PARENT INVOLVEMENT: THE IMPACT OF COMMUNITY CONNECTIONS AND TECHNOLOGY

by

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(Under the Direction of David W. Wright)

ABSTRACT

The benefits of parent involvement have been found to impact children, parents, teachers, and schools as a whole. This study builds of the Hoover-Dempsey and Sandler's (1997, 2005) Theoretical Model of the Parental Involvement Process to explore specific influences on parent involvement behaviors. Two additions to the model were made to account for the lack of research on the impact of parents feeling connected to a school community and parents' use of technology to connect with their children's school. The current study used structural equation modeling to analyze the paths hypothesized by the model of parent involvement process. A sample of 220 parents with kindergarten to fifth grade students completed surveys addressing their perceptions of their personal motivators to be involved, perceptions of invitations to be involved, feelings of being connected to their child's school community, ways of communication with the school, and involvement practices at home and at school. Findings partially supported Hoover-Dempsey's model as well as the predicted model of parent involvement being influenced by parents feeling connected and technology usage. Furthermore, feeling connected to the school community was found to mediate the relationship between role construction and parent

involvement. Lastly, lower technology usage was found to moderate the relationships between parents feeling connected to the school and parent involvement.

INDEX WORDS: Parent Involvement, Community Connections, Technology, Schools, Elementary School, Parenting

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DEDICATION

I would like to dedicate my dissertation to my family. First, Jackson, my husband and best friend, has provided much needed emotional support through this journey. He held me close through the struggles and never let me settle for less than I desire. He has always believed in me and knew we would one day be the Drs. Dove. My parents, Roger and Mimi Kicklighter, have always encouraged and supported me so that I was able to achieve all my dreams. My brother, Kevin Kicklighter, and I were able to be UGA students together and he "lovingly" nudged, prodded, and annoyed me to complete my degree. David Wright, my "Academic Dad", has been an irreplaceable mentor who has seen me grow from a 6 page thesis to a 126 page dissertation. Lastly, the Quilting Club has supported and encouraged me through every step and have become my sisters.

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TABLE OF CONTENTS

Page

LIST OF TABLES

Pages

LIST OF FIGURES

Page

CHAPTER 1

INTRODUCTION

Parent involvement is an important aspect of children's early learning and development and is beneficial throughout childhood and early adolescence (e.g. Arnold, Zeljo, Docroff, & Ortiz, 2008; Domina, 2005; Mo & Singh, 2008; etc.). Research shows that parent involvement in activities and processes taking place in the home may influence a child's development in many areas of academic development (Bus, van Ijzerldoorn, & Pellegrini, 1995; Deckner, Adamson, & Bakeman, 2006; Weigel, Martin, & Bennett, 2006). Additionally, the benefits of parent involvement can impact children, parents, teachers, and schools as a whole (El Nokali, Bachman, & Votruba-Drzal, 2010; Hara & Burke, 1998; Luster & McAdoo, 1996).

Research on parent involvement in their children's development is often studied in the context of education. Furthermore, child outcomes associated with parent involvement are often quantified into a measure of success, such as test scores, grade point averages, social skills, and behavioral problems (Domina, 2005; El Nokali, Bachman, & Votruba-Drzal, 2010; Jeynes, 2005; Luster & McAdoo, 1996). Research has shown parent involvement can benefit parents, teachers, and the school as a whole (Hara & Burke, 1998). Thus, parent involvement can also be conceptualized as a function of family processes. To better understand these family processes, it is beneficial to approach this topic from a human development and family science perspective.

The use of theory is crucial to fully grasp parent involvement in children's learning from a developmental instead of an educational point of view. For this reason, the theoretical perspectives presented focus the influences of family processes surrounding parent involvement

choices. The foundational theoretical perspective is Bronfenbrenner's bioecological systems theory. Next, building off the bioecological systems theory is Epstein's theoretical model of overlapping spheres of influence of family, school and community on children's learning. Going deeper with the intertwining relationship of home and school, Hoover-Dempsey and Sandler's (1997, 2005) Theoretical Model of the Parental Involvement Process focuses on parents' processes to explore specific influences on parent involvement behaviors. Using this theoretical model, research has shown that parents' personal motivators and their perceptions of invitations can impact their involvement and children's outcomes.

However, gaps in parent involvement research still exist. Very little research has explored the impact of feeling connected to a school community on parents' involvement. This lack of research warrants further exploration within the context of parent involvement and schools. Another gap is the lack of research on parents' use of technology to connect with their children's school and be involved in their child's education. The changing landscape of technology creates a necessity to understand if and how technology is improving parental involvement.

The current study used structural equation modeling to analyze the paths hypothesized by the model of parent involvement process (Hoover-Dempsey & Sandler; 1997, 2005). A sample of 220 parents with kindergarten to fifth grade students completed surveys addressing their perceptions of their personal motivators and any invitations to be involved. Furthermore, parents' were surveyed about their feelings of being connected to and a part of their child's school community, their ways (both technological and traditional) of communication with the school, and their parent involvement practices at home and at school.

Findings partially supported Hoover-Dempsey's model as well as the predicted model of parent involvement being influenced by parents feeling connected and technology usage. Furthermore, feeling connected to the school community was found to mediate the relationship between role construction and parent involvement. Lastly, lower technology usage was found to moderate the relationships between parents feeling connected to the school and parent involvement. These findings have implications not only for future research, but also for schools working to improve parent involvement.

CHAPTER 2

LITERATURE OVERVIEW

To provide foundational information for this study, the theoretical perspectives and research on parent involvement in children's learning will be reviewed in this chapter. In the first section, major views of parent involvement will be defined and described. The existing literature and research on the importance of parent involvement will be reviewed in the second section. The theoretical perspectives of parent involvement in children's learning and education will be discussed in the third section. From there, research related to the theoretical motivating factors that influence parents' involvement will be reviewed. Finally, the lack of research on parents feeling connected with their child's school community and the use and impact of technology with parent involvement will be discussed.

Defining Parent/Family Involvement/Engagement

Parents take part in children's education in many different ways, such as aiding with class work, guest speaking in class, organizing school functions, or just supporting their child at home. Nevertheless, researchers do not always share the same definition of parent involvement. One way this discrepancy can be seen is the variety of terms researchers use for parent involvement: family engagement, parent engagement, family involvement, and parental involvement.

To construct a consistent definition of parent involvement, extensive research has been done in the field of parent involvement in children's learning and education (e.g. Epstein, 2011; Hoover-Dempsey & Sandler 2005). In this study, the term parent involvement encompasses

parents' behaviors in home and school settings in supporting their child's education (El Nokali, Bachman, & Votruba-Drzal, 2010; Smith, Wohlsetter, Kuzin, & DePedro, 2011).

Epstein's Categories of Parent Involvement

Epstein (2011) described six categories of ways that parents are involved in their child's education based on research. The first of Epstein's six categories consists of basic parenting obligations. These obligations can range from the parents caring for the health and safety of their child to preparing and supporting their child before and during his or her school career (Epstein, 2011). Although all of the activities in this range may not appear to be parental involvement in children's education, it has been shown to have an effect on their education outcomes (Luster & McAdoo, 1996).

Epstein's second category of parent involvement is communication. Schools' aim to keep parents involved in their child's education through communicating with them about school programs and events, as well as the child's progress (Epstein, 2011). Communication between the school and parents is commonly maintained through notes, phone calls, report cards, and conferences (Epstein, 2011).

Volunteering is Epstein's third category of parent involvement. Parents can be involved at their child's school by volunteering to assist teachers, administrators, and children in various capacities in and around the school (Epstein, 2011). Volunteering can include support within the classroom on a regular basis or during special events, assistance at student performances, help with sporting events at a range of levels, and a wide range of other events depending on the school.

Epstein's fourth category of parent involvement is participation in learning at home (Epstein, 2011). Learning activities at home can cover a wide range of activities and may

include instruction or guidance from the child's teacher to aid parents in assisting their child (Epstein, 2011). Generally, parents who work with their child on school related activities at home increase the learning opportunities for the child.

Decision-making is the fifth of Epstein's parent involvement categories. Parents may decide to become involved in decision-making, governing, and advocacy within the school (Epstein, 2011). A few ways parents are a part of decision-making is through participating in parent-teacher organizations/association, various committees, and on the school board (Epstein, 2011). The opportunities for parents to be involved in decision-making and school governing can vary across schools.

The sixth and most in-depth of Epstein's categories of parent involvement is collaborating with the community. Parents can be involved in their child's education through collaboration with community organizations such as local agencies, businesses, and groups. These community organizations share responsibility for the education and future success of local children (Epstein, 2011).

Hoover-Dempsey's Definition of Parent Involvement

Although Epstein's categories illustrate some of the specific areas which parents are involved in with their child's learning and education, the researchers at Family-School Partnership Lab, including Hoover-Dempsey, Sandler, Walker, and Green, define parent involvement slightly differently. Much of Hoover-Dempsey and her colleagues' work have been done to better understand of the role of parent involvement taking place in both the classroom and the home on children's education outcomes. According to Hoover-Dempsey and Sandler's (1997) definition of parental involvement, parents' involvement in school can range from volunteering at school functions to participating in formal and informal conferences with school

officials (e.g., teachers, school administration). Additionally, Hoover-Dempsey and Sandler (1997) defined parental involvement within the home as a range of activities related to and supportive of children's learning. Hoover-Dempsey and Sandler (1997) suggested this range of activities includes reviewing and aiding with work, monitoring progress, discussing a child's day with the child, offering children opportunities to participate in enriching activities, and various types of communication with the child's school from home. The discussion of the major definitions of parent involvement is important to laying the foundation for understanding parent involvement. Nevertheless, empirical research is beneficial in illustrating the importance of parent involvement.

The Impact of Parent Involvement

Many individuals and groups, including the Federal Government and the National Association of the Education of Young Children (NAEYC), advocate for involving parents at varying degrees throughout a child's academic career. The NAEYC Developmentally Appropriate Practice handbook states practitioners working with kindergarteners should maintain regular and frequent two-way communication with parents through parent conferences, face-to-face interactions, emails, notes, and notebooks that travel each day between home and school (Copple & Bredekamp, 2009). However, the NAEYC Developmentally Appropriate Practice handbook does not provide empirical research to support this standard of practice (Peressini, 1998). Advocating for a particular practice is much more meaningful when quality research explains the impact of that practice. Thus, before discussing the major theoretical perspectives and influences on parent involvement, it is necessary to discuss the research on the impact of parent involvement.

Research on the Impact of Parent Involvement

The definitions and themes discussed above aid in understanding the foundation of parent involvement, but they do not adequately describe the impact it has been found to have. Researchers have found that parent involvement is beneficial throughout childhood and early adolescence (e.g. Arnold, Zeljo, Docroff, & Ortiz, 2008; Domina, 2005; Mo & Singh, 2008; etc). The following research includes the benefits of parent involvement to elementary age children as well as parents, teachers, and overall schools.

A study on the Perry Preschool Project found high maternal involvement in kindergarten, as rated by teachers, was positively related to children's academic motivation and socially appropriate behaviors (Luster & McAdoo, 1996). Additionally, academic motivation in kindergarten was positively related to both eighth grade educational achievement and educational attainment and income at age 27. This study illustrates that parent involvement can impact a child's life well beyond elementary school successes and into his or her adult life.

El Nokali, Bachman, and Votruba-Drzal (2010) used longitudinal data of 1,364 children from birth to fifth grade to examine effects of parent involvement. The data were from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development (NICHD SECCYD). Using between-child analyses the researchers found parent involvement promotes better social skills and fewer problem behaviors. This study suggests that parent involvement is not limited to academic success of a child, but in fact can promote important life skills.

A similar study to the one above is Domina's (2005) four-year longitudinal study on 1,445 children with a median grade of second grade. Domina (2005) assessed the influence of parental involvement of children's cognitive achievement and behavioral problems. The

researcher found that parents' volunteering at their child's school (both inside and outside the classroom), helping with their child's homework, and checking their child's homework were related to their children scoring lower on the Behavioral Problems Index. Interestingly, this link was still significant after controlling for family and school backgrounds and previous scores on earlier measures of behavioral problems. Similar to El Nokali, Bachman, and Votruba-Drzal (2010), Domina (2005) revealed that parent involvement can go beyond influencing children's academic outcomes to actually preventing children's behavior problems.

Another research studying the influence of parental involvement on children's development found the benefits of parent involvement are not limited to a specific ethnic group or SES. Jeynes' (2005) meta-analysis on parental involvement in urban elementary schools found parent involvement to be associated with racial minority student's higher academic achievement just as previous research had found with higher SES families. The same study also found no difference between male and female students. Thus, parental involvement can lead to higher academic achievement no matter a child's race, SES, or gender. This study illustrates that parent involvement can benefit children from a variety of backgrounds.

Although the previous research demonstrated how parents could impact their children when they are involved in their learning, Hara and Burke (1998) found benefits could go beyond an individual child's outcome. Through implementing a parent involvement program in third grade classrooms, students' whose parents participated improved reading and vocabulary levels. Parents also benefited from the program; they gained increased interest in education, improved attitudes about school and their child's teacher, and greater respect for teachers' roles and the impact of teachers on children (Hara & Burke, 1998). Additionally, school extra-curricular activity participation increased, class attendance increased, and the number of discipline referrals

decreased. This study revealed the impact of parental involvement may go beyond the child to also impact the school as a whole.

Overall, research demonstrates that the effects of parent involvement are not limited to a certain age within childhood (see Deckner, Adamson, & Bakeman, 2006; Arnold, et al, 2008; Domina, 2005; Mo & Singh, 2008; Weigel, Martin, & Bennett, 2006; McNair and Johnson, 2009), a specific developmental area, or even a specific individual. For one, the importance and impact of parent involvement spans from infancy into early adolescence. Secondly, parent involvement can affect an array of development aspects from language and literacy to social and behavioral skills. Lastly, parent involvement reaches beyond benefiting the individual child to also benefiting the parent, teacher, and school as a whole.

Theoretical Perspective

Understanding parent involvement is not a simple task because of the complexity of human relationships. Three theoretical perspectives are presented that build upon one another in increasing detail provide the most complete image of parent involvement. First, Bronfenbrenner's bioecological systems theory, including the Person-Process-Context-Time model, is the foundational theoretical perspective of this study (Bronfenbrenner, 2005; Tudge, Mokrova, Hatfield, & Karnik, 2009). Next, building off the bioecological systems theory is Epstein's (2011) theoretical model of overlapping spheres of influence of family, school and community on children's learning. Epstein's theoretical model includes both an external and internal look at the relationships taking place surrounding a child. Going beyond the prevalence of intertwining relationships, Hoover-Dempsey and Sandler's (1995, 1997, 2005) and theoretical Model of the Parental Involvement Process focuses on specific processes influencing parent involvement behaviors. A review of these three theoretical perspectives will illustrate how each

perspective builds upon the previous to include more detail on the processes taking place within parent involvement.

Bioecological Systems Theory

Parent involvement in a child's education includes an array of individuals and institutions working together. From those closest to the child, such as parents and teachers, to those indirectly affecting the child, such as administrators and even politicians, there are varying layers of influence that are illustrated by nesting the layers in a concentric circles model. Bronfenbrenner (2005) stated "a child's ability to learn to read in the primary grades may depend no less on how the child is taught than on the existence and nature of the ties between the school and the home" (p. 51). Although this quote was meant to be an example to clarify his theoretical model, Bronfenbrenner's statement illustrates the necessity of interactions between the home and the school to improve children's learning.

Process-Person-Context-Time Model. Tudge et al. (2009) critique the misuse of Bronfenbrenner's theory in many published articles. Many researchers neglect the change over time and the dynamic state of human development, which is integral to his later writings. Tudge et al. (2009) also pointed out an element of the bioecological systems theory that is frequently neglected, the Process-Person-Context-Time (PPCT) model. Through the bioecological systems theory, the PPCT model describes the many dynamic influences of the contextual elements and processes through which children develop (Bronfenbrenner, 2005).

***Process*.** The "processes" are the dynamic bidirectional interactions between the person and environment (Bronfenbrenner & Morris, 2006), which could include specific involvement routines and activities taking place within a specific context (Bronfenbrenner, 2005). These

processes are numerous in a child or family's everyday life. As parents are involved in their child's education, their experiences are changing the child and themselves.

Person. A person is also seen as having an influence over his or her own development. An individual's development is influenced by his or her unique characteristics, biological or psychological (Bronfenbrenner, 2005). Personality, experiences, and temperament can impact the environment surrounding an individual, parent or child, and his or her choices. Although an outgoing child may be more willing to invite his or her parents to be involved in the classroom, his or her parents' previously bring unavailable may cause the child to be wary of inviting them again. The child's personality combined with his or her previous experiences influences if he or she invites the parent to be involved.

Context. Considering the environment as a "*context*" for development, the bioecological system theory is comprised of four primary contexts, which are organized into hierarchical levels. These levels are: microsystem, mesosystem, exosystem, and macrosystem (Bronfenbrenner, 2005; Tudge et al., 2009). The first layer surrounding the child is the microsystem, which is made up of the events, people, objects, and experiences in an individual's immediate surroundings (Bronfenbrenner, 2005; Rogoff, 2003). The next level of the bioecological systems theory is the mesosystems, which are environments in which an individual frequently and actively participates. For most children, the environments where they spend the majority of their time are home and school. The exosystem extends the concept of the interconnectedness of environments, yet the exosystem contains contexts that an individual may never actually enter but that still affect his or her immediate environments, such as parents' work places (Bronfenbrenner, 2005). Lastly, macrosystem is comprised of cultural, subcultural, and social contextual aspects of micro-, meso-, and exosystems. The macrosystem is also made up of

belief systems, resources, lifestyles, life course options, and social exchange patterns that are within each of the systems (Bronfenbrenner, 2005). Through PPCT, the interplay of the micro-, meso-, exo-, and macro-systems is made complete when examined as processes that involve individuals over time.

Time. Naturally, the interactions, or processes, between the individual and their context are occurring over time. These processes are conceptualized as an essential part in constructing a consistent, stable environment for which optimal human development occurs (Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006). One example of the influence of time in a child's development is the way parents' involvement changes as the child ages to accommodate children's need for more independence.

Bioecological systems theory facilitates the understanding of human development. More specifically, the combination of person-process-context-time illustrates the major influences on parent involvement. Nevertheless, more detailed theories building off bioecological systems theory can provide more information about the influences of persons, processes, and contexts on parent involvement.

Overlapping Spheres of Influence of Family, School and Community on Children's Learning

Although the bioecological systems theory provides an understanding of the nested connections between individuals and groups, the broad nature of the theory makes it applicable to any inter-institutional interactions. Thus, Epstein's (2011) theory moves beyond looking at processes and contexts as nesting circles to describe them as "overlapping spheres of influence of family, school and community on children's learning" (p. 28). This model also includes external as well as an internal view of the structure.

External Structure of Overlapping Spheres. As illustrated by Figure 1, the external structure illustrates that parental involvement across time (Force A) is impacted by the experiences, philosophies, and practices of families (Force B), schools (Force C), and communities (Force D). Thus, parents' experiences, philosophies, and family practices in their family of origin and current family, all play a role in how they are involved with their child. A parent's negative experience in elementary school may impact his or her desire to be an active part in the child's classroom.

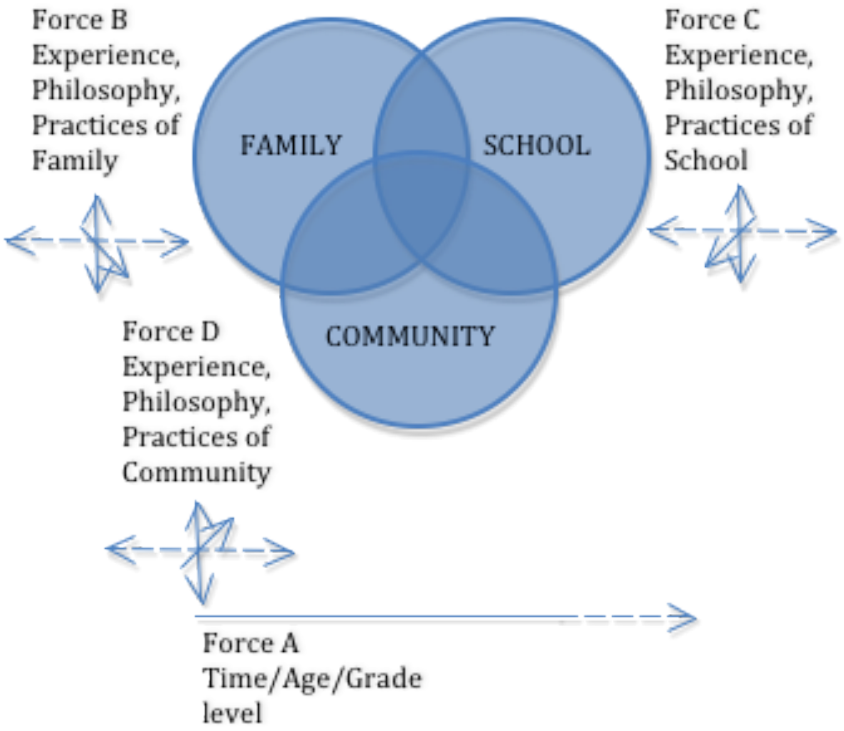

Figure 1. Overlapping Spheres of Influence of Family, School and Community on Children's Learning (External Structure of Theoretical Model) (Epstein, 2011, p. 28).

Additionally, the school's unique experiences, philosophies, and practices as an institution, as well as those of the staff and leadership, can impact parent involvement. A school that views parents as the experts on their children is an example of a philosophy that can impact how they engage with parents. Lastly, a community's experiences, philosophies, and practices

can impact parent involvement. One community may not actively work with families to give them support, while another community puts resources into reaching out to families in need. Epstein's (2011) external model illustrates one-way bioecological systems theory can be applied to research on parental involvement (Bronfenbrenner, 2005; Tudge et al., 2009). More specifically, it can be used to clarify how the particular contexts surrounding parents, schools, and communities can influence the processes of which they are taking part.

Internal Structure of Overlapping Spheres. Another view of the overlapping spheres is the internal structure (Figure 2), which is more of an x-ray view of the external structure. Although the community is one of the overlapping spheres in the external structure, to simplify, Figure 2 only includes the family and school spheres. The internal structure reveals the interpersonal relationships and the primary patterns of influence on parental involvement that are taking place. Within the internal structure, there are two types of interaction and influence: intra-institutional and inter-institutional (Epstein 2011).

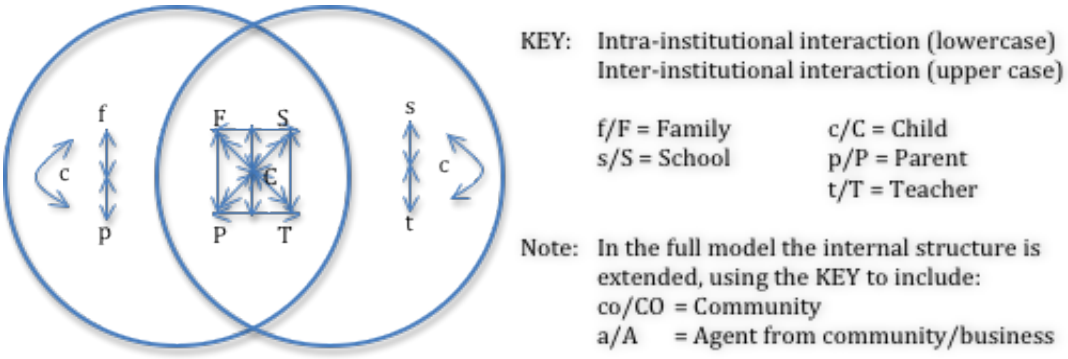

Figure 2: Overlapping Spheres of Influence of Family, School and Community on Children's Learning (Internal Structure of Theoretical Model) (Epstein, 2011, p. 28).

Intra-institutional interactions take place within one institution, such as the child's home or school, separate from the other institution (Epstein 2011). As illustrated by the lower case letters in Figure 2, there are some interactions that families have at home and school officials'

have at school that do not happen between the two spheres. Personal relationships between family members are intra-institutional interaction within the family; however, teachers are not usually part of these family intra-interactions. An example of school settings' intra-institutional interactions is school staff working together on school-related matters (Epstein, 2011). A few specific examples of schools' intra-institutional interactions are staff meetings, continuing education programs, or even working together during daily scheduled times such as recess or pickup and drop-off time. Parents rarely take part in these intra-institutional interactions. Thus, intra-institutional interactions are the interactions between members of a singular institution.

The other type of interaction is between inter-institutional organizations, which includes the communication between parents and the school (Epstein, 2011). Within the communication between families and the school, there are two levels of interaction taking place. The first type of interaction is the standard organizational communication between the family and the school that usually concerns all families and school staff (Epstein, 2011). These interactions are usually more general communications such as general announcements of which parents should be aware or up-coming events (e.g. fund raisers, school productions, or sporting events). The second level of interaction is individual or specific communications that happen between teachers and parents about a specific child, such as positive or negative notes on a child's progress, parent-teacher conferences, or just sharing of concerns (Epstein, 2011). Within this model, the child and his or her welfare and interest are assumed to be the main reason for interaction between parents and the school.

Although Epstein's (2011) external and internal structures provide an illustration of processes and complex relationships taking place between home and school, the model does not fully describe the more nuanced influences on parent involvement. To better understand, parent

involvement, an individual parent's characteristics and experiences must also be taken into consideration (Bronfenbrenner, 2005). Thus, a more in-depth view of specific influences on individuals can provide more a more detailed view of parent involvement.

Theoretical Model of the Parental Involvement Process

The Model of the Parental Involvement Process is a theoretical model that builds off bioecological systems theory and the model of overlapping spheres of influence. Additionally, the authors utilized Epstein's six categories of parent involvement during the development of the model (K.V. Hoover-Dempsey, personal communication, December 5, 2012). The Model of the Parental Involvement Process, as shown in Figure 3 on the next page, aids in understanding why parents become involved, what parents do when they are involved, and how parents' involvement influence children's outcomes (Hoover-Dempsey & Sandler, 1995, 1997, 2005; Hoover-Dempsey, Walker, & Sandler, 2005; Hoover-Dempsey, Whitaker, & Ice, 2010; Walker, Wilkins, Dallaire, Sander, & Hoover-Dempsey, 2005).

Initially, the model of parental involvement process was made up of five levels within the processes and influences of parental involvement, as shown in Appendix A; however, the authors have since revised it twice based on their own research (Hoover-Dempsey & Sandler, 2005; Hoover-Dempsey et al., 2010). As the model was revised, levels were combined and new elements of parent involvement were added. As shown in Appendix B, the 2005 revised model and the current model can be used as an analytical framework. Since the most recent version of model was used in this study, the model warrants further examination.

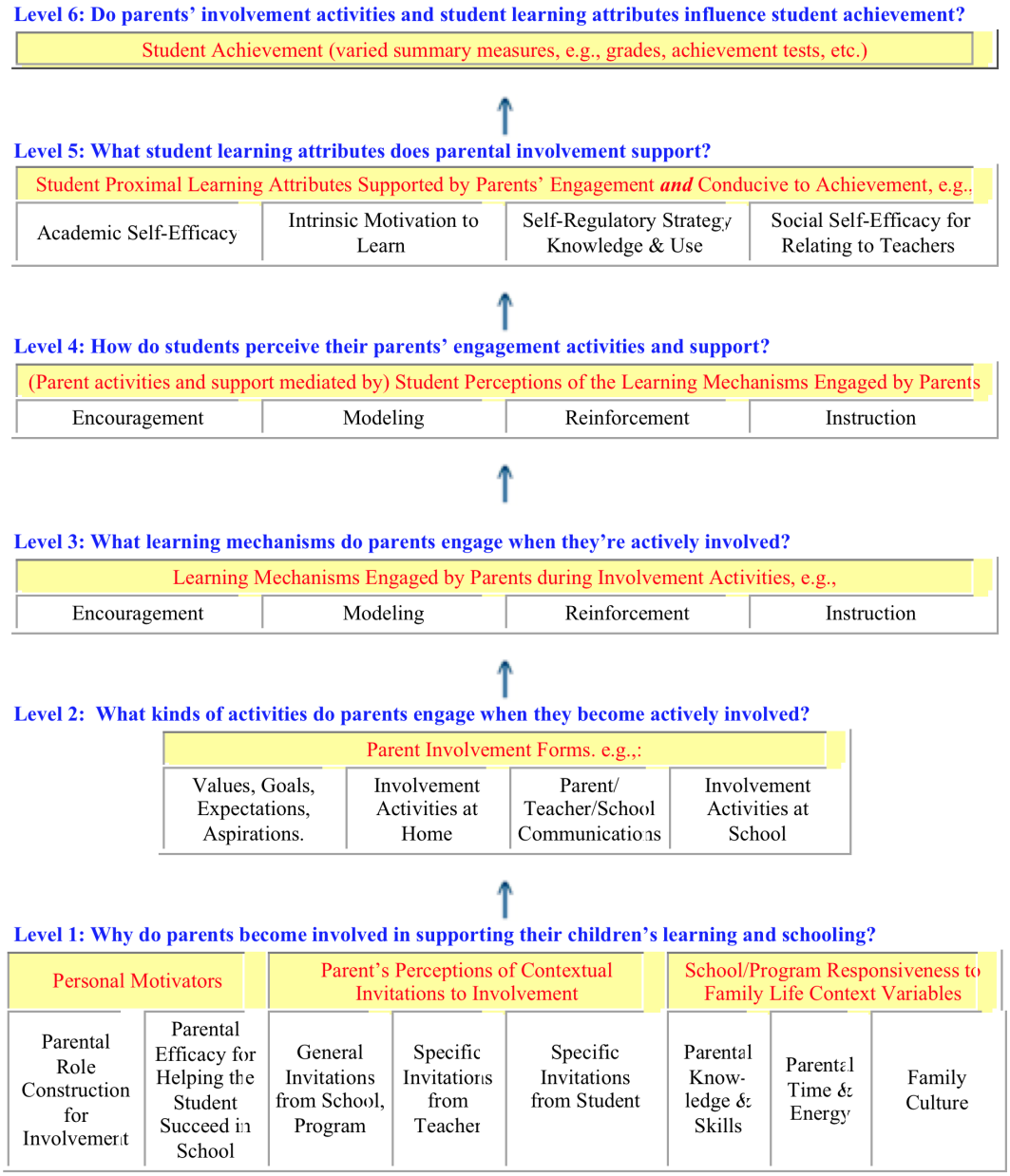

Figure 3. Hoover-Dempsey & Sandler Model of the Parental Involvement Process (adapted from Hoover-Dempsey & Sandler, 1995, 1997, 2005; see also Hoover-Dempsey et al., 2009, Ice & Hoover-Dempsey, 2011; Walker et al., 2009, 2010, 2011)'

Level 1. Revisions to the original model (see Appendix A) included combining the first two levels so that parents' beliefs and perceptions of themselves and others make up Level 1 (Hoover-Dempsey & Sandler, 2005; Walker et al., 2005). These beliefs and perceptions are made up of three overarching constructs: parents' personal motivators, parents' perceptions of contextual invitations for involvement from others, and school responsiveness to family life context. The authors intended the overarching constructions of Level 1 to answer the question "why do parents become involved in supporting their children's learning and schooling?" (Hoover-Dempsey et al., 2010).

The overarching construct of parental motivational beliefs is defined as parental role construction and parental self-efficacy (Hoover-Dempsey et al., 2005). Role construction is shaped by social contexts in which roles are developed actually, thus they are not static but are changing. As those who are involved in the construction of someone's role change, the role changes as well (Hoover-Dempsey & Sandler, 2005). Role construction often develops out of expectations of a group for a particular behavior. Further, the construction of parents' role in their child's education tends to either be active or passive (Hoover-Dempsey et al., 2005). An individual's sense of self-efficacy is the belief that an individual has the ability to create desired outcomes through his or her own actions. Individuals with strong self-efficacy tend to persevere through challenges and create successful outcomes while those with lower self-efficacy usually quit when they do not feel their efforts are making a difference (Hoover-Dempsey et al., 2005).

The overarching construct of parents' perceptions of contextual invitations for involvement from others is the recognition of the influence of invitations to be involved (Hoover-Dempsey & Sandler, 2005). This overarching construct includes parents' perceptions of general schools invitations, specific child invitations, and specific teacher invitations to be

involved. General school invitations include information that is sent home to all parents, such as school announcements or newsletters. Specific child invitations are the child asking the parents to be involved in a specific event or activity. Similar to specific child invitations are specific teacher invitations that are focused on getting a particular parent involved in a specific activity.

The overarching construct of school responsiveness to family life contexts involves parents' time and energy, their skills and knowledge, as well as their family cultural contexts. The authors state that life contexts are important to shaping, but not necessarily determining, parents' involvement (Hoover-Dempsey & Sandler, 2005). Instead, the school response to parents' life contexts can impact how parents are involved. Parents who do not work traditional 9 a.m. to 5 p.m. hours, for example, may not be available to come to evening meetings or events, however, schools can respond to that life context by offering alternative times for some events.

Level 2. The authors conceptualized Level 2 as answering the question "what kinds of activities do parents engage when they become actively involved?" (Hoover-Dempsey et al., 2010). Thus, Level 2 contains the parental involvement behaviors. These behaviors include expressing values, goals, expectations, and aspirations for their child's learning, involvement with activities at home, participating in parent/teacher/school communications, and involvement with activities at their child's school. Of these four forms of parent involvement, parents might be involved in one, a few, or all of them. The factors of Level 1 are seen as contributing to Level 2.

Level 3. The authors' research has found parents engage in specific learning mechanisms when they are involved in learning activities. Thus, Level 3 was conceptualized to answer, "what learning mechanisms do parents engage when they're actively involved?" (Hoover-Dempsey et al., 2010). Parent involvement was found to include the learning mechanisms of

encouragement, modeling, reinforcement, and instruction (Hoover-Dempsey & Sandler, 1997, 2005; Walker et al., 2005).

Level 4. To answer "how do students perceive their parents' engagement activities and support?" Level 4 is made of the child's perceptions of the learning mechanisms in which his or her parents engage (Hoover-Dempsey et al., 2010). This new level was added to the revised model as research revealed the influence children's perceptions of parents' involvement could have on the impact of parents' involvement on children's outcomes (Hoover-Dempsey & Sandler, 2005; Walker et al., 2005). Children's perceptions are generally focused on the learning mechanisms in which parents engage when they are actively involved in their child's education and learning. These mechanisms, as discussed in Level 3, are encouragement, modeling, reinforcement, and instruction (Hoover-Dempsey & Sandler, 1997, 2005; Walker et al., 2005). One example of child's perception impacting parents' involvement is that as children view parents' involvement as positive, parents are more likely to be involved.

Level 5. Level 5 contains intermediate outcomes of the parent involvement process, which are intended to answer, "what student learning attributes does parental involvement support?" (Hoover-Dempsey et al., 2010). Researchers suggest that parents support the student attributes that lead to achievement, but parents are not necessarily directly responsible for children's outcomes. Although parents may not be able to alter their child's thinking, their involvement can impact four specific areas. These areas include a child's academic self-efficacy, a child's intrinsic motivation to learn, a child's self-regulatory strategy knowledge and use, and a child's social self-efficacy for relating to his or her teachers. Previously, the authors used test scores as an in indirect outcome of parent involvement; however, they have since developed a questionnaire for children that specifically look at each of these attributes.

Level 6. Lastly, Level 6 includes student's outcomes and was conceptualized to answer the question "do parents' involvement activities and student learning attributes influence student achievement?" (Hoover-Dempsey et al., 2010). Examples of student outcomes include students' skills and knowledge (Hoover-Dempsey & Sandler, 1997, 2005; Walker et al., 2005). The authors recommend using standardized test scores, classroom grades, and teacher assessments of student effort and performance to measure child outcomes. As a whole, the model describes how parents' decisions to be involved can impact a range of factors that ultimately influence student's outcomes.

Each of the three theoretical perspectives provides a more detailed view of parent involvement than the previous. The bioecological systems theory describes the broad processes that impact a person's development within specific contexts across time (Bronfenbrenner, 2005; Tudge et al., 2009). The Overlapping Spheres of Influence of Family, School and Community on Children's Learning illustrate the processes that take place between home and school (Epstein, 2011). The model of the parental involvement process details the effect of an individual person's beliefs and perceptions that influence parents' involvement (Hoover-Dempsey & Sandler, 2005; Hoover-Dempsey et al., 2010). Together these theories illustrate a more complete view of parent involvement than they do alone.

Research on the Influences on Parent Involvement

Much research on parental involvement illustrates the complex nature of parents' involvement. Research often focuses on a variety of influences on parents' involvement in their child's education. Interestingly, using the model of the parental involvement process, much of the research fits well into the Level 1 influences on parent involvement (Hoover-Dempsey &

Sandler, 2005). Thus, each of those influences outlined in Level 1 of Figure 3 were used to organize and understand the current research in the field of parent involvement.

Parents' Motivational Beliefs

Level 1 of the model of the parental involvement process includes three overarching constructs (Hoover-Dempsey et al., 2010). The first of those constructs is parents' personal motivators, which is made up of parental role construction and parental self-efficacy. Literature on both parental role construction and parental self-efficacy can provide additional knowledge on this construct.

Parental role construction. As stated earlier, role construction is shaped by the social contexts in which those roles are developed, thus roles are not static but changing (Hoover-Dempsey et al., 2005). Role construction can grow out of expectations particular behavior, such as cultural expectations of a particular social class or ethnicity can influence how parents construct their role of involvement within their child's education and their child's life as a whole. Additionally, the construction of parents' role in their child's education tends to either be active or passive. Parents who have constructed an active role in their child's education tend to hold the belief that a child's education is the parents' responsibility. Parents whose involvement is more passive, however, believe the school is responsible for children's educational outcomes. Much research focuses on the influence of social class on how parents are involved and details how role construction can impact whether parents are active or passive in their involvement.

One well-known study is Lareau's (1987) qualitative study on family-school relationships by social class of two different schools of white working-class and professional middle-class communities. Her study used participant observation of two first grade classrooms and interviews of 12 families, as well as teachers, resource specialists, and school principals of one of

the schools. Lareau found that American working class parents view their roles in their children's education to be more preparatory, but beyond that, their children's education was in the school's hands. This separate view of home and school led the parents in the study to accept decisions the school made. Parents described those decisions as being the school's responsibility (Lareau, 1987). These parents took an active role in their children's education with constant monitoring and parental intervention if school decisions did not meet their standards (Lareau, 1987). As illustrated by this study's findings, parents' role construction for involvement can be greatly impacted by their social-class with upper and lower classes taking more active and passive roles respectively.

More recently, Lareau (2002) continued her research by interviewing and observing 88 children and their families of various social classes from both a northeastern metropolis as well as a small midwestern community. Lareau found middle-class parents provided more stimulation to help their children develop social and cognitive skills. In contrast, working-class and lower-income families tend to think development has a natural timeline that only requires children's basic needs to be met such as food, shelter, and comfort. Additionally, middle-class children were taught to be individuals and develop their own skills and talents while also teaching them they were entitled to having their desires met (Lareau, 2002). Nevertheless, working-class and lower-income families were much different in that the children in those families were limited to certain areas of skill development and often children's wishes did not influence parents' actions (Lareau, 2002). Lareau (2002) did not find any differences in race, but only social class, thus demonstrating that parents influenced their children's role construction in their use of skills and talents, which may create a cycle of influence. Thus, as children become parents they construct involvement roles similar to those of their family of origin.

In addition, when parents face problems with schools, reactions have been found to vary based on social class. Qualitative interviews and observations of 88 third and fourth grade children and their families revealed white-middle class parents would combine together to deal with any issues whereas working-class and lower-income families would face the problem individually (Horvat, Weininger, & Lareau, 2003). Again these findings illustrate as parents construct their involvement role within their child's education, middle-class parents take a more active role.

McIntyre, Eckert, Fiese, DiGennaro, and Wildenger (2007) researched parents' involvement with their children's transition into kindergarten using 132 parental surveys. They found the parents who were receiving government financial aid were less likely to be involved with annual preschool meetings, monthly communication with preschool, and visiting a kindergarten classroom (McIntyre, Eckert, Fiese, DiGennaro, & Wildenger, 2007). This study demonstrates that parents may not see their role in their child's education as involved through such formal ways. Although there may be a very important issues for the family not being involved, such as lack of transportation or availability, these findings may also be an example of lower SES families taking a more passive approach to parent involvement.

In addition to social class and SES, research has also described the school environments that can influence parents' view of their role in their child's education. Expectations that schools and other parents place on parent involvement can impact how parents view their involvement role. Multiple research studies have found higher expectations of parental involvement tend to increase parent involvement whereas lower expectations of parental involvement often result in lower parent involvement (Hoover-Dempsey & Sandler, 1997; Waanders, Mendez, & Downer, 2007). Similar to Ryan et al., 2010 findings that parents from other cultures assimilate into more

American middle-class view of parent involvement, when the school or other parents have particular expectations parents tend to align with those views. Although parents' role construction is a complex process, the overarching construct of parents' motivational beliefs is not limited to only role construction.

Parental self-efficacy. An individual's sense of self-efficacy, as discussed earlier, is the belief that an individual has the ability to create desired outcomes through his or her own actions (Hoover-Dempsey et al., 2005). As related to parent involvement, parents develop involvement goals based on their appraisal of their capabilities to help their child succeed in school (Hoover-Dempsey et al., 2010). Parents generally help with homework when they feel they have the required capabilities to make a difference in their child's learning and development. Individuals with strong self-efficacy tend to persevere through challenges and create successful outcomes while those with lower self-efficacy usually quit when they do not feel their efforts make a difference (Hoover-Dempsey et al., 2005).

Parents' previous negative experiences with their own academic careers may created feelings of skepticism, ambivalence, and over all disengagement toward parent involvement can result in parents having difficulty in being involved with their own children's education (Foundation for Child Development, 2009). These negative feelings may be a reflection of parents' lack of feelings of self-efficacy. These early experiences may have created feelings of inadequacies, which cause parents to not feel that their involvement does enhance their child's education.

Similarly, Anderson and Minke (2007) surveyed 351 families across three elementary schools. Using path analysis, parental sense of efficacy on their child's learning and school success was found to have a direct effect on parent involvement with their child's learning at

home. As parents feel they can make a positive impact on their child, they are more likely to be involved.

These studies demonstrate that parents' motivational beliefs are influenced by both their own perceptions of themselves as well as their larger cultural expectations. Parents' motivational beliefs (i.e. their role construction and their sense of self-efficacy) is one of the three constructs that influences parent involvement (Hoover-Dempsey and Sandler, 2005). Beyond parents' motivational beliefs, two additional overarching constructs also impact how parents are involved.

Parents' Perceptions of Contextual Invitations for Involvement from Others

The second of the three overarching constructs that comprise Level 1 are parents' perceptions of contextual invitations for involvement from others (Hoover-Dempsey et al., 2005; Hoover-Dempsey et al., 2010). The three types of invitations that contribute to how parents are involved are general school invitations, specific child invitations, and specific teacher invitations. Parents' perceptions of each of these invitations can impact the form of involvement that they choose. Beginning with general school invitations, followed by specific child invitations and specific teacher invitations, research on each of these types of invitations will be discussed to provide a more complete view of how each of these can impact parents' involvement.

Parents' Perceptions of general schools invitations. The first of the three types of parental involvement invitations is general school invitations, which are ways schools demonstrate not only their expectations but also the value they place in parent involvement. Schools use a number of methods to invite parents to be involved in their child's educations, including newsletters or announcements, suggestions for parents to support student learning, and creating a welcoming school climate, (Hoover-Dempsey et al., 2005; Hoover-Dempsey et al.,

2010). As schools work to involve parents and create a welcoming environment, they are also creating an environment that values the students and their families.

Seginer's (2006) review of parent involvement literature focused on prekindergarten to high school found much of the research focused on what teachers are doing and school structure for the promotion of parent involvement while focusing much less on parents and their perceptions of those invitations. Although it is important to know what school processes foster parent involvement, parents' views of those processes are a major element of parent involvement. This research illustrates the need to understand the impact of parents' perceptions of invitations and how those perceptions can influenced the form of parents' involvement.

Using the Family Involvement in Education Survey, a U.S. Department of Education (2006) study of parents of 12,167 students revealed parents from lower SES English-speaking households, reported less opportunity for involvement, volunteering, and parent meetings. The study also found the same parents reported less general communication with their child's school, such as newsletters, memos, or phone calls, than their higher SES counterparts. This study illustrates a disconnection between the school and the home. When parents are not invited or given opportunities to be involved, they are not as involved in the same ways that parents who are receiving those invitations.

Additionally, surveys of 159 parents and one of their elementary, middle, and high school students revealed the receptivity of the school, such as promoting parent involvement, was the most powerful predictor of parent involvement for all of age levels (Decker, Overstreet, Devine, Bevans, & Efreom, 2005). Similar to previous research, parents are often involved in the schools because the school provided information and opportunities for them to be involved.

Another study implemented programs to promote school improvement through utilizing school, family, and community partnerships to increase student success in 888 schools (Sheldon, 2005). Sheldon (2005) used update surveys of 565 elementary schools to better understand the impact of the program on parent involvement. The surveys revealed parent involvement at school was a reflection of school organization, social processes, and outreach to increase family and community involvement. Thus, this study illustrates that there is more to schools to increasing parent involvement than just basic invitations. Invitations for parents to be involved from the school are a function of schools working to create opportunities and provide information.

As schools reach out and meet parents where they are, parents are better able to feel welcomed by the school. When parents feel welcomed, they think their involvement is important to the school. The above research demonstrates that parents' perceptions of general school invitations can influence how parents are involved; however, parents' perceptions of specific invitations from their own children also impact parents' involvement.

Parents' Perceptions of Specific Teacher Invitations. The second of the three types of invitations are invitations from teachers (Hoover-Dempsey & Sandler, 2005; Hoover-Dempsey et al., 2010). These invitations, similar to those from the child, are generally about a specific event or need. A specific event could be a parent-teacher conferences or it could be teachers reaching out to gain parent involvement with sharing their experiences or expertise with the class or to better the classroom or the school. A parent skilled in carpentry, for example, could demonstrate his or her carpentry skills to complement a teacher's lesson or the parent could use his or her skills to help the school by volunteering to help build a school's parade float or festival booths.

Hoover-Dempsey and Sandler's (1997) review of research discussed that parents were most involved when teachers created inviting classroom climates. In turn, those teacher efforts were positively related to children's higher reading achievement. This illustrates that invitations are not just requests for parents to be involved, but also the creation of an environment that welcomes parents to be a part of their child's education.

Additionally, using path analysis methods, Anderson and Minke, 2007 found teacher invitations have the strongest relationship with parent involvement. Invitations from teachers included both ongoing activities such as helping with homework to special events such as attending open house or other special events (Anderson & Minke, 2007).

Bower and Griffin (2011) implemented programs to increase parental involvement at an urban elementary school with low parental involvement. The researchers interviewed five teachers and two administers and observed two school events where there were opportunities for parental involvement. They found that teacher invitations were not effective at increasing parent involvement without there first being a relationship between teachers and parents. Thus, illustrating that how parents' perceive invitations from teachers may impact how and if parents are involved with their child's education.

Invitations by schools, children, and teachers to parents can all vary greatly as can parents' perception of those invitations. An invitation does not necessarily mean parents will be involved with the activity, but parents' perception of each invitation impacts how parents will be involved in the child's learning and education. Invitations and motivational beliefs, however, are not the only constructs that influence how parents are involved.

Parents' Perceptions of Specific Child Invitations. The third of the three types of invitations is specific child invitations. Although school invitations are sent to all to all parents,

specific invitations to a parent from their child are more focused on a particular event or need in which the parent can be involved. Invitations from the child can span a wide range from explicit to implicit (Hoover-Dempsey et al., 2005; Hoover-Dempsey et al., 2010). More explicit invitations involve directly asking parents for help with homework issues while implicit invitations would be parents realizing the child needs help based on recent grades (Hoover-Dempsey et al., 2005; Hoover-Dempsey et al., 2010). Children's attributes and characteristic behaviors can determine if he or she uses explicit or implicit invitations. Children that are more independent may use implicit invitations to get parents involved. Again these invitations are pivoted around parents' perceptions of those invitations, thus depending on the parent, children may have to be more explicit to get parents involved.

Few studies have looked specifically at the influence of children inviting their parents to be involved. One study using surveys of 853 parents of children in first to sixth grade revealed that the child affirming the importance of parental involvement might encourage parent involvement (Hoover-Dempsey & Sandler, 1997; Green, Walker, Hoover-Dempsey, & Sandler, 2007; Hoover-Dempsey et al., 2010). This study illustrated that the child's invitation was not only a request for parents, but also the parents' perception that their child wanted them involved.

Invitations from a child are generally personal and are about a specific event. As parents feel that they child wants or needs them to be involved, generally parents are willing to help in some form or another. However, these are not the only type of specific invitations.

School Responsiveness to Family Life Contexts

The third of the three overarching constructs that contribute of why parents become involved in supporting their child's learning is schools' responsiveness to family life contexts (Hoover-Dempsey et al., 2010). This construct is made up of parents' skills and knowledge,

time and energy, and family culture. Recently, this construct was changed from family's perception of their life contexts to school's responsiveness to family life contexts (K.V. Hoover-Dempsey, personal communication, December 5, 2012). . Additionally, family culture was added as one of the three types of family life contexts. Although this change appears to better account for family life contexts, little has been published on these changes. .

Parents' Knowledge and Skills. The first of parents' life contexts are parents' perceptions of their skills and knowledge (Hoover-Dempsey & Sandler, 2005; Hoover-Dempsey et al., 2010). As parents feel they have skills and knowledge to share with their children, they are more involved. One the other hand, parents who feel less skilled or knowledgeable about a topic may choose to be involved in different ways.

In a study discussed earlier, Lareau (1987) found working-class parents report inadequacies in their own education hindered the amount they were able to help their children and thus gave more power to their child's teachers. Less educated parents may feel they do not have much to offer their child with specific needs. Instead they may rely more on their child's teacher for educational support, but these parents could still be involved in other ways with their child's education, such as through encouragement or motivation.

Overall, parents' perceptions of their life contexts can impact how they are involved in their child's life. Parents who feel they do not have the time or energy to be involved at their child's school are usually taking part in some form of parent involvement at home. Also parents who feel their limited knowledge or skills can hinder their involvement in more academic areas of their child's education can still be involved as an encourager or motivator.

Parents' Self-Perceived Time and Energy. The amount of time and energy parents perceive they have to contribute can influence the ways parents are involved (Hoover-Dempsey

& Sandler, 2005; Hoover-Dempsey et al., 2010). Parents who feel they have more time may be involved inside the classroom more often than parents who feel their schedule does not allow for them to be involved during the day. However, parents who are busy during the day, may actually be taking part in more involvement practices at home in the evenings.

Although not much research has been done on this area, one study on 163 families and their preschool age children found single parents, which made up approximately 50% of the sample, were less involved, even when controlling for SES (Arnold, et al., 2008). These findings may have to do with single parents lack of time or energy after filling roles for both parents. Though single parents may not be a physical presence in the classroom, they are probably at least involved in some degree at home. Although parents feeling they have limited time and energy can prevent them from being involved in their child's education and learning in some ways, another life context also impacts their involvement.

Family Culture. The third and final variable of family life contexts is family culture (Hoover-Dempsey et al., 2010). This was the newest addition to the model of parent involvement processes. Family culture impacts the other constructs of Level 1, thus schools' response to families' cultural backgrounds is important.

Research on various ethnic groups found parents across ethnic groups desire to be involved in their child's education in different ways. Some ethnicities were involved through various home roles like tutor or audience (Hoover-Dempsey and Sander, 1997). This finding suggested that parents' willingness to be involved in their children's education does not always require a physical presence in the classroom. Again, this view of involvement with children's education outside of the classroom is generally created by cultural expectations that parents' involvement takes place outside the classroom.

In parts of Brazil, teachers are considered a part of the family and parents do not interfere with the roles and responsibilities of teachers (Souto-Manning & Swick, 2006). Furthermore, research reveals some cultural and ethnic communities, such as Hispanic and African, place much trust and responsibility into teachers' hands and parents only enter schools upon invitation (Seginer, 2006; Souto-Manning & Swick, 2006). These studies reveal that for some families cultural expectations may be limiting their involvement within schools, but that does not mean these parents are not involved in other ways. Schools also need to understand and respect the different cultural backgrounds of the students and work to keep those parents informed and involved.

Lastly, research was conducted using parent questionnaires and elementary children's school records of 104 Latino parents and their child in Nebraska (Ryan et al., 2010). Results indicated that groups of Latino parents' views on parent involvement shifted as they assimilated to the more dominate cultural points of view. Thus, the Latino parents gained a more white middle-class cultural orientation and they begin to view parental involvement as an actual physical presence in their children's classrooms. Parents' motivation to be involved can be influenced by the views of the culture surrounding them, even if the culture is different than their family of origin.

The three overarching constructs of personal motivators, perceptions of contextual invitations to involvement, and school's responsiveness to family life contexts all provide a clearer image of why parents become involved. These constructs are the initial influences that contribute to the form of involvement in which parents choose to take part. As shown above, much research has been done on parent involvement; however, there are still areas that more research would help to further the understanding of parent involvement.

Gaps in Research

The Model of Parental Involvement Process includes three overarching constructs to describe why parents become involved (Hoover-Dempsey & Sandler, 1995, 1997, 2005). However, this model does not account for the role of parents feeling connected to the child's school community or the role of modern technology in keeping parents connected with their child's school or knowledgeable about their child's progress. A review of the impact of feeling connected to a community demonstrates how changing technological advances are impacting how parents and schools are staying connected. Additionally, reviewing current teacher practices and recent research on parental use of technology reveals the need for research in this area.

Feeling Connected to School Community

Research has been conducted on communities and feeling connected within a wide range of communities, such as geographic locations, an event uniting people together, or a specific group of individuals with a similar interest (Mancini & Bowen, 2013). One such community is a school community. As children, parents, teachers, administrators and staff are united by a shared desire to educate children, a school community is created. However, the model of parent involvement process does not account for feelings of being connected to a community.

Although research presented earlier alluded to how feeling connected may impact parent involvement (e.g. Bower & Griffin, 2011) the increase in technological advances have greatly changed the processes of many basic everyday life activities over the last 10 years. Communication, for example, has not changed in and of itself, but the methods of communicating and staying connected over long distances have gone through major changes through the invention and improvement of the telephone and the Internet. Understanding the

impact of these changes requires looking back at some of the technological advances of the last 40 years.

Technological Advances: Connections and Education

Since the 1970s, American families have become more private and less community-focused. Robert Putnam (2001) wrote about the privatization of America in his book *Bowling Alone*. He explained that as Americans became more mobile and began moving into suburbia, they also became less focused on being engaged in their communities and more focused on their individual family lives; however, this book is now 12 years old. In the years since Putnam wrote his book, technology has greatly altered the way individuals interact with friends and loved ones. Previously, calling friends or neighbors on the telephone outside of a designated area was expensive. These restrictions hindered the quality and quantity conversations required to maintain long-distance relationships.

Now, maintaining relationships has become much easier, with phone companies offering cheap long distance and text messaging plans. Social networking through Facebook and Twitter also enables friends and acquaintances to stay up-to-date on each other's ordinary daily life while also celebrating life's many milestones. Additionally, video chat on computers, tablets, and smartphones allows people to stay connected in a completely different way than before. Previously long-distance communication was limited by not being able to use non-verbal cues, but video chat now enable people to at least read facial cues even though they may be thousands of miles apart. Although individuals may not be connecting in person as often, they are connecting in many new ways.

The shift from community focus to family focus has also taken place in the schools across the country. The Census Bureau's reports show more and more mothers have entered the

work force over the last 40 years (Casper, 1996; Johnson, 2005). This increase in working mothers means fewer are able to take on an active roll in their children's education and learning as previous generations. However, the insurgence of technology has enabled parents to connect with teachers on multiple levels beyond teachers calling and sending notes home.

From universities to preschools, technology has enabled teachers, students, and parents to stay connected through the use of software like eLearning, school management information system, student information system, or other learning platforms (Selwyn, Banaji, Hadjithoma-Garstka, & Clark 2011; Smith, Wohlstetter, Kuzin, & DePedro, 2011; Bird, 2006; Telem & Pinto, 2006; Ramirez, 2001). Although each program is slightly different, they all provide the opportunity for the students, parents, and teachers to communicate, collaborate, and access learning resources (Selwyn et al., 2011). Around the world, from New Zealand to Finland and many countries between, governments (local and federal) are adopting these software packages to further the virtual learning in their school systems (Selwyn et al., 2011).

In the past, teachers faced being unable to reach parents or guardians consistently, with changing phone numbers being a frequent occurrence in lower SES communities (Paslay, 2011). The invention of cell phones gives teachers more opportunities to keep in touch with parents. Cell phones usage tripled from 2000 to 2011 (http://www.itu.int/ITU-D/ict/statistics/) and the current market is comprised of approximately 50% Internet enabled smartphones (http://www.steadyrain.com/digital-clarity/infographics/mobile-america.aspx). Now, lower prices and the ease of text messaging, as well as the increase in email accessibility on inexpensive or prepaid smartphones, provides many more opportunities for parents and teachers to stay connected.

Social networking has also changed the face of staying in touch. Social networking tools help teachers keep in touch with their students or their students' families. Facebook provides schools and teachers a place to create private groups for parents to learn about their child's classroom activities. Twitter allows for schools and teachers to quickly and easily keep parents up to date on current events.

Advances in technology have changed how schools, teachers, and parents stay connected over the last few years, however there is much more to learn about the impact of those changes. Technology is not necessarily useful unless it is being used appropriately. To better understand how actual teachers are using technology to keep parents informed and involved, it is necessary to talk with an actual teacher on her methods about using the technology available to her.

Teacher's Use of Technology

Amy Witcher, a second grade teacher in the Atlanta Metro Area provided details of some of the ways she has communicated with parents using technology (personal communication, August 8, 2012). She has a class website that offers information such as lunch menus, scheduling, homework assignments, blogging, and a contact form that is linked to her e-mail (www.awitcher.weebly.com). Her email address, cell phone number (with availability to text her), home phone number, and school phone number is available to each parent. Parents can also call a specific phone number for Mrs. Witcher at school, leave her a message, and the message is sent directly to her e-mail address. This system is designed to allow teachers to listen to parents' messages instantly from anywhere e-mail is available, including on smartphones.

In addition to offering multiple ways parents can reach her, Mrs. Witcher uses technology for her to reach parents easily. She purchased a package from CallingPost.com that allows her to record a single message and send it to all parents on her class list simultaneously with only one

click. This program saves her time and helps cut down on the paper being sent home for reminders. She has not heard of any other teachers using this website, however this lack of use may be because she purchased her package with her own money.

Mrs. Witcher's school has a website, updated often, that has her school as well as county school board information posted. Parents can also view teachers' self-designed profiles with a direct link to each of their email addresses by way of the school website. The school also has a Quick Response code posted for parents to scan with their smartphone that gives them instant access to information about the school. Mrs. Witcher's school also has a parent resource center on campus that offers computers, technology games, and learning resources for parents and children to use and check out for use at home. Additionally, the school uses Infinite Campus, which is an online learning program that allows teachers to take attendance, see all of a child's contact info, post students' grades, send notes for parents to view at home, and fill out report cards online. This teacher's personal experiences demonstrate that schools are embracing technology as a means to easily reach more families.

Research on Technology's Impact on Parental Involvement

Research on parents involvement and connected with school using technology is inconsistent and quickly outdated, which may be a reflection of the rapidly changing nature of technology. Reviewing teacher suggestions from the last 10 years illustrates how much technology in schools has changed. Ramirez (2001), for example, suggested teachers create phone trees, bilingual hotlines, and a course websites using WebCT or BlackBoard. Although some of his suggestions were cutting edge at the time, technology has come a long way. Since there is limited research on technology and parent involvement, all relevant research studies, including those that include a wide range of child ages, warrant discussion.

Research on eLearning programs has shown that these programs are impacting parents' involvement in many positive ways. Bird (2006) reported on student information systems' (SIS) influence on 6,000 students in Omaha-area schools. He discussed how school administration attributed to lower discipline reports, above national average test scores to the SIS program. The SIS program allowed parents to track their child's progress, school attendance, grades, or even the after-school activities in which their child participated at any time online (Bird, 2006). Thus, parents were able to work with their child's teacher before their behaviors reached the crisis point of requiring a parent-teacher conference (Bird, 2006).

Telem and Pinto (2006) found similar results with their qualitative research study on high schools in Israel. Their study looked at the effect of school management information system (SMIS) on teenagers learning, behavior, and attendance. Seventeen families were chosen who had a high school student in the school before the program was implemented and a high school student in the school after the program was implemented (Telem & Pinto, 2006). Additionally, 12 staff members from Israel's national school system were interviewed. Although this system utilized computers for teachers to input students' grades, the school combated the lack of availability of computers for all families by regularly mailing grade reports and notices of the child's behaviors to parents (Telem & Pinto, 2006). Overall, the increase in grade reporting enabled parents and school staff members to deal with students' learning, behavior, and attendance issues with a more interrelated functionality (Telem & Pinto, 2006).

Research on the impact of eLearning programs and parent involvement has also been done in the United Kingdom. Selwyn et al. (2011) conducted 133 qualitative research interviews to better understand parents' usage of "Learning Platforms." Overall, parents used the Learning Platforms to support their child's learning in new and more in-depth ways, which schools

expected to only increase as parents became more efficient with and knowledgeable of the programs (Selwyn et al., 2011). Additionally, the location of the schools created times when weather would prohibit schools from opening, however, parents were able to utilize the online Learning Platforms to continue their child's learning (Selwyn et al., 2011).

Smith and colleagues (2011) found that technology gave parents access to instant communication with their child's school as well as reducing school's costs of mailing home notices. Furthermore, email provided parents with more accessible two-way communication than notes or flyers from their child's school (Smith et al., 2011). In addition to email, teachers had their own websites, which they updated weekly, an AllCall system which provided information in the parents' choice of language, and number of other advanced technologies to get newsletters or brief messages out to parents (Smith et al., 2011).

There have been a number of studies conducted on the use of technology and schools, but only a small portion of that focuses on the use of technologically advanced parent involvement tools in the United States. In addition, research on technologies is mainly qualitative and done by way of interviews with parents, teachers, and administrators. Although qualitative research is valuable, much of that type of research is not generalizable beyond the school in which it was done, especially with school in the United States varying so greatly in their uses of technology. The aforementioned research illustrates the need to better understand how technology may be changing the relationships between parents and teachers and impacting parents' involvement in supporting their child's learning.

Summary of Research

In summary, parent involvement is an important aspect of children's early learning and development. Researchers have found that parent involvement is beneficial throughout

childhood and early adolescence (e.g. Arnold, Zeljo, Docroff, & Ortiz, 2008; Domina, 2005; Mo & Singh, 2008; etc). Additionally, research shows the benefits of parent involvement can impact children, parents, teachers, and overall schools.

To provide the most complete image of parent involvement, three theoretical perspectives, built upon one another in increasing detail, were presented. The foundational theoretical perspective is Bronfenbrenner's bioecological systems theory. Next, building off the bioecological systems theory, is Epstein's theoretical model of overlapping spheres of influence of family, school and community on children's learning. Epstein's (2011) theoretical model includes both an external and internal look at the relationships taking place surrounding a child. Going beyond looking at the intertwining relationships, Hoover-Dempsey and Sandler's (1997, 2005) Theoretical Model of the Parental Involvement Process focuses on parents' processes to explore specific influences on parent involvement behaviors.

Level 1 of Hoover-Dempsey and Sandler's (1997, 2005) theoretical model of the parental involvement process includes three overarching constructs (Walker et al., 2005): parents' personal motivators, parents' perceptions of contextual invitations for involvement from others, and school's responsiveness to family life contexts. These overarching constructs were reviewed using relevant research on parent involvement to better understand the nuances of the theoretical model.

Lastly, major gaps in parent involvement research were discussed. First, the impact of feeling connected on parent involvement was mentioned in very few studies and was not included in any of the theoretical perspectives mentioned earlier. Second, there is a lack of research on the impact of schools', teachers', and parents' use of technology to stay connected on parents' involvement. As more and more schools adopt technological methods of staying

connected with parents, it becomes necessary to understand if and how technology is improving parental involvement.

Filling the Gaps: Current Study

As detailed above, the model of parental involvement process does not account for the role of feeling connected to their children's school community. Additionally, the role of modern technology in keeping parents connected with their children's school or knowledgeable about their children's progress has only been explored in a limited number of studies. Thus, there is a need to assess how parents feel connected to the school community and their use of technology to stay connected and involved.

Based on the gaps in available research, the current study examines the relationship between parents' personal motivators to be involved, their perceptions of invitations to be involved, whether or not they feel connected to and a part of their children's school community, ways they connect with the school, and their involvement practices at home and at school. The model pathways and corresponding research questions are shown in Figure 4. Based on the model of parental involvement process, questions 1 and 2 examined the relationship between personal motivators and parents' involvement and parental perceptions of contextual invitations to involvement predict parents' involvement, respectively. Questions 3 and 4 examined the relationships between the predictor variables and parents feeling connected to their child's school community. Furthermore, question 5 explored the relationship between parents feeling connected and their involvement. Research questions 6 and 7 explored the role of parents' use of technology as a mediator of the influence of parents feeling connected to their children's school community on parents' involvement. Lastly, question 8 examined if technology moderates the relationship between parents feeling connected and parents' involvement.

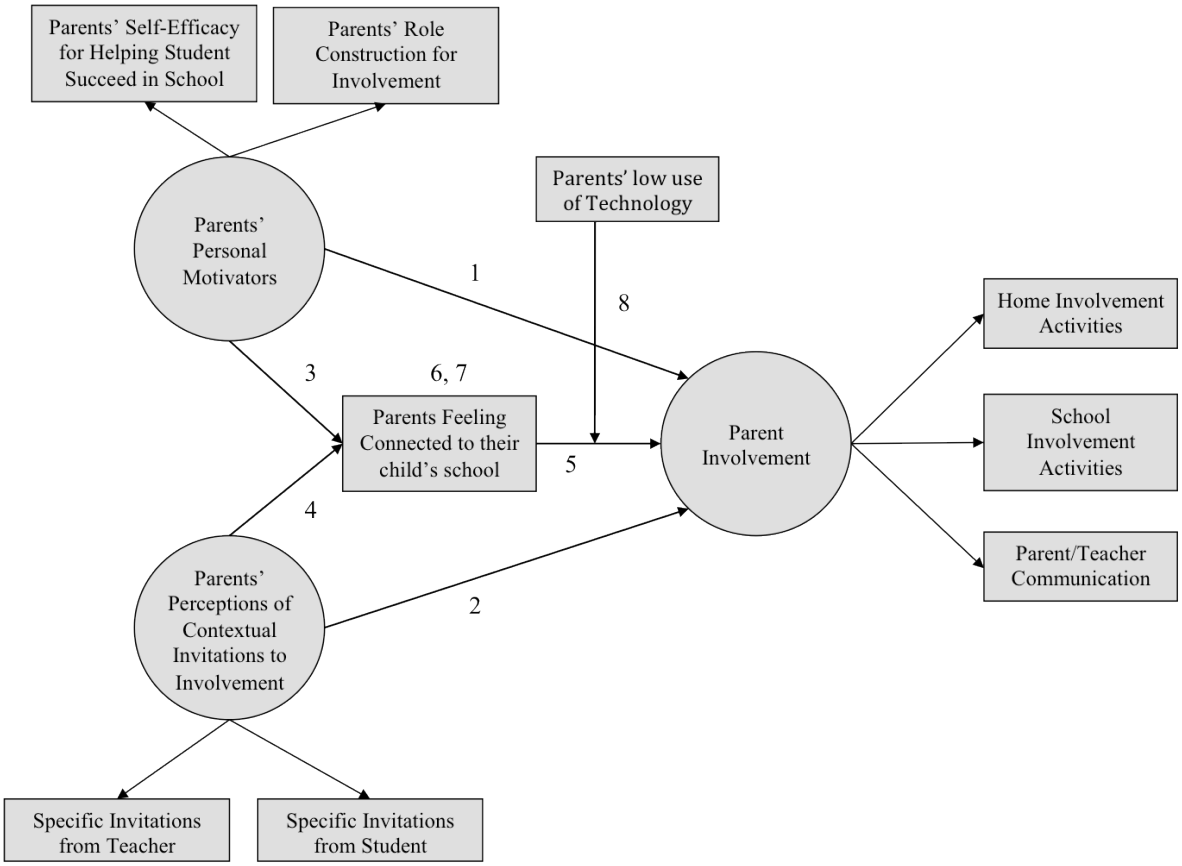

Figure 4: Proposed Model

Research Questions:

1. Do parents' personal motivators predict parental involvement?
2. Do parents' perceptions of contextual invitations to involvement predict parental involvement?
3. Do parents' personal motivators predict parents feeling connected to their children's school?
4. Do parents' perceptions of contextual invitations to involvement predict parents feeling connected to their children's school?
5. Do parents feeling connected to their children's school community predict parents' involvement?

6. Does parents feeling connected mediate the relationship between parents' personal motivators and parents' perceptions of contextual invitations to involvement and parents' involvement?
7. Do parents feeling connected to their children's school mediate the relationship between parents' perceptions of contextual invitations to involvement and parents' involvement?
8. Does the use of technology moderate the relationship between parents feeling connected to their children's school and parents' involvement?

CHAPTER 3

DESIGN AND METHODS

Parent involvement has been found to be beneficial for children, schools, and parents (Domina, 2005; El Nokali, Bachman, & Votruba-Drzal, 2010; Hara & Burke, 1998; Jeynes, 2005; Luster & McAdoo, 1996). However, in recent years technology has changed many of the ways people connect and interact, including parents and teachers. Although much research has been completed on the various aspects, theories, and points of-view of parent involvement, little has been done on the impact of technological advances on parents feeling connected and being involved with their children's education. Using the Model of Parent Involvement Process, the Community Connection Index, and a measure of ways parents connect with their children's school and teacher, this study surveyed parents about their involvement and their feelings of connectedness to their children's school and their use of technology to stay involved with their children's education.

Participants

The current study focuses on a sample of 230 parents of kindergarten to fifth graders; however, ten participants were missing a large amount of data and were removed from the sample. Therefore, the final sample was comprised of 220 participants, with only .7% of data missing. Eighty-seven percent of the participants were female (n = 192). The data was collected in late spring to so that information from the entire school year was included. The majority of participants reported their marital status as married (89.1%, n=196), with the remaining reporting they are separated, divorced, or widowed (5.9%, n=13), living with a partner (3.6%, n = 8), or

never married (1.4%, $n = 3$). Educational levels of the participants ranged from high school diploma to doctoral degree with the mode being bachelor's degrees ($M = 4.64$, $SD = 1.51$). Participants reported their spouses were slightly less educated. Partners' education ranged from less than high school to doctoral degrees. Both are reported in Table 1.

Table 1: Descriptive Statistics –Educational Attainment

	Frequency (*n*)	Percentage
Participant		
Less than high school	0	0
High school	14	6.4
Some college	43	19.5
Bachelor's degree	62	28.2
Some grad work	19	8.6
Master's degree	53	24.1
Doctoral degree	26	13.2
Participant partner		
Less than high school	4	1.8
High school	21	9.5
Some college	50	22.7
Bachelor's degree	51	23.2
Some grad work	11	5
Master's degree	33	15
Doctoral degree	17	7.7

The mode of partner education level also bachelor's degrees ($M = 4.13$, $SD = 1.58$). The mode annual household income (Table 2) was reported as over $100,000 with 31.4% ($n$=69) reporting their family annual income was over $100,000. The median annual household income was between $75,000 and $100,000 ($M = 7.58$, $SD = 1.49$).

Table 2: Descriptive Statistics –Family Annual Income

	Frequency (*n*)	Percentage
Less than $5,000	2	.9
$10,001 - $20,000	3	1.4
$20,001 - $30,000	5	2.3
$30,001 - $40,000	8	3.6
$40,001 - $50,000	17	7.7
$50,001 - $75,000	52	23.6
$75,001 - $100,000	60	27.3
Over $100,001	69	31.4

Data were collected on the race/ethnicity of the family respondents to the survey and are shown in Table 3. For the current study's sample, the self-reported race/ethnicity of the family respondents to the family survey was 92.3% White/Caucasian (*n* = 203), 3.2% Black/African American (*n* = 7), 1.8% Hispanic/Latino (*n* = 4), 1% comprised of Asian/Pacific Islander, American Indian, Eskimo/Inuit/Aleut (*n* = 2), and 1.8% multiracial (*n* = 4). Although a Spanish version of the survey was created, no one completed it. For the sample, the number of children under the age of 19 living in the home had a mode of 2 (*M* = 2.17, *SD* = .88), with the largest reported number being five (*n* = 2).

Table 3: Descriptive Statistics – Participant Race/Ethnicity

	Frequency (*n*)	Percentage
White/Caucasian	203	92.3
Black/African American	7	3.2
Hispanic/Latino	4	1.8
Asian/Pacific Islander, American Indian, Eskimo/Inuit/Aleut	2	1
Multiracial	4	1.8

One hundred seventy-one participants (77.7%) reported they currently live in a southern state with the majority in Georgia (64.5%, *n* = 142). Other reported southern states included: Alabama (4.5%, *n* = 10), Texas (1.8%, *n* = 4), South Carolina (1.4%, *n* = 3), Virginia (1.4%, *n* = 3), Oklahoma (.9%, *n* = 2), Tennessee (.9%, *n* = 2), Louisiana (.5%, *n* = 1), Mississippi (.5%, *n* = 1), Kentucky (.5%, *n* = 1), Maryland (.5%, *n* = 1), and North Carolina (.5%, *n* = 1). The remaining participants reported currently living in the midwestern states of Missouri, Minnesota, Indiana, Illinois, Ohio, and Michigan, (8.2%, *n* = 18), the Western states of California, Utah, and Colorado (7.7%, *n* = 16) and Northeastern states of Pennsylvania, New Jersey, New Hampshire, and Connecticut, (3.2%, *n* = 7). In total, participants reported living in 25 different states.

The main criterion for participation in this study was currently having a child who regularly attended classes in kindergarten to fifth grade. This age range was chosen because

research has found teachers rate parent involvement the highest in the third grade (El Nokali, Bachman, & Votruba-Drzal, 2010). Throughout the survey, participants were asked to focus on their experiences with their youngest child to establish a target child. Target children (as shown in Table 4) were in kindergarten (24.5%, *n* = 54), first grade (17.7%, *n* = 39), second grade (16.4%, *n*=36), third grade (16.8%, *n* = 37), fourth grade (11.4%, *n* = 25), and fifth grade (13.2%, *n* = 29). Furthermore, parents reported 62.3% (*n* = 137) of the target children were in enrolled in public school and 27.3% (*n* = 60) being enrolled in private school.

Table 4 Descriptive Statistics – Target Child's Grade

	Frequency (*n*)	Percentage
Kindergarten	54	24.5
First Grade	39	17.7
Second Grade	36	16.4
Third Grade	37	16.8
Fourth Grade	25	11.4
Fifth Grade	29	13.2

Parents also reported their use of technology to communicate with their child's teachers and school. This included schools, teachers, and parents using email, websites or smartphone applications, and text messaging to communicate. The mean score, median score, and standard deviation for each are shown in Table 5. In addition to technology use, parents were asked about their traditional or low tech means of communicating with their child's school such as phone calls, hand written notes, flyers, announcement sheets, newsletters, or face-to-face conversations. Again the mean score, median score, and standard deviation for each are shown in Table 5.

Sample size requirements. With Structural Equation Modeling (SEM), researchers differ on their opinions when latent variables are being used (Kenny & Cook, 1999; Norman & Streiner (2003). Kenny (2012) suggests a minimum sample size of 200 is appropriate for SEM with latent variables. Norman and Streiner (2003) suggest a minimum of 100 participants, however they also caution that having well above 10 participants per parameter may cause Chi-square

goodness-of-fit to be statistically significant, even though the model fits reasonably well. For this study the number of distinct parameters was 78, thus the maximum number of participants as suggested by Norman and Streiner (2003) would be 780. This study's 220 participants fit into the sample suggestions of a minimum of 200 and a maximum of 780.

Table 5: Descriptive Statistics – Parents' Frequency of Technology Use

	Mean	Median	Std. Deviation
Parents			
Email	2.82	3	1.155
Text Messages	1.2	1	0.719
Websites	1.6	1	1.272
Phone	1.65	1	0.886
Hand Written Notes	2.17	2	1.276
Flyer, announcement sheet, or newsletter	1.34	1	0.884
Face-to-Face	2.7	2	1.511
Schools			
Email	3	3	1.46
Text Messages	1.15	1	0.602
Websites	1.94	1	1.544
Phone	1.72	1	0.993
Hand Written Notes	1.4	1	0.825
Flyer, announcement sheet, or newsletter	2.85	3	1.372
Face-to-Face	2.16	2	1.394
Teachers			
Email	2.88	3	1.274
Text Messages	1.23	1	0.691
Websites	1.79	1	1.325
Phone	1.46	1	0.685
Hand Written Notes	2.41	2	1.578
Flyer, announcement sheet, or newsletter	3.02	4	1.438
Face-to-Face	2.63	2	1.442

Procedures

Initial participant recruitment was conducted by way of an email from the teachers or the school administration at a private school in a rural town in southeastern US. Secondary recruitment was conducted with the use of paper flyers of an informational letter that was sent home with the children at a public elementary school in an urban city in the southeastern US. In addition to school recruitment, emails with the informational letter were sent to personal and

professional contacts who then sent the survey information to their contacts. The informational letter was also sent to multiple listservs such as the National Counsel on Family Relations research and theory listserv and the staff listserv at a large university in the southeast. Lastly, a Facebook page was created with the survey informational letter and link to the survey (https://www.facebook.com/parentinvolvementandtechnology). The survey was available in a format that is accessible on a computer or mobile device such as a tablet or smartphone. Within the emails, social media posts, and flyers, the informational letter informed individuals of the opportunity to be entered into a drawing to receive one of eight $25 gift cards. Additionally, English and Spanish versions were available. The Spanish version was translated and transcribed from the English version by a fluent Spanish speaker from one of the school systems.

Measures

Model of the Parental Involvement Process.

During the development of the Model of the Parental Involvement Process, the authors developed scales for each of the elements of the overarching constructs as well as for home and school based parents' involvement across four studies of elementary schools (Hoover-Dempsey & Sandler, 2005). Each of the scales will be discussed in more detail below. For each of the scales, face validity and construct validity were evaluated by a panel of five experts in the field with extensive knowledge of the model (Green & Hoover-Dempsey, 2007). Additionally, Hoover-Dempsey and Sandler (2005) reported the Cronbach's alpha reliability coefficients for each of the scales, however these were also assessed using the current study's sample.

Of the three overarching constructs in Level 1 of the Model of the Parental Involvement Process, the current study used scales measuring the first two: personal motivators and parents' perceptions of contextual invitations to involvement. Because these constructs cannot be directly

observed, they are considered latent variables and scales have been designed to measure them (Byrne, 2010). The first latent variable, parents' personal motivators, is made up of parental role construction for involvement and parental efficacy for helping the student succeed in school. Secondly, the latent variable, Parents' Perceptions of Contextual Invitations to Involvement, is made up of General Invitations from School, Specific Invitations from Teacher, and Specific Invitations from Student. Recent changes to the model's third overarching construct have altered the context of the construct making old measures invalid and new measures have yet to be developed. Thus, the measures designed for the original third overarching construct were not included in this study.

A few of the items in each of the scales were altered for clarification purposes. For example, the item "teachers at this school are interested and cooperative when they discuss my child" was altered to "teachers at this school are interested and cooperative when they discuss my child with me". Furthermore, items that stated "this school," "at the school," or "school staff" were changed to "my child's school," "in the classroom or at the school," and "my child's teacher or school staff," respectively. These changes were made to clarify and provide additional information about the items, however these changes were not expected to alter the meaning of the items.

Parents' personal motivators. The first latent variable in the model is parents' personal motivators. This variable is measured using two scales. The first is Parental Role Construction for Involvement in the Child's Education Scale and the second is Parental Self-Efficacy for Helping the Child Succeed in School Scale.

Parental Role Construction for Involvement in the Child's Education Scale. The first indicator of parents' personal motivators was assessed using the Parental Role Construction for

Involvement in the Child's Education Scale (Hoover-Dempsey & Sandler, 2005). The parental role construction for involvement in child's education scale (see Appendix C) was designed to aid in understanding parents' beliefs of their responsibility with their children's education. The scale includes 10 items on a 6-point scale ranging from *disagree very strongly* to *agree very strongly*. A mean score across items was calculated and higher scores indicated greater feelings of responsibility to be involved in their children's education. In past research, Hoover-Dempsey and Sandler (2005) found the Parental Role Construction for Involvement in the Child's Education Scale had a Cronbach's alpha reliability coefficient of .80; however, for the current study the Cronbach's alpha was .84.

Parental Self-Efficacy for Helping the Child Succeed in School Scale. The second indicator of Parents' personal motivators is parents' efficacy in their children's education. As stated earlier, sense of efficacy is the belief that an individual has the ability to create desired outcomes through his or her own actions. To measure parents' efficacy in their children's education, the Parental Self-Efficacy for Helping the Child Succeed in School Scale was used (see Appendix D). This scale is made up of 7 items on a 6-point scale ranging from *disagree very strongly* to *agree very strongly*. A mean score across items was created for the scale with higher scores indicating greater feelings of being able to help their children succeed in school. Hoover-Dempsey and Sandler (2005) found the Parental Self-Efficacy for Helping the Child Succeed in School Scale had a Cronbach's alpha reliability coefficient of .78. Cronbach's alpha for the current study was found to be .85.

Parents' perceptions of contextual invitations to involvement. Parents' perceptions of contextual invitations to involvement is the second latent construct in the model. This variable is made up of three indicators: parents' perceptions of general invitations for involvement from the

school, parents' perceptions of specific invitations for involvement from the teacher, and parents' perceptions of specific invitations for involvement from their children. Scales were developed for each of the indicators to assess specific elements of them.

Parents' Perceptions of General Invitations for Involvement from the School Scale. Parents' Perceptions of General Invitations for Involvement from the School Scale (see Appendix E) was developed to assess if parents feel the school values his or her participation in the children's education and welcomes him or her in the school (e.g., Hoover-Dempsey & Sandler, 1995, 1997; Hoover-Dempsey et al., 2005; Walker et al., 2005). It includes 6 items on a 6-point scale ranging from *disagree very strongly* to *agree very strongly*. A mean score across items was created with higher scores being associated with more positive perceptions of general invitations from the children's school. Although Hoover-Dempsey and Sandler (2005) found the scale had a Cronbach's alpha reliability coefficient of .88. This study the Cronbach's alpha was found to be .85.

Parents' Perceptions of Specific Invitations for Involvement from the Teacher Scale. As detailed earlier, specific invitations from the teacher can include direct requests for parental involvement. These requests can come in a number of forms. The Parents' Perceptions of Specific Invitations for Involvement from the Teacher Scale was used to assess parents' perceptions of invitations from their children's teachers about being involved in specific events or activities (see Appendix F). This scale is made up of 7 items on a 6-point frequency scale ranging from *never* and *1 to 2 times* to *daily*. A mean score across items was created with higher scores indicating parents feeling their children's teacher asks them to help frequently. Hoover-Dempsey and Sandler (2005) found this scale to have a Cronbach's alpha reliability coefficient of .81, this was found to be the same for the current study.

Parents' Perceptions of Specific Invitations for Involvement from the Child Scale. In addition to receiving invitations from the teacher, invitations may also be extended by children. The Parents' Perceptions of Specific Invitations for Involvement from the Child Scale was used to assess parents' perceptions of initiations from their children to be involved in a specific activities or event (see Appendix G). A mean score across items was created with higher scores being related to parents feeling their children ask them to be involved more frequently. This scale is made up of 6 items on a 6-point frequency scale ranging from *never* and *1 to 2 times* to *daily*. Hoover-Dempsey and Sandler (2005) found the scale had Cronbach's alpha reliability coefficient of .70, but for the current study, it was found to be .69.

Parents' Report of Home-based Involvement Activities Scale and Parents' Report of School-based Involvement Activities Scale. Although there are many measures of parent involvement, the Parents' Report of Home-based Involvement Activities Scale and Parents' Report of School-based Involvement Activities Scale were designed as a short measure of parents' involvement (see Appendices H & I). This measure was chosen to keep the questionnaire at a reasonable length and minimize respondent burden. The Parents' Report of Home-based Involvement Activities Scale included 5 items on a 6-point scale ranging from *never* and *1 to 2 times* to *daily*. Hoover-Dempsey and Sandler (2005) reported this scale had a Cronbach's alpha reliability coefficient of .85, but for the current study, it was found to be .78. The Parent Report of School-based Involvement Activities Scale includes 5 items with a 6-point scale ranging from *never* and *1 to 2 times* to *daily*. As found by Hoover-Dempsey and Sandler (2005), this scale had a Cronbach's alpha reliability of .82, however the current study found it to be .79.

Other Measures. In addition to the scales developed for the model of parental processes, two other scales were used: community connections index and parents' use of technology. These were intended to measure how connected parents feel to their children's school and how parents communicate with their children's school.

Parents feeling connected to their children's schools. To measure parents feeling connected to their children's schools, the Community Connections Index (CCI) was used (see Appendix J). This scale is made up of 15 items on a 4-point scale ranging from *often* to *never* (Mancini, Bowen, Ware, & Martin, 2007). With support from the scale's author, the items were altered to focus on school community instead of the wider community. For example, the statement "joined with people in your community to solve community problems" was altered to "joined with people from your child's school community to solve problems the school or the students are facing." Although in previous use the original scale was analyzed for both construct and convergent validity**,** for this study face validity was assessed by a panel of experts to determine if the new wording agreed with the original intention of the items. For the current study, this scale had a Cronbach's alpha reliability of .92.

Parents' use of technology. Due to the limited research linking technology use with parent involvement, a scale was created (see Appendix K). To establish the adequacy of using these measures to evaluate parents' use of technology, experts in various levels and areas of elementary education evaluated the face validity of the measures. To begin, parents were asked how often they communicate with their children's teachers and their children's schools. Next, they were asked to pick from a list of items how their children's schools and teachers communicates with them and vice versa. The items included: email, phone, hand written notes, flyers, announcement sheets, or news letters, school software for grade and progress, face-to-

face, as well as the option of other that included a place to type a response. Finally, parents were asked how often their children's schools, teachers, and they use those means of communicating with one another. Responses were on a 6-point frequency scale ranging from *never* to *daily*. Both technological and more traditional means of communication, such as notes and announcement sheets, were assessed. For technology usage, the Cronbach's alpha reliability was found to be .77, and for traditional means of communicating with teachers and schools, the Cronbach's alpha was .73. In addition to reliability statistics, confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) confirmed the items did load onto the same component and were part of the same measure.

Statistical Analyses

Structural Equation Modeling using AMOS 8.0 and SPSS 21 was used to examine the hypothesized pathways. Those pathways include the parents' personal motivators to parents' involvement and parental perceptions of contextual invitations to involvement to parents' involvement. The planned analyses are shown below in Figure 4.

For each of the analyses, model fit was evaluated by using three fit indices: the chi-square (χ^2) statistics, the Comparative Fit Indices (CFI), and the root mean square error of approximation (RMSEA). Close model fit is thought to be indicated by χ^2 goodness of fit statistic divided by the degrees of freedom ratio estimates of less than 2.0, RMSEA values under .08 and CFI values of greater than .95 (Browne & Cudeck, 1993, Byrne, 2010; Ullman 2007).

In addition to estimating the pathways, SEM was used to conduct a mediation analysis to determine if parents feeling connected to their children's school served as a mediator between the two variables, parent personal motivators and parents' perceptions of invitations to involvement, and parents' involvement. To show mediation, three criteria must exist (Baron &

Kenny, 1986). First, the independent variables must account for variation in the dependent variable. Second, the mediator must explain variation in the outcome when the effect of the independent variable is held constant. Third, when controlling for the mediator, the relationship between the independent and dependent variables is no longer significant. Once these three criteria were met, Sobel's test (1982) of indirect effects were used to measure the magnitude of the indirect effects of the independent variables through the proposed mediator variable.

Finally, to examine moderation, the sample was divided using the overall mean score of 2.34 creating two groups. A mean score above 2.34 were considered high technology using parents and a mean score below 2.34 were low technology using parents. The fit of the model of the high technology and the low technology parents were compared using a series of multi-group analyses. Two models were fit for each group. First, a constrained model was fit with the both groups set as equal. Second, an unconstrained model was fit. The unconstrained models allowed parameters were to vary freely so that the paths would differ based on technology use.

CHAPTER 4

RESULTS

The current study of parent perceptions of their involvement and the influence of feelings connected and use of technology included three main components that previously had not been researched together. To begin this study utilized Hoover-Dempsey & Sandler's Model of the Parental Involvement Process (adapted from Hoover-Dempsey & Sandler, 1995, 1997, 2005) and previously developed measures for that model to understand parents' perceptions of their involvement in their children's education. Next, parents feelings connected to their children's school community were examined using an adapted version of the Community Connection Index (CCI). Then, schools', teachers', and parents' use of technology to connect was tested as a moderation effect of feeling connected on parents' involvement. This chapter begins by reporting the univariate characteristics of each variable and the bivariate correlations. Finally, the findings from the structural equation model are reported.

Univariate Analyses

For each of the continuous variables, the univariate statistics were analyzed. The means, standard deviations, skewness, and kurtosis coefficients are reported in Table 6. Although a few of the items had skewness and kurtosis over what some believe is acceptable levels, Curran, West, and Finch, (1996) found data is not affected by a skewness up to 2 and kurtosis up to 7 as long as there are more than 200 participants. Univariate information is also shown for the control variables, which included income, education, and parents' traditional means of communicating with their children's school.

As described in the previous chapter, parents' personal motivators were measured using two indicators: parental role construction for involvement in their children's education and parental self-efficacy for helping their children succeed in school. Both measures were on a scale of 1 to 6 including *disagree very strongly* to *agree very strongly*. The overall mean score for parents' role construction was 5.23 (*SD* = .53) and the overall mean score for parental self-efficacy was 4.99 (*SD* = .73).

Table 6: *Univariate Statistics for Variables in the Path Mode*

	Mean	Std Dev	Skewness	Kurtosis
Parental role construction for involvement	5.24	.54	-.92	1.00
Parental self-efficacy for helping the child succeed in school	4.99	.73	-.98	1.09
Parents' perceptions of general invitations for involvement from schools	5.18	.71	-1.16	2.36
Parents' perceptions of specific invitations for involvement from teachers	3.15	1.06	.23	-.15
Parents' perceptions of specific invitations for involvement from children	3.09	.89	.56	.89
Parents' report of home-based involvement activities	5.25	.86	-1.69	3.92
Parent report of school-based involvement activities	2.48	.84	1.76	4.16
Frequency of communication with teachers	4.50	1.48	-.09	-.63
Parents feeling connected to the school community	2.84	.65	-.35	-.17
Parents' Use of Technology	2.34	.91	.66	.26
Target Child's Grade	2.12	1.72	.28	-1.19
Annual Family Income	7.58	1.49	-1.57	3.44
Parent Education (participant)	4.64	1.51	.07	-1.17
Traditional Means of Communicating with Schools	2.13	.61	.26	-.11

Next, parents' perceptions of contextual invitations were assessed using three indicators: parents' perceptions of general invitations for involvement from the school, parents' perceptions of specific invitations for involvement from the teacher, and parents' perceptions of specific invitations for involvement from their children. All measures were on a 1 to 6 scale with general involvement invitations from schools ranging from *disagree very strongly* to *agree very strongly* and teachers' and children's invitation measures were on the scale from *never* to *almost everyday*. The overall mean score for perceptions of invitations from schools was 5.18 (*SD* =

.71), for perceptions of invitations from teachers was 3.15 (*SD* = 1.06), and for perceptions of invitations from children was 3.54 (*SD* = .76). Upon reviewing the reliability statistics for invitations from children, the item "my child talked with me about the school day" lowered the Cronbach's alpha coefficient for children's invitations to involvement from .72 to .68. This may be due to the item not specifying if it was parent or child initiated conversation. For this reason, for final analysis, the item was removed from the measure and the overall mean score of the reduced measure was 3.09 (*SD* = .89), which is consistent with later versions of Hoover-Dempsey and Sandler's (2005) survey.

Parents' Involvement was assessed using the home activities scale, the parent report of school-based involvement activities scale and an additional item on the frequency that parents' thought they communicated with their children's school. These measures were also on a scale of 1 to 6 ranging from *never* to *almost every day*. The overall mean score for home activities was 5.2 (*SD* = .86). However, the item "someone in this family talks with this child about the school day" had a mean score of 5.91 (*SD* = .48) and 95% (*n* = 209) of participants reported they did this *almost everyday*. Although this partially explains the kurtosis of 3.92, the item was not altered because it was under 7 (Curran, West, & Finch, 1996). Parents' school involvement had an overall mean score of 2.48 (*SD* = .84). Finally, the item on parent frequency of communication with their children's teachers had a mean score of 4.5 (*SD* = .1).

Parents feeling of connected to their children's school was measured using an adapted version of the Community Connections Index (CCI) (Mancini, Bowen, Ware, & Martin, 2007). This measure was on a scale of 1 to 4 ranging from *often* to *never*. This measure was reverse coded to align with the other measures in the study. The adapted CCI had an overall mean score of 5.96 (*SD* = 1.44).

A measure of parents' use of technology to connect with their children's schools was developed because of the limited research on the topic. Initially, nine items made up the scale, however only 9.09 % (n = 20) of participants had sent text message to their children's schools or teachers and only 7.3 (n = 19) and 12.7% (n = 28) of participants had received texts from their children's schools or teachers, respectively. Because of this, the items related to text messages were removed. The resulting final measure of parents' use of technology had an overall mean score of 2.34 (SD = .912).

Bivariate Statistics

To detect the level of association between the study variables, Pearson product-movement correlation coefficients (*r*) were examined using both the direction and size of the linear relationship. The correlation coefficient matrix for all the variables in the model is presented in Table 2.

Parents' role construction is one of the variables in the latent variable parent personal motivators. Interestingly, it was found to be associated with nearly all of the other variables. It was positively associated with their self-efficacy for helping their children succeed in school ($r = .31$, $p < .01$) such that the more positively parent view their role the more they feel they can make a difference in their children's education. In addition, role construction is positively associated with perceptions of involvement invitations from their children's schools ($r = .40$, $p < .01$), teachers ($r = .27$, $p < .01$), and their children ($r = .31$, $p < .01$). Thus, the more positive parents view their role the more positive they are to perceive invitations to be involved. It was also positively associated with their involvement activities at home ($r = .32$, $p < .01$), at school ($r = .36$, $p < .01$), and their frequency of communication with their children's teachers ($r = .40$, $p < .01$). This demonstrated that the more positive they view their role, the more they are involved in

all three of the measures of parents' involvement. Additionally, role construction was associated with feeling connected to their children's schools ($r = .48$, $p < .01$) and their technology use ($r = .25$, $p < .01$). These correlations reveal that the way parents view their role in their children's education is associated not only with their involvement, but also in other predictors of their involvement.

In addition to being correlated to role construction, parental self-efficacy for helping their children succeed in school was positively associated with general involvement invitations from the school ($r = .30$, $p < .01$) and parents feeling connected to their children's schools ($r = .20$, $p < .01$). Thus, parents who feel they are more able to help their children succeed, are more likely to feel connected to their children's schools.

Parents' perceptions of general invitations from the school was positively associated with their perceptions of teacher invitations ($r = .32$, $p < .01$), their involvement activities at home ($r = .20$, $p < .01$), their frequency of communicating with their children's teachers ($r = .31$, $p < .01$), parents feeling connected to their children's school ($r = .34$, $p < .01$), and technology use ($r = .15$, $p < .05$). These correlations illustrate that invitations from the school are related to more than just parents' involvement at the school.

Parents' perceptions of the frequency of involvement invitations from their children's teachers was positively associated with their perceptions of the frequency of invitations from their children ($r = .59$, $p < .01$), their involvement activities at home ($r = .33$, $p < .01$) and at school ($r = .23$, $p < .01$), and of their communication with their children's teachers ($r = .44$, $p < .01$). This demonstrated that as parents viewed teacher invitations to be more frequent they also thought invitations from their children were more frequent and vice versa. Similarly, higher

participation in all three of the measures of parents' involvement was related to more frequent communication with their children's teachers.

Parents' perceptions of the frequency of involvement invitations from their children were positively associated with the frequency of their involvement activities at home ($r = .50$, $p < .01$) and at their children's schools ($r = .28$, $p < .01$) as well as their communication with their children's teachers ($r = .33$, $p < .01$). This is similar to teacher invitations in that the more children invited parent to be involved, the more they are involved in home and school activities as well as communicating with their children's teacher. Additionally, invitations from their children was also positively associated with parents feeling connected to the school ($r = .14$, $p = < .05$) so that more invitations from their children related to parents feeling more connected to the school.

In addition to parents' role construction and perceptions of invitations from the school, teachers, and their children, involvement activities at home were positively associated with involvement activities at school ($r = .27$, $p < .01$) and parent and teacher frequency of communication ($r = .41$, $p < .01$). Thus, parents who are more involved at home are also more involved at the school and talk to their children's teachers more frequently.

Involvement activities at the school were positively associated with the frequency that parents and teachers communicated ($r = .21$, $p < .01$) and feeling connect to their children's school ($r = .29$, $p < .01$), in addition to role construction, perception of invitations, and home activities. This demonstrates that more parent involvement at the school related to more frequent communication with their children's teachers as well as feeling more connected to the school.

The frequency of communication between parents and teachers was positively associated with feeling connected to their children's school ($r = .26$, $p < .01$). Thus, the more frequent the

communication with children's teachers the more connected parents felt to the school community.

Finally, a correlation analysis was conducted using the control variables to examine their relationships with the variables in the proposed model. Family's annual income was found to be positively correlated with role construction ($r = .15$, $p < .05$), self-efficacy ($r = .17$, $p < .05$), and parents feeling connected to their children's school ($r = .23$, $p < .01$).

Grade was found to be negatively associated with frequency of using technology ($r = -.19$, $p < .01$), involvement in home activities ($r = -.28$, $p < .01$), the frequency of teacher invitations ($r = -.31$, $p < .01$) and the frequency of communication between parents and teachers ($r = -.29$, $p < .01$). For all of these variables, the younger the child the more frequently the activity or communication took place. Grade was also negatively correlated with parent perceptions of school invitations ($r = -.19$, $p < .01$), so that the younger the child the more positively parents viewed the invitations from the school.

Additionally, parents' education was positively associated with parent self-efficacy ($r = .28$, $p < .01$). Thus, parents who feel they are more able to help their children succeed are more likely to be more educated. Interestingly, parent education was negatively associated with parents' involvement in activities at school ($r = -.18$, $p < .01$) so that the lower a parents' education the more frequently they are involved at their children's school.

Table 7: Pearson Correlation Coefficients of Path Model Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Parental role construction for involvement	1													
2. Parental self-efficacy for helping the child succeed in school	.31**	1												
3. Parents' perceptions of general invitations for involvement from schools	.40**	.30**	1											
4. Parents' perceptions of specific invitations for involvement from teachers	.27**	.03	.32**	1										
5. Parents' perceptions of specific invitations for involvement from children	.31**	.04	.12	.59**	1									
6. Parents' report of home-based involvement activities	.32**	.12	.20**	.33**	.50**	1								
7. Parent report of school-based involvement activities	.36**	.07	.07	.23**	.28**	.27**	1							
8. Frequency of communication with teachers	.40**	.06	.31**	.34**	.33**	.41**	.21**	1						
9. Community Connections Index	.48**	.20**	.34**	.09	.14*	.13	.29**	.26**	1					
10. Parents' Use of Technology	.25**	.09	.15*	.05	.08	.02	.14*	.10	.28**	1				
11. Target Child's Grade	-.03	-.09	-.19**	-.31**	-.10	-.28**	-.02	-.29**	.11	.16*	1			
12. Annual Family Income	.15*	.17*	.13	-.08	-.03	.04	-.10*	-.02	.23**	.19**	-.03	1		
13. Parent Education (participant)	.02	.28**	.05	-.02	-.07	-.04	-.18	-.05	.14*	.08	-.09	.33**	1	
14. Traditional Means of Communicating with School	.38**	.15*	.29**	.25**	.27**	.24**	.13**	.44**	.22**	.18**	-.26**	-.04	.18**	1

Note: * $p < .05$. ** $p < .01$.

Multivariate Statistics

To examine the predicted pathways between parent personal motivators, parent perceptions of involvement, feeling connected to the school, technology usage, and parent involvement, structural equation modeling (SEM) using Amos version 8 was utilized. Parameter estimates were obtained using the full maximum likelihood (FIML). This procedure was utilized to because it has been found to handle missing data better than other techniques (Blunch, 2008).

As described earlier, the research questions were tested while controlling for family annual income, participant's level of education, target child's grade, and parents' use of traditional ways of being in contact with their children's school or teacher (i.e. notes, phone calls, face-to-face meetings, and generic flyers sent to all parents). The frequency of using traditional ways of communicating was controlled for to account for how more traditional ways of communicating may be impacting parents' involvement and their use of technology. Because the sample was rather homogeneous with 92.3% reported being Caucasian, ethnicity was not included as a control variable.

All hypothesized paths and control variables were included in the path analysis. The standardized path coefficients for the model predicting parent involvement are shown in Figure 5. Paths were estimated for the control variables (i.e., effect of family annual income, participant education, target children's grade, and parents' use of traditional means of communicating with their children's schools and teachers); however, these are not shown in the figure for ease of interpretation. Significant paths at the $p < .05$ level are indicated by bold lines.

Overall Determinants of Model Fit

With regards to model fit, the chi-square (χ^2) statistics was 57.60 ($df = 26$, $p = .00$), and the $\chi^2/df = 2.21$. The comparative fit index (CFI) was .95 and the root mean square error of

approximation (RMSEA) value was .07. Of the three goodness-of-fit statistics, two are in line with existing cutoff values previously hypothesized. The χ^2 goodness of fit statistic divided by the degrees of freedom ratio estimates is slightly higher than 2.0, which generally the cutoff as a good model fit (Byrne, 2010; Ullman 2007). However, as discussed by Byrne (2010), this measure has been found to be problematic and recommends CFI and RMSEA be used. The CFI value falls within the .95 value that indicates relatively good model fit (Brown & Cudeck, 1993; Hu & Bentler, 1995). Lastly, RMSEA vales that fall between .05 and .08 indicate reasonable fit (Brown & Cudeck, 1993). Overall, the proposed model appears fits the data reasonably well.

Results from the Path Analysis

Do parents' personal motivators predict parents' involvement? Initially tested as a latent variable, parents' role construction and self-efficacy for helping their children succeed in school were unable to properly load onto the latent variable. Thus, the variables were made into individual predictor variables. The impact of role construction on parent involvement was statistically significant ($\beta = .32$, $p < .001$), the impact of self-efficacy was not $\beta = -.03$, $p = .65$).

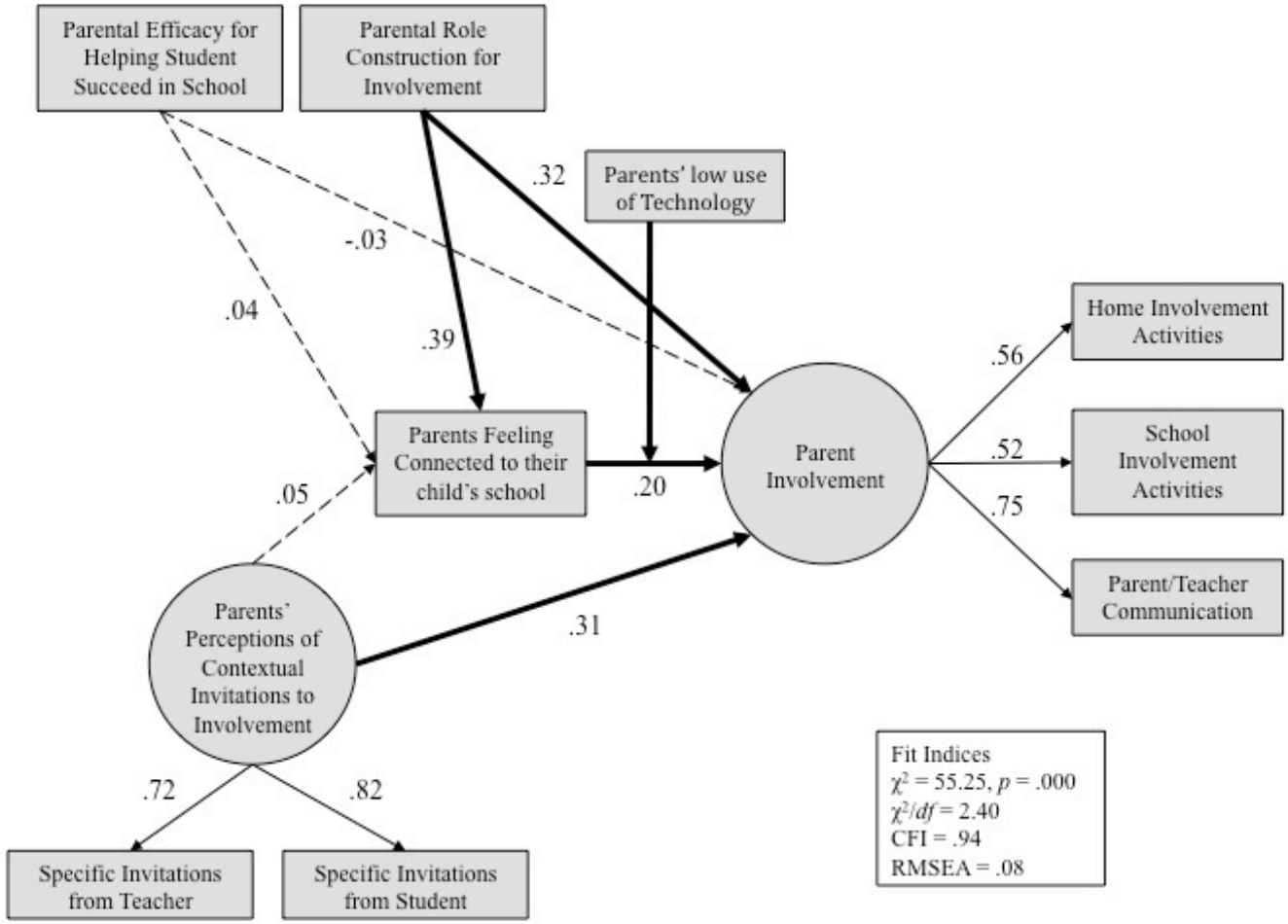

Figure 5: Results from the path analysis with standardized coefficients.

Do parents' perceptions of contextual invitations to involvement predict parents' involvement? When analysis began on the latent variable parents' perceptions of contextual invitations to involvement, the loadings of the three observed variables (general school invitations, teacher invitations, and child invitations) are considered too far apart (Kline, 2011). Though teacher invitations and child invitations had standardized beta of .72 and .77, respectively, general school invitations had a standardized beta of .33. An exploratory factor analysis was conducted to better understand the loadings of the individual items within the variables. The results revealed school invitations do not load onto the same component as invitations from teachers and children.

The items were converted into z-scores since the measures are on different measurement scales (i.e., school invitations *very strongly disagree* to *very strongly agree* and teachers' and children's invitations *never* to *every day*). Converting the data, however, created a Heywood Case with the standardized loading of children's invitations being larger than 1 while the error variance was negative. Kenny (2012) suggests treating a Heywood case as a specification error and modifying the model accordingly.

When the measure was removed from the latent variable and made into an individual predictor variable, the model fit indices were $\chi^2 = 116.14$, $df = 30$, $p = .00$, $\chi^2/df = 3.87$, CFI = .86 and RMSEA = .12. The fit indices after it was removed from the model were $\chi^2 = 55.25$, $df = 23$, $p = .00$, $\chi^2/df = 2.40$, CFI = .94 and RMSEA = .08. For these reasons the measure was reviewed again for reliability and validity. Upon examination, three of the items were focused on teachers, one focused on scheduling of events, another on feeling welcome, and one was focused on schools letting parents know about events. Because of this lack of clarity and validity, the variable was removed from

the model. The latent variable parent perception of invitation now consisted of specific invitations from teachers and children to be involved. The impact of this latent variable on parent involvement was statistically significant ($\beta = .31$, $p < .01$).

Do parents' personal motivators (role construction and self-efficacy) predict parents feeling connected? The pathways between parents' role construction, their self-efficacy, and the measure of feeling connected to the school were examined. The impact of parents' role construction on parents feeling connected to the school community was statistically significant ($\beta = .39$, $p < .001$). The impact of self-efficacy on parents feeling connected to the school was not found to be statically significant ($\beta = .04$, $p = .57$).

Do parents' perceptions of contextual invitations to involvement predict parents feeling connected to their children's school? The pathway between parents' perceptions of invitations from teachers and children and the measure of feeling connected to the school was examined. The impact of parents' perceptions of invitations on parents feeling connected to the school was not statistically significant ($\beta = .05$, $p = .50$).

Do parents feeling connected to their children's school community predict parents' involvement? Interestingly, the impact of parents feeling connected to the school on parent involvement was statistically significant ($\beta = .20$, $p < .01$).

Does parents feeling connected mediate the relationship between parents' personal motivators and parents' perceptions of contextual invitations to involvement and parents' involvement? Since the impact of self-efficacy on parents feeling connected was not found to be statically significant, parents feeling connected does not mediate the relationship between parents' self-efficacy and their involvement.

With both the impact of parents' role construction on parents feeling connected and the impact of parents feeling connected on parent involvement being statistically significant, Sobel's test of mediation was used to determine parents feeling connected mediated the relationship between parents' role construction and their involvement. Sobel's test revealed parents feeling connected partially mediates the relationship between role construction and parents' involvement ($z = 2.07$, $p = .04$). This was only a partial mediation because the impact of role construction on parents' involvement was statistically significantly even when accounting for parents feeling connected.

Do parents feeling connected mediate the relationship between parents' perceptions of contextual invitations to involvement and parents' involvement? Similar to self-efficacy, the impact of perceptions of invitations on parents feeling connected was not found to be statistically significant. Thus, feeling connected does not mediate the relationship between parents' involvement or perceptions of invitations and parents' involvement.

Does the use of technology moderate the relationship between parents feeling connected to their children's school and parents' involvement? Finally, to examine moderation, the fit of the model with parents who use technology a few times a month to every day (n = 100) and the model with parents who uses technology never to less than monthly (n = 120), were compared using a series of multi-group analyses. Two models were fit for each group. First, a constrained model was fit with the both groups set as equal. Second, an unconstrained model was fit. The unconstrained models allowed parameters were to vary freely so that the paths would differ based on technology use. Even though the model fit from the constrained model ($\chi^2 = 92.43$, $df = 53$, $p = .001$) to

the unconstrained model (χ^2 = 79.75, *df* = 46, *p* = .001) did not statistically significantly differ ($\Delta\chi2$ = 12.68 (7), *p* = .08), path-by-path analysis revealed if any paths were statistically significantly different for high and low technology using parents when all other paths were held constant. Only one path was significantly different for the high technology parents and the low technology parents. For those parents who used technology never to less than monthly, the impact of parents feeling connected on parents' involvement was found to statistically significant (β = .27, *p* < .01). For those who use technology multiple times a month to almost every day the impact was not statistically significant (β = .12, *p* = .27).

Background variables. Finally, the control variables were examined in the path analysis. Traditional methods of communicating with schools and teachers were positively associated with parents' perceptions of invitations (β = .34, p < .001), role construction, (β = .44, p < .001), and parents' involvement (β = .20, p < .001). Family annual income was positively associated with role construction (β = .19, p < .01) and parents feeling connected (β = .15, p < .05), so that parents with higher incomes had more positive role construction and felt more connected to their children's school community.

Participant education was positively associated with parents feeling connected (β = .34, p < .001) and self-efficacy (β = .21, p < .01) so that the more educated parent the more they felt like a part of their children's school community and had higher self-efficacy. Additionally, participant education was negatively associated with parents' perceptions of invitations (β = -.16, p < .05) and parents' involvement (β = -.15, p < .05) so that lower educated parents were more involved and perceived invitations for

involvement more positively. Lastly, children's grade was negatively associated with parents' involvement ($\beta = -.29$, $p < .001$) and positively associated with parents feeling connected ($\beta = .17$, $p < .01$).

Summary of results

In summary, a majority of bivariate correlation coefficients were statistically significant. These supported several of the research questions' identified pathways. Findings partially supported Hoover-Dempsey's model as well as the predicted model of parent involvement being influenced by parents feeling connected and technology usage. The proposed latent variable, parent personal motivators, was found to actually be individual predictor variables and feeling connected to the community did not mediate the relationship between perceptions of involvement invitations and parent involvement. However, feeling connected to the school community was found to mediate the relationship between role construction and parent involvement. Lastly, lower technology usage was found to moderate the relationships between parents feeling connected to the school and parent involvement.

CHAPTER 5

DISCUSSION

The current study examined the relationship between parents' personal motivators, parents' perceptions of invitations, feeling connected to and a part of their children's school community, ways (both technological and traditional) parents connect with the school, and parent involvement practices at home and at school. This builds on previous research, which has shown parent involvement is influenced by multiple factors such as parents' personal motivators, perceptions of involvement invitations, culture, and even the teacher, other parents, and the school (e.g. Anderson & Minke, 2007; Bower & Griffin, 2011; Decker et al., 2005; Hoover-Dempsey et al., 2005; Lareau, 1987, 2002). To test the predicted pathways, a path analysis using structural equation modeling was conducted. In this chapter, these results and their meaning are discussed in greater detail. Implications for future research are provided followed by the study's strengths and limitations.

Summary of Path Analysis

The current study examined eight research questions.

1. Do parents' personal motivators predict parental involvement?
2. Do parents' perceptions of contextual invitations to involvement predict parental involvement?
3. Do parents' personal motivators predict parent feelings connected to their children's school?

4. Do parents' perceptions of contextual invitations to involvement predict parents feeling connected to their children's school?
5. Do parents feeling connected to their children's school community predict parents' involvement?
6. Does parents feeling connected mediate the relationship between parents' personal motivators and parents' perceptions of contextual invitations to involvement and parents' involvement?
7. Do parents feeling connected mediate the relationship between parents' perceptions of contextual invitations to involvement and parents' involvement?
8. Does the use of technology moderate the relationship between parents feeling connected to their children's school and parents' involvement?

The first and second questions intended to replicate previous research on parents' involvement. The remaining questions examined the addition of the variable: parents feeling, to the preexisting model. The final question looked specifically at how parents' use of technology moderated the impact of their feeling connected to the school community on parents' involvement. A review of the findings along with previous research will demonstrate how these findings fit into what is currently known about parents' involvement.

Summary of Results: Replication of Previous Model

The current study intended to replicate Hoover-Dempsey and Sandler's Model of the Parental Involvement Process (adapted from Hoover-Dempsey & Sandler, 1995, 1997, 2005). After adapting the model based on statistical findings, the results revealed

that the impact of both parents' role construction and their perceptions of invitations on parent involvement were statistically significant. However, the impact of parents' self-efficacy on parent involvement was not significant. Although the results did not replicate Hoover-Dempsey and Sandler's Model of the Parental Involvement Process (adapted from Hoover-Dempsey & Sandler, 1995, 1997, 2005), much of the findings do support previous research.

For instance, teacher invitations have been found to be the strongest relationship with parents' involvement (Anderson & Minke, 2007). Additionally, researchers have revealed that the children affirming the importance of parental involvement encourages parent involvement (Green, Walker, Hoover-Dempsey, & Sandler, 2007; Hoover-Dempsey et al., 2010). Therefore, the current study aligns with these previous research studies that have found that perceptions of invitations impact parents' involvement.

The impact of self-efficacy on parent involvement was not found to be statistically significant, which does not align with previous research. In fact, parents' sense of efficacy on their children's learning and school success was found to have a direct effect on parent involvement (Anderson & Minke, 2007). However, Anderson and Minke (2007) also had issues with self-efficacy impacting involvement at school. These authors suggest a need for a more comprehensive measure of efficacy.

Summary of Results: Addition of Feeling Connected

In addition to examining Hoover-Dempsey and Sandler's Model of the Parental Involvement Process (adapted from Hoover-Dempsey & Sandler, 1995, 1997, 2005), the current study added the variable parents feeling of connected to the model to examine its relationships with the variables in the model. The analysis began by examining the

impact of the predictor variables' (parents' self-efficacy, role construction, and perceptions of involvement invitations) on parents feeling connected. Next, the influence of parents feeling connected on their involvement was examined. Lastly, the current study explored whether feeling connected to the school mediated the relationship between each of the predictor variables and parents' involvement.

The current study did not find parents' self-efficacy or perceptions of invitations to be related to their feeling connected to the school. Thus, parents feeling that they can make a difference in their children's education and how they view invitations to be involved do not impact their feeling connected to the school. In previous research, however, feeling connected was found to impact perceptions of invitations. For instance, Bower and Griffin (2011) found that teacher invitations were not effective at increasing parent involvement without first having a relationship between teachers and parents. The predicted directionality of parents' perceptions of invitations influencing feeling connected to the school community may instead be reverse causality. Therefore, parents feeling connected may actually influence their perceptions of invitations to be involved.

When examining the impact of the predictor variables on parents feeling connected, the impact of role construction was found to statistically significant. Research has shown white-middle class parents typically work together to deal with any issues whereas working-class and lower-income families tend to face problems individually without getting help from the school (Horvat, Weininger, & Lareau, 2003). Because the majority of the current study's sample reported having a college degree (74.1%) and an annual family income over $75,000 (50.9%), this supports previous research.

In addition to the impact of parents' role construction impacting their feeling

connected, the current study found parents feeling connected impacted their involvement. Thus, as parents feel more connected to the school community the more they are involved with their children's education. This aligns with previous research that revealed teacher invitations were not effective at increasing parent involvement without there first being a relationship between teachers and parents (Bower & Griffin, 2011).

Furthermore, this study found parents feeling connected to the school partially mediated the relationship between role construction and parent involvement. Previous research on role construction has shown that upper-middle class parents view the relationship between home and school as interconnected and interdependent (Lareau, 1987). Thus, upper-middle class parents, much of the current study's sample, think their role and responsibility is to be connected with their children's school and therefore make an effort to feel that they are part of the school community. For this sample, parents who had a more positive view of their role in their children's education were more likely strive to be a part of the school community.

Summary of Results: Technology Use as a Moderator

Lastly, the current study sought to examine if schools', teachers', and parents' use of technology moderated the relationship between parents feeling connected and parents' involvement. This topic had only been minimally covered by previous research. Based on the path analysis, the impact of parents feeling connected on parent involvement was only statistically significant for families who less than monthly used email to communicate with the school and websites or smartphone applications to view their child's grades and progress. Although previous research has shown technology enabled parents to work with their child's teacher, which lead to lower discipline reports and

above national average test school (Bird, 2006), research has not examined how technology is impacting the relationship between parents feeling they are connected to the school community and their involvement. The current study adds to the literature by examining technology's impact on parents feeling of connection with the school community.

Model Adaptations

The current study was intended to test Hoover-Dempsey and Sandler's Model of the Parental Involvement Process (adapted from Hoover-Dempsey & Sandler, 1995, 1997, 2005) and add variables to better understand parents' involvement. Although much of the model fit as described by Hoover-Dempsey and Sandler (2005), a few items required changes for the model to fit appropriately. Each of these changes has implications both for the data, as well as for future research with the model.

Changed Latent Variable

Initially, the variables role construction and self-efficacy were thought to make up the latent variable parents' personal motivators. When these variables were tested using SEM, they did not load appropriately to be a latent variable and were changed into individual predictor variables. There are multiple reasons that necessitate this change.

First, parents' sense of efficacy and feeling as if they can make a difference in their children's learning and school success has been found to have a direct effect on parent involvement with their children's learning at home but not at school (Anderson & Minke, 2007). These authors suggest role construction and self-efficacy are related concepts but they operate differently and should be measured separately. For this study, bivariate statistics did not show that self-efficacy was statistically significantly correlated

with any of the measures making up parent involvement. In addition, the impact of self-efficacy on parents' involvement was not found to be statistically significant within the path analysis. The large number of higher income parents in the sample may have influenced this finding. Research has shown upper-middle class parents would intervene if school decisions did not meet their standards (Lareau, 1987).

Secondly, although self-efficacy was not found to impact the other variables, role construction was found to impact all of the variables. Again, this may also be due to the homogenous sample. Upper-middle class parents have been found to take an active role in their children's education with constant monitoring (Lareau, 1987). This may explain why the current study's sample of mainly higher income families held positive views of their roles and responsibilities with their children's education.

Thirdly, self-efficacy may only impact specific parent involvement forms instead of all three predicted in this study. For example, parents may be more involved within their home because it is an environment they feel they can control. Additionally, Anderson and Minke (2007) found parent self-efficacy to impact home activities but not school activities. For this study the involvement forms were combined into one latent variable, which may account for the impact of self-efficacy on parent involvement not being found to be statistically significant.

Removed Variable

In addition to changing a latent variable into two predictor variables, the model also had one item removed from the latent variable: parents' perceptions of invitations. This item was parents' perceptions of general school invitations to be involved. This change was based on exploratory factor analysis revealing the item was not part of the

same component as parents' perceptions of teacher invitations to be involved or parents' perceptions of children invitations to be involved. Reviewing previous research may shed light onto the discussion of the removal of this variable.

Although previous research has shown schools promoting parent involvement was the most powerful predictor of parents' involvement (Decker et al., 2005), the current study was unable to replicate those findings. However, the scale used for this study may not have actually been measuring school promotion of parent involvement. For example, Sheldon (2005) found parents' involvement at school was a reflection of school organization, social processes, and outreach to increase family and community involvement. Thus, increasing parent involvement goes beyond simply inviting parents to events. For this reason, the individual items within the measure of general school invitations need to be further examined to understand if, as a whole, they are measuring the ways schools invite parents to be involved. In addition, another reason this measure may not have been appropriate is that parents may actually receive too many general school invitations to be involved causing them to become overwhelmed with notices rather then feeling connected. Further research may be warranted to explore the underlying reason.

Implications

This study was designed and implemented to provide information that can be used to improve parent involvement. There are multiple implications form the current study for schools to utilize in improving parent involvement. Furthermore, this study, like all others, has implications on future research on the Model of Parent Involvement Process as well as research on schools use of technology, alternative methodologies for collecting

data on this topic, and qualitative research methods to increase understanding of parent involvement.

Implications for Schools

As schools prepare and plan to get parents involved, teachers and administrators need to understand how parents' perceptions and motivators are impacting their involvement. This study revealed that the impact of parents' role construction and perceptions of invitations to involvement on parent involvement was statistically significant. Furthermore, the impact of parents' role construction on parents feeling connected was statistically significant as was the impact of parents feeling connected on parent involvement. Lastly, parents feeling connected partially mediated the relationship between role construction and parents' involvement. Consequently, parents feeling connected plays a role in how parents' role construction impacts their involvement. These findings are supported by previous research. Expectations that schools and other parents place on parent involvement have been found to impact how parents view their involvement role (Hoover-Dempsey & Sandler, 1997; Waanders, Mendez, & Downer, 2007). By recognizing that parents' role constructions may be altered by schools' or other parents' expectations of parent involvement, schools can work to increase parent involvement. Thus schools must know the parents and the resources available to parents. For example, if most of the parents have internet access in their homes, then sending emails may be an effective way of connected with all parents. However, if parents have limited access to the internet, then when schools send an email, those parents are not getting the information and are disconnected from the school. Simply asking parents

about the resources available to them can help teachers and schools know the best ways to reach those families.

Furthermore, based on this study's findings schools should remember to include those parents who used technology to communicate with the school less than monthly. For those parents who use technology less than monthly, the impact of parents feeling connected on parents' involvement was found to statistically significant. Parents who use less technology need to feel connected to the school to increase their involvement. Schools need to make an effort to make low technology using families feel included and are part of the school community. These may be lower income families who not cannot afford technology, have limited mobility, or difficult work hours that keep them from being involved.

The importance of reaching parents where they are is illustrated by Telem and Pinto (2006)'s study on school management software found the increase in grade reporting enabled parents and school staff members to deal with students' learning, behavior, and attendance issues with a more interrelated functionality. Although the school utilized computers for teachers to input students' grades, the school combated the lack of availability of computers for all families by regularly mailing grade reports and notices of the child's behaviors to parents. Thus, the school used technology but also remembered to include those families who do not have access to computers. By making those parents feel that they are a part of the school community, they may be more willing to make an effort to be involved.

Implications for Future Research

This study not only expands upon Hoover-Dempsey and Sandler's previous research on parent involvement, but it also fills a gap in research by exploring how parents feeling connected to the school community and technology use impacts parents' involvement. This study also lends itself to adding future directions to explore these topics more in-depth.

First, this study did not agree with Hoover-Dempsey and Sander's theory that parents' self-efficacy impacts parent involvement. One possible explanation is that these finds were due to a homogeneous sample of married, white, middle class mothers. Additional research needs to explore this in more detail to determine whether parents' self-efficacy needs to be operationalized differently.

Whereas this study was done through an online survey, future studies should include paper copies sent home from schools to better account for families who rarely use technology. This would require more funding than the current study had available. However, working with specific schools to get data on the processes, relationships, and culture of the school and classrooms would provide more details that can limit online surveys.

Although this study's inclusion of technology was able to fill a gap in research, in that lower technology use was found to moderate the relationship between parents feeling connected and parent involvement, future studies should expand on this avenue of research. For instance, to measure the use of technology a simple frequency scale was utilized. Future studies could expand on the measure to explore how parents felt about using of technology to communicate, check children's progress, and be involved in

unique ways. This research would aid schools in streamlining their communication methods instead of sending messages through all available methods at the same time.

Lastly, the current study also collected open-ended responses within the survey from 32.3% (n = 71) of respondents. Although the use of qualitative methods was outside of the constraints of this study, those comments may be able to provide additional insights into parents' perceptions about improving their involvement. Utilizing both quantitative and qualitative research allow for a more complete picture of parents' perceptions of their involvement.

Strengths and Limitations

This study, like any study, has strengths and limitations. One strength in this study is that the sample size was over 200 parents. This sample size allowed for diversity within the study. For instance, the sample included families from around the United States and included kindergarten to fifth grade. Secondly, this study used previously tested measures that were all found to be reliable based on Cronbach's alpha reliability scores. Lastly, this study was able to fill a gap that had not been previous researched. The addition of parents feeling connected to the school community provided an additional component to Hoover-Dempsey and Sandler's Model of the Parental Involvement Process (adapted from Hoover-Dempsey & Sandler, 1995, 1997, 2005).

Despite the sample size being over 200, one major limitation is that the sample was homogeneous, with most participants being white higher income women. Additionally, the study was only done through online survey and the parents who do not use technology very frequently were likely under represented. Lastly, this data is based

on parents' perceptions, and adding in data on the schools, teachers, and children would have made the study more rich and informative.

Conclusion

Despite several limitations, this study makes notable contributions to the existing research. First, it provides evidence that the Model of the Parental Involvement Process (Hoover-Dempsey & Sandler, 1997, 2005) used to facilitate an understanding of predictors of parent involvement, such as parents' role construction and perceptions of invitations. Although not all of the paths hypothesized by the Model of Family Involvement Process were statistically significant, this aligns with other researchers have found (Anderson & Minke, 2007). Second, existing research has minimally explored the impact of parents feeling connected to a school community on parents' involvement. In this study, feeling connected was found impact parents' involvement. Lastly, research has not fully explored parents' use of technology to connect with their children's school. Lower technology usage was found to moderate the relationships between parents feeling connected to the school and their involvement. These findings have implications not only for future research, but also for schools working to increase parent involvement.

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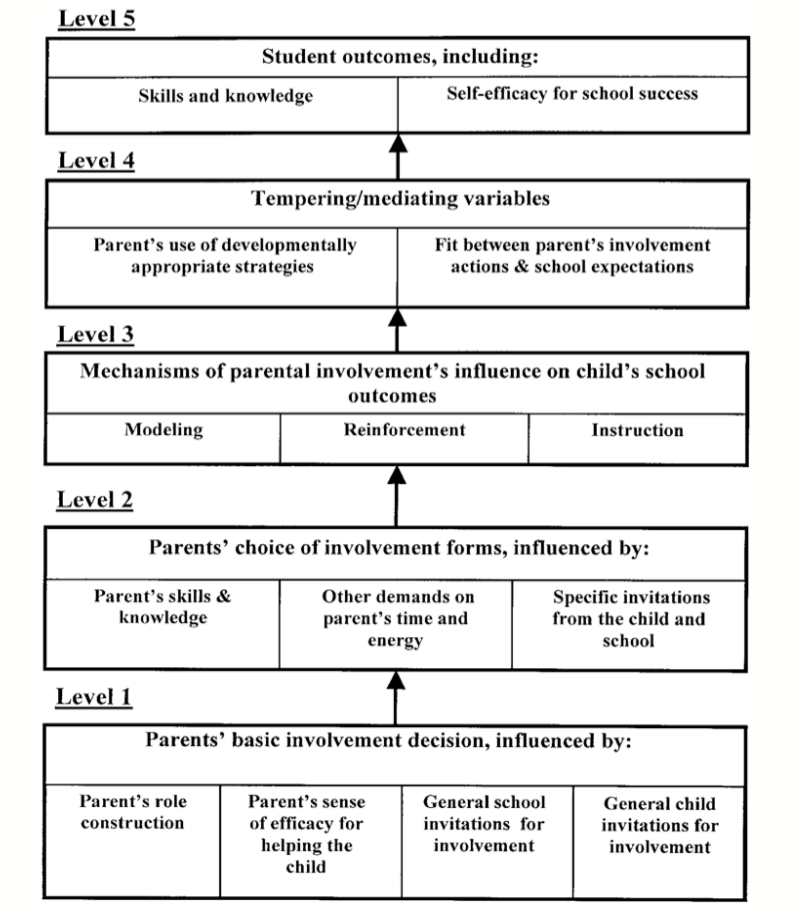
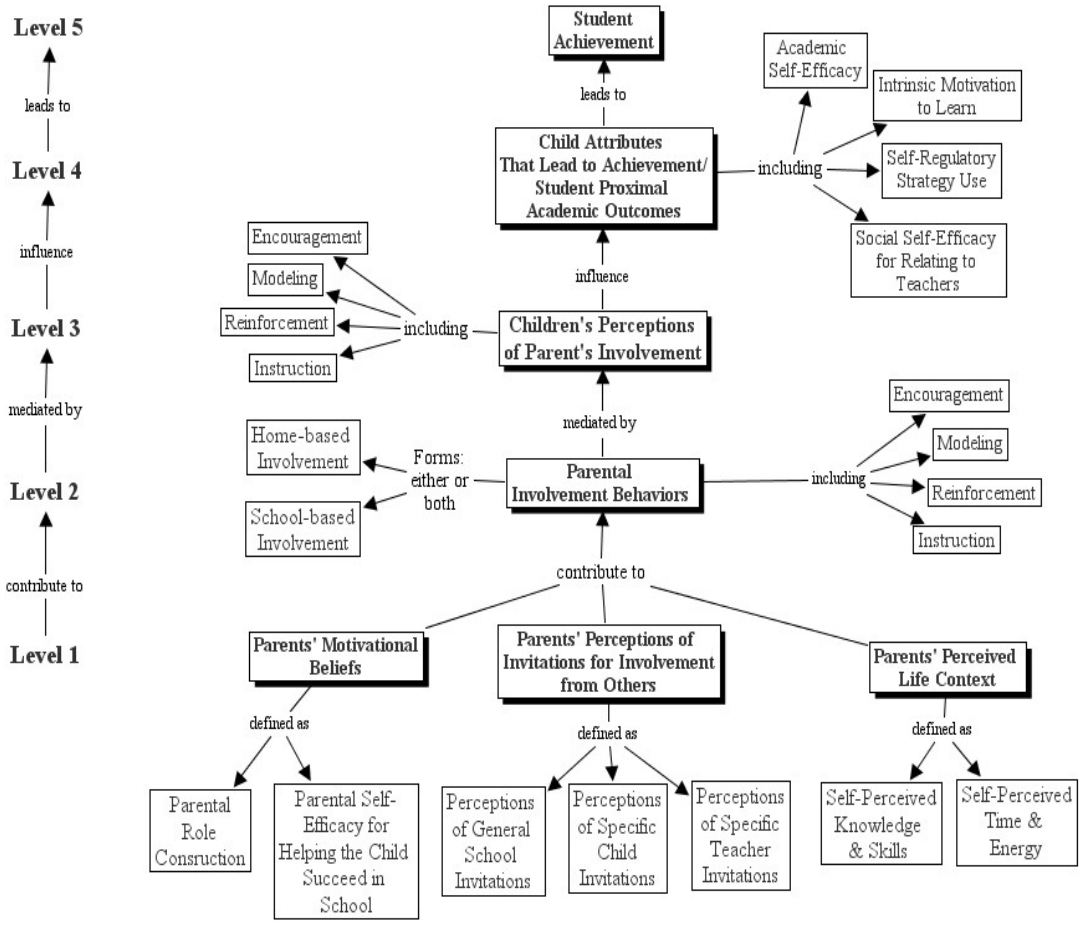
APPENDICES

Appendix A



Hoover-Dempsey and Sandler's (1995, 1997) original theoretical model of the parental involvement process.

Appendix B



2005 Revised Hoover-Dempsey and Sandler's model of the parental involvement process

Appendix C: Parental Role Construction for Involvement in the Child's Education Scale

Instructions: Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about **the current school year** as you consider each statement. Please, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

Response format: All items in the scale use a six-point response format (disagree very strongly to agree very strongly): 1 = Disagree very strongly; 2 = Disagree; 3 = Disagree just a little; 4 = Agree just a little; 5 = Agree; 6 = Agree very strongly.

Items

I believe it is my responsibility…

1. …to volunteer at the school
2. …to communicate with my child's teacher regularly.
3. …to help my child with homework.
4. ...make sure the school has what it needs.
5. ...support decisions made by the teacher.
6. ...stay on top of things at school.
7. ...explain tough assignments to my child.
8. ...talk with other parents from my child's school.
9. ...make the school better.
10. ...talk with my child about the school day.

Appendix D: Parental Self-Efficacy for Helping the Child Succeed in School Scale

Instructions to respondent Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about **the current school year** as you consider each statement. Again, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

Response format All items in the scale use a six-point response format (disagree very strongly to agree very strongly): 1 = Disagree very strongly; 2 = Disagree; 3 = Disagree just a little; 4 = Agree just a little; 5 = Agree; 6 = Agree very strongly.

Items

1. I know how to help my child do well in school.
2. I know if I'm getting through to my child.
3. I know how to help my child make good grades in school.
4. I feel successful about my efforts to help my child learn.
5. Other children have more influence on my child's grades than I do.
6. I know how to help my child learn.
7. I make a significant difference in my child's school performance.

Appendix E: Parents' Perceptions of General Invitations for Involvement from the School Scale

Instructions to respondent Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about **the current school year** as you consider each statement. Again, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

Response format All items in the scale use a six-point response format (disagree very strongly to agree very strongly): 1 = Disagree very strongly; 2 = Disagree; 3 = Disagree just a little; 4 = Agree just a little; 5 = Agree; 6 = Agree very strongly.

Items

1. My child's teachers are interested and cooperative when they discuss my child with me.
2. I feel welcome at my child's school.
3. Parent activities are scheduled at my child's school so that I can attend.
4. Someone at my child's school lets me know about meetings and special school events.
5. My child's teacher or school's staff contacts me promptly about any problems involving my child.
6. The teachers at my child's school keep me informed about my child's progress in school.

Appendix F: Parents' Perceptions of Specific Invitations for Involvement from the Teacher Scale

Instructions to respondent Please indicate HOW OFTEN the following have happened SINCE THE BEGINNING OF THIS SCHOOL YEAR. Again, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

Response format All items in the scale use a six-point response format (never to daily): 1 = never, 2 = less than monthly, 3 = 1 or 2 times a month, 4 = once a week, 5 = 2 or 3 times a week, 6 = almost everyday

Items

1. My child's teacher asked me or expected me to help my child with homework.
2. My child's teacher asked me or expected me to check or supervise my child's homework.
3. My child's teacher asked me to talk with my child about the school day.
4. My child's teacher asked me to attend a special event at the school or in the classroom.
5. My child's teacher asked me to help out at the school or in the classroom.
6. My child's teacher contacted me (for example, sent a note, phoned, e-mailed).
7. My child's teacher has told me about volunteer opportunities at the school or in the classroom.

Appendix G: Parents' Perceptions of Specific Invitations for Involvement from the Child Scale

Instructions to respondent Please indicate HOW OFTEN the following have happened SINCE THE BEGINNING OF THIS SCHOOL YEAR. Again, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

Response format All items in the scale use a six-point response format (never to daily): 1 = never, 2 = less than monthly, 3 = 1 or 2 times a month, 4 = once a week, 5 = 2 or 3 times a week, 6 = almost everyday

Items

1. My child asked me to help explain something about his or her homework.
2. My child asked me to check or supervise his or her homework.
3. My child talked with me about the school day.
4. My child asked me to attend a special event at the school or in the classroom.
5. My child asked me to help out at the school or in the classroom.
6. My child asked me talk with his or her teacher.

Appendix H: Parent Report of Home-based Involvement Activities Scale

Instructions to respondent Parents and families do many different things when they are involved in their children's education. We would like to know how true the following things are for you and your family. Please think about the current school year as you read and respond to each item. Again, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

Response format All items in the scale use a six-point response format (never to daily): 1 = never, 2 = less than monthly, 3 = 1 or 2 times a month, 4 = once a week, 5 = 2 or 3 times a week, 6 = almost everyday

Items

Someone in this family…

1. … talks with this child about the school day.
2. … supervises or checks this child's homework.
3. … helps this child study for tests.
4. … practices spelling, math or other skills with this child.
5. … reads with this child.

Appendix I: Parent Report of School-based Involvement Activities Scale

Instructions to respondent Parent and families do many different things when they are involved in their children's education. We would like to know how true the following things are for you and your family. Please think about the current school year as you read and respond to each item. Again, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

Response format All items in the scale use a six-point response format (never to daily): 1 = never, 2 = less than monthly, 3 = 1 or 2 times a month, 4 = once a week, 5 = 2 or 3 times a week, 6 = almost everyday

Items

Someone in this family…

1. . . . helps out at this child's school.
2. . . . attends special events at school.
3. . . . volunteers to go on class field trips.
4. . . . attends PTA meetings.
5. . . . goes to the school's open-house
6. … attends parent-teacher conferences

Appendix J: Community Connections Index

Instructions to respondent: Community can be defined as a geographic location, an event uniting people together, or a specific group of individuals with a similar interest. We would like to know more about how you connected with your child's school community. This can include the students, parents, teachers, administrators, and staff that are a regular part of the school. We would like to know how true the following things are for you. Again, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

Response format All items in the scale use a 4-point response format: 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often

Items

How often in the current school year have you…

1. Joined with people in your child's school community to solve problems impacting the school or the students
2. Volunteered in your child's school community
3. Participated in school community events or activities
4. Attended club or organization meetings in your child's school community
5. Attended an informational meeting about an issue affecting your child's school community
6. Attended a school committee or Parent-Teacher Organization meeting
7. Felt like you could make a positive difference in your child's school community
8. Spent time with parents or teachers in your child's school community when you needed a little company

9. Looked after or shown concern for other parents or teachers in your child's school community
10. Talked with parents or teachers in your child's school community about your problems or difficulties
11. Made new friends with someone in your child's school community
12. Felt close to other parents or teachers in your child's school community
13. Felt like you belonged in your child's school community
14. Felt your circumstances were similar to others in your child's school community

Appendix K: Parents' Ways of Communicating

Parent and families do many different things when they are involved in their children's education. We would like to know how true the following things are for you and your family. Again, think about your current experiences with your **youngest** child in Kindergarten to 5th grade.

How satisfied are you with your child's teacher?

1. Very satisfied
2. Satisfied
3. Slightly satisfied
4. Slightly dissatisfied
5. Dissatisfied
6. Very dissatisfied

Thinking about this school year, how have you and your child's school communicated with each other?

1. Email
2. Phone
3. Text Message
4. Hand Written Notes
5. Flyer, announcement sheet, or newsletter
6. Website or smartphone application to view grades and progress
7. Face-to-Face
8. Other

Response format Remaining items in the scale use a six-point response format: 1 = never, 2 = less than monthly, 3 = 1 or 2 times a month, 4 = once a week, 5 = 2 or 3 times a week, 6 = almost everyday

How often has your child's teacher used the following to communicate with you?

1. Email
2. Phone
3. Text Message
4. Hand Written Notes
5. Flyer, announcement sheet, or newsletter
6. Website or smartphone application to view grades and progress
7. Face-to-Face
8. Other

How often has your child's school used the following to communicate with you?

1. Email
2. Phone
3. Text Message
4. Hand Written Notes
5. Flyer, announcement sheet, or newsletter
6. Website or smartphone application to view grades and progress
7. Face-to-Face
8. Other

How often have you used the following to communicate with your child's teacher or school?

1. Email
2. Phone
3. Text Message
4. Hand Written Notes
5. Flyer, announcement sheet, or newsletter
6. Website or smartphone application to view grades and progress
7. Face-to-Face
8. Other

Overall, how often do you and your child's teacher communicate with each other?

Do you have any other comments about your experiences with parent involvement with your child's school or teacher? Type in answer

Appendix L: Demographic information

Your Gender:

1. Male
2. Female

What school does your child attend?

1. Type in answer

What grade is he or she child in?

1. Kindergarten
2. 1st grade
3. 2nd grade
4. 3rd grade
5. 4th grade
6. 5th grade

How many children (under the age of 19) live in your home?

1

2

3

4

5

6 or more

What state do you currently live in?

1. Type in answer

Your level of education (please check highest level completed):

1. less than high school
2. high school or GED
3. some college, 2-year college or vocational
4. bachelor's degree
5. some graduate work
6. master's degree
7. doctoral degree

Family income per year (check one):

1. Less than $5,000
2. $5,001 - $10,000
3. $10,001 - $20,000
4. $20,001 - $30,000
5. $30,001 - $40,000
6. $40,001 - $50,000
7. $50,001 - $75,000
8. $75,001 - $100,000
9. over $100,001

What is your usual job?

1. Type in answer

Please indicate your marital status:

1. Married
2. Living with partner

3. Separated, divorced,or widowed
4. Never married

Your spouse or partner's level of education (please check highest level completed):

1. less than high school
2. high school or GED
3. some college, 2-year college or vocational
4. bachelor's degree
5. some graduate work
6. master's degree
7. doctoral degree
8. do not know

What is your spouse or partner's usual job?

1. Type in answer

How would you best describe yourself? (Choose every answer that is true for you)

1. Hispanic/Latino/Spanish
2. White/Caucasian
3. African American/Black
4. American Indian or Alaska Native (i.e. Eskimo, Aleut)
5. Asian (i.e. i.e. Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, etc)
6. Native Hawaiian or other Pacific Islander (i.e. Samoan, Guamanian, Chamorro, etc.)

Would you like to be entered into a drawing for a gift card?

1. Yes 2. No

If answer yes to previous question: To be entered into the drawing for the gift cards, please provide your email address. Email will be separated from survey responses and deleted once the drawing has been completed.

1. Type in answer

Thank you for taking my survey.