Parent involvement and child academic outcomes

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Parent involvement and child academic outcomes

by

Jessica Jo Enneking

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Human Development and Family Studies (Child Development)

Program of Study Committee:
Susan M. Hegland, Major Professor
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Iowa State University
Ames, Iowa
2002

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This is to certify that the master's thesis of

Jessica Jo Enneking

has met the thesis requirements of Iowa State University

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ABSTRACT

The purpose of the present study was to understand the unique contribution that home and school involvement play in predicting child math and reading scores as well as to examine the possible moderating influence of parent education in the relationship between home involvement and child math and reading scores. The sample included 161 second and third grade children and their families. A family involvement questionnaire was used to assess parent report of parent involvement in the home and school settings. Children's math and reading skills were assessed using the Woodcock-Johnson Tests of Achievement-Revised. Correlations revealed a significant relationship between home and school involvement and child's math skills, but not reading skills. Results of hierarchical regression analyses showed home involvement accounted for additional variance beyond that of parent education in predicting child's math skills; however, home involvement did not mediate the relationship. Results also showed that parent education was not a moderator variable. Implications for future research in parent involvement and school efforts of parent involvement are discussed.
CHAPTER 1: GENERAL INTRODUCTION

Numerous researchers (e.g., Alexander & Entwisle, 1996; Baker & Stevenson, 1986; Comer & Haynes, 1991; Epstein, 1986, 1987, 1991; Lareau, 1996; Swap, 1993; Useem, 1992) have shown that parent involvement is related to children's academic achievement. However, Epstein (1987) identified several different forms of parent involvement; each of which may have different effects on the child's development. Furthermore, Lareau argued that parents from different economic and educational backgrounds may define parent involvement differently. Questions exist as to whether parent involvement should be measured from the teacher's or the parent's perspective because parents and teachers may evaluate parent involvement differently. Because most studies in this area have been correlational, studies that purported to measure the effect of parent involvement in children's achievement could be interpreted as showing the effect of children's achievement on parent involvement.

Parent involvement appears to significantly impact a child's academic career (e.g., Alexander & Entwisle, 1996; Baker & Stevenson, 1986; Comer & Haynes, 1991; Epstein, 1986, 1987, 1991; Lareau, 1996; Swap, 1993; Useem, 1992). However, how parents become involved can vary widely, and may have different effects on the child. Epstein (1987) outlines six types of parent involvement based on home, school, and community involvement. In each of these three settings, parent involvement can exist in different ways. It is important to distinguish between different types of parent involvement and determine which types contribute to fostering children's academic development by looking closer at theory, research, and application.
Lareau (1996) suggests that the parents' education levels and income levels affect how parent involvement is measured; parents from low SES levels define parent involvement differently than do parents from high SES levels. Differences in the understanding of parent involvement can significantly influence child outcomes. Parent characteristics may act as moderators or parent involvement may act as a mediator in determining what influences children's academic development.

Finally, there is a dearth of longitudinal research surrounding the topic of parent involvement. Cross-sectional research only provides a correlational look into the relationship between parent involvement and child academic outcomes. Longitudinal analyses may allow for causal inferences. It is important to examine the correlational and causal links between parent involvement and child academic development that have been established in recent research.

The following are the specific research questions of our study: (1) Does home involvement have an impact on child academic skills? (2) How does school involvement differ in impact than home involvement on child academic skills? (3) Does home involvement play a mediating role in the relationship between parent education and child academic skills? (4) Does parent education play a moderating role in the relationship between home involvement and child academic skills?

Thesis Organization

This thesis contains two papers suitable for publication: a review of literature on the different types of parent involvement and child academic outcomes (Chapter 2), and an empirical study examining the effect of parent involvement on child academic outcomes (Chapter 3). The papers are preceded by a general introduction (Chapter 1), and are followed
by a general conclusion (Chapter 4) and an Appendix. Appendix A includes the Family
Involvement in Child’s Learning scale used to assess parent home and school involvement.
Appendix B includes tables summarizing descriptive variables and correlation and
hierarchical regression analyses.
References


CHAPTER 2: REVIEW OF LITERATURE ON PARENT INVOLVEMENT
AND CHILD ACADEMIC OUTCOMES

A paper to be submitted to The Journal of Parenting

Jessica J. Enneking and Susan M. Hegland

Introduction

Numerous researchers (e.g., Alexander & Entwisle, 1996; Baker & Stevenson, 1986; Comer & Haynes, 1991; Epstein, 1986, 1987, 1991; Lareau, 1996; Swap, 1993; Useem, 1992) have shown that parent involvement is related to children’s academic achievement. However, Epstein (1987) identified several different forms of parent involvement; each of which may have different effects on the child’s development. Furthermore, Lareau argued that parents from different economic and educational backgrounds may define parent involvement differently. Questions exist as to whether parent involvement should be measured from the teacher’s or the parent’s perspective because parents and teachers may evaluate parent involvement differently. Because most studies in this area have been correlational, studies that purported to measure the effect of parent involvement in children’s achievement could be interpreted as showing the effect of children’s achievement on parent involvement.

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Finally, there is a dearth of longitudinal research surrounding the topic of parent involvement. Cross-sectional research only provides a correlational look into the relationship between parent involvement and child academic outcomes. Longitudinal analyses may allow for causal inferences. It is important to examine the correlational and causal links between parent involvement and child academic development that have been established in recent research.

Theory and Parent Involvement

Different theories of parent involvement lead to different child outcomes. Earlier studies (e.g., Bronfenbrenner, 1979; Levy, 1943; Symonds, 1939) considered parents to be a contributing factor that shaped children’s behaviors. Specific ways that parents become involved in their children’s lives, such as assisting the child with homework, have been linked to specific child outcomes, such as reading and math scores. It is important to become aware of how parents are involved in each setting in order to determine the effect on various
child academic outcomes. Recent research has examined the importance of family-school connectedness on child academic outcomes.

Throughout the course of childhood, many factors influence the child’s social, academic, and cognitive development. Bronfenbrenner and colleagues (Bronfenbrenner, 1979; Bronfenbrenner & Crouter, 1983; Bronfenbrenner & Morris, 1997) examined how the surrounding environment affected behaviors children exhibited. Earlier studies considered parents to be a contributing factor in a child’s immediate environment that affected children’s behaviors (Levy, 1943; Symonds, 1939). Both Symonds (1939) and Levy (1943) reported that parental care affected children’s personality characteristics and behaviors.

More recently, specific parenting behaviors have been linked to specific child behaviors (Belsky, 1984; Bloom, 1981; Bronfenbrenner & Crouter, 1983; Dauber & Epstein, 1993; Levy, 1943). Belsky (1984) states that parenting is determined by multiple sources including personality, marital relations, work, social network, and even child characteristics. All of these sources and the parent’s own developmental history contribute to the way the parent guides the child’s development. These sources are influenced by one another and may or may not be equally determining of specific parenting techniques. Many theorists (Belsky, 1984; Bloom, 1981; Bronfenbrenner & Crouter, 1983; Dauber & Epstein, 1993; Levy, 1943) have debated the appropriate parent involvement parents should use to guide and support their children. One area of support is parent involvement in children’s education. At first glance, this topic may seem quite distinct; however, there are many aspects of parent involvement that come into play as a child progresses from early childhood on into the adolescent years and beyond. Whether one is talking about involvement in the home, school,
or community setting, it is important to become aware of how parents are involved in each setting.

*Epstein (1987)* outlines six different types of involvement: parenting obligations, communication with school, volunteering at school, doing learning activities at home, becoming involved in decision making, governance, and advocacy, and involvement with the community. *Parenting obligations* include providing for their children's health, nutrition, and safety needs. They may acquire additional information to do so through the community or school. The family needs to discuss skills and attitudes important to the family, and share with their children the importance of certain customs or beliefs the family shares (Rich & Jones, 1977). By doing this, the children are able to better define themselves as to the role they play in the family. Teachers can bring different cultures and traditions into the classroom via parents or family members. In this way, parents are communicating to the school and the school is communicating to the families. *Communicating with schools* is another involvement Epstein suggests. Schools often send home newsletters, report cards, or hold conferences in order to keep the family involved in school happenings. Families can affect the communication coming from the school via the child by expressing appreciation to the school whenever something is received at home from the school. Parents can become involved by *volunteering at school*. Parents can come into the school and talk about their own experiences. This is an easy way to increase parent involvement and if parents are talking about their occupations, students may begin or continue to think about career goals. Families who either come up with their own *learning activities at home* or help the child with their homework are showing the child the importance of what they are doing in school and encourage the child to share stories of what they are learning. Epstein argues that one way of
strengthening parent involvement in the school is to have the parents be part of a governing body where they are encouraged to make decisions. Examples of these committees include the Parent Teacher Association, School Board, and Parent Teacher Organization. By being a part of or even by expressing concern to a different parent who is a part of these committees, the parent is considered to be problem-solving issues they are unsatisfied with, they are not problem-creating conflicts. The parent's involvement in the community can also be important for the child. There are ways that schools can help with creating a parent-community partnership. They can send home information about happenings in the surrounding community. These happenings could be activities that parents and children could participate in together, creating an increase in parent-child interaction time. Parents can bring in community resources as well. They might have connections outside of the school that would further students' learning, such as field trips into the community.

To fully understand the relationship between school and family, it is important to become aware of the background between the two entities. Earlier, education was done in an informal setting (i.e., churches, farms, and shops). Formal education was viewed as a supplement to what was already occurring at home. The separation of church and state brought with it a shift in educational control. The schools now took the power out of the hands of the families, and reduced the amount of developmental functions previously managed by the families (Lewis, 1989).

Epstein's (1987) model of family-school connectedness allows readers to visualize the current influence that family has on school, school has on family, and both family and school have on child and vice versa. Epstein points out there are separate, shared, and sequential responsibilities of families and schools and that what produces these different
relationships are two mechanisms. Symbolic interactionism (Mead, 1934) is the idea that people’s actions are the result of interactions with others. For example, if a teacher finds that parents expect something, she or he will try to act on that expectation; thereby parents and teachers will shape each other’s views. Reference group theory (Merton, 1968) states that people plan out their objectives based on who is in the reference group. For example, when parents are deciding how to implement guidance techniques in the home, they may take into account what the teacher would do or say about the situation because the parents consider the teacher to be an important reference group for that situation.

Over time theories of family-school relationships have evolved from the community and parents having control over the schools to the schools taking charge of the education to now a more shared view of education between families and schools. Epstein suggests four reasons why this change has and should be occurring: mothers are becoming more educated, even more so than the teachers, child care books are readily available, federal regulations are allowing funding for parent involvement in school programs, and the family structure is changing from mostly dual parent homes to increasingly single parent families, increasing the need for single parents to get more involved in their child’s education. These four trends have changed the relationship between family and school, thus demonstrating an increasing need for more parent involvement programs and more reasons for the family and school to become further connected. It is important to remember, Epstein says, that time spent in and out of the school is not considered solely family or school time, but is now a combination of school and family time, as the child continuously brings school home with them and vice versa (i.e., homework brought home, morals and values brought to school, social skills acquired in both settings, etc.). Epstein (1986) found that parent involvement in the form of
volunteering at school and conducting learning activities at home lessens and is even
discouraged as the child progresses through the grades; this finding is consistent with other
research (Epstein & Dauber, 1991; Parke, MacDonald, Beitel, & Bhavnagri, 1988). Epstein
also found that teachers controlled how much information was relayed to and from parents,
and that student's basic skills test scores were higher when teachers and families worked
together to teach and develop the student's basic skills. This result highlights the importance
of parent involvement in the form of both school-to-family and family-to-school
communication.

As shown here, family-school connectedness is an important element in fostering
positive outcomes in children. Epstein (1987) points out that being involved in the school is
not the only way to become involved with a child. Being involved at home and in the
community may be essential to fostering the child's development. To say a parent is
involved in one area and not the other might be considered impractical because most parents
who are involved at school are likely to be somewhat involved with home learning.
Therefore, these three areas of parent involvement overlap and may be extensions of one
another, so that when a parent is volunteering at school, for example, they might discuss the
activity at home, thus bringing the school involvement into the home setting. Also, if the
parent accompanies the child's class on a field trip to a community event, all three areas of
involvement can interplay and produce a positive effect on the development of the child.
However, it is important to note that some parents may not be available to participate in
school activities due to demands from their workplace. Likewise, other parents from diverse
cultural and economic backgrounds may involve themselves in different ways (Lareau,
1996). Therefore, when measuring parent involvement or implementing a parent
involvement program, researchers and schools must be cautious to account for all types of parent involvement from parents of all backgrounds. The parent’s own perspective on how he/she is involved in the child’s education is critical. Determining how these facets of involvement affect child developmental outcomes (i.e., social, academic, and cognitive development) is the next question.

Parent Involvement Elicits Change

Different aspects of parent involvement may make specific contributions to child academic outcomes. Research has linked parent involvement to changes in child developmental outcomes such as grades, social skills, and reading and math performance (e.g., Bloom, 1981; Bradley, Caldwell, & Rock, 1988; Parke et al., 1989). Epstein (1987) and Swap (1993) have examined different ways parent involvement influences child outcomes. Parent involvement in both the home (Bradley et al., 1988; Pomerantz & Eaton, 2001) and school (Comer & Haynes, 1991) settings have been linked to positive child outcomes.

Although research has shown that parent involvement with the school is essential to a child’s academic development (Connors & Epstein, 1995; Epstein, 1987), in a review of literature surrounding the home environment and its effects on children, Bloom (1981) concluded that if a parent wished to assist their child in learning, they needed to do it in the home setting. It is assumed that the home setting, and not the school setting, is where the parent has some control over the child’s learning. When it is understood what is ultimately affecting the home environment, parents can effectively assist in the child’s learning in the home setting by altering their own behaviors that affect the home environment to produce positive outcomes for their child. Bloom suggests that it is what the parents do in the home
rather than the status characteristics of the parents that affect the child’s development. Bloom also suggested specific aspects of the home environment that affect these developmental outcomes: work habits of the children and parents, academic guidance and support, stimulation to explore and discuss ideas and events, language development, and academic aspirations and expectations held by parents.

Research has linked parent involvement to changes in child developmental outcomes such as grades, social skills, and reading and math performance (Bloom, 1981; Bradley et al., 1988; Parke et al., 1989). Theorists (Bronfenbrenner, 1979; Lewin, 1931) have expressed the importance that the environment has on the child. Family and school are included in a child’s immediate environment (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 1997). Lewin (1931) suggests behavior is a function of the interaction between the person and the environment. Because families and schools are part of the child’s environment, according to Lewin’s theory, together they will impact a child’s behavior. Therefore, there is a need for cooperation between families and schools in order to produce a positive effect on a child’s behavior and, as other research has shown (Entwisle, Alexander, Cadigan, & Pallas, 1986; Parke et al., 1989), on child’s academic and social outcomes.

Connors and Epstein (1995) describe the shift in responsibility for schooling children in and around the 19th century. Earlier, children were schooled in their own homes, in churches, or in shops. Any education received in a school setting was viewed as a supplement to what children were already learning about political and religious beliefs. As time progressed, constitutional amendments separated church and state, resulting in an increased need for schools to educate children. The shift from a religious emphasis in education towards the concept of meeting the needs of a democratic society emerged. This
shift resulted in families giving schools more power to educate their children. Currently, schools are viewed as the main source of education for children. Families now adjust their lives to meet the needs of schools; however, the school system also needs to modify to correspond with the needs of the families (Connors & Epstein, 1995).

According to Epstein (1987), there are three main theoretical perspectives in the area of school and family connections. The first is separate influences, where the teachers and parents were thought of as two distinct entities. Early educational theories supported this distinction, as the child was thought to have a tabula rasa, or blank slate, in which the families were to fill the blank slate with aspects of social development, whereas the schools were to fill the slate with academic skills. The families were then in charge of social development, and the schools in charge of education.

The second theoretical basis described by Epstein (1987) is embedded influences. Bronfenbrenner’s (1979) theory suggests that a child’s development is embedded within different systems over time. For example, he suggests many aspects of the environment, including but not limited to the family and school, are constantly affecting the development of a child. Bronfenbrenner’s work pointed out that several facets of human development are shaped and molded by many different contexts and factors, which are embedded in each person’s environment.

The final theory developed by Epstein (1987) is referred to as overlapping influences. The overlapping influences model furthers Bronfenbrenner’s ecological model in that it takes the different environmental spheres, or contexts, and pushes them to overlap according to which environmental factors are playing a role at that particular time. Epstein describes external and internal structures within development. The external structure is composed of
moving spheres that are characterized by changes in time (different age levels or grade levels, or effects of historic events on an individual) and behavior (different background characteristics or philosophies). The internal structure is composed of exchanges between those individuals within a particular environment. The child is at the center of the internal structure and is claimed to be the reason for the different levels of parental involvement in school activities. Other theoretical models have derived from Epstein’s perspectives.

Swap (1993) defined three models that further elaborate the distinctiveness between separate and overlapping spheres of influence. The protective model states that it is in the best interest of schools, children, and families to have separate roles when it comes to educating children. Families may become involved with extracurricular activities and chaperoning, for example, but should not become involved in the children’s learning. In this model, families are not encouraged to share thoughts and opinions about their child’s education. The school-to-home transition model encourages information be brought home from school, but not necessarily vice versa. Two-way communication is not expected or anticipated. In the school-to-home transition model, families are not given an inviting opportunity to become involved in their child’s education. The final-- and most enabling--model is known as the partnership model. Under this model, families and schools are encouraged to communicate and exchange ideas that would be most beneficial to the child. The families are able to express concerns and thoughts that correspond to the school’s mission. Swap’s partnership model closely compares to Epstein’s (1987) theory of overlapping influences, in that two-way communication and extended at-home learning are encouraged, and will promote a family-school partnership. However, it is important to note that not all parents are eager to become as involved as are others. Lareau (1996) argues that
lower class and working-class parents are less likely to intervene in school functions than are middle-class and upper class parents.

Many studies of parent involvement and its influence on child outcomes have contributed to the existing literature that points to the importance of family involvement in the home. Pomerantz and Eaton (2001) sampled 166 working class, married mothers and their upper elementary age children to test the hypothesis that children’s low achievement would elicit intrusive-support practices from parents. Mothers’ ratings and children’s grades were used in multiple regression analyses, path analyses, and hierarchical linear modeling. The link between child achievement and maternal intrusive support appeared to be mediated by two variables: mother’s worry and child uncertainty. Over time, intrusive support from the mother was associated with improvement in the child’s grades. Pomerantz and Eaton suggested this improvement might be due to the importance that intrusive support places on doing well, which increases motivation in the child. The researchers concluded that although intrusive support does not transform low-achieving children into high-achieving children, it does appear to improve the children’s grades.

Bradley et al. (1988) sampled 42 fourth- and fifth-grade children and their lower and middle class families to test the relationship between home environment at 6 months, 2 years, and 10 years, and school performance at 10 years. Scores from a HOME Inventory (Caldwell & Bradley, 1979) measuring home involvement, achievement tests measuring reading, language arts, and math, and the Classroom Behavior Instrument (Schaefer & Aaronson, 1977, as cited by Bradley et al., 1988) measuring classroom behavior were used in a correlational analysis. Significant correlations were found between home environment at 2 years and 10 years and achievement levels at 10 years. However, home environment at 6
months was related to a minimum amount of achievement levels. Children whose parents involved them in social and cultural experiences during the elementary years scored higher on achievement tests and were rated higher by their teachers. The researchers concluded that different patterns of environmental experiences relate to different developmental outcomes.

As shown thus far, parent involvement in the home elicits change in children's academic and social developmental outcomes, but it is also important to note that even parental expectations of their child can affect certain child outcomes such as grades. Entwisle et al. (1986) sampled 825 first graders and their working and middle class families to test the influence of parents' and children's expectations on children's academic and social skills. IQ scores, parent expectations, child expectations, and child grades were used in structural equation models and chi square analyses. The researchers concluded that origins of child's expectations could not be well defined due to the lack of variance; overall, children expressed positive thoughts about themselves and their own abilities. Entwisle et al. also concluded that parents' report of their expectations has a significant effect on children's reading and math skills; however, the researchers did not address the affect that the child's past performance has on parental expectations. Hence, a causal relationship was not implied.

Although academic outcomes such as reading and math performance are essential to a child's development, social skills are also important (Parke et al., 1989; Shim, Herwig, & Shelley, 2001). Shim et al. (2001) discuss the consequential effects of children engaging in quality peer interactions. Shim et al. suggest that peer interaction and the acquisition of social skills contribute to the growth and development of children. Parke et al. (1989) suggest that peers are not the only promoters of beneficial social interactions. Parent-child interactions indirectly affect peer-child relationships through the quality of the interpersonal
relationship of the parent and child. In this way, social skills are affected by parental involvement. Research by Parke et al. (1988, 1989) supports the conception that children acquire social skills through observing and replicating the interactions they have with their parents. Parke and colleagues found that parent’s directiveness, involvement, and ability to elicit affect during their interactions with their child may foster or hinder the acquisition of social skills the child needs for successful peer interactions. The amount of time spent involved in a parent-child interaction may influence the length of peer interactions. In addition, during the parent-child play interactions, the child is learning how to detect and when to display emotions during peer interactions.

When parent involvement is in place and parents form a positive attachment to the school, the students themselves may feel a stronger attachment to the school. Comer and Haynes (1991) implemented a parent program which helped make parent involvement an important part of a school system. The parent program fostered parent involvement in different aspects of the school. In the parent program, parents were selected by their peers to be on a School Planning and Management Team where they served as representatives for other parents as well as for the school. By being on this Team, the parents were able to urge other parents to become active participants in different programs centered around the school. Parents were able to bring in community members to share information with other parents regarding various programs or services that are available in the community for families. The authors suggest that when a strong, positive attachment is formed between the school and parents, the students are more likely to develop a stronger, more positive attachment to the school and its programs. Comer and Haynes suggested that a parent involvement program
such as theirs provides a key linkage between school, home, and community that is important to the various elements of child development.

It is important to note that in the research reviewed here, parent involvement has been linked to changes in child developmental outcomes such as grades, social skills, and reading and math performance. If parent involvement has been shown to elicit change in child outcomes, there should be no question to whether it should be maintained in both the home and school settings. However, the solution may not be easily applicable by all parents and schools, and the definition of parent involvement may lie in the hands of the families involved, not in the hands of the researchers. Therefore, it is essential to study the operational definition of parent involvement before designing research to examine it.

Socio-Economic Status and Parent Involvement

When measuring parent involvement, it is important to consider family characteristics such as socio-economic status or parent education. These family characteristics have been found to significantly influence the relationship between parent involvement and child academic outcomes, possibly by becoming a moderating variable or because of the discrepancy of the definition of parent involvement across SES groups or parents with different educational backgrounds. It is important to examine different ways that parent education and income contribute to the relationship between parent involvement and child outcomes.

Many researchers have found that household income (SES) and parent’s education are related to levels of parent involvement and child’s academic achievement (Baker & Stevenson, 1986; Coleman, 1987; Lareau, 1996; Useem, 1992). Before discussing research related to the relationship between SES levels, parent involvement levels and child’s
academic achievement, the definitions of such variables must be considered. In some studies, SES is defined by the number of children in the free or reduced lunch program (Alexander & Entwisle, 1996; Comer & Haynes, 1991). In other studies, SES is defined by family income level, which sorts families into different social classes (Baker & Stevenson, 1986; Lareau 1989). In some studies (e.g., Slater & Power, 1987) SES and ethnicity are confounded; most upper SES participants were Caucasian, while most lower SES participants were African American. Therefore, it is also important to note what ethnic groups make up our SES levels to be sure that SES level, and not ethnicity, is what is accounting for a majority of the difference in the outcome variables.

According to Epstein (1987) parent involvement can be sorted into many different categories, three of which being home, school, and community involvement. Thus, it is important to note what kind of parent involvement is being studied because different measures of parent involvement may elicit different outcomes (Epstein, 1987). Child academic outcomes is another variable for which there are many possible measures including reading, mathematics, IQ score, and others. For example, Useem (1992) studied the effects that mother’s educational level has on student math group placement. One cannot generalize the results and suggest mother’s educational level affects child academic outcomes when only math skills were reported. It is not possible for researchers to show that all child academic outcomes correlate perfectly; math and reading scores may correlate in some studies (Bradley, et al., 1988; Epstein, 1991), but social skills may be linked to parent involvement in a different way (Parke et al., 1988; Parke et al., 1989). Therefore, it is necessary to examine each child academic outcome separately to determine which outcome variables are affected by the independent variables. Similarly, it is important to note which
levels (low, moderate, high) of which variables (SES, parent involvement) are being observed to have an effect on which types of child outcomes so that results are not generalized beyond the characteristics of the sample and beyond the methodology used. For similar reasons, one needs to consider how the child outcomes are being measured, for example, by a test or teacher ratings.

Family SES and parent education level are highly correlated; each of these two variables has been found to correlate highly with student achievement (Comer & Haynes, 1991; Lareau, 1989). Higher levels of parent involvement in any of the three areas proposed by Epstein (1987)—home, school, and community—were also found to be correlated with higher levels of student’s academic achievement (Alexander & Entwisle, 1996; Coleman, 1987; Lareau, 1989; Stevenson & Baker, 1987). When parent involvement in school activities was tested in the same model as SES or parent education level and student academic achievement, parent involvement was found to take a mediating role (Stevenson & Baker, 1987; Useem, 1992). Specifically, the relationship between SES or parent education level and student academic achievement lessened or became nonsignificant when parent involvement in school activities was entered into the regression model.

Three possible explanations for such findings each have research support (Becker & Epstein, 1982; Lareau, 1996). The first is that teachers may be encouraging more parent involvement in the home and school from those parents who have a higher educational background and who are in a higher SES level than from those parents who come from a lower SES or have low educational backgrounds (Becker & Epstein, 1982). This differential teacher treatment may reduce the importance of parent involvement in lower income families, thus decreasing the amount of time the parent spends being involved in their child’s
education. The second explanation is that families from low economic backgrounds may not have the financial resources it may take to become involved in their child's educational career at home, in the community, or in the school setting (Lareau, 1996). These parents may not be able to take their child to a community theater event, for example, that other parents from higher SES levels might be able to. The lower income parents may not be able to—or feel they need to—take time off work to volunteer at the school or go on field trips, whereas the higher income parents might be able to do these kinds of activities. The third possibility is that low SES families who are less educated than their high SES counterparts may not have the skills needed to assist their children with homework, or to volunteer in the school; this lack of involvement may lead to lower student academic achievement (Lareau, 1996).

When examining how household income, or socio-economic status, affects the relationship between parent involvement and child's school outcomes, problems in methodology may arise. Lareau (1996) argues that working-class and lower-class parents do not view the idea of parent involvement the same as most researchers do today. Such differences create difficulties with measuring parent involvement between SES groups. Lareau states that working-class parents give the responsibility of educating their child to the schools. She suggests that the term family-school partnership is inaccurate because the relationship between a family and a school is not an equal one. The teacher, Lareau suggests, has an imbalance of power over the parents no matter what the type of partnership, especially in working class families. Lareau reminds us to consider the context of the family-school relationship before making decisions regarding methods of parent involvement to be implemented. Lareau also states that parents are not always to be considered as an
educational resource for parent involvement because the education levels of parents vary greatly between parents.

Lareau (1989) found that higher educated parents and those parents from higher SES backgrounds demonstrated more parent involvement in all contexts than those parents with a limited educational background and low SES backgrounds. Some parents with a limited educational background had a difficult time understanding their child’s teacher. Parents’ lack of education led parents to rely heavily on the teacher to educate the child. One parent suggested that school had changed since she had been in school, so the things her daughter was learning now were different than what she learned in school; therefore, she would be unable to assist her daughter with homework or other academic affairs. Lareau also found that parents with less education were more likely to view themselves as inferior to the teachers, although higher educated parents viewed themselves as equal or superior in occupation to the teacher. This difference in self-confidence displayed by these parents could be a contributing factor to the different levels of demonstrated parent involvement.

Baker and Stevenson (1986) interviewed 41 upper-lower to upper-middle class mothers of eighth graders to research the strategies used by mothers to enhance school achievement. These mothers reported using a range of strategies, such as helping their child with homework or arranging for a tutor, when becoming involved in their child’s school career; these strategies had direct effects on their child’s school achievement. The researchers suggest there may be standard parental strategies used by parents, but mothers in different SES levels produce and adapt different strategies; higher SES parents use better management skills and were more likely to select college preparatory courses for their child than were lower SES parents.
Useem (1992) interviewed 86 mothers of middle school children living in a suburban community to test the relationship between parent involvement in school and math group placement. Results showed that parent involvement in school mediated the relationship between mothers' education level and students' math group placement. The researchers concluded that schools should aggressively elicit parent involvement from parents of all types of backgrounds.

Coleman (1987) suggests that children from “strong” (p. 35) family backgrounds (high income, high education level) are more successful at school than children from “weak” (p. 35) family backgrounds (low income, low education level). One should note that “strong” and “weak” are very subjective terms; both terms require operationalization before use in research or practice. Coleman suggests the difference between families may be due to the resources available for different family types. Coleman suggests that the variation in family resources is larger than the variation in different school resources; therefore, resources from the family create larger differences in student outcomes than do resources provided by the school. Coleman also argued that parent involvement in the home and school contexts reduces school dropout rates and improves school performance; therefore, he suggests schools do their part to actively involve parents from diverse economic and educational backgrounds.

Comer and Haynes (1991) addressed the idea that parents' education level is directly related to developmental progress in their children. They found that middle-income parents were higher educated than lower income parents, and in addition, the middle-income children were more academically skilled than the lower income children. This relationship may point out a multicollinearity problem. If parent income and parent education level are highly
correlated, it is not possible to distinguish which of these two variables affect children’s academic skills.

Alexander and Entwisle (1996) found children from low income families scored lower on achievement tests than did children from higher income families, and that this difference increased as the children passed through elementary school. Data from this study showed that the low SES children were continuing to fall back farther and farther in achievement scores from their higher SES peers as time passed. This study highlights the importance of intervention in low SES children’s academic affairs either by parents or by educators so these children do not continue to lose potential gains in academic achievement. Alexander and Entwisle concluded the achievement scores children showed in their study could reflect levels of parent involvement in their child’s education over the summer months. Specifically, lower SES parents may spend less time with their child reviewing academic material during the summer months than do higher SES parents. Thus, higher SES children continue learning throughout the summer, increasing their academic level between school years, while lower SES children maintain or show losses in the academic level achieved at the beginning of the summer.

Stevenson and Baker (1987) sampled 179 school age children (ages 5-17 years) and their parents and teachers to test the following hypotheses: (1) higher education status of the mother would be associated with higher levels of parental involvement in school activities; (2) the younger the child, the higher the level of parental involvement in school activities; and (3) the higher the level of parental involvement in school activities, the more successful the child would be in school. Teacher ratings of parental involvement at school, child’s grades, and mothers’ demographics were used in cross-sectional analyses and multiple
regression analyses. Results showed a strong positive correlation between mother’s education and parental involvement for boys, but the association was weak for girls. An increase in age of boys was correlated with a decrease in parent involvement; however, this relationship did not hold true for girls. An increase in parent involvement was associated with an increase in child’s school performance regardless of sex of child. The relationship between mothers’ education and children’s academic performance was mediated by parent involvement regardless of the number of children in the home or mothers’ work outside of the home. Researchers concluded that parent involvement in school activities acted as an “investment” in their child’s education.

Another area stemming from research surrounding involvement from parents of low economic or educational backgrounds is how the teacher and/or school encourage involvement practices from parents of different economic or education levels. Becker and Epstein (1982) reported that education level of parent played a role in parent involvement practices in general from teachers. The authors found that teachers of children whose parents are highly educated were more likely to believe that parent involvement practices would be effective even though the teacher chooses not to implement the practices. However, the authors also found that a majority of teachers who did not implement parent involvement practices and taught children whose parents were less educated said that those parents would not be able or willing to help the child with schoolwork outside of school. Becker and Epstein reported that teachers’ attitudes were mediating the effect that parent education level had on parent involvement. According to Lareau (1996), parents with less education or less income may not be able or willing to participate in the types of activities some teachers would like. These parents may view parent involvement differently than their higher SES
counterparts. In this instance, parent education or parent income may be acting as a moderating variable; when parents with low education backgrounds report high levels of parent involvement, parent involvement may not have an effect on child outcomes, but when parents with high education backgrounds report high levels of parent involvement, parent involvement may have an effect on child academic outcomes. Therefore, how teachers elicit involvement from lower SES parents may need to differ than how teachers elicit involvement from higher SES parents.

It is important to distinguish between a moderating and a mediating effect on a relationship. Baron and Kenny (1986) describe a moderating variable as a preexisting condition that affects the impact of the independent variable on the dependent variable. In other words, the moderating variable specifies under what conditions the independent variable will produce a certain effect on the dependent variable. Baron and Kenny (1986) described a mediating variable as one that functions as the cause of the change in the dependent variable. In a model where an independent variable was found to significantly influence a dependent variable, when the mediating variable is entered into the regression equation, the significance of the relationship between the independent variable and the dependent variable decreases. Furthermore, Baron and Kenny (1986) suggest that if, after a mediating variable is entered into the regression equation, the relationship between the independent variable and dependent variable decreases in significance rather than becomes nonexistent, then that mediating variable is influential, but is not both a necessary and sufficient condition for the effect to occur. Although a moderating variable can only act as an independent variable, a mediating variable can act as both a cause and an effect in a relationship. For example, higher parent education levels may lead to higher levels of parent
involvement at home, which in turn leads to higher grades for their child. Depending on regression statistics, parent education level in this example may have acted as a moderator variable or parent involvement may have acted as a mediator variable.

If parent involvement in any context is a mediating variable between SES or parent education level and child's academic achievement, as the studies by Baker and Stevenson, Coleman, Lareau, and Useem have shown, it would be important to identify the specific components of parent involvement that function as a mediator and research how this proposed mediating variable affects the relationship between SES or parent education level and child's academic achievement. Epstein (1987) identified multiple aspects of parent involvement. It is essential to note which aspects of parent involvement function as mediators for which families in order to progress with intervention programs surrounding parent involvement. It may be that the forms of parent involvement that mediate achievement for children from more affluent families may be different than the forms of parent involvement that mediate achievement for children from less affluent families. Intervention programs may bring out productive involvement from parents in their child's academic affairs. These programs could perhaps change the way teachers, like those in the study by Becker and Epstein, think about parents from diverse economic or educational backgrounds, and could quite possibly change parents' beliefs regarding their children's schools and teachers.

Schools and Parent Involvement

When a parent becomes involved in a child's academic career, it seems evident that the school would play an important role in fostering that involvement either in the home, school, or community setting. Questions exist as to how parent-school relationships can
impact the child’s academic development and how schools can elicit parent involvement from parents.

Many researchers have concluded that parent involvement is related to children’s development (e.g., Ames, 1993; Bradley et al., 1988; Epstein, 1986); however, recently researchers have questioned the amount of effort put forth by schools and teachers to initiate and sustain parent involvement (Ames, 1993; Becker & Epstein, 1982; Dauber & Epstein, 1993; Epstein, 1986). Teachers and parents differ in their assessments of the nature and extent of parent involvement. Teachers often report that parents are not interested in becoming involved with their child’s school activities (Becker & Epstein, 1982); however, parents report that they need to be involved and that they are helping with their children’s education at home (Dauber & Epstein, 1993; Epstein, 1986). This difference of opinion may indicate a communication breakdown between families and schools. Ames (1993) suggested that the communication between parents and schools positively influences parents’ thoughts about both becoming involved with their child at school and the effectiveness of their child’s teachers.

Epstein (1986) sampled working class parents of 1,269 elementary children to research parent attitudes about teachers’ parent involvement practices. Parent and teacher comments were coded and used in chi square analyses and regression analyses. The researchers discovered that parents displayed overall positive attitudes toward the schools and teachers, but parents admitted that teachers could do more to get parents involved in their child’s education. Only 8% of parents reported that they never helped their children with homework. A large majority of parents said they regularly help their children with schoolwork when asked to do so by teachers, and would do more with their children if
teachers instructed them as to what they could do. Parents reported that teacher efforts at parent involvement in the home and school settings lessened as the child progressed through the elementary grades. It was also reported that school to home communication was common, but home to school communication was less frequent. The authors concluded that parent involvement workshops provided through the school are needed to teach parents how to become involved.

Epstein and Dauber (1991) sampled 171 inner city elementary and middle school teachers to research the relationship between teacher attitudes towards parent involvement in the home and school settings, teacher efforts eliciting parent involvement in the home and school, and school programs eliciting parent involvement in the home and school. Teacher responses were used in descriptive statistical analyses and correlational analyses. The researchers found teachers reported an overall positive attitude towards parent involvement in the home and school and those teachers viewing parent involvement as more positive were more likely to report that they encouraged further communication with parents, held conferences with parents, and communicated with parents that were hard to reach than were other teachers who viewed parent involvement in the home and school as less positive.

Epstein and Dauber also discussed five types of parent involvement: parenting obligations, communicating with schools, volunteering at schools, learning activities at home, and decision making in schools, all of which were significantly related to each other. A sixth type of involvement, community involvement, was not used in this study. The researchers found the first five types of parent involvement to be significantly interrelated. If the involvement types were highly correlated, an issue of multicollinearity may arise; however, the correlations were modest between types of involvement suggesting that each type of
parent involvement studied here may play an individual role. The researchers also found
specific communication practices, such as including informal notes and telephone calls, were
used significantly more often by elementary, rather than middle school, teachers, and
specifically, younger elementary teachers used these communication practices more often
than older elementary teachers. The researchers concluded that assessing the attitudes and
goals of parents and teachers provides a starting point on which to build more effective
programs that enrich school and family connections.

Hoover-Dempsey, Bassler, and Brissie (1987) sampled 1,003 teachers and 66
principles from 66 elementary schools to test the relationship between levels of parent
involvement and qualities of school settings. Teacher and principal reports were used in
stepwise multiple regression analyses. All variations of quality of school settings, including
school SES, teacher degree level, grade level, class size, teacher self-efficacy level, principal
perceptions of teacher self-efficacy, institutional adherence to school rules, and instructional
coordination, accounted for significant portions of variance in parent involvement. Schools
with teachers with higher levels of self-efficacy were more likely to receive higher levels of
support from parents. The researchers concluded that, although higher levels of teacher self-
efficacy and school SES were related to higher levels of parental involvement in the school
setting, the correlational analyses performed do not permit causal inferences. The authors
presupposed, however, that the relationship between parent involvement levels and quality of
a school program is bi-directional; the responsibility for improving child outcomes is shared
between schools and families. This presupposition is supported by results of other
researchers (Connors & Epstein, 1995; Lareau, 1996; Swap, 1993). Finally, the authors
suggest that in schools serving primarily low-income families, an increased effort to enhance
shared responsibility between school and home should focus on specific task-related parent-child involvement at home so that parents have an idea of what types of learning activities they could do with their child at home. Epstein and Dauber (1991) reported that teachers often fail at giving the parents guidelines as to how to extend and encourage their child’s learning while completing homework.

Becker and Epstein (1982) sampled 3,698 public elementary school teachers to describe teaching practices and attitudes regarding parent involvement. Most teachers reported that although they talked with all parents, they were unaware of how to initiate a parent involvement program; furthermore, some did not even think parental involvement in the home would be effective. The authors found a decline in the amount of teacher efforts to request that parents read with their child as the child moved from first to fifth grade. The authors attributed this decline to teacher beliefs that older students did not need read-aloud activities and that parents of fifth graders had a hard time organizing instruction for their older child. A methodology problem arises here as well. Changes in parent involvement assessment tools may be important as a child grows older; assessment methods may need to be adapted to each child’s age or grade level. Teachers did suggest two parent involvement techniques where the parent acts as a (1) tutor (assertive technique) and (2) role model (passive technique) for their child. Teachers of young children suggested that an effective way for parents to acquire different home instructional techniques is to observe the teacher in the classroom. A majority of teachers sampled reported a problem with teaching parents instructional techniques is that they could teach the parents techniques to use, but they could not make the parents use them. However, Becker and Epstein found a small, positive relationship between teacher support for parent involvement and overall parent involvement.
in the school; although direction of causality is unclear, this finding suggests that teachers’ positive attitude towards parent involvement may actually lead to increased parent involvement.

Epstein (1991) found that when teachers talked with parents about becoming involved with their child’s literacy development, more families participated and children’s reading skills improved. Teachers expect parents to extend and encourage their child’s learning while completing homework, but often fail at giving the parents guidelines as to how to do so (Epstein & Dauber, 1991). Without guidance from teachers, some parents feel homework is a time for the child to finish work outside of the classroom and the parent should not interfere with what the teacher planned. Other parents may feel that homework is their opportunity to work actively with the child to enhance academic development.

Lareau (1996) argues that working-class and lower-class parents do not assume the same responsibilities for their children’s homework as middle-class and upper-class parents presume. Working-class and lower-class parents, according to Lareau, report “helping” their children in different ways than middle-class and upper-class parents. Lareau suggests teachers consider other sources of home involvement than parents to assist children with studies. Reaching out to those individuals in the child’s life, such as older siblings still in school or educated adults in or near the home, can benefit the child’s academic progress.

In summary, it appears that teachers and schools can be a catalyst for fostering parent involvement. By developing effective communication between school and home, parents are able to take advantage of what schools have to offer for their child outside of the classroom. When schools offer parents techniques, skills, and material to better involve families with their child’s education, parents are more likely to become and stay involved than if families
were on their own to take an active role (Connors & Epstein, 1995). Connors and Epstein (1995) even suggested "talking points" that parents and schools should follow in order to increase and maintain parent involvement. "Talking points" include parents' understanding of the organization of the school, children's transitions through grades, parent involvement at older grade levels, student assessment, grouping of children according to ability level, and parents' continued awareness of student progress. Thus, communication between school and home may have the power to not only initiate parent involvement, but also to sustain it. It may be in the best interest of the parent to discuss involvement with their child's teacher, but it may take the teacher's ingenuity to motivate and intrigue the parents into becoming involved.

Limitations and Implications for Future Research

More research is needed to further distinguish between the different types of parent involvement provided by Epstein (1986) and determine how they independently or collectively impact child academic outcomes, be it through a direct or mediating role, via a longitudinal methodology. Differences in results between studies may be due to how parent involvement information was collected. Parents from low socio-economic status backgrounds, for example, may become involved in a different way than do parents from high socio-economic backgrounds, as Lareau (1989; 1996) has argued. According to Lareau (1996), parents from low SES backgrounds may view parent involvement differently than their higher SES counterparts. Teachers may not have a clear idea of how parents from differing SES levels are involved with their child's learning, especially in the home setting. Therefore, asking teachers to rate parents' levels of home or school involvement may not be appropriate. Baker and Stevenson (1986) and Useem (1992) used mother's ratings of parent
involvement in analyses, while Becker and Epstein (1982) and Epstein and Dauber (1991) used teacher ratings of parent involvement. More research is needed that uses mother’s ratings of parent involvement in order to obtain a more accurate view of how the parents perceive they are becoming involved.

Differences in how child outcomes are measured may also impact research results. Baker and Stevenson (1986), Entwisle, et al. (1986), Stevenson and Baker (1987), and Useem (1992) used teacher ratings to measure child academic ability. Teacher ratings of child’s academic ability such as grades are subjective and more susceptible to teacher bias. In contrast, child academic outcomes as measured by achievement tests (Alexander & Entwisle, 1996; Bradley et al., 1988; Epstein, 1991; Peters, Bollin, & Murphy, 1991) are more objective and less biased. More research is needed that uses achievement tests to examine academic outcomes to increase objectivity and lessen the likelihood of biased results. It is important to note that achievement is viewed differently by different people; even if parent involvement is not shown to predict scores on achievement tests, parent involvement may predict other aspects of school success or may reduce aspects of school failure.

In the studies showing school involvement as an important factor in determining student achievement, the participants included children in elementary up through the middle school and high school grades (Stevenson & Baker, 1987; Useem, 1992). However, few studies showing a positive relationship between home involvement and child outcomes focused on children in the early elementary grades (Alexander & Entwisle, 1996; Bradley et al., 1988; Epstein, 1991; Peters et al., 1991). More research that focuses on children in the early elementary grades and their parents is needed to understand more clearly how children
in this age group are affected by their parents' involvement in their education. In addition, previous studies (Stevenson & Baker, 1987; Useem, 1992) have used more affluent families, which may not be representative of a more diverse population. Currently, there is a dearth of research using primarily low-income samples; therefore, research examining a primarily lower income sample is warranted. More research is needed to examine primarily lower income families.

Furthermore, because much of the current research is cross-sectional, one cannot conclude the direction of causality. The presumed direction of causality may need to be reversed; the child's school performance may play a part in the amount of parent's school or home involvement. Therefore, longitudinal research in this area is needed.
References


CHAPTER 3: PARENT INVOLVEMENT AND
CHILD ACADEMIC OUTCOMES

A paper to be submitted to The Journal of Parenting

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Introduction

Many theorists (Belsky, 1984; Bloom, 1981; Bronfenbrenner & Crouter, 1983; Dauber & Epstein, 1993; Levy, 1943) have debated the appropriate parent involvement parents should use to guide and support their children’s academic development. One area of support is parent involvement in children’s education. Many aspects of parent involvement in children’s education come into play as a child progresses from early childhood on into the adolescent years and beyond.

Epstein (1986, 1996) outlines six different types of involvement: parenting obligations, doing learning activities at home, communication with school, volunteering at school, becoming involved in decision making, governance, and advocacy, and involvement with the community. The first two types described by Epstein relate mostly to parent involvement in the home setting. Parenting obligations include providing for their children’s health, nutrition, and safety needs. By discussing skills and attitudes important to the family, and sharing with their children the importance of certain customs or beliefs the family shares, the children are able to better define themselves as to the role they play in the family (Rich & Jones, 1977). Families who either come up with their own learning activities at home or help the child with their homework are showing the child the importance of what they are doing in school and encourage the child to share stories of what they are learning.
The following three types of parent involvement are typically thought of as parent involvement in the school setting. Communicating with schools occurs when schools offer newsletters, report cards, or hold conferences with the parents in order to keep the family involved in school happenings. Parents can become involved by volunteering at school. Parents may also be involved by becoming part of a governing body where they are encouraged to make decisions. Examples of these committees include the Parent Teacher Association, School Board, and Parent Teacher Organization. By being a part of or even by expressing concern to a different parent who is a part of these committees, the parent is considered to be problem-solving issues they are unsatisfied with, they are not problem-creating conflicts. Finally, Epstein's sixth type of parent involvement is being involved in the community. This sixth type of parent involvement is not included in the current study and thus will not be addressed further.

Epstein (1986) found that parent involvement in the form of volunteering at school and conducting learning activities at home lessens and is even discouraged as the child progresses through the grades; this finding is consistent with other research (Epstein & Dauber, 1991; Parke, MacDonald, Beitel, & Bhavnagri, 1988). Epstein also reported that teachers controlled how much information was relayed to and from parents, and that student's basic skills test scores were higher when teachers and families worked together to teach and develop the student's basic skills. This result highlights the importance of parent involvement in the form of both school-to-family and family-to-school communication.

Although research has shown that parent involvement with the school is essential to a child's academic development, in a review of literature surrounding the home environment and its effects on children, Bloom (1981) concluded that if a parent wished to assist their
child in learning, they needed to do it in the home setting. This conclusion supports Epstein’s (1986, 1996) notion of parent involvement in the form of home learning activities and parenting obligations. Bloom (1981) assumes that the home setting, and not the school setting, is where the parent has some control over the child’s learning.

Parent Involvement Elicits Change

Epstein and Dauber (1991) sampled 171 inner city elementary and middle school teachers to research the relationship between teacher attitudes towards parent involvement, teacher efforts eliciting parent involvement, and school programs eliciting parent involvement. Teacher responses were used in descriptive statistical analyses and correlational analyses. The researchers found teachers reported an overall positive attitude towards parent involvement and those teachers viewing parent involvement as more positive were more likely to report that they encouraged further communication with parents, held conferences with parents, and communicated with parents that were hard to reach than were other teachers who viewed parent involvement as less positive. Epstein and Dauber also studied five of Epstein’s (1986) six types of parent involvement: parenting obligations, communicating with schools, volunteering at schools, learning activities at home, and decision making in schools, all of which were significantly related to each other. Correlations between involvement types were modest; this finding suggests that each type of parent involvement studied here plays an individual, yet significant role. Specifically, Epstein and Dauber (1991) found that when schools emphasized parent involvement in learning activities at home, at least one of the other types of involvement was also more likely to be in place at that school. However, contrary to expectations, the emphasis that schools put on communicating with parents was not related to other types of parent
involvement. The researchers attributed this finding to the probability that most schools do something along the lines of communicating with their families, be it in the form of a newsletter, posted notes, or conferences. Therefore, the type of parent involvement, communicating with schools, was least predictive of other types of parent involvement. The researchers also found specific communication practices, such as including informal notes and telephone calls, were used significantly more often by elementary, rather than middle school, teachers. Furthermore, younger elementary teachers used these communication practices more often than older elementary teachers. The communication practices measured in Epstein and Dauber's (1991) study consisted of mainly school-to-home communication practices; it is possible that the quality or type of the communication plays a role as well (school-to-home vs. home-to-school). The researchers concluded that assessing the attitudes and goals of parents and teachers provides a starting point on which to build more effective programs that enrich school and family connections.

Research has linked the general concept of parent involvement to changes in child developmental outcomes such as grades, social skills, and reading and math performance (Bloom, 1981; Bradley, Caldwell, & Rock, 1988; Parke et al., 1989). Peters, Bollin, and Murphy (1991) sampled 174 parent/child dyads over two years to research the influence of the Head Start program on parent and child literacy competence. Standardized test scores and parent and teacher ratings were used in ANOVA and regression models. The researchers found that parents in Head Start programs with stronger home components (that is, high engagement in home learning activities, high use of expressive and receptive language, and high amounts of emotional warmth) showed greater gains in parent/child interactions as measured by items on the HOME scale (Caldwell, & Bradley, 1979). When applying this
finding to Epstein’s framework of parent involvement, one could hypothesize that a higher frequency of learning activities in the home and a higher likelihood of parents fulfilling their basic parenting obligations may result in greater gains in parent/child interactions. The researcher’s findings also showed that children enrolled in a Head Start program whose parents rated their involvement at home as more frequent received higher levels of teacher ratings of student achievement and scored higher on achievement tests. The researchers concluded that when a school directs attention towards the importance of parents, long-term benefits to the child occur.

Similar results were found when Bradley et al. (1988) sampled 42 fourth- and fifth-grade children and their lower and middle class families to test the relationship between home environment at 6 months, 2 years, and 10 years, and school performance at 10 years. Scores from a HOME Inventory (Caldwell & Bradley, 1979) measuring home involvement, achievement tests measuring reading, language arts, and math, and the Classroom Behavior Instrument (Schaefer & Aaronson, 1977, as cited by Bradley et al., 1988) measuring classroom behavior were used in a correlational analysis. Significant correlations were found between home environment at 2 years and 10 years and achievement levels at 10 years. However, correlations were not as strong between home environment at 6 months and achievement levels at 10 years, possibly indicating that aspects of the home measured at 2 years are more predictive of achievement at 10 years than aspects of the home measured at 6 months. Children whose parents involved them in social and cultural experiences (learning activities in the home, fulfilling parenting obligations, community involvement) during the elementary years, as measured by the HOME scale, scored higher on achievement tests and were rated higher by their teachers.
Teachers' appeal for parent involvement in the home through learning activities or fulfilling parenting obligations also affects child outcomes. Epstein (1991) found that when teachers talked to parents about becoming involved with their child's literacy development at home, more families participated in home learning activities and children's reading skills improved. Teachers expect parents to extend and encourage their child's learning while completing homework, but often fail at giving the parents guidelines as to how to do so (Epstein & Dauber, 1991). Without guidance from teachers, some parents may feel homework is a time for the child to finish work outside of the classroom and the parent should not interfere with what the teacher planned. Other parents may feel that homework is their opportunity to work actively with the child to enhance academic development. Parent involvement in the school by talking with the teacher can affect what kind of parent involvement occurs at home; therefore, separate forms of parent involvement (school and home involvement) can affect one another. Information from the school may affect the learning activities the parents carry out in the home.

Parent education levels may also impact the child's academic achievement; however, parent involvement in the home may still be a mediating factor in this relationship. Stevenson and Baker (1987) sampled 179 school age children (ages 5-17 years) and their parents and teachers to test the following hypotheses: (1) higher education status of the mother would be associated with higher levels of parental involvement in school activities; (2) the younger the child, the higher the level of parental involvement in school activities; and (3) the higher the level of parental involvement in school activities, the more successful the child would be in school. Teacher ratings of an overall measure of parental school involvement, child's grades, and mothers' demographics were used in cross-sectional
analyses and multiple regression analyses. Parent involvement in the home setting was not used in this Stevenson and Baker study. The specific types of school involvement were not discussed at length; however, the authors gave an example of a question answered by teachers. This question prompted teachers to give responses rating parents' level of communication with the school (communicating with schools) and parents' involvement in the parent-teacher organization (involvement in decision making). Results showed a strong positive correlation between mother's education and parental involvement in school activities for boys, but the association was weak for girls. Teachers reported that parents of older boys were less involved in school activities than those of younger boys; however, this relationship did not hold true for girls. Higher levels of school involvement were associated with higher levels of the child's school performance regardless of sex of child. The relationship between mothers' education and children's academic performance was mediated by school involvement regardless of the number of children in the home or mothers' work outside of the home. Researchers concluded that school involvement positively contributes to children's school performance. However, outcomes related to specific types of school involvement (communicating with the school, volunteering at school, becoming involved with decision making) were not discussed. Furthermore, because this study is cross-sectional, one cannot conclude the direction of causality. It may be the case that the direction is actually reversed, where child's school performance may play a part in the amount of parent's school involvement. Therefore, longitudinal research in this area is needed.

Useem (1992) found similar results as she interviewed 86 mothers of middle school children living in a suburban community to test the relationship between parent involvement in school (communicating with the school, volunteering at school, decision making at
school), mother’s education level, and child’s math group placement. Results showed that parent involvement in school as measured by Useem’s Parent Involvement in Education scale via volunteering at school, communicating with school, and becoming part of decision-making processes in the school mediated the relationship between mothers’ education level and students’ math group placement. The researchers concluded that schools should aggressively elicit parent involvement with the school from parents of all types of backgrounds. However, the direction of causality is unclear; student’s math group placement may have an effect on parent involvement. Therefore, longitudinal research is needed in this area.

Parent involvement in the home has also been found to play a mediating role between socio-economic level and student achievement. Alexander and Entwisle (1996) found children from low income families scored lower on achievement tests than did children from higher income families, and that this difference increased as the children passed through elementary school. Data from this study showed that the low SES children were continuing to fall back farther and farther in achievement scores from their higher SES peers as time passed. This study highlights the importance of intervention in low SES children’s academic affairs either by parents or by educators so these children do not continue to lose potential gains in academic achievement. Lower SES children showed plateaus or declines over the summer months, in contrast to higher SES children. Therefore, Alexander and Entwisle concluded the achievement scores children received in their study could reflect levels of parent involvement in their child’s education over the summer months. Specifically, lower SES parents may spend less time with their child doing learning activities at home, such as reviewing academic material and reading, that reinforces and builds school skills during the
summer months than do higher SES parents. Thus, higher SES children continue learning throughout the summer, increasing their academic level between school years, while lower SES children maintain or fall back from the academic level achieved at the beginning of the summer.

Alexander and Entwisle (1996), Bradley et al. (1988), Epstein (1991), and Peters et al. (1991) all reported positive relationships between some type of parent involvement in the home setting and child academic outcomes. Studies by Stevenson and Baker (1987) and Useem (1992) found a positive relationship between some type of school involvement and child academic outcomes. Some researchers have reported that parent involvement in either the home (Alexander & Entwisle, 1996) or school (Stevenson & Baker, 1987; Useem, 1992) settings acted as a mediating variable in the relationship between socio-economic status or parent education and student achievement. Specifically, the relationship between socio-economic status or parent education and student achievement is no longer significant once parent involvement in the home or school is entered into the regression equation.

Parent education and SES may act as moderating variables in the relationship between parent involvement and child academic outcomes. Although a moderating variable can only act as an independent variable, a mediating variable can act as both a cause and an effect in a relationship. For example, higher parent education levels may lead to higher levels of parent involvement at home, which in turn leads to higher grades for their child. Depending on regression statistics, parent education level in this example may have acted as a moderator variable or parent involvement may have acted as a mediator variable. Therefore, it is important to test for a moderating relationship as well as a mediating relationship. Furthermore, some studies discussed here (Stevenson & Baker, 1987; Useem,
are cross-sectional and do not allow for inference of causation. Therefore, to determine direction of causality, longitudinal research is needed.

The goal of the present study is to further distinguish between the different types of parent involvement provided by Epstein (1986) and determine how they independently or collectively impact child academic outcomes, be it through a direct or mediating role, via a longitudinal methodology. Differences in results between studies may be due to how parent involvement information was collected. Parents from low socio-economic status backgrounds, for example, may become involved in a different way than do parents from high socio-economic backgrounds, as Lareau (1989; 1996) has argued. According to Lareau (1996), parents from low SES backgrounds may view parent involvement differently than their higher SES counterparts. Teachers may not have a clear idea of how parents from differing SES levels are involved with their child's learning, especially in the home setting. Therefore, asking teachers to rate parents' levels of home or school involvement may not be appropriate; parent's self-perceptions of parent involvement are needed. Baker and Stevenson (1986) and Useem (1992) used mother's ratings of parent involvement in analyses, while Becker and Epstein (1982) and Epstein and Dauber (1991) used teacher ratings of parent involvement. The present study uses mother's ratings of parent involvement in order to obtain a more accurate view of how the parents perceive they are becoming involved.

Differences in how child outcomes are measured may also impact research results. Baker and Stevenson (1986), Entwisle, Alexander, Cadigan, and Pallas (1986), Stevenson and Baker (1987), and Useem (1992) used teacher ratings to measure child academic ability. Teacher ratings of child's academic ability such as grades are subjective and more
susceptible to teacher bias. In contrast, child academic outcomes as measured by achievement tests (Alexander & Entwisle, 1996; Bradley et al., 1988; Epstein, 1991; Peters et al., 1991) are more objective and less biased. The present study will use achievement tests to examine academic outcomes to increase objectivity and lessen the likelihood of biased results.

In the studies showing school involvement as an important factor in determining student achievement, the participants included children in elementary up through the middle school and high school grades (Stevenson & Baker, 1987; Useem, 1992). However, few studies showing a positive relationship between home involvement and child outcomes focused on children in the early elementary grades (Alexander & Entwisle, 1996; Bradley et al., 1988; Epstein, 1991; Peters et al., 1991). The present study focuses on children in the early elementary grades and their parents to understand more clearly how children in this age group are affected by their parents’ involvement in their education. Also, previous studies (Stevenson & Baker, 1987; Useem, 1982) have used more affluent families, which may not be representative of a more diverse population. Currently, there is a dearth of research using primarily low-income samples; therefore, research examining a primarily lower income sample is warranted. The sample of the present study consists of primarily lower income families. Thus, after reviewing the preceding empirical and theoretical evidence, we have made the following hypotheses:

1. Parent involvement in learning activities in the home and fulfilling parenting obligations, as measured by parent ratings at the end of second grade, will be related to child’s academic competence, as measured by math and reading standardized tests at the end of third grade.
2. The relationship between parent education at the end of second grade and math and reading performance at the end of third grade will be mediated by parent involvement in learning activities in the home and fulfilling parenting obligations, as measured by parent ratings at the end of second grade.

3. Parent education at the end of second grade may moderate the relationship between parent involvement in learning activities in the home and fulfilling parenting obligations, as measured by parent ratings at the end of second grade and child’s math and reading performance at the end of third grade.

4. School involvement, as measured by parent ratings of the amount of communication between school and home, the amount of time parents volunteer in the school, and whether parents are a part of a governing body where decisions can be made or influenced by parents all at the end of second grade, will be significantly related to child’s academic competence, as measured by math and reading standardized tests at the end of third grade.

Method

Participants

Data from the present study is part of a larger study examining children’s transitions from Head Start into elementary school. The sample in the larger longitudinal study comprised of 194 children from low income families from a small midwestern city. The target children consisted of two cohorts and were followed from the fall of their kindergarten year to the spring of the third grade year. Cohort 1 was followed from the fall of 1992 until
the spring of 1996. Cohort 2 was followed from the fall of 1993 until the spring of 1997. Of the 194 target children, 104 comprised the Head Start group and 90 comprised the matched group, which included a randomly selected group of non-Head Start children who matched the Head Start children on age, sex, classroom assignment, and neighborhood.

The focus of the present study is the effect of parent involvement in the home or school setting on child academic performance. The sample for the present study consisted of 161 second and third grade children and their families. At the time the data was collected, 13% of parents had achieved less than a high school education, 31.7% were high school graduates or had obtained a GED, 37.9% had some college without a degree, and 17.4% received an Associate degree or higher. Annual household income of families in the present study ranged from $3,600 to $66,000 (\(M = \$22,351, SD = \$14,319\)). At the time of assessment, the mean age of the 161 children entering second grade was 8.15 (\(SD = .32, range = 7.58 \text{ to } 9.03\)). 57.1% \((n = 92)\) of the children were male and 42.9% \((n = 69)\) of the children were female.

**Measures**

**Parent Involvement**

The Family Involvement in Children's Learning scale (FICL) was adapted in part from the National Household Education Survey (National Center for Education Statistics [NCES], 2000). Items were chosen from the measures to be used in the current study that measured the amount of parent involvement in home and school settings (see Appendix A). Home involvement items can be broken down into two categories: a) parenting obligation items and b) learning activities in the home items. Examples of parenting obligation items include, “did adults in your family attend/participate in parent classes/education,” and “are
there rules about what [TV] programs [your] child can watch.” Examples of learning activities in the home items include, “how often do adults in your family work with your child on things he/she is learning in school,” “how often do adults in your family discuss current events or community happenings with your child,” and “in the past week, have you or someone in your family read to [your child].” School involvement was measured by three types of items: a) communicating with schools, b) volunteering at school, and c) decision making. Examples of communicating with schools items include, “did adults in your family attend/participate in an open house,” and “did adults in your family attend/participate in parent/teacher conferences.” Examples of volunteering at school items include, “have you helped in the library or computer lab,” and “have you worked with children in the classroom.” Examples of decision-making items include, “have you served on a committee, advisory board, or council,” and “have you helped make decisions about school policies or programs.” Parents indicated whether they were involved with each activity (coded as 1) or not (coded as 0). For some items, parents indicated whether an involvement activity was offered to them. If an activity had been offered, they then answered if they attended (coded as 1) or not (coded as 0). If an activity was not offered to them, the response was coded as 0. In the National Household Education Survey (NCES, 2000), each item was used independently; no composite scales or indices were constructed. In the present study, we constructed a composite scale for these items. Internal consistencies were .73, .84, and .81 for the 21 home involvement items, 25 school involvement items, and 46 total scale items, respectively. Responses from each category (home or school) were summed to represent the total amount of involvement displayed.
Child Outcomes

The Woodcock-Johnson Tests of Achievement-Revised is a standardized measure of academic achievement (Woodcock & Johnson, 1989; 1990) and was individually administered to children at the end of kindergarten, first, and third grade.

Math. The Woodcock-Johnson Tests of Achievement (mathematics subtests 24 and 25, form B) were used to determine a calculation score and an applied problems score, which resulted in a total mathematics competence score. The children's raw scores were converted into W scores, which correspond to scores on an interval scale that are derived from the Rasch ability scale (Rasch, 1960, as cited in Woodcock & Mather, 1989; 1990). This conversion allowed for longitudinal data analysis. The W scale for the math subtests puts the average score for beginning fifth grade students at 500.

Reading. The Woodcock-Johnson Tests of Achievement (reading subtests 22 and 23, form B) were used to determine a Letter-Word Identification score and a Passage Comprehension score, which were combined for a total reading competence score. During the Letter-Word Identification test, children were shown lists of letters and words, and asked to identify the items on the list. Children's raw scores, ranging from 0 to 57, were determined by the number of letters and words that they identified correctly. During the Passage Comprehension test, children identified the missing words in short sentences and paragraphs. Raw scores (ranging from 0 to 43) were obtained that measured reading comprehension and vocabulary knowledge. The children's raw scores were converted into W scores, which correspond to scores on an interval scale that are derived from the Rasch ability scale (Rasch, 1960, as cited in Woodcock & Mather, 1989; 1990). This conversion allowed for longitudinal data analysis. The W scale for the math subtests puts the average
score for beginning fifth grade students at 500. The Letter-Word Identification and Passage Comprehension subscales were used in the current study because of the high predictive validity and their similarity to measures used in previous research.

Procedure

After receiving approval from Iowa State Human Subjects Committee, families and schools were sent letters for recruitment into a longitudinal study that would examine children's transition from Head Start through third grade, as a part of the National Head Start Transition Project. All families in the community with children enrolled in Head Start in 1991 and 1992 or in kindergarten in the fall of 1992 and 1993 received the letter. Of those families whose children attended a Head Start program, 80% of cohort 1 (children entering kindergarten in 1992) and 90% of cohort 2 (children entering kindergarten in 1993) agreed to participate in the study. A non-Head Start sample was randomly selected from those families whose children did not attend Head Start. Children in the non-Head Start sample were matched by age, sex, classroom assignment, and neighborhood to those children who did attend Head Start.

Graduate research assistants completed interrater reliability training and then interviewed parents in the family's home. All instruments were administered orally due to differences in literacy skill levels of parents. At the initial home visit, parents signed informed consent forms indicating that the researchers may assess their child at school as well as use the parent interview for research. Each family received $20 for each home interview they participated in.

Data for the Family Involvement in Children's Learning scale was collected at the end of second grade for both cohorts. Attrition occurred between testing sessions for a
number of reasons including, but not limited to, families moving out of the school district or the parents agreeing to having their child tested but did not want to have any home visits or fill out any surveys. Teachers were given two weeks to complete individual assessments on each child included in the sample. Teachers were paid $5 for each completed child assessment questionnaire. Research assistants administered the Woodcock-Johnson Scales.

Results

Descriptive statistics for all variables are listed in Table 1. In order to test the first hypothesis that parent involvement in home learning activities and fulfilling parenting obligations will be related to child’s academic competence, Pearson product-moment correlations were run (see Table 2). In support of our hypothesis, the amount of home involvement was significantly related to child’s math skills, $r = .20, p = .02$. No significant relationships were found between home involvement and child’s reading skills.

To test the second hypothesis that the relationship between parent education and math and reading performance will be mediated by parent involvement in learning activities in the home and fulfilling parenting obligations, hierarchical regression analyses were run (see Tables 3 and 4). In support of our hypothesis, when home involvement was entered into the regression analyses, it accounted for an additional 4% ($\text{Adj} \Delta R^2 = .03$) of variance in predicting child’s math skills; however, the significance of the relationship between parent education and child’s math and reading skills remained. Therefore, home involvement did not mediate the relationship between parent education and child’s math or reading skills.

To test the third hypothesis that parent education may moderate the relationship between parent involvement in learning activities in the home and fulfilling parenting obligations, hierarchical regression analyses were run (see Tables 5 and 6). A moderator
variable was created by multiplying parent education by home involvement. After this moderator variable was entered into the equation, no significant change in the relationship between home involvement and child’s math or reading skills emerged. Furthermore, collinearity statistics showed that tolerance levels dropped to near zero when the moderator variable was entered into the regression equation. Therefore, the moderator variable contributes little information to the model.

To test the final hypothesis that school involvement will be related to child’s academic competence, Pearson product-moment correlations were run (see Table 2). In support of our hypothesis, the amount of school involvement was related to child’s math skills, \( r = .19, p = .02 \). No significant relationships were found between school involvement and child’s reading skills.

**Discussion**

The current study was conducted to narrow the gap in the research regarding parent involvement in the home and school settings and child academic outcomes. The purpose of the current study was to understand the unique contribution that home and school involvement play in predicting child math and reading scores.

Our first hypothesis was parent involvement in the home would be related to child’s academic competence, specifically math and reading scores on a standardized test. Our results showed home involvement correlated with child’s math skills, but not with reading skills. We might speculate that one reason home involvement did not correlate with reading skills is that the schools may offer an exceptional reading program, in which case the parent’s role at home may not additionally contribute to the child’s reading skills.
The second hypothesis we tested was the relationship between parent education and math and reading performance will be mediated by parent involvement in the home. We found home involvement accounted for additional variance beyond parent education in predicting math and reading scores. Home involvement, however, was not found to play a mediating role; the statistical significance of the relationship between parent education and child's math and reading skills remained after home involvement was entered into the regression equation. Our results differ from those of Stevenson and Baker (1987) and Useem (1992) who found that parent involvement did play a mediating role in the relationship between parent education and child academic outcomes. Becker and Epstein (1982) state that teachers may be encouraging more parent involvement in the home and school from those parents who have a higher educational background and who are in a higher SES level than from those parents who come from a lower SES or have low educational backgrounds. This differential teacher treatment may be reduce the importance of parent involvement in lower income families, thus decreasing the amount of time the parent spends being involved in their child's education. Our sample was primarily made up of low-income families, thus possible creating a floor effect in our analyses. In addition, Lareau (1996) argues that low SES families who are less educated than their high SES counterparts may not have the skills needed to assist their children with homework or to volunteer in the school; this lack of involvement may lead to lower student academic achievement. Our findings refute this argument. Our sample was primarily lower class and yet home involvement was positively correlated to child's math skills and was not correlated to child's reading skills.

Our third hypothesis was that parent education may moderate the relationship between parent involvement in the home and child's math and reading performance. Our
analyses failed to depict parent education as a moderating variable. After the moderator variable was entered into the regression equation, no significant change in the relationship between home involvement and child’s math or reading skills emerged. This finding does not support Lareau’s (1989) research; she argues that economic and education levels impact how the parent becomes involved in a child’s academic development. A reason for this discrepancy may be that the parent spending time with the child helps in predicting child math and reading scores, but having a higher educational background is an additive quality in the model.

The final hypothesis tested if school involvement would be related to child’s academic competence, specifically math and reading scores on a standardized test. Our analyses supported this final hypothesis in that the amount of school involvement was significantly related to child’s math skills. However, school involvement was not linked to child’s reading skills. As with our first hypothesis testing home involvement, we might speculate that one reason school involvement did not correlate with reading skills is that the schools may offer an exceptional reading program, in which case the parent’s role with school may not additionally contribute to the child’s reading skills. Bloom (1981) suggests that home involvement will have more of an effect than school involvement on a child’s academic development regardless of status characteristics of the parent. Our results do not come to this conclusion; both home and school involvement were related to math skills and not to reading skills. Therefore, Bloom’s suggestion that parent status characteristics do not play a role may be premature.
Limitations of the Present Study

Also contributing to the discrepant results in the present study may be the construct validity of the parent involvement measure. It is possible that the items chosen for the scale do not accurately assess separate aspects of involvement. In addition, it is important to remind the reader that the FICL scale was a composite of other involvement scales including, but not limited to, the National Household Education Survey (NCES, 2000). It is possible that other items on either scale may have more accurately assessed parent involvement in the home and school settings.

Social desirability may also be contributing to the discrepant results in the present study. Items that ask about parenting responsibilities (i.e., how often do you read to your child each day) may bring about socially desirable responses, and thus bias the scale.

Furthermore, we assumed that an increased number of involvement activities would predict child academic outcomes; however, it may not only be the quantity, but also the quality of the involvement activities as well. Self-report may not be accurate in this case; observational study would better assess the quality of the involvement interactions, which could affect results.

Examining who completes the involvement assessments may play an important role as well. We were able to utilize parent report for involvement levels. However, Epstein (1987) found that teachers have control over how much information is shared between families and schools. It is possible that by obtaining both teacher and parent report we would get a more accurate assessment of parent involvement in both the home and school settings and child academic outcomes. Obtaining teacher reports of parent involvement along with the parent’s own report would allow us to analyze what involvement efforts are put forth by
schools and how the school's efforts aid in the effectiveness of parent involvement. Ames (1993) suggested that the communication between parents and schools positively influences parents' thoughts about both becoming involved with their child at school and the effectiveness of their child's teachers. Becker and Epstein (1982) reported that the education level of the parent played a role in parent involvement practices elicited from teachers. Becker and Epstein reported that teachers' attitudes towards the parent's education were mediating the effect that parent education level had on parent involvement. Therefore, it may be important to consider parent and teacher report when assessing parent involvement. In addition, it may be important for future research to examine whether parent involvement increases all children's scores or just the high achieving children.

Implications for Future Research

Future research needs to address several factors that may play a role in the relationship between parent involvement and child academic outcomes. Parent expectations of involvement levels or of the child's academic ability may impact how involvement relates to child outcomes, as Entwisle et al. (1986) have shown. Entwisle et al. concluded that parents' report of their own expectations has a significant effect on children's reading and math skills.

Comer and Haynes (1991) implemented a parent program which helped make parent involvement an important part of a school system. The parent program fostered parent involvement in different aspects of the school. Comer and Haynes suggested that a parent involvement program such as theirs provides a key linkage between school, home, and community that is important to the various elements of child development. When designing and implementing a parent involvement program, one needs to assess goals of parents and
teachers so as to enhance the quantity and quality of parent involvement. Hoover-Dempsey, Bassler, and Brissie (1987) suggest that in schools serving primarily low-income families, an increased effort to enhance shared responsibility between school and home should focus on specific task-related parent-child involvement at home so that parents have an idea of what types of learning activities they could do with their child at home. Epstein and Dauber (1991) reported that teachers often fail at giving the parents guidelines as to how to extend and encourage their child’s learning while completing homework.

Epstein (1987) pointed out that various types of involvement overlap each other and are extensions of each other. We might speculate that there is a Gestalt-like phenomenon occurring in this area of research where the whole is different than the sum of its parts. For example, if we were to examine home and school involvement, both parent and school initiated, it is possible that in analyses, after entering all of these variables into one model, more variance would be accounted for than by simply examining each variable separately. As Epstein points out, the types of involvement overlap, which could cause researchers to miss the important role an interaction effect produced by combining all previously mentioned variables may play in predicting child developmental outcomes.
References


CHAPTER 4: GENERAL CONCLUSIONS

There is a dearth of research that examines the unique contribution that home and school involvement play in predicting child math and reading scores. Much of the current literature surrounding parent involvement examines a more general parent involvement and its effect on various child outcomes. The purpose of the current study was to understand the unique contribution that home and school involvement play in predicting child math and reading scores.

Our results showed a relationship between both home and school involvement and child’s math scores, but not reading scores. We suggest that future research examine the role that school reading programs play in addition to/in lieu of the parent’s home or school involvement in developing child’s reading skills.

Our results showed that home involvement accounted for additional variance beyond parent education in predicting child math and reading scores; however, home involvement was not found to play a mediating role in the relationship between parent education and math and reading performance. We suggest that future research further examine the possible mediating role that home involvement may play in this relationship as other researchers have found (Stevenson and Baker, 1987).

Our results failed to depict parent education as a moderating variable in the relationship between home involvement and child’s math and reading performance. This finding does not support previous research by Lareau (1989); she argues that economic and education levels impact how the parent becomes involved in a child’s academic development. We suggest future research examine the possibility that although the parent
spending time with the child may help in predicting child math and reading scores, having a higher educational background may be an additive quality in the model.

The current study identifies the need for parent involvement programs offered by the community or schools to address the different types of parent involvement and how they will best foster academic development in the population at hand.
References


APPENDIX A. SURVEY INSTRUMENT
### Home Involvement Items

6. Have any of the following activities been offered to you. If yes, did adults in your family attend/participate?

<table>
<thead>
<tr>
<th>Activity/Event</th>
<th>Was it offered?</th>
<th>If yes, did you attend?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>i. Parent classes/education</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>k. Parent resource room</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>l. Home lending library</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

9. How often do adults in your **family** do the following with your child:

a. Talk with your child on things he/she is learning in school?

<table>
<thead>
<tr>
<th>1 Almost every day</th>
<th>2 3-5 Times/Week</th>
<th>3 1-2 Times/Week</th>
<th>4 1-3 Times/Month</th>
<th>5 Less than Monthly</th>
<th>6 Almost Never</th>
</tr>
</thead>
</table>

b. Play with your child?

<table>
<thead>
<tr>
<th>1 Almost every day</th>
<th>2 3-5 Times/Week</th>
<th>3 1-2 Times/Week</th>
<th>4 1-3 Times/Month</th>
<th>5 Less than Monthly</th>
<th>6 Almost Never</th>
</tr>
</thead>
</table>

c. Read or look at books with your child?

<table>
<thead>
<tr>
<th>1 Almost every day</th>
<th>2 3-5 Times/Week</th>
<th>3 1-2 Times/Week</th>
<th>4 1-3 Times/Month</th>
<th>5 Less than Monthly</th>
<th>6 Almost Never</th>
</tr>
</thead>
</table>

d. Discuss TV programs that your child watches?

<table>
<thead>
<tr>
<th>1 Almost every day</th>
<th>2 3-5 Times/Week</th>
<th>3 1-2 Times/Week</th>
<th>4 1-3 Times/Month</th>
<th>5 Less than Monthly</th>
<th>6 Almost Never</th>
</tr>
</thead>
</table>

e. Discuss current events or community happenings with your child?

<table>
<thead>
<tr>
<th>1 Almost every day</th>
<th>2 3-5 Times/Week</th>
<th>3 1-2 Times/Week</th>
<th>4 1-3 Times/Month</th>
<th>5 Less than Monthly</th>
<th>6 Almost Never</th>
</tr>
</thead>
</table>

10b. How often do you work on activities suggested or sent home by the teacher?

<table>
<thead>
<tr>
<th>1 Almost every day</th>
<th>2 3-5 Times/Week</th>
<th>3 1-2 Times/Week</th>
<th>4 1-3 Times/Month</th>
<th>5 Less than Monthly</th>
<th>6 Almost Never</th>
</tr>
</thead>
</table>

15. Are there rules for your child about TV?  
   If Yes:  
   | Rules about what programs child can watch? |
   |---------------------------------------------|---|---|
   | 0 | 1 |
   | Rules about how early or late he/she may watch television? |
   |---------------------------------------------|---|---|
   | 0 | 1 |
   | Rules about how many hours he/she may watch television overall? |
   |---------------------------------------------|---|---|
   | 0 | 1 |
   | Rules about how many hours he/she may watch television on weekdays? |
   |---------------------------------------------|---|---|
   | 0 | 1 |
16. In the past week, have you or someone in your family done the following things with your child?

<table>
<thead>
<tr>
<th>Activity</th>
<th>No</th>
<th>Yes</th>
<th>1-2 times</th>
<th>3 or more times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Read to him/her?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Taught reading, spelling, or math?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Taught songs or music?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Told a story?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Sang a song?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Did arts and crafts?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Played games or sports?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Does your family receive a newspaper regularly (once a week or daily)? Yes  No
School Involvement Items

6. Have any of the following activities been offered to you. If yes, did adults in your family attend/participate?

<table>
<thead>
<tr>
<th>Activity/Event</th>
<th>Was it offered?</th>
<th>If yes, did you attend?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>a. Open house</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>b. Student performance or programs</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>c. Lunch or breakfast at school for parents and children</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>d. Parent/teacher conferences</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>e. Visits at home with school staff</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>f. Family educational events or workshops</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>g. Family field trips</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>h. Family social events</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>j. Parent discussion groups</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

7. Have any of the following volunteer opportunities been available to you? If yes, did adults in your family attend/participate?

<table>
<thead>
<tr>
<th>Was it offered?</th>
<th>If yes, did you attend?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>a. Send treats for the class</td>
<td>0</td>
</tr>
<tr>
<td>b. Helped with parties/served snacks</td>
<td>0</td>
</tr>
<tr>
<td>c. Room parent</td>
<td>0</td>
</tr>
<tr>
<td>d. Helped in library or computer lab</td>
<td>0</td>
</tr>
<tr>
<td>e. Helped in office, cafeteria, playground</td>
<td>0</td>
</tr>
<tr>
<td>f. Worked with children in classroom</td>
<td>0</td>
</tr>
<tr>
<td>g. Helped teacher with work in classroom</td>
<td>0</td>
</tr>
<tr>
<td>h. Helped with field trips</td>
<td>0</td>
</tr>
<tr>
<td>i. Helped with fund raising</td>
<td>0</td>
</tr>
<tr>
<td>j. Helped with newsletter</td>
<td>0</td>
</tr>
<tr>
<td>k. Helped other parents become involved</td>
<td>0</td>
</tr>
</tbody>
</table>
11. Have you had any of the following school involvement opportunities during this school year? If yes, did adults in your family attend/participate?

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Was it offered?</th>
<th>If yes, did you attend?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. PTA, PTO, or other parent organization meeting</td>
<td>0 1 2</td>
<td>0 1</td>
</tr>
<tr>
<td>b. Served on a committee, advisory board, or council</td>
<td>0 1 2</td>
<td>0 1</td>
</tr>
<tr>
<td>c. Served as an officer of a parent organization, advisory board, or council</td>
<td>0 1 2</td>
<td>0 1</td>
</tr>
<tr>
<td>d. Telephoned or talked to other parents about upcoming school events</td>
<td>0 1 2</td>
<td>0 1</td>
</tr>
<tr>
<td>e. Helped make decisions about school policies or programs</td>
<td>0 1 2</td>
<td>0 1</td>
</tr>
</tbody>
</table>
Table 1

*Descriptive statistics for parent and child variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
<th>M</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home involvement</td>
<td>159</td>
<td>38.12</td>
<td>8.13</td>
<td>16.00</td>
<td>57.00</td>
<td>0.00</td>
<td>60.00</td>
<td></td>
</tr>
<tr>
<td>School involvement</td>
<td>159</td>
<td>7.96</td>
<td>3.91</td>
<td>1.00</td>
<td>19.00</td>
<td>0.00</td>
<td>25.00</td>
<td></td>
</tr>
<tr>
<td>Child math scores</td>
<td>155</td>
<td>485.79</td>
<td>13.01</td>
<td>444.00</td>
<td>510.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child reading scores</td>
<td>155</td>
<td>481.32</td>
<td>17.79</td>
<td>418.00</td>
<td>521.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parent education

- Less than H.S. 21 13.00
- H.S or GED 51 31.50
- Some college 61 37.70
- Associate or higher 28 17.30
Table 2

Correlations between Parent Characteristics and Children’s Reading and Math Skills

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Home</th>
<th>School</th>
<th>Math</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent education(^a)</td>
<td>(.06) (158)</td>
<td>(.22^{**}) (158)</td>
<td>(.30^{**}) (154)</td>
<td>(.23^{**}) (154)</td>
</tr>
<tr>
<td>Home involvement</td>
<td>--</td>
<td>(.31^{**}) (159)</td>
<td>(.20^{*}) (152)</td>
<td>(.01) (152)</td>
</tr>
<tr>
<td>School involvement</td>
<td>--</td>
<td>--</td>
<td>(.19^{*}) (152)</td>
<td>(.12) (152)</td>
</tr>
<tr>
<td>Math</td>
<td>--</td>
<td>--</td>
<td>(.57^{**}) (155)</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Values in parentheses represent N.*

*\(p<.05\). **\(p<.01\).*

\(^a\)Spearman's Rho
Table 3

Summary of Hierarchical Regression Analysis Testing for a Mediating Variable to Predict Children's Math Skills (N = 151)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>p</th>
<th>$R^2_\Delta$</th>
<th>$F_\Delta$</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.08</td>
<td>12.83</td>
<td>1, 149</td>
<td>0.00</td>
</tr>
<tr>
<td>Parent education</td>
<td>3.91</td>
<td>1.09</td>
<td>0.28</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.04</td>
<td>6.03</td>
<td>1, 148</td>
<td>0.02</td>
</tr>
<tr>
<td>Parent education</td>
<td>3.89</td>
<td>1.07</td>
<td>0.28</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home involvement</td>
<td>0.29</td>
<td>0.12</td>
<td>0.19</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4

Summary of Hierarchical Regression Analysis Testing for a Mediating Variable to Predict Children's Reading Skills (N = 151)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>p</th>
<th>R²Δ</th>
<th>FA</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>.04</td>
<td>6.06</td>
<td>1,149</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent education</td>
<td>3.67</td>
<td>1.49</td>
<td>.20</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td>.00</td>
<td>.00</td>
<td>1,148</td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent education</td>
<td>3.67</td>
<td>1.50</td>
<td>.20</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home involvement</td>
<td>-.01</td>
<td>.17</td>
<td>-.01</td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5

*Summary of Hierarchical Regression Analysis Testing for a Moderator Variable to Predict Children's Math Skills (N = 151)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>p</th>
<th>R²Δ</th>
<th>FΔ</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent education</td>
<td>3.91</td>
<td>1.09</td>
<td>0.28</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent education</td>
<td>3.89</td>
<td>1.07</td>
<td>0.28</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home involvement</td>
<td>0.29</td>
<td>0.12</td>
<td>0.19</td>
<td>.02</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Parent education</td>
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<td>4.91</td>
<td>-0.09</td>
<td>.81</td>
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</tr>
<tr>
<td>Home involvement</td>
<td>-0.06</td>
<td>0.35</td>
<td>-0.04</td>
<td>.87</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pted x home</td>
<td>0.14</td>
<td>0.13</td>
<td>0.44</td>
<td>.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6

*Summary of Hierarchical Regression Analysis Testing for a Moderator Variable to Predict Children's Reading Skills (N = 151)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>p</th>
<th>$R^2\Delta$</th>
<th>$F\Delta$</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.04</td>
<td>6.06</td>
<td>1,149</td>
<td>.02</td>
</tr>
<tr>
<td>Parent education</td>
<td>3.67</td>
<td>1.49</td>
<td>.20</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.00</td>
<td>.00</td>
<td>1,148</td>
<td>.95</td>
</tr>
<tr>
<td>Parent education</td>
<td>3.67</td>
<td>1.50</td>
<td>.20</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home involvement</td>
<td>-.01</td>
<td>.17</td>
<td>-.01</td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
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<td></td>
<td>.00</td>
<td>.46</td>
<td>1,147</td>
<td>.50</td>
</tr>
<tr>
<td>Parent education</td>
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<td>6.86</td>
<td>-.05</td>
<td>.90</td>
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<td></td>
<td></td>
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</tr>
<tr>
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<td>.49</td>
<td>-.16</td>
<td>.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pted x home</td>
<td>.12</td>
<td>.18</td>
<td>.29</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>