relationship between three predictor variables and parent-reported involvement behaviors. The study utilized the Predictive Analysis Statistical Package for Social Sciences (SPSS) version 18.0 to analyze survey data with an alpha level of .05 for all statistical tests. Additional screening included an analysis for normality (skewness and kurtosis) and scale reliability. Multiple regression analysis of the data provided results. Of particular interest was the relationship between parent-reported variables and total teacher quality rating scores (Cohen, Cohen, West, & Aiken, 2003).

Data Screening
Initial data analysis included screening for missing data. Descriptive statistics provided an understanding of variable distribution and general trends. The imputation of missing data created a complete data set. Correlations also provided information to determine the independence of dependent variables.

Question 1

Question 1 asked, “To what extent does teacher quality predict parent involvement?” To address Research Question 1, the researcher conducted regression analysis using teacher quality as the independent variable and each of the parent involvement subscales as dependent variables (valence, rolebeliefs, hbinvolve, sbinvolve, tinvites, and sinvites). These analyses determined the degree to which teacher quality predicted parent-reported involvement. Correlations with family income and child membership in special education determined which combination of the three predictor variables would provide the best model for predicting parent-reported involvement.

Question 2

Question 2 asked, “To what extent do additional variables, including family income and child membership in special education, predict parent involvement?” To address Research Question 2, the researcher conducted regression analysis using family income (income) and child special education membership (sped) as independent variables and each of the parent involvement subscales as dependent variables (valence, rolebeliefs, hbinvolve, sbinvolve, tinvites, and sinvites). These analyses
determined the degree to which family income and special education membership predicted parent-reported involvement.

Further, a multiple correlation was also run to determine the relationship between the independent variables as a composite group (income, sped, ecers) and each dependent (valence, rolebeliefs, hbinvolve, sbinvolve, tinvites, and sinvites). This method determined the relationship between each predictor variable to each dependent variable and also ruled out the possibility of collinearity (Daniel & Onwuegbuzie, 2001). Multiple regression techniques also determined the combination of predictor variables (ecers, income, sped) that produced the highest correlation (multiple R) with each of the parent involvement subscales.

Summary

The purpose of this study was to explore the relationship between teacher quality rating scores and parent-reported involvement among parents with children in preschool programs. Descriptive analysis and regression analysis were used to determine the variables that were most likely to occur together in patterns between predictor variables and outcome variables.
CHAPTER 4

RESULTS

Purpose of the Study

This chapter describes the results obtained based on the methods of research and data collection described in Chapter 3. This study examined the potential influence of teacher quality on parent involvement motivational variables including role beliefs for involvement, valence and perceptions of invitations for involvement among parents of preschool children enrolled in state funded preschool programs. Foundational theories in early childhood establish the importance of overlapping influences such as the teacher and parent in a child’s educational experiences. The ecological systems theory and other models of home-school partnerships (e.g., Epstein’s overlapping spheres & the social exchange model of parental involvement) provide a theoretical link between the independent importance of parent involvement and teacher quality. Prior research has documented the independent roles of teacher quality and parental involvement on school success (Fan & Chen, 2001; Ferguson, Ramos, Rudo & Wood, 2008; Phillipson & Phillipson, 2007; Pianta et al., 2005).

The six dependent variables were first modeled with teacher quality as a potential predictor of parent involvement. An additional model included teacher quality, family income and child membership in special education as predictor variables. In other words, teacher quality, family income and special education were hypothesized to predict parent involvement.
Procedures

Participants included parents in programs that used the Early Childhood Environmental Rating Scale-Revised during the 2009-2010 school year. Data included surveys from parents and teacher quality rating scores secured from four participating school districts. The school district preschool offices provided copies of raw data from the Early Childhood Environmental Rating Scale-Revised completed during the 2009-2010 school year. Parents completed paper and pencil surveys including the following subscales: Parent Role Beliefs, Valence, Specific Teacher Invitations, General School Invitations, School-Based Involvement and Home-Based Involvement.

Several school districts in the Phoenix area received requests to participate in the study. Of the five districts that accepted the invitation to participate, one district later declined due to district-level changes and time restraints. This chapter details the data assessment procedures and the specific results of the data analysis obtained using multiple regression.

Data Screening

Initial screening included assessment of missing data and testing of assumptions including homogeneity of variance, normal distribution and outliers. Screening indicated the presence of missing data that can potentially influence the analyses (Patrician, 2002; Schafer, 2002). The replacement of values through single imputation techniques can lead to parameter estimates, standard errors and test statistics.
Missing Data

Descriptive statistics identified the extent of the missing data on the parent involvement surveys. Questions 1, 2 and 7 had the fewest cases of missing data (0.9%) while Questions 16 and 50 had the greatest number of cases with missing data (6%). A separate variance $t$-test and patterns analysis showed that the data did not appear to represent jointly missing cases and could therefore be considered MCAR (missing completely at random) (Patrician, 2002; Schafer, 2002). Therefore, expectation maximization (EM) accounted for incomplete parent survey data (Schafer).

Several items from the parent survey required reverse scoring. Total values for the Hoover-Dempsey subscales reflected the mean of total items within each subscale. Summing each item and finding the mean provided a total score for teacher quality. However, due to incomplete data sets, the total score for the ECERS-R omits the parent subscale.

Assumptions

Descriptive statistics on the intact data set for the six parental involvement subscales provided a test for homogeneity of variance, normal distribution and outliers. Careful examination of the data for outstanding features or violations of multiple regression assumptions indicated some missing data. Descriptive statistics also provided information to screen for a violation of assumptions including normality, linearity and homoscedasticity (Osborn & Water, 2002).

Visual inspection of the data as well as screening for skewness and kurtosis provided information about normality of the data. Identification of outliers was possible
through a visual analysis of histograms as well as an examination of standardized residuals. The response to outliers within individual subscales is described below. The combined use of frequency histograms and skewness and kurtosis provided a general check for normal distribution of the data. Table 5 indicates the kurtosis values near zero for the dependent variables Teacher Invitations (-.91) and School-Based Involvement (-.76). The kurtosis for Valence (1.19) and Home-Based Involvement (2.2) indicated a tendency for the data to peak at the higher end of the potential distribution (parents tended to report higher scores in these areas). Normality was evident among all dependent variable subscales with the exception of Role Beliefs and General School Invitations. Kurtosis for Role Beliefs (4.98) and General School Invitations (3.43) indicated parent responses across these subscales tended to peak more closely to the mean rather than follow a normal distribution pattern. However, a review of the raw data indicated normal results. Histograms for each variable showed consistency in the positive excess kurtosis for Role Beliefs and General School Invitations and both appeared to slightly violate the assumption of normality. However, a review of the raw data did not show unusual patterns.

Skewness, a measure of normality based on concentration of data around the mean, represents the variability in data. Normality based on skewness was evident for all continuous variables excluding Role Beliefs (skewness = -1.703, kurtosis = 4.977) and General School Invitations (skewness = -1.610, kurtosis = 3.426). Although further from the traditional absolute value of 1, transformations did not improve the results. For simplicity, the results only include nontransformed scores.
Table 5

Data Distribution of Research Study Variables (N = 306)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valence</td>
<td>Valence (^{DV})</td>
<td>5.27</td>
<td>0.86</td>
<td>-1.32</td>
<td>1.19</td>
</tr>
<tr>
<td>rolebeliefs</td>
<td>Role Beliefs (^{DV})</td>
<td>5.36</td>
<td>0.62</td>
<td>-1.70</td>
<td>4.98</td>
</tr>
<tr>
<td>tinvites</td>
<td>Teacher Invitations (^{DV})</td>
<td>4.10</td>
<td>1.30</td>
<td>-0.29</td>
<td>-0.91</td>
</tr>
<tr>
<td>sbinvolve</td>
<td>School-Based Involvement (^{DV})</td>
<td>3.22</td>
<td>1.35</td>
<td>0.53</td>
<td>-0.76</td>
</tr>
<tr>
<td>sinvites</td>
<td>School Invitations (^{DV})</td>
<td>5.51</td>
<td>0.54</td>
<td>-1.61</td>
<td>3.43</td>
</tr>
<tr>
<td>hbinvolve</td>
<td>Home-Based Involvement (^{DV})</td>
<td>5.15</td>
<td>0.84</td>
<td>-1.37</td>
<td>2.20</td>
</tr>
<tr>
<td>ecers</td>
<td>Teacher ECERS-R (^{PV})</td>
<td>6.30</td>
<td>0.69</td>
<td>-0.80</td>
<td>-0.57</td>
</tr>
<tr>
<td>income</td>
<td>Family Income (^{PV})</td>
<td>2.94</td>
<td>1.64</td>
<td>0.81</td>
<td>0.12</td>
</tr>
<tr>
<td>sped</td>
<td>Child in Special Education (^{PV})</td>
<td>1.81</td>
<td>0.71</td>
<td>-1.58</td>
<td>0.29</td>
</tr>
</tbody>
</table>

Note: \(^{PV}\) indicates predictor variable; \(^{DV}\) indicates the dependent variable.

An examination of residual scatter plots and a review of the standardized residuals and predicted values demonstrated consistency of spread through the distributions indicating the data was homoscedastic. The preliminary descriptive analyses indicated that the model adequately met all assumptions and was acceptable for further statistical testing.
Data Analysis

An aggregation of survey responses provided descriptive statistics on demographic information of the participants including gender (gend), income (income), child membership in special education (sped) and teacher quality scores (ecers). Next, a correlation matrix of all independent variables provided information about the effect of the independent variables as proposed predictors on the parent reported involvement data. The use of multiple regression analysis provided a way to evaluate the effects of the independent variables (ecers, income, sped), as measured by regression coefficient, on each of the dependent variables (rolebeliefs, valence, sinvites, tinvites, hbinvolve, sbinvolve). Additionally, multiple regression answered the question of the total effect of all independent variables together on each dependent variable.

Following initial regression, an examination of standardized residuals identified several outliers. A review of the outliers demonstrated there was no theoretical justification for removing them. The results reported in this chapter represent the complete data set including outliers.

Descriptive Statistics

The study sample included a total of 306 Arizona parents with at least one child enrolled in a state-funded preschool classroom evaluated with the ECERS-R during the 2009-2010 school year. Descriptive statistics obtained using the Predictive Analysis Statistical Package for Social Sciences (SPSS) version 18.0 provided analysis of the population and survey responses across districts.
District 3 returned the greatest percentage of surveys (65%) while District 2 returned the fewest (39%). Of the 306 participants, there were 262 female and 31 male respondents (Tables 6 and 11). Tables 7 – 12 illustrate demographic information for survey respondents first by total participant population and then by district.

Table 6

*Descriptive Statistics of Returned Parent Surveys Across Participating School Districts*

<table>
<thead>
<tr>
<th>Total Surveys Distributed</th>
<th>Total Surveys Returned</th>
<th>percentage of total surveys returned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n )</td>
<td></td>
</tr>
<tr>
<td>District 1</td>
<td>264</td>
<td>104</td>
</tr>
<tr>
<td>District 2</td>
<td>210</td>
<td>109</td>
</tr>
<tr>
<td>District 3</td>
<td>80</td>
<td>52</td>
</tr>
<tr>
<td>District 4</td>
<td>76</td>
<td>41</td>
</tr>
</tbody>
</table>

Table 7

*Gender Distribution of Parent Participants*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>262</td>
<td>85.6%</td>
</tr>
<tr>
<td>Male</td>
<td>31</td>
<td>10.1%</td>
</tr>
<tr>
<td>Unknown</td>
<td>13</td>
<td>4.2%</td>
</tr>
<tr>
<td>Total</td>
<td>306</td>
<td>100%</td>
</tr>
</tbody>
</table>
Table 8

*Family Income Distribution Among Parent Survey Respondents*

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 5K</td>
<td>59</td>
<td>19.3</td>
</tr>
<tr>
<td>5,100-10,000</td>
<td>59</td>
<td>19.3</td>
</tr>
<tr>
<td>10,001-20,000</td>
<td>68</td>
<td>22.2</td>
</tr>
<tr>
<td>20,001-30,000</td>
<td>42</td>
<td>13.7</td>
</tr>
<tr>
<td>30,001-40,000</td>
<td>15</td>
<td>4.9</td>
</tr>
<tr>
<td>40,001-50,000</td>
<td>11</td>
<td>3.6</td>
</tr>
<tr>
<td>over 50K</td>
<td>14</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>268</strong></td>
<td><strong>87.6</strong></td>
</tr>
<tr>
<td>Unknown</td>
<td>38</td>
<td>12.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>306</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Of the 306 participants, 268 reported their income range. Among respondents, 50.8% reported income at or below $20,000 annually. Table 10 aggregates family income ranges across districts. Across the four districts, a total of 54 respondents reported their child received special education services while 23 did not respond to the question. Special education represents a categorical variable. That is, it represents subjects by limiting them into specific categories. Therefore, for the analysis, responses on the sped variable received either 1 (yes) or 2 (no) for child membership in special education. All non-responses received a score of 2 or non-special education specified. Table 11 summarizes the number of students receiving special education services across districts. The range in percentage of children enrolled in special education varies...
considerably across school districts. The greatest number of students enrolled in special education occurred in District 1 \( (n = 36, 37\%) \) and the fewest occurred in District 4 \( (n = 2, 2.6\%) \). Additionally, District 1 and District 2 reflected a greater number of total survey participants \( (n = 104, n = 109 \text{ respectively}) \) while District 3 and District 4 included fewer survey respondents \( (n = 52, n = 41 \text{ respectively}) \).

Table 9

_Survey Respondent Reports of Child Membership in Special Education_

<table>
<thead>
<tr>
<th>Reported Child Membership</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>in Special Education</td>
<td>54</td>
<td>17.6</td>
</tr>
<tr>
<td>Non-SPED</td>
<td>229</td>
<td>74.8</td>
</tr>
<tr>
<td>Total</td>
<td>283</td>
<td>92.5</td>
</tr>
<tr>
<td>Unknown</td>
<td>23</td>
<td>7.5</td>
</tr>
<tr>
<td>Total</td>
<td>306</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 10

Descriptive Statistics of Survey Respondent Family Income By District

<table>
<thead>
<tr>
<th></th>
<th>District 1 (n = 104)</th>
<th>District 2 (n = 109)</th>
<th>District 3 (n = 52)</th>
<th>District 4 (n = 41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 5 K</td>
<td>21</td>
<td>23</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>5,100–10,000</td>
<td>17</td>
<td>21</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>10,001–20,000</td>
<td>15</td>
<td>22</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>20,001–30,000</td>
<td>17</td>
<td>13</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>30,001–40,000</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>40,001–50,000</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>over 50 K</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>unknown</td>
<td>9</td>
<td>26</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: n reports total number of survey respondents within each district

Table 11

Descriptive Statistics of Survey Respondent Gender by District

<table>
<thead>
<tr>
<th></th>
<th>District 1 (n = 104)</th>
<th>District 2 (n = 109)</th>
<th>District 3 (n = 52)</th>
<th>District 4 (n = 41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>91</td>
<td>88</td>
<td>47</td>
<td>36</td>
</tr>
<tr>
<td>Male</td>
<td>9</td>
<td>13</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: n reports total number of survey respondents within each district

Table 12

Survey Respondent Reports of Child Membership in Special Education By District

<table>
<thead>
<tr>
<th></th>
<th>District 1 (n = 104)</th>
<th>District 2 (n = 109)</th>
<th>District 3 (n = 52)</th>
<th>District 4 (n = 41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 = yes)</td>
<td>36 (37%)</td>
<td>11 (12%)</td>
<td>5 (2.6%)</td>
<td>2 (8.2%)</td>
</tr>
<tr>
<td>(2 = no)</td>
<td>68 (63%)</td>
<td>98 (88%)</td>
<td>47 (97.4%)</td>
<td>39 (91.8%)</td>
</tr>
</tbody>
</table>

Note: n reports total number of survey respondents within each district
Scale Reliability

Cronbach’s alpha provided a measure of internal consistency to demonstrate the reliability of the Hoover-Dempsey and Sandler subscales. Alpha coefficients determine the degree to which the data for the items within each subscale are reliable. Values range from 0 to 1 with a generally acceptable level of .70 in most social science research. The alpha coefficients for the six parent involvement subscale items are acceptable, suggesting that the items have relatively normal internal consistency (see Table 13). Although the alpha coefficient for Home-Based Involvement ($\alpha = .60$) was at the lower end of the .70 considered acceptable in most social science research, the scales were uncorrelated with one another and therefore acceptable at the identified alpha levels (Introduction, 2007).

Table 13

*Reliability for the Hoover-Dempsey and Sandler Model of Parent Involvement Survey*

<table>
<thead>
<tr>
<th>Subscales</th>
<th>$\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valence</td>
<td>.90</td>
</tr>
<tr>
<td>Role Beliefs</td>
<td>.88</td>
</tr>
<tr>
<td>School Invitations</td>
<td>.75</td>
</tr>
<tr>
<td>Teacher Invitations</td>
<td>.83</td>
</tr>
<tr>
<td>School-Based Involvement</td>
<td>.82</td>
</tr>
<tr>
<td>Home-Based Involvement</td>
<td>.60</td>
</tr>
</tbody>
</table>
Question 1

Question 1 asked, “To what extent does teacher quality account for variance in parental involvement?” One total score for teacher quality accounted for the predictor variable and six subscale scores accounted for parental involvement scores. Multiple correlation ($R$) identified linear relationships between the three-predictor variable set and each parent involvement subscale score. Beta weights data yielded the regression coefficients between each predictor variable and independent variable. Structured coefficients supported analysis of the relationship between independent variables of teacher quality, income and sped and dependent parental involvement subscale scores. A final comparison of beta weights and structured coefficients provided reliable information about the impact or contribution of individual independent variables to the regression (Daniel & Onwuegbuzie, 2001). Table 14 presents the results of the multiple regressions on each of the parent involvement subscales.

A multiple regression determined the variance explained by teacher quality in the prediction of parent-reported involvement. A consideration of both beta weights and structure coefficients aided in the interpretation of the regression results. The following section provides a discussion of the multiple regressions.
Table 14

Multiple Regression Summary of Beta Weights and Structure Coefficients for All Study

<table>
<thead>
<tr>
<th>Variables</th>
<th>$B$</th>
<th>$\beta$</th>
<th>$r_s$</th>
<th>$r_s^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecers</td>
<td>-.01</td>
<td>.07</td>
<td>.10</td>
<td>.01</td>
<td>.64</td>
</tr>
<tr>
<td>income</td>
<td>.04</td>
<td>.02</td>
<td>.10</td>
<td>.01</td>
<td>.10</td>
</tr>
<tr>
<td>Sped</td>
<td>-.01</td>
<td>.10</td>
<td>.10</td>
<td>.01</td>
<td>.95</td>
</tr>
<tr>
<td>role beliefs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecers</td>
<td>-.01</td>
<td>-.02</td>
<td>.02</td>
<td>.001</td>
<td>.79</td>
</tr>
<tr>
<td>income</td>
<td>.00</td>
<td>.00</td>
<td>.02</td>
<td>.001</td>
<td>.99</td>
</tr>
<tr>
<td>Sped</td>
<td>-.02</td>
<td>-.02</td>
<td>.02</td>
<td>.001</td>
<td>.77</td>
</tr>
<tr>
<td>sinvites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecers</td>
<td>.01</td>
<td>.01</td>
<td>.10</td>
<td>.01</td>
<td>.90</td>
</tr>
<tr>
<td>income</td>
<td>.02</td>
<td>.10</td>
<td>.10</td>
<td>.01</td>
<td>.08</td>
</tr>
<tr>
<td>Sped</td>
<td>-.01</td>
<td>-.01</td>
<td>.10</td>
<td>.01</td>
<td>.87</td>
</tr>
<tr>
<td>tinvites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecers</td>
<td>-.17</td>
<td>-.09</td>
<td>.09</td>
<td>.01</td>
<td>.13</td>
</tr>
<tr>
<td>income</td>
<td>.02</td>
<td>.03</td>
<td>.09</td>
<td>.01</td>
<td>.58</td>
</tr>
<tr>
<td>Sped</td>
<td>-.07</td>
<td>-.03</td>
<td>.09</td>
<td>.01</td>
<td>.63</td>
</tr>
<tr>
<td>sbinvolve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecers</td>
<td>-.37</td>
<td>-.19</td>
<td>.22</td>
<td>.05</td>
<td>.001</td>
</tr>
<tr>
<td>income</td>
<td>.01</td>
<td>.02</td>
<td>.22</td>
<td>.05</td>
<td>.77</td>
</tr>
<tr>
<td>Sped</td>
<td>.32</td>
<td>.12</td>
<td>.22</td>
<td>.05</td>
<td>.04</td>
</tr>
<tr>
<td>hbinvolve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecers</td>
<td>-.04</td>
<td>-.03</td>
<td>.10</td>
<td>.01</td>
<td>.62</td>
</tr>
<tr>
<td>income</td>
<td>.03</td>
<td>.07</td>
<td>.10</td>
<td>.01</td>
<td>.21</td>
</tr>
<tr>
<td>Sped</td>
<td>-.14</td>
<td>-.08</td>
<td>.10</td>
<td>.01</td>
<td>.15</td>
</tr>
</tbody>
</table>
Valence. The mean for parent responses to Valence along a Likert scale ranging from 1 to 6 was 5.27. Tables 14 and 15 provide results of a multiple regression with teacher quality, family income and child membership in special education as predictor variables and Valence as the dependent variable. The resulting regression model produced an overall $R^2$ of .001 ($F(3,302) = .95, p .42$). Beta weights ($\beta$), or standardized regression coefficients provide information about the influence of each independent variable within the model on parent involvement. The benefit of including beta weights in an analysis is the ability to compare the relative effect of various independent variables in one model (Daniel & Onwuegbuzie, 2001). Beta weights for teacher quality were small (-.03). Structure coefficients also identified teacher quality as a minimal predictor of Valence. Structure coefficients represent the correlation between a given predictor variable and the predicted values of the dependent variable. Consultation of both $\beta$ weights and structure coefficients provide a more accurate determination of the contributions of each independent variable (Courville & Thompson, 2001; Daniel & Onwuegbuzie, 2001). As a predictor of Valence, teacher quality accounted for less than one percent (.3%) of the variance explained for Valence ($\beta = -.03$, $r_s^2 = -.003$) indicating the model does not provide much information in terms of predictability with regard to Valence.
Table 15

*Multiple Regression Model Summary of Predictor Variables on Valence*

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>$R^2$</th>
<th>Adj. $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valence</td>
<td>2.08</td>
<td>3</td>
<td>.69</td>
<td>.95</td>
<td>.42</td>
<td>.01</td>
<td>-.001</td>
</tr>
<tr>
<td>Residual</td>
<td>220.99</td>
<td>302</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>223.06</td>
<td>305</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Role Beliefs (rolebeliefs). The mean for parent responses to Role Beliefs along a Likert scale ranging from 1 to 6 was 5.36. Tables 14 and 16 provide results of a multiple regression with teacher quality, family income and child membership in special education as predictor variables and Role Beliefs as the dependent variable. The resulting regression model produced an overall $R^2$ of .001 ($F(3,302) = .05, p = .98$). Beta weights ($\beta$ weights) for teacher quality were small (-.02). Structure coefficients also indicated teacher quality contributed insignificantly to the model. As a predictor of Role Beliefs, teacher quality accounted for less than one percent of the variance explained ($\beta = -.02, r_s^2 = -.003$) indicating the model does not provide much information in terms of predictability with regard to Role Beliefs.
Specific Teacher Invitations (tinvites). The mean for parent perceptions of teacher invitations for involvement along a Likert scale ranging from 1 to 6 was 4.1. Tables 14 and 17 provide results of a multiple regression with teacher quality, family income and child membership in special education as predictor variables and teacher invitations for involvement as the dependent variable. The resulting regression model produced an overall $R^2$ of .01 ($F(3,302) = .85, p = .47$). Beta weights ($\beta$ weights) for teacher quality were small (-.09). Structure coefficients also indicated teacher quality did not contribute significantly to the model. As a predictor of parent perceptions of General School Invitations, teacher quality accounted for less than one percent (.3%) of the variance explained ($\beta = -.09, r_s^2 = -.003$) indicating the model does not provide much information in terms of predictability with regard to teacher invitations for parent involvement.
Table 17

*Multiple Regression Model Summary of Predictor Variables on Teacher Invitations for Involvement*

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>R²</th>
<th>Adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tinvites</td>
<td>4.32</td>
<td>3</td>
<td>1.44</td>
<td>0.85</td>
<td>.36</td>
<td>.01</td>
<td>-.001</td>
</tr>
<tr>
<td>Residual</td>
<td>508.63</td>
<td>302</td>
<td>1.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>512.95</td>
<td>305</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General School Invitations (sinvites). The mean for parent perceptions of General School Invitations for involvement along a Likert scale ranging from 1 to 6 was 5.5. Tables 14 and 18 provide results of a multiple regression with teacher quality, family income and child membership in special education as predictor variables and General School Invitations as the dependent variable. The resulting regression model produced an overall $R^2$ of .01 ($F(3,302) = 1.07, p = .36$). Beta weights ($\beta$ weights) for teacher quality were small (.007). Structure coefficients also indicated teacher quality did not contribute significantly to the model. As a predictor of teacher invitations, teacher quality accounted for less than one percent (.3%) of the variance explained ($\beta = .007, r_s^2 = -.003$) indicating the model does not provide much information in terms of predictability with regard to General School Invitations for parent involvement.
Table 18

Multiple Regression Model Summary of Predictor Variables on General School Invitations for Involvement

<table>
<thead>
<tr>
<th>Predictor</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>R²</th>
<th>Adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinvites</td>
<td>0.94</td>
<td>3</td>
<td>0.31</td>
<td>1.07</td>
<td>.36</td>
<td>.01</td>
<td>.001</td>
</tr>
<tr>
<td>Residual</td>
<td>88.45</td>
<td>302</td>
<td>0.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>89.41</td>
<td>305</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

School-Based Involvement (sbinvolve). The mean for parent School-Based Involvement for involvement along a Likert scale ranging from 1 to 6 was 3.2. Tables 14 and 19 provide results of a multiple regression with teacher quality, family income and child membership in special education as predictor variables and School-Based Involvement as the dependent variable. The resulting regression model produced an overall $R^2$ of .04 ($F(3,302) = 5.1, p = .002$). The effect size for the model including the three predictor variables (ecers, income, sped) was significant at the $p < .05$ level (see Table 19). Additionally, teacher quality as a predictor of school-based parent involvement also demonstrated significance at the $p = .05$ level ($p = .001$). Beta weights ($\beta$ weights) for teacher quality were small (-.19). Structure coefficients also indicated teacher quality somewhat contributed to the model. As a predictor of School-Based Involvement, teacher quality accounted for three percent (3%) of the variance explained ($\beta = -.19, r^2_s = .03$).
Table 19

*Multiple Regression Model Summary of Predictor Variables on School-Based Involvement*

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>R²</th>
<th>Adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>sbinvolve</td>
<td>26.76</td>
<td>3</td>
<td>8.92</td>
<td>5.10</td>
<td>.002</td>
<td>.05</td>
<td>.04</td>
</tr>
<tr>
<td>Residual</td>
<td>528.26</td>
<td>302</td>
<td>1.75</td>
<td></td>
<td></td>
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Home-Based Involvement (hbinvolve). The mean for parent School-Based Involvement for involvement along a Likert scale ranging from 1 to 6 was 5.2. Tables 14 and 20 demonstrate results of a multiple regression with teacher quality, family income and child membership in special education as predictor variables and Home-Based Involvement as the dependent variable. The resulting regression model produced an overall $R^2$ of .01 ($F(3,302) = 1.07$, $p = .36$). Beta weights ($\beta$ weights) for teacher quality were small ($-.03$). Structure coefficients also indicated teacher quality did not contribute significantly to the model. As a predictor of School-Based Involvement, teacher quality accounted for less than one percent (.3%) of the variance explained ($\beta = -.03$, $r^2_s = -$ .003) indicating the model does not provide much information in terms of predictability with regard to Home-Based Involvement.
Table 20

*Multiple Regression Model Summary of Predictor Variables on Home-Based Involvement*

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Question 2

A multiple regression analysis determined the variance explained by family income (income) and child membership in special education (sped) in addition to teacher quality (ecers) as predictors of parental involvement. A consideration of both beta weights and structure coefficients aided in the interpretation of the regression results.

Valence. The three predictor variables produced an $R^2$ of .01 ($F(3,302) = .95, p = .42$) for the prediction of valence. The strongest predictor was child membership in special education ($\beta = .10$), followed by teacher quality ($\beta = .07$) (see Table 14). Although not significant, income demonstrated a noteworthy effect size ($p = .10$) to suggest that family income showed some, yet not significant, influence on parent beliefs and feelings about their own school experiences, a motivational variable in parent involvement decisions.
Role Beliefs. The three predictor variables produced an \( R^2 \) of .001 (\( F (3,302) = .05, p = .98 \)) for the prediction of Role Beliefs. Together, these three predictors shared less than one percent variance. The strongest predictors were child membership in special education and teacher quality which both indicated slightly negative relationships with parent Role Beliefs (\( \beta = -.02 \)) (see Table 14).

Specific Teacher Invitations (tinvites). The three predictor variables produced an \( R^2 \) of .01 (\( F (3,302) = .85, p = .36 \)) for the prediction of Specific Teacher Invitations. Together, these three predictors accounted for around one percent of the variance in teacher invitations for involvement. The strongest predictor was teacher quality (\( \beta = -.09 \)) which indicated a slightly negative relationship with teacher invitations for parent involvement. Family income and child membership in special education demonstrated equally small relationships with this outcome variable although family income showed a slightly positive relationship with teacher invitations (\( \beta = .03 \)) while child membership in special education demonstrated a slightly negative relationship in the model (\( \beta = -.03 \)) (see Table 14).

General School Invitations (sinvites). The three variables produced an adjusted \( R^2 \) of .01 (\( F (3,302) = 1.07, p = .36 \)) for the prediction of General School Invitations. Together, these three predictors accounted for roughly one percent of the variance among parent perceptions of General School Invitations. The strongest predictor within the model was family income (\( \beta = .10 \)) (see Table 14). Income, as a predictor of parent
perceptions of school invitations for involvement, demonstrated a noteworthy, yet non-significant effect size ($p = .08$).

School-Based Involvement (sbinvolve). The three variables produced an $R^2$ of .05 ($F(3,302) = 5.1, p = .002$) for the prediction of School-Based Involvement. The model accounted for 5% of the variance in parent reported School-Based Involvement. The strongest predictor was teacher quality which demonstrated a negative relationship with parent School-Based Involvement ($\beta = -.19$). Child membership in special education demonstrated a positive relationship with parent School-Based Involvement ($\beta = .12$) (See Table 14). Both teacher quality ($p = .001$) and child membership in special education ($p = .04$) demonstrated significant effect sizes as predictors of parent reported School-Based Involvement at the $p < .05$ level. Teacher quality accounted for the greatest amount of variance, although negative, within the model than the other two predictors.

Home-Based Involvement (hbinvolve). The three predictor variables produced an $R^2$ of .01 ($F(3,302) = 1.07, p = .36$) for the prediction of Home-Based Involvement. Together, these three predictors shared roughly one percent of the variance in parent-reported Home-Based Involvement. The strongest predictor was child membership in special education ($\beta = -.08$) which demonstrated a slightly negative relationship with parent Home-Based Involvement followed by teacher quality ($\beta = -.03$) which also demonstrated a slightly negative relationship with parent Home-Based Involvement (see Table 14).
CHAPTER 5
DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

Chapter 5 reports a summary of the major results of the study, conclusions and recommendations for future research. Additionally, the chapter discusses policy and practical implications for schools, programs and classroom practices related to teacher quality and parental involvement practices in preschool programs.

This study examined the relationship between teacher quality rating scores and parent-reported involvement among parents with 3-4 year-old children enrolled in publicly funded preschool programs. While research identifies both the role of parent involvement and teacher quality as important variables in the successful school experiences of preschool children, it has yet to examine the interaction between teacher quality and parent involvement as a potential third level of influence in a child’s early school experiences. This study examined the predictive value of teacher quality as one influence on parent involvement. Additionally, the study considered family income and child membership in special education as potential predictors of parent involvement.

Parent participants represented four public school districts in and surrounding Phoenix, Arizona. A multiple regression model served as a useful procedure to test theories about the relationship between teacher quality, family income and child membership in special education as predictors of parent involvement. Parents qualified for participation in the study based on their child’s enrollment in a publicly-funded preschool program that used the Early Childhood Environmental Rating Scale-Revised during the 2009-2010 school year.
Data consisted of 306 parent-completed Hoover-Dempsey and Sandler model of parent involvement surveys. Participating school districts provided existing ECERS-R data for the 35 classrooms. Using these two forms of data, the study attempted to answer the following research questions:

1. To what extent does teacher quality account for variance in parent involvement?
2. To what extent do additional variables, including family income and child membership in special education, account for variance in parent involvement?

Summary of Results

The first research question examined preschool teacher quality as a predictor of parental involvement across six subscales: (a) Valence, (b) Role Beliefs, (c) General School Invitations for involvement, (d) Specific Teacher Invitations for involvement, (e) School-Based Involvement, and (f) Home-Based Involvement. Although this study yielded few statistically significant results, it provided insight into existing measures of teacher quality and implications for an examination of the relationship between teacher quality and parent involvement.

Descriptive Statistics

An analysis of descriptive statistics provided information about the general population sample and data set. Descriptive statistics provide important insight into the population and determine the relative generalizability of the current population and
results to a broader audience. Chapter 5 provides descriptive statistics and implications for each variable in the study.

Valence. The mean score for parent Valence, a measure of parent feelings about their own school experiences, was 5.27 along a scale of 1 to 6. A higher score on this subscale indicates that parents liked their own school experiences and felt positive about past experiences. Overall, parents indicated that they felt as though their former teachers cared about them and that those teachers provided a sense of belonging. Parent attitudes toward school and dispositions toward engagement with their child’s school contribute to the overall definition of parents’ role in the child’s education and influences involvement choices.

Role Beliefs. On a scale of 1 to 6, the mean score for Role Beliefs ($\mu = 5.36$) indicated parents generally agreed or agreed very strongly that it is the parent’s responsibility to volunteer, help the child at home, make sure the school has what it needs, support the teacher, maintain awareness of school events, make the school better and talk to their child about school. Role Beliefs and parent Valence represent two subscales that create parent role construction motivation for involvement and represent factors that influence how a parent feels about becoming involved in their child’s education. The consistency of high mean scores across Role Beliefs and parent Valence is consistent with the previous finding that high role construction is consistent with active involvement in the child’s education (Anderson, 2005).

Teacher invitations for involvement. Teacher invitations for involvement represent the frequency, since the beginning of the school year, of teacher communication with parents through email, phone contact or notes home to request parent support, attend
an event, help out at school, work with the child at home or talk about the child. Based on the subscale mean (µ = 4.1) parents reported the frequency of these events as once per week.

General School Invitations for involvement. The General School Invitations subscale describes parent perceptions of school-based experiences as either supportive or not supportive of their involvement. The mean score for General School Invitations (µ = 5.5) indicated parents agreed or agreed very strongly that the school scheduled activities so parents could attend, the school informed them of events and problems involving their child, and the school communicated with parents about the child’s progress. General School Invitations and teacher invitations for involvement reflect Level 1 motivational factors that contribute to a parent's initial decisions to become involved in the child’s education as described on the Hoover-Dempsey and Sandler model of parent involvement.

School-Based Involvement. School-based involvement is one of two subscales that represent the ways in which parents become involved in the child’s education. Involvement practices reflect a level of involvement beyond the Level 1 motivational factors on the Hover-Dempsey and Sandler model of parent involvement. This subscale reflects parent reports of involvement with the child in the school setting such as helping out at school and attending special events including field trips, PTA meetings and open house. The mean score for this subscale (µ = 3.2) indicates that parents tended to participate in these events between 4-5 times per year.

Home-Based Involvement. The Home-Based Involvement subscale reflects parent reports of involvement with the child in the home setting such as talking with the
child about school, supervising home-based activities, practicing skills at home, and reading with the child. Reported Home-Based Involvement was higher ($\mu = 5.2$) than School-Based Involvement and indicated parents participated in these activities between a few times per week to daily. In general, parents reported more frequent involvement in home-based activities than school-based activities throughout the school year.

Teacher quality (ECERS-R). The first of three predictor variables, teacher quality (ecers) provides a measure of quality including the environment and interactions between teachers and children. The teacher quality scores reflect a total of six of the seven original subscales. The total quality score omitted the parent and staff subscale due to missing data across school districts. The mean score for teacher quality reflected generally high ratings ($\mu = 6.30$). Findings from the study showed that preschool teacher quality, as evaluated by the early childhood environmental scale-revised (ECERS-R) ranged from 4.89 to 7.0 across participating classrooms along a possible scale of 1.0 to 7.0.

Membership in special education (sped). The study also considered child membership in special education as a second predictor of parent involvement. 17.6% ($n = 54$) of respondents indicated their child received special education services.

Question 1

A simple multiple regression analysis was useful in providing an empirically based understanding of whether teacher quality ratings, family income and/or child membership in special education could predict parent involvement across various
subscales. Evidence of a predictive relationship between teacher quality and parent involvement variables could lead to more effective practices and strategies tailored towards the needs of individual families or parents. More effective approaches to work with families could assist teachers, programs and schools in continuing to emphasize the importance of parent involvement in meaningful ways to achieve greater support for children.

Question 1 considered the potential of teacher quality to predict parent involvement as measured by six different variables. Teacher quality refers to behaviors and practices that result in both student academic and emotional learning as measured through academic and emotional growth outcomes, and knowledge or expertise of the teacher (Fenstermacher & Richardson, 2005). That is, the study used teacher quality as a proxy measure of process quality behaviors that potentially influence parent involvement. Even though existing research demonstrates the importance of teacher behaviors in the relationship between teacher and parent, data in this study failed to provide clear and consistent evidence that teacher quality predicts parent involvement among preschool parents.

Teacher quality generally did not explain variance among the six parent involvement variables. A comparison of this result with the effect size ($\rho = .42$), a measure of practical significance, confirmed the failure of teacher quality to account broadly for variance in parent involvement. However, teacher quality was a significant negative predictor of one particular parent involvement variable: School-Based Involvement. School-Based Involvement measures parent reports of engagement with the school including volunteering and attending special events. The results
demonstrated a tendency for School-Based Involvement activities to decrease slightly when teacher quality ratings increased. For every one point increase along the teacher quality scale, parent involvement responses decreased by .37 along the subscale Likert scale ranging from 1 (low) to 6 (high). Practical application could suggest that parent survey respondents with higher quality teachers tend to demonstrate less School-Based Involvement.

Question 2

The multiple regression analyses for the remaining predictor variables of family income (income) and child membership in special education (sped) also failed to yield consistently significant results as predictors across the six parent involvement variables. Data analysis for this model showed that neither family income nor child membership in special education met the typical $p < .05$ for statistical significance across the model. A consideration of effect sizes, measures of practical significance, confirmed the failure of either family income or child membership in special education to account for variance broadly across parent involvement. Child membership in special education demonstrated a statistically significant effect as a predictor of School-Based Involvement and accounted for a greater amount of unique variance than family income in the model.

The significance of special education as a predictor of School-Based Involvement by parents indicates that parents with children enrolled in special education generally reported a greater amount of participation in school-based events and meetings. It is unclear whether parents with children enrolled in special education had more
opportunities for involvement as a function of their connection in special education than other parents.

Family income, as a predictor, demonstrated noteworthy effect sizes for both school-based invitations for involvement ($p = .083$) and Valence ($p = .098$). Although not significant, these effect sizes approach significance and therefore may indicate that income may influence parent involvement on some level.

As a predictor of parent involvement, family income demonstrates significance in various studies (Halgunseth et al., 2009; Henderson & Mapp, 2002; Waanders, Mendez, & Downer, 2007). The results of this study are generally inconsistent with prior work examining family income and involvement practices. For example, Waanders and colleagues (2007) found that parents’ perceived economic stress resulted in decreased involvement including limited relationships with teachers and less time spent on School-Based Involvement.

Child membership in special education did demonstrate the ability to positively predict School-Based Involvement. The results indicated parents with children enrolled in special education services tended to attend school events or volunteer in the school more frequently than parents with children who did not receive special education services. Practically speaking, this result is not surprising given the frequency of communication and contact between families and schools to develop and maintain children’s special education services and programs.

One additional notable result was the difference between home-based and School-Based Involvement. Parents generally reported higher, yet insignificant, involvement in home-based activities ($\mu = 5.3$) compared with school-based activities ($\mu$
This finding is consistent with prior research which reported that parent beliefs and personal attitudes towards school may impact school-based but not Home-Based Involvement (Grolnick, Benjet, Kurowski, & Apostoleris, 1997; Waanders et al., 2007). This could indicate that there are additional motivational variables, not included in this study, that are influential in parent decisions to become involved. Downer and Mendez (2005), for example, identified efficacy as an important determinant of School-Based Involvement but not Home-Based Involvement. For example, one additional factor identified in the existing research as influential includes parental education level (Fantuzzo, Tighe, & Childs, 2000).

Implications for Practice

In summary, the research proposed to obtain data on the ability to predict parent involvement from preschool teacher quality ratings. An analysis of parent involvement included categories such as role construction, perceptions of involvement invitations from teachers and schools, and involvement practices at home and at school. Although the findings did not demonstrate consistently significant effects of family income, child participation in special education or teacher quality as predictors of parent involvement, the study nevertheless demonstrates important implications for practice. Nationally, the desire to identify the most effective strategies to support children prior to prekindergarten entry requires a better understanding of individual variables such as teacher quality and parent involvement as influences in the child’s experience and eventual outcomes. An emerging category of research that identifies benefits of these
relationships to child outcomes is parent-teacher relationships (Henderson & Mapp, 2002; Copple & Bredekamp, 2009; Powell, Son, File & San Juan, 2010).

The study uniquely extends the discussion of multidimensional views of teacher quality as influential in parent-teacher relationships and ecological factors that contribute to parent involvement. A limitation of the study is the homogeneity in the participant sample and responses. Parents generally reported high expectations of their involvement and perceptions of invitations for involvement. Additionally, the nature of the research design failed to allow for the interpretation of causal relationships between predictor variables and parent involvement variables.

Finally, the two measures used in this study may not represent the ideal measures necessary to clearly understand the dynamic between teachers and parents. The ECERS-R, although widely used nationwide, fails to capture the depth of process quality necessary to identify patterns or predictive value for parent-teacher relationships. Although developed and validated for use with an elementary population, the Hoover-Dempsey and Sandler survey is promising for its recognition that there are deep, underlying motivational factors beyond demographics that influence parent decisions about involvement.

Implications for Teachers and Schools

The Hoover-Dempsey and Sandler model includes various subscales at different levels that recognize precursors, or motivators, to parent involvement. This is consistent with the research in parent involvement that suggests parents feel more comfortable and are more likely to demonstrate involvement when they feel a sense of welcome and
a level of respect by the teacher and school (Halgunseth et al., 2009; Henderson & Mapp, 2002).

Additionally, the importance of parent-teacher relationships continues to deserve attention based on existing research (Pianta, La Paro et al., 2002; Pianta, Stuhlman, & Hamre, 2002; Powell et al., 2010). The parent involvement survey used in this study identified a range of unique factors that motivate parents to initially become involved in their child’s school. This also reflects an important consideration in the development of strategies used to promote parent involvement; Namely, parents may have different needs based on experiences and expectations. Teachers have the capacity to influence the relationship with parents and therefore potentially influence parent involvement including parent beliefs about their involvement role, beliefs or attitudes about school (valence) and perceptions of teacher invitations for involvement.

Implications for Policy

Schools and programs may wish to rethink the prevalent belief that teacher quality exists within the walls of the classroom, as reflected by current practices in quality evaluation and policy. It may be beneficial for schools and programs to begin to consider how to develop and nurture policies and expectations related to parent involvement and parent-teacher relationships. Schools and programs might consider ways in which school-based staff can serve as primary influences on parent beliefs about helping their child succeed in school as well as guidance on role expectations for involvement. Parent efficacy and Role Beliefs are both motivating factors in parents’ decisions to become involved in their child’s education (Hoover-Dempsey et al., 2005).
School policies should consider the full spectrum of influence teachers have on children’s experiences.

Implications for Research

Traditionally, research provides evidence of parent involvement as a significant variable on child outcomes. Additionally, teacher quality also represents a contributor to child developmental and educational outcomes. Recent research has addressed the need to consider teacher quality as multidimensional (Powell et al., 2010; Fan & Chen, 2001; Xu & Gulosino, 2006) and extending beyond the interactions exclusively between teachers and children. The consideration of motivational variables as foundational to parents’ decisions to become involved in children’s educational experiences could indicate that parents have unique needs when considering involvement and developing initial habits of involvement. Additional research is necessary to better understand two key aspects of parent involvement: which teacher behaviors influence specific aspects of parent involvement and which aspects of the parent-teacher relationship are most important to the eventual types of parent involvement most significant to positive child outcomes.

A second consideration for research is the selection of a measurement for teacher quality. Although the ECERS-R is a commonly used tool, other measures exist that may provide better insight into the behaviors that may prove important to parent-teacher relationships. For example, the Arnett Caregiver Interaction Scale provides an assessment of teacher sensitivity to children, warmth towards children and appropriateness of interactions with children (Powell et al., 2010). These behaviors are
consistent with process quality behaviors identified with the CLASS measurement of quality (Pianta 2007; Pianta et al., 2005). Both tools serve to identify important process quality behaviors between teachers and children that demonstrate positive social, emotional and educational outcomes for children.

Recommendations for Further Study

The need to understand how teacher quality and parent involvement overlap is relevant to improving early school experiences for young children. The research conducted provided one approach by considering teacher quality as a predictor of parent involvement across six different involvement variables. An understanding of how teachers affect parent motivation and involvement practices is useful in the development of more effective strategies to improve children’s educational experiences.

The following are possible recommendations for further research:

1. Repeat the current study on a larger scale incorporating a broader range of preschool programs in surrounding states.

2. Include school-based and relevant district parent involvement policies and practices as potential predictors for parent responses.

3. Include qualitative data such as interviews or focus groups to further explore the motivation behind parent involvement among preschool parents.

4. Design a study with benchmarks that measure parent involvement at both the beginning and end of the preschool experience.
5. Design a study to assess the use of the Hoover-Dempsey and Sandler model of parent involvement scale among preschool parents. Establish new validity for this population.

6. Reconsider the use of ECERS-R as primary quality tool in early childhood. Consider the use of other quality rating scales that more closely measure process quality or behaviors that could similarly influence relationships with parents.

7. Design a study to assess whether participation in preschool programs correlates with parent involvement in Kindergarten through third grade.

Any study of teacher quality must recognize that quality is multidimensional and consequently has the potential to extend beyond the walls of the classroom. This approach to quality reflects the perspective that relationships and expectations, such as those of parent involvement, are socially constructed. According to Hoover-Dempsey et al. (2004), parents enter the school with previously conceived ideas and expectations about their role in the child’s education and will therefore demonstrate a tendency or predisposition to particular involvement behaviors and practices. However parents’ ideas and preconceptions are moldable and are subject to influence by the teacher. It is promising to consider the teacher-parent relationship as one potentially effective approach to producing the kind of parent-school relationships that will most effectively support children’s earliest school experiences (Hoover-Dempsey, Walker, Jones & Reed, 2002; Hoover-Demsey et al., 2004).
Conclusions

Although the study resulted in mixed findings regarding the predictive value of teacher quality, the results indicate that participating families are supportive of their involvement in the education of their children. Additionally, these findings were not broadly affected by family income or child membership in special education and teacher quality only appeared to significantly affect school-based parent involvement. Preschool parent participants feel it is their responsibility to become involved and demonstrate greatest involvement practices in the home. Additionally, parents perceived teacher invitations to become involved as more convincing and encouraging than those from the general school. This supports the research that teachers are uniquely important influences in the parent-teacher relationship and that parents indeed perceive interactions and relationships with teachers differently than they perceive interactions and relationships with the general school.

As the field of early childhood education continues to respond to federal legislation and current research, it is imperative that long-held philosophical beliefs including the ecological systems theory remain a part of the discussion. If one accepts that the child’s multiple environments interact to create entirely new influences on the child’s school experience, then practices within the field must also recognize that perspective. If one accepts that both teacher-parent relationships and the influence of the teacher on that relationship are important then local policies that define and measure teacher quality must begin to be defined in terms of all teacher behaviors that matter.
In summary, this study supports an understanding of how teachers matter in the education of young children. Previous research established the relationship between teacher quality and child’s educational and developmental outcomes. However, this study relied on a multidimensional approach to quality by emphasizing process quality, or teacher behaviors, as a possible influence on the relationship between teacher and parent. Further research could include a deeper exploration of the relationship between teacher and parent and the ways in which that relationship affects motivational factors for parent involvement. It is clear that the teacher matters beyond the walls of the classroom in the educational experience of the child and it is necessary to continue to understand the potential of the preschool teacher to influence early parent involvement practices during a parent’s first experiences with the child’s school.
APPENDIX A

THE HOOVER-DEMPSEY AND Sandler MODEL OF PARENTAL INVOLVEMENT

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APPENDIX B

PARENT RECRUITMENT LETTER
Dear Parent,

Your child’s school is participating in a research project designed to help schools understand how parents make decisions about their involvement in the school. This information will help your school and your child’s classroom teacher better understand parent involvement in your school. In one week, you will receive a short survey with questions about your involvement in your child’s school.

The survey will include 60 questions and should take between 25-30 minutes for you to complete. When you complete your survey, I ask that you place it into the envelope provided and return it to your child’s classroom teacher. Your teacher and the school will not open the survey. Only the researchers will have access to your survey responses.

Your participation in this study is voluntary. You may withdraw from the study at any time without consequences.

If you have any questions about this study now or in the future, please contact me, Armandina Brown. Should you have questions regarding your rights as a participant in research, please contact the Institutional Review Board of the University of North Texas, 940-369-7487.

All information obtained during this study will remain confidential to the extent allowed by law. Your name or school’s name will not be associated in any way with the data gathered or the findings of the research. The results or findings will be used for the purpose of this study only. If the results are published, your name or school’s name will not be used.

Thank you in advance for your consideration. I hope you will consider participating in this project.

Sincerely,

Armandina Brown
Estimados Padres,

La escuela de su niño participa en un proyecto de investigación diseñado para ayudar las escuelas entender como los padres toman decisiones sobre su participación en la escuela. Esta información ayudará a su escuela y los profesores de aula de su niño mejor entienden la participación paternal en su escuela. En una semana, usted recibirá una encuesta corta con preguntas sobre su participación en la escuela de su hijo(a).

La encuesta incluirá 60 preguntas y debería tomar entre 25-30 minutos para usted para completar. Cuando usted completa su encuesta, pregunte que usted lo coloque en el sobre proporcionado y lo devuelva al profesor de aula de su niño. Su profesor y la escuela no abrirán la encuesta. Sólo los investigadores tendrán el acceso a sus respuestas de encuesta.

Su participación en este estudio es voluntario. Puede retirarse de el estudio a cualquier tiempo sin consecuencias.

Si Ud. tiene alguna pregunta sobre este estudio hoy o en el futuro, favor de comunicarse conmigo, Armandina Brown. Si acaso tiene preguntas sobre sus derechos como participante en este estudio, por favor comuníquese con la Mesa de Revista Institucional en la Universidad de North Texas en el teléfono 940-369-7487.

Toda la información obtenida durante este estudio permanecerá confidencial al grado permitido por la ley. Su nombre o el nombre de la escuela no serán asociados de ningún modo con los datos juntados o las conclusiones de la investigación. Los resultados o conclusiones serán usados para el objetivo de este estudio sólo. Si los resultados son publicados, su nombre o el nombre de la escuela no será usado.

Gracias de antemano por su consideración. Espero que usted piense participar en este proyecto.

Sinceramente,

Armandina Brown
APPENDIX C

INFORMED CONSENT FORM
Title of Study: An Ecological Understanding of Teacher Quality in Early Childhood Education

Principal Investigator: George S. Morrison, Professor of Education at the University of North Texas (UNT), Teacher and Education Administration.

Purpose of the Study: You are being asked to participate in a research study that involves understanding parent beliefs and ideas about involvement in the education of their children and how this information helps professionals to understand the quality of classrooms and teachers. This information will enable the researcher to learn more about how parents in different classrooms think about their participation in schools.

Study Procedures: You will be asked to complete a written survey that will take about 30-45 minutes of your time. You will also be asked to return all completed paper surveys to your child’s classroom teacher.

Foreseeable Risks: No foreseeable risks are involved in this study.

Benefits to the Subjects or Others: We expect the project to benefit you by helping your school and teachers understand what parents think and believe about their participation in classrooms and schools.

Procedures for Maintaining Confidentiality of Research Records: All records and responses will be kept confidential. Survey responses will not include identifying information. All responses will be kept in separate locations from signed consent forms. The confidentiality of your individual and school information will be maintained in any publications or presentations related to this study.

Questions about the Study: If you have any questions about the study, you may contact Armandina Brown or the faculty advisor, Dr. George S. Morrison, UNT Department of Development and Family Studies.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.
**Research Participants’ Rights:** Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- *Armandina Brown* has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

______________________________
Printed Name of Participant

______________________________           Signature of Participant

               Date

**For the Principal Investigator or Designee:** I certify that I have reviewed the contents of this form with the participant signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

______________________________           Date

Signature of Designee
Mesa de Revista Institucional de La Universidad de North Texas

Forma de Consentimiento Informado - Forma Para Padre o Guardian

Antes del convenir participar en este estudio de investigación, es importante que usted lea y entienda la explicación siguiente del objetivo, ventajas y riesgos del estudio y como será conducido.

Título del Estudio: Un Entendimiento Ecológico de la Calidad de Maestro(a) en la Educación de la Niñez Temprana.

Investigador Principal: George S. Morrison, Profesor de Educación en la Universidad de North Texas (UNT), Administración y Educación de Maestros

Propósito del Estudio: Le piden participar en un estudio de investigación que implica creencia de padre comprensivas e ideas sobre la participación en la educación de sus niños y como esta información ayuda a profesionales a entender la calidad de aulas y profesores. Esta información permitirá al investigador aprender más sobre como los padres en aulas diferentes piensan tocante su participación en las escuelas.

Procederes del Estudio: Le pedirán completar una encuesta escrita que tomará aproximadamente 30-45 minutos de su tiempo. También le pedirán devolver todas las encuestas completadas de papel al profesor de aula de su niño.

Riesgos de Presciencia: No se anticipan riesgos en este estudio.

Beneficios a los Sujetos o a Otros: Esperamos que el proyecto le beneficiara a Ud. en ayudarle a su escuela y sus maestros entender lo que piensan y creen los padres sobre su participación en las salas de clase y las escuelas de sus hijos.

Procederes para Mantener la Confidencia de los Records Documentos de Buscar: Todos los registros y respuestas serán guardados confidenciales. Las respuestas de encuesta no incluirán la información que se identifica. Todas las respuestas serán guardadas en ubicaciones separadas de las formas de consentimiento La confidencialidad de su información individual y de la escuela será mantenida en cualquier publicación o presentaciones relacionadas con este estudio.

Preguntas sobre el Estudio: Si tiene preguntas sobre el estudio, puede comunicarse con Armandina Brown o con el consejero de facultad, Dr. George S. Morrison, UNT Departamento de Estudios de Desarrollo y Familia.

Revista para la Protección de los Participantes: Este estudio de investigación ha sido repasado y aprobado por UNT Mesa de Revista Institucional (MRI) [en inglés, Institutional Review Board (IRB)]. Se puede comunicar con la UNT IRB al teléfono 940-
Derechos de los Participantes en el Estudio de Buscar: Su firma debajo indica que usted ha leído o ha tenido leído a usted todos encima y que usted confirma todo lo siguiente:

- **Armandina Brown** le ha explicado el estudio y le ha contestado todas sus preguntas. Se le han dicho las ventajas posibles y los riesgos potenciales y/o las incomodidades del estudio.
- Usted entiende que usted no tiene que participar en este estudio, y su rechazo de participar o su decisión de retirarse no implicará ninguna pena o pérdida de los derechos o beneficia. El personal del estudio puede decidir terminar su participación en cualquier momento.
- Usted entiende porqué el estudio está siendo conducido y como será realizado.
- Usted entiende sus derechos como un participante de investigación y usted voluntariamente consiente para participar en este estudio.
- Usted se le ha informado que recibirá una copia de esta forma.

______________________________  
Nombre de el Participante en molde

______________________________  
Firma de el Participante

____________  
Fecha

Para el Investigador Principal/Designado: Certifico que he repasado el contenido de esta forma con el firmar de participante encima. He explicado las ventajas posibles y riesgos potenciales y/o incomodidades del estudio. Es mi opinión que el participante entendió la explicación

______________________________  
Firma de el Designado

____________  
Fecha
REFERENCES


Rowan, B., Correnti, R., & Miller, R. J. (2002). What large-scale, survey research tells us about teacher effects on student achievement: Insights from the Prospects study of elementary schools. *Teachers College Record, 104*(8), 1525–1567.


