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The Involvement Patterns and Predictive Factors

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**SOUTHERN TAIWANESE MOTHERS' INVOLVEMENT IN THEIR CHILDREN'S
EDUCATION : THE INVOLVEMENT PATTERNS AND PREDICTIVE FACTORS**

By

Pi-Hun Yang

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ABSTRACT

SOUTHERN TAIWANESE MOTHERS' INVOLVEMENT IN THEIR CHILDREN'S EDUCATION : THE INVOLVEMENT PATTERNS AND PREDICTIVE FACTORS

By

Pi-Hun Yang

The study combined a multilevel model of parental context with a multidimensional conceptualization of parent involvement to examine mothers' involvement patterns and the factors influencing mothers' involvement in their children's education. Six potential influences on involvement were identified: maternal involvement beliefs, maternal perceived invitations for involvement, mother's school experiences, the mother-child relationship, mother's depression level, and the educational involvement of mothers' social network members. Southern Taiwanese mothers (n=1242) of 2nd grade children responded to questionnaires assessing factors that may influence parent involvement and three types of parental involvement: home-based, school-based and school governance/advocacy involvement. Findings revealed that Taiwanese mothers showed different degrees of educational involvement: home-based involvement was the highest, followed by school governance/advocacy, and finally school-based involvement. Maternal role construction and maternal social network members' involvement significantly predicted all three types of involvement. A cultural interpretation of the phenomenon was discussed.

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Chapter 1

INTRODUCTION

Rationale for the study

Parental school involvement has long been an interest among educators, researchers and others concerned with children's developmental and educational outcomes.

Empirical research has shown a positive relationship between parental involvement and student outcomes for a variety of student populations. Stevenson and Baker (1987)

found that parent involvement in school activities was significantly related to teacher reports of academic performance for a sample of students ranging in age from 5 to 17

years. A parent involvement study of Head Start children (Parker et al., 1997) suggested that parent volunteer hours and frequency of attending school activities were significantly

related to parent and teacher ratings of children's academic motivation, social

competence, and school readiness. Reynolds (1994) reported parent involvement to be

positively related to reading and mathematics scores for a sample of 7-year-old

low-income minority children. Across a range of studies, there has emerged a strong

conclusion that parent involvement in children's education benefits children's learning

and school success (Eccles & Harold, 1993; Epstein, 1991, 1994; Hoover-Dempsey &

Sandler, 1997).

Along with this emerging literature, more researchers are interested in studying the factors that affect parent involvement. Family income, parents' education, age, employment status, marital status, culture of origin, and parent-staff relationships are among those factors found to be related to parent involvement (Baker & Stevenson, 1986; Coleman, 1987; Comer & Haynes, 1991; Epstein & Dauber, 1991; Fantuzzo, Tighe & Childs, 2000; Grolnick & Slowiaczek, 1994;). Most early work on predictors of parent involvement has focused on demographic factors and used narrow, unidimensional measures of parent involvement. However, recent studies challenged these approaches and argued that such approaches do not take into account the diverse ways in which parents can be involved (Auerbach, 1989).

For example, Grolnick, Benjet, Kurowski and Apostleris (1997) combined a multilevel model of parental context with a multidimensional conceptualization of parent involvement to examine the factors influencing parents' involvement in their children's schooling. Three sets of factors were identified: parent and child characteristics, family context, and teacher behaviors and attitudes. A diverse sample of 209 mothers, their 3rd-5th grade children, and 28 teachers participated. Parents, teachers and children reported on 3 types of involvement: school, cognitive and personal. They found that

mothers who felt efficacious, who saw their roles as that of teacher, and who viewed their children as less difficult were more involved in cognitive activities. Social support, teacher attitudes and practices were associated with both school and personal involvement. Furthermore, consistent with other studies, Grolnick et al. (1997) found marital status and family SES to be significantly related to parent involvement, especially school and cognitive involvement. However, when taking into account other factors, parent personal involvement was not associated with SES. In addition, although mothers from single-parent families were less involved on all three dimensions than those in two-parent families, only school involvement was lower when SES was held constant. The study thus suggested that multiple factors at several levels are necessary to explain parents' involvement.

Hoover-Dempsey and Sandler (1997) proposed that specific variables create patterns of influence at critical points in the parental involvement process. They suggested three major constructs to be central to parents' involvement decisions – parents' role construction, parents' sense of efficacy for helping their children succeed in school, and general invitations, demands, and opportunities for involvement. Hoover-Dempsey (1992) argued that although parent efficacy is likely only one of several contributors to parents' involvement decisions, "it may operate as a fundamentally important mechanism,

explaining variations in involvement decisions more fully than do some of the more frequently referenced status variables (e.g., parent income, education, employment)”- (p.288).

Hoover-Dempsey’s conclusion may be applicable for understanding Taiwan’s difficulties in getting parents involved in their children’s school education. Through education reform in Taiwan, parents at all levels of schools are urged to get involved in school activities, decision-making and governance. Many plans and projects were set up to achieve this goal (National Educational Reform Policy Team, 1995; Family Education Program, 1999). However, the outcome of these efforts was not satisfactory. Research findings showed that the parental participation rate is low (Lin, 2002; Shu, 2001). Wu (2003) conducted a study with a sample ranging from elementary children to high school students. Across the age range, she found that school conference /activities got the lowest parental attendance rate, school-helping activities the second lowest rate, and home-based involvement had a moderate involvement rate. Parents tend to do more in-home supervision than school-based activities. Why does this happen? What can schools do to increase parent involvement?

Influenced by Hoover-Dempsey’s model and Bandura’s self-efficacy theory, the goal of this study was to understand Taiwanese parents’ beliefs about involvement and their

level of involvement. The hypothesis underlying this study is that parents' beliefs about their role in school involvement influence their involvement.

Although most research regarding parent involvement tends to assume gender neutrality (Wu, 2003), maternal and paternal school involvement differ in both quantity and quality. Based on Chinese tradition, gender roles are more rigid than those in Western cultures. Mothers usually are the ones in charge of children's care and education, while fathers are given the role of bread winners. Interestingly, although Chinese mothers normally invest more time and energy than fathers in child-rearing and school-related activities, fathers' participation in all levels of school advisory committees is higher than mothers' (Chang, 1999). Only a few studies have focused on this gender difference. Chang (1999) studied a group of mothers who were actively involved in their children's education. She found that while doing school-based activities, mothers were more likely than fathers to do volunteer work, acted more as followers and supporters, and were usually the "doers" rather than the "power-holders". Tseng (2002) and Lin (2003) also conducted qualitative research regarding mothers' school involvement and found similar results. To help schools generate practical parent involvement programs, it is necessary to study mothers' and fathers' school involvement separately.

However, limited by resources and time, the present study focused on mothers' involvement instead of studying both parents' involvement at the same time. Given the fact that in contemporary Taiwan, mothers are still typically the primary caretakers of their children and are usually more involved than fathers in most of the day-to-day activities of their children, focusing specifically on mothers made a meaningful contribution to the literature.

Purpose of the study

The primary purpose of this study was to understand Taiwanese mothers' involvement patterns in their elementary school children's education. This study focused on three types of parent involvement: home-based, school-based and school governance/ advocacy involvement. This study also examined six sets of predictor variables: 1) maternal beliefs regarding parent involvement, 2) maternal perceived invitations to be involved from the school and the child, 3) mother's school experiences, 4) mother's relationship with the child, 5) maternal social networks, and 6) mother's depression level.

Research Questions

Eight research questions were addressed in this study and are listed below:

1. How involved are Taiwanese mothers in their children's education? How involved are they in the following categories: home-based, school-based, and school governance/advocacy?
2. What are Taiwanese mothers' beliefs regarding parent involvement? Is there a relationship between maternal involvement beliefs and level of involvement?
3. What are Taiwanese mothers' perceptions about the school climate for involvement? To what degree do they perceive invitations from the school and their children to be involved? Is there a relationship between the mothers' perceived invitations from the school or the child and their level of involvement?
4. What are Taiwanese mothers' school experiences? How do they perceive their own school experiences and their experiences with their child's school? Is there a relationship between mothers' own school experiences or their experiences with their children's schools and their educational involvement?
5. What are Taiwanese mothers' relationships with their children? Is there a relationship between the mother-child relationship and their educational

involvement?

6. What is the level of educational involvement of the Taiwanese mothers' social network members? Is there a relationship between the involvement of maternal social network members and the mothers' level of involvement?
7. What is the level of Taiwanese mothers' perceived depression? Is there a relationship between maternal perceived depression level and their educational involvement?
8. What factors are directly or indirectly related to the three types of maternal educational involvement (e.g., home-based, school-based, and school governance/advocacy involvement) when other factors are controlled?

Assumptions

1. The Taiwanese mothers' emphasis on education is reflected more in in-home instruction and children's extra-curricular activities than in school-based activities.
2. Although the society is changing, Taiwanese mothers' perceptions of schools as educational authorities remain unchanged.
3. Mothers will respond honestly to questions about their beliefs regarding parental

involvement, their level of involvement, their social network, and their perceptions of the extent to which schools encourage parents to be involved.

Conceptual Framework

Theoretical support for the proposed model (Figure 1) was gleaned from two major sources -- Bronfenbrenner's Ecological Model (1989, 1998) and Hoover-Dempsey and Sandler's Parental Involvement Process Model (1997).

Bronfenbrenner (1979) speaks of the developing person "as a growing dynamic entity that progressively moves into and restructures the milieu in which it resides" (p.21).

There is a constant and reciprocal interplay between the person and the environment throughout the life span. The individual develops in a number of different contexts.

Bronfenbrenner describes four dimensions of an individual's overall ecological system as micro-, meso-, exo-, and macrosystem. A microsystem is a pattern of activities, roles, and interrelationships between a developing individual and his immediate setting. The initial microsystem that the child inhabits is the home where the primary interaction is most often between the mother and the child. As the child grows, he/she develops in many other microsystems: the school, the neighborhood, and the peer network. A mesosystem is an interrelationship between two or more microsystems which contain the developing individuals and is an extension of the microsystem; it is the interactions

among settings containing the developing person. The child’s development can be facilitated by linkages between settings. An exosystem refers to a microsystem that does not involve the developing person as an active participant, but events in that context can influence the developing person. The final layer, a macrosystem represents the outermost layer in the child’s context. The macrosystem is comprised of cultural values, customs, rules and laws (Bronfenbrenner, 1994). Most macrosystems are informal and are maintained through custom and practice in everyday life.

Bronfenbrenner’s ecological model provides a conceptual framework for understanding the multidimensional nature of parent involvement. In keeping with an ecological perspective, this study will examine interactions between interconnected systems (school and family) that are viewed as having a critical influence on child development outcomes.

Hoover-Dempsey and Sandler’s Parental Involvement Process Model (1997) proposed five levels of the parent involvement process:

Level 5	Child/student outcomes	
	Skills & Knowledge	
	Personal sense of efficacy for doing well in school	

Level 4	Tempering/mediating variables	
	Parent’s use of developmentally appropriate involvement strategies	Fit between parents’ involvement actions and school expectations

Level 3	Mechanisms through which parental involvement influences child outcome		
	Modeling	Reinforcement	Instruction
Level 2	Parent's choice of involvement forms, influenced by		
	Specific domains of parent's skill & knowledge	Mix of demands on total parental time and energy (family, employment)	Specific invitations & demands for involvement from child & school
Level 1	Parent's basic involvement decision, influenced by		
	Parent's construction of the parental role	Parent's sense of efficacy for helping children succeed in school	General invitations & demands for involvement from child & school

Model of the parental involvement process (Hoover-Dempsey and Sandler, 1997, p.4)

Their model suggests that parents' involvement decisions and choices are based on several constructs drawn from their own ideas and experiences as well as on other constructs growing out of environmental demands and opportunities. At the first level, Hoover-Dempsey and Sandler suggested that most parents' fundamental decision to become involved in their children's education is a function primarily of three constructs: a) the parent's construction of his or her role in the child's life; b) the parent's sense of efficacy for helping her or his child succeed in school; and c) the general invitations, demands, and opportunities for parental involvement presented by both the child and the child's school.

Hoover-Dempsey and Sandler argued that although it has been well established that

family status variables (e.g., income, education, ethnicity, marital status) are often related to parent involvement, the family status variables do not explain fully parents' decisions to become involved in their children's education, nor do such variables explain the linkages between parents' involvement and child school outcomes. Status does not determine parents' thinking, actions, or influences related to their involvement in their children's schooling. For example, status does not explain many parents' abilities to nurture positive educational outcomes in spite of difficult and presumably discouraging circumstances. Presumably, it is parental willpower or determination that overcomes these disadvantages. Therefore, an attempt to look beyond demographic variables to understand the parental involvement process is likely to yield valuable information.

Guided by Bronfenbrenner's ecological model as well as Hoover-Dempsey and Sandler's parental involvement process model, the conceptual model for this study is based on the proposition that maternal beliefs mediate the effects of demographic characteristics on maternal involvement. In addition, maternal beliefs, maternal perceived school climate for involvement, mother's school experiences, the mother-child relationship, and maternal depression level along with maternal social networks operate as direct influences on mothers' school involvement. The model is illustrated in Figure 1.

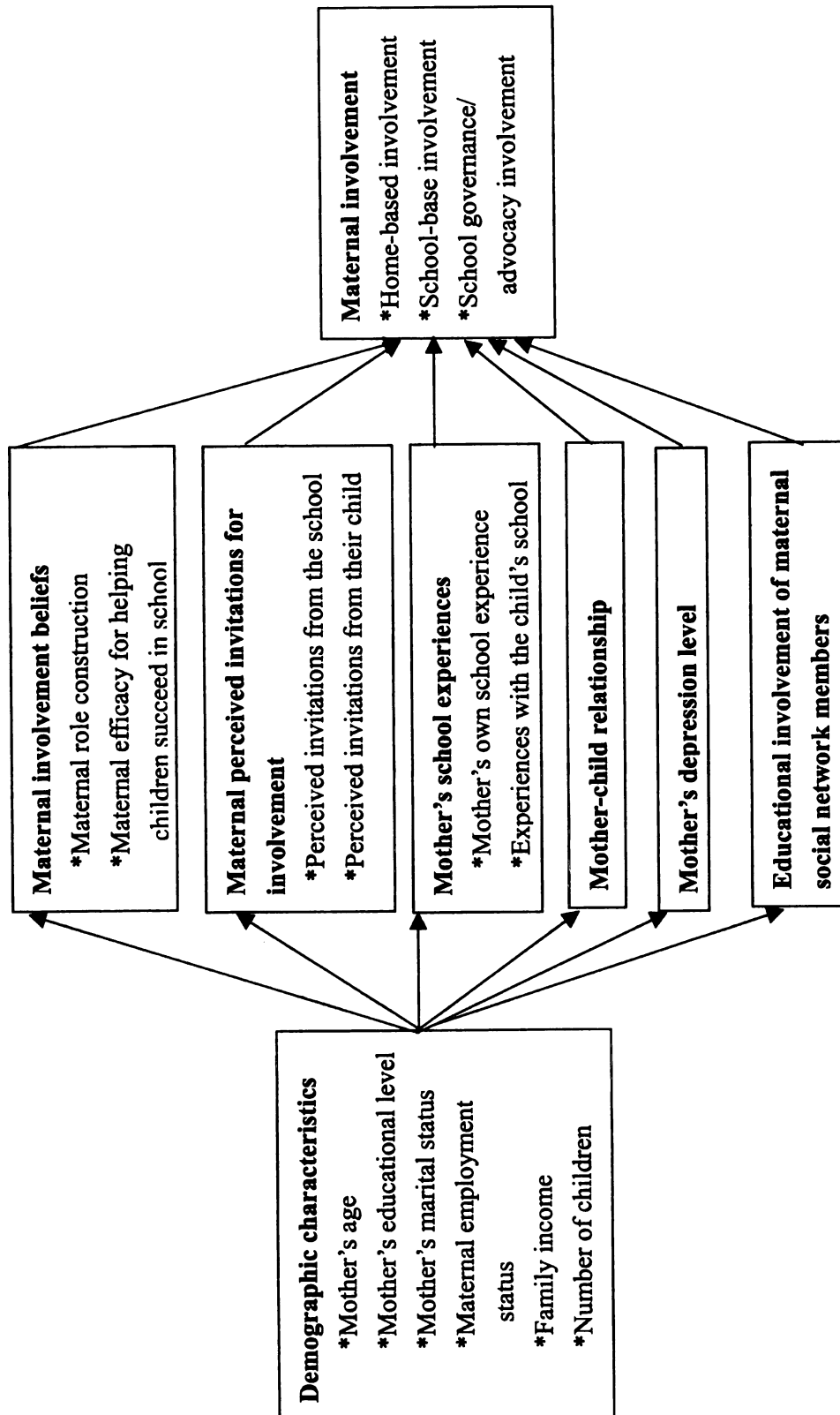


Figure 1. Conceptual Model for the study

Conceptual Definition of Variables

Conceptual definitions of variables were presented here. The operational definition of variables will be addressed at the Instrumentation section in Chapter three.

Maternal involvement

Maternal involvement is defined as mothers' investment of resources and time in their children's schooling. This concept is further separated into three categories:

- 1) Home-based involvement: Mother-child interactions involving the active promotion of a learning environment at home.
- 2) School-based involvement: Mothers' volunteering or participating in school with their children.
- 3) School governance/advocacy involvement: Mother's actions related to school improvement or school decision-making processes.

Maternal involvement beliefs

Maternal beliefs regarding educational involvement is defined as mothers' beliefs towards helping children succeed academically. Guided by Hoover-Dempsey and Sandler's parental involvement process model (1997), this concept is further divided into two parts:

1) Maternal role construction: The extent to which mothers believe it is their responsibility to be involved in children's day-to-day education.

2) Maternal efficacy for helping children succeed in school: The extent to which mothers believe that they can help their children succeed in school.

Maternal perceived invitations for involvement

This variable refers to the degree to which mothers perceive invitations, demands or opportunities for involvement from their children's school and from their child. To be more specific, this concept is further divided into two parts: 1) perceived invitations from the school, and 2) perceived invitations from the child.

Mother's School Experiences

Mother's school experiences refer to maternal perceived school experiences. This concept is further divided into two parts: 1) mother's own school experiences, and 2) mother's experiences with the child's school.

Mother-Child Relationship

The mother-child relationship refers to the degree to which mothers perceive their relationships with their children positively or negatively.

Maternal Social Networks

The social network refers to the degree to which the participating mothers perceive

that parents in their social network are involved in their children's education.

Mother's Depression Level

Mother's depression level refers to the degree to which mothers experience depressive symptoms (e.g., feeling that people dislike me, feeling about the future).

Demographic information

The demographic variables of interest in this study are: mother's age, mother's educational level, mother's employment status, family income, mother's marital status, and number of children.

Chapter Two

Review of Literature

This chapter is organized into three sections. Section one provides an overview of the parent involvement literature. It includes the shifting definition of parent involvement, the effects of parent involvement, and the three dimensions of parent involvement. Section two discusses the research examining variables related to parents' decisions to be involved. It focuses on three major factors: parental involvement beliefs, parental perceived invitations for involvement from children and the school, and parental social networks. The last section is a brief summary of prior research.

An overview of Advances in the Study of Parent Involvement

The shifting definition of parent involvement

Parent involvement is described in the child development literature as the degree to which a parent is “committed to his or her role as a parent and to the fostering of optimal child development” (Maccoby & Martin, 1983, p.48). The amount of effort put into child-oriented activities is the major concern for researchers. In addition, in the educational domain, parent involvement has typically focused on specific activities, such

as going to school activities and events, helping with homework, or communication between families and schools.

Gordon (1978) defined parents' six roles regarding parent involvement: 1) Teacher of own child, 2) Paraprofessional, 3) Decision maker, 4) Learner, 5) Audience, and 6). Classroom volunteer. Berger (1991) suggested that parent involvement contains five levels, ranging from acting as an active partner to a passive supporter. The five levels are: 1) parents as active school cooperators and leaders, 2) parents as decision-makers; 3) parents as volunteers; 4) parents as school-family communicators; and 5) parents as school supporters. Similarly, Greenwood and Hickman (1991) also described five levels of parent involvement in schools: audience, teacher of the child, volunteer, trained worker, and participant in decision making.

In the past ten years, much significant work has been accomplished in the area of parent involvement and has thus broadened its meaning. In contrast to the "traditional" view, Crolnick and Slowiaczek (1994) defined parent involvement as "the allocation of resources to the child's school endeavors" (p.237). Parent involvement was separated into three dimensions: behavior, intellectual/cognitive, and personal involvement. The parent can overtly manifest involvement through his or her behavior by going to school, and/or participating in activities such as open houses or parent-teacher conferences.

Parent cognitive/intellectual involvement involves exposing the child to cognitively stimulating activities and materials such as books and current events. Parents' personal involvement refers to parents conveying the idea to the child that the parent cares about school, and has and enjoys interactions with the child around school.

Noted researcher Joyce Epstein (1995, 1997, 2002) has delineated six types of family-school involvement, underscoring that families and schools can connect in many ways, and that families can and do participate both at school and at home. Epstein has moved from traditional definitions of involvement types and developed school-wide family-school partnership programs. Epstein's Type 1 of involvement, *parenting*, refers to the school assisting families with parenting skills, helping parents understand child and adolescent development, and helping families provide home conditions that support learning. Type 2, *communicating*, refers to the development of effective two-way communication between home and school about school programs and children's progress. Type 3, *volunteering*, refers to school efforts in recruiting, training, and organizing families to support students and school programs. In type 4, *enhancing learning at home*, educators are encouraged to work with families. Type 5, *decision making*, refers to involving families in school- and district-level decision making, including decisions for both practices and policies. Type 6, *collaborating with the community*, involves

coordinating resources and services to families, students, and schools to enhance students' learning and school experiences. This definition has broadened the meaning of parent involvement.

Much recent research has recognized parents and school personnel as co-communicators, co-supporters, co-learners, co-teachers, and co-decision makers (Moles, 1993; Epstein, 1995, 1997, 2002; Henderson & Berla, 1994). Furthermore, options for parent involvement have moved beyond the traditional "big three" (volunteering, helping with homework, helping with fund-raising) to integrating parents' involvement in homes, schools and communities (Christenson & Sheridan, 2001).

The effects of parent involvement

In the past decade, parent involvement in children's learning and development have frequently been discussed. Numerous books, journal articles, and conference presentations on this topic have provided empirical evidence for the necessity and importance of parent involvement. For example, in a study investigating home-school collaboration for students with ADHD, it was found that effective parent-teacher communication, collaborative planning and monitoring of interventions have made critical differences for students' development (August, Anderson, & Bloomquist, 1992;

Bos, Nahmias & Urban, 1999).

Besides special need children, parent involvement in children's education is positively associated with many benefits for typically developing students. When parents are involved, students show improvement in grades, including reading (Comer, 1988; Epstein, 1997; Steven & Baker, 1987) and math achievement (Epstein, 1997). Barton & Coley (1992) conducted a study using the National Assessment of Educational Progress data. They analyzed three factors over which parents exercise authority—school attendance, variety of reading materials in the home, and amount of television watching. They found that parent involvement at home explained nearly 90% of the difference in mean achievement of students in 37 states and D.C..

Similarly, in an intervention study, parent involvement had been found to improve children's task completion and accuracy in mathematics compared with control group children (Galloway & Sheridan, 1994). Thurston (1989) reported that parent involvement improves children's academic competencies including classroom participation and ability to stay "on task". Hill and Craft (2003) also reported that parents' involvement at school, including volunteering in the classroom and sending materials to school, improved children's academic skills, which in turn improved math performance for African American children.

Moreover, with school-age children, parent involvement in school increases children's perceived competence and motivations for achievement (Grolnik, Ryan, & Deci, 1991), increases adolescents' engagement in school (Connell, Spencer, & Aber, 1994), and instills a sense of value for education in children that results in more responsible behavior in school (Epstein, 1997). All of these factors, in turn, improve children's school performance.

Empirical research further suggests that parent involvement directly improves children's social behavior and interactions among peers. Parent-child interactions about schooling are positively associated with rule compliance and sociability at school for middle-class Euro-American samples (Adams, Ryan, Ketschis, & Keating, 2000) and low-income African American samples (Fantuzzo, Davis, & Ginsburg, 1995). In addition, Izzo, Weissberg, Kasprow, and Friendrich (1999) reported that children with parents who are involved in school have better emotional adjustment and social skills.

While there is evidence of the potency of parent involvement, recent research also reveals the need for studying parent involvement from a multi-dimensional perspective. Grolnick and Slowiaczek (1994) conducted a study of parent involvement in children's schooling measuring three types of involvement. In a sample of 300 parents with 11-14 year-old children, they found that there were substantial differences in parents'

involvement levels. For example, parents' level of education was strongly related to intellectual/cognitive involvement (exposing the child to cognitively stimulating activities and materials) but was unrelated to parent behavior involvement (e.g. going to school, volunteering, etc). Their results were consistent with other studies (Epstein, 1992; Hoover-Dempsey, Bassler & Brissie, 1987; Stevenson & Baker, 1987) in which background variables distinguished between some, but not all, measures of parent involvement. If this is true, the stereotype of the low involved, less educated parent may not hold true for all types of involvement. Because attitudes teachers hold about parents can have important ramifications for how they treat them, and in particular for whether or not they try to involve them, these results have important implications. The results suggested that *the ways* in which parents get involved in their children's school experiences may vary according to their background.

Therefore, instead of treating parent involvement as a unidimensional construct, it is important to identify the multi-dimensional nature of parent involvement (Epstein, 1997, 2002; Fantuzzo et al., 2000; Stevenson & Baker, 1987; Sui-Chu & Willms, 1996).

The three dimensions of parent involvement

This section will discuss the different dimensions of parent involvement:

home-based, school-based, and school governance/advocacy involvement.

Home-based parent involvement

Home-based involvement is defined as the activities and behaviors that parents do to promote a learning environment for children. Home-based involvement activities include providing a place in the home for learning materials, actively initiating and participating in learning activities at home with children, and creating learning experiences for children in the community.

Parents could support children's reading by creating a rich and stimulating print or written language environment, including serving as model readers for their children. Topping (1985) reported that four aspects of parent involvement at home are related to children's reading achievement: 1) allowing more time for children to practice reading at home, 2) making reading more enjoyable and valued, 3) giving children feedback and praise, and 4) modeling reading and writing behaviors at home. In addition, parents listening to a child read, and sharing and exploring books have significant effects on children's reading skills (Evans, cited from Connors & Epstein, 1995).

In his intensive observational study of the home environment of 10 high-achieving and 10 low-achieving secondary-level students, all of whom were low income and African American, Clark (1983) identified home variables that differentiate high and low

achievers. Parents of high achievers reported having frequent dialogue with children, encouraging children's academic pursuits, having warm and nurturing interactions with children, and consistently monitoring how children's time was spent. In his later study, Clark (1993) studied the homework-related practices of parents of third graders. In a sample of 460 predominantly Hispanic-American, African-American, Asia-American, and other non-Anglo families, he found that most parents were sending their children to school regularly, providing a regular time and a quiet place to study, and expecting them to complete homework assignments. However, high-achieving students also had parents who also checked homework for accuracy, demonstrated how to use references materials, and read or studied in the home.

White's (1982) analysis of 101 studies also supported the positive influences of parental in-home involvement on children's school performance. He concluded that the following aspects of the home environment had a great impact on students' school performance: parents' attitudes, guidance, and expectations for their children's education; quality of interaction; participation in cultural and learning-related activities; and overall stability in the home. Overall, the significant influence of parent involvement at home on children's school performance has been well-documented in the literature (Entwisle, Alexander, & Olson, 1997; Hoover-Dempsey, et al., 1993; Keith, 1991; Sheldon, 2002).

School-based parent involvement

School-based parent involvement is defined as activities and behaviors that parents engage in at school with their children. Such behaviors include volunteering in the classroom, going on class trips with children, and meeting with teachers to discuss their children's learning behaviors.

Empirical research on parent involvement has documented positive relationships between parental school involvement behaviors and specific student outcomes for a variety of student populations. Stevenson and Baker (1987) found that parent involvement in school activities was significantly related to teacher reports of academic performance for a sample of students ranging in age from 5 to 17 years. A parent involvement study on Head Start children (Parker et al., 1997) suggested that parent volunteer hours and frequency of attending school activities were significantly related to parent and teacher ratings of children's academic motivation, social competence, and school readiness.

Similarly, Reynolds (1991) found that parent involvement in school activities, rated by teachers at the end of the first year, had relatively strong indirect effects on reading and mathematics achievement at the end of the second year. A substantial number of studies have shown that greater parent involvement in school-aged children's learning has

positive effects on school performance, including greater cognitive development and higher academic achievement (Christenson, 1995; Eccles & Harold, 1996; Epstein & Dauber, 1991; Moles, 1996).

Maternal school governance/advocacy involvement

Maternal school governance/advocacy involvement refers to mothers' actions related to school improvement or school decision-making processes.

This type of parent involvement is actually the most rare type of involvement seen in the literature and probably in reality as well. In a study analyzing the relationship between schools and disadvantaged parents, Mole (1993) suggested that parents had little direct influence on program policy. Although federal education programs for disadvantaged students require particular forms of parent involvement, such as parent advisory councils to help make decisions about school programs and policies, parents actually exert little power or influence on this matter.

In one of her articles, Epstein (1997) discussed the shifting paradigm of family-school relationship. She wrote (p.441),

The psychological and sociological literatures in the early twentieth century argued for the separateness of teachers' and parents' roles in schooling. Anna Freud (1935, cited in Lightfoot, 1978) discussed the "dangers" of teachers becoming too "motherlike", resulting in children who would become too "demanding" of teachers. Waller (1932) wrote about the necessity of separate roles for parents and teachers in order to successfully train children in the responsibilities of school and the demands of work. These views reflected other long-standing sociological theories that organizations are most effective

when they set unique missions and fulfill distinct responsibilities. ... This perspective put the family in charge of their child's social development, and put the school in charge of education.

Bronfenbrenner (1979, 1986) introduced a theoretical framework that recognized the multiple and interdependent influences of various contexts on children's development. His paradigm emphasizes that children's development is "embedded" or nested within the microsystem and the macrosystem. ... Researchers use this paradigm to study the contextual and interrelated effects of maternal employment, day care, social support, community conditions, and other factors on children's achievement, other indicators of success in school, and other aspects of development.

Epstein (1997) then suggested a social-organizational perspective of overlapping spheres of influence for understanding and studying school and family relations. In this model, an external structure of moving spheres and an internal structure of interpersonal exchanges and interactions of the members of the various environments are identified. The external model assumes that shared responsibilities are affected by forces of (1) time to account for changes in the ages and grade levels of students and the influence of historical change on environments, and (2) behavior to account for the background characteristics, philosophies, and practices of each environment. Two levels of school-family interactions within the internal structure are proposed: (1) between the institutions of schools and families (as when schools invite families to events) and (2) between and among individuals (as when a parent and a teacher meet in conference). The child is assumed to be the reason for and a participant in home and school

partnerships.

Though theoretically clear, Epstein's model of overlapping influences of schools and families remains more in the realm of theoretical discussions than real-life practice. In reality, parent involvement in school governance and advocacy needs more encouragement from schools and the society (Christenson & Sheridan, 2001, Epstein & Salinas, 1993; Epstein, 1997). Connors and Epstein (1995) suggested that schools should take more initiatives to include parents in the school's decision-making process. Creating a friendly atmosphere for parents to communicate with the school about their own and their children's needs, encouraging parents to connect with each other, or even offering formal or social opportunities for the parents to work together should be included in school policies.

Variables Related to Parents' Decisions to Be Involved

As mentioned above, different types of parent involvement may have different influences on children's learning. However, there has emerged a strong conclusion that parent involvement in child and adolescent education generally benefits children's learning and school success (Brody, Flor & Gibson, 1999; Chavkin, 1993; Eccles & Harold, 1993; Epstein, 1991, 1997, 2002; Hess & Holloway, 1984). Given this

conclusion, the follow-up critical question is: *Why do parents become involved in their children's education?*

The following review focuses on the process of parental involvement decision-making. It is organized into three parts: parental involvement beliefs, perceived invitations for involvement from children and schools, and parental social networks.

Parental involvement beliefs

Kohn (1963) proposed that parents from various social class levels differ in terms of what characteristics they value most for their children and these differences in values contribute to differences in parenting behaviors. The causal sequence proposed by Kohn has been diagramed in the following way: social class → conditions of life → parental values → parental behaviors (Gecas, 1979). Luster et al. (1989) conducted a study to test Kohn's model. In a sample of 65 mother-infant dyads, they found that differences in parenting behavior are due, at least in part, to differences in parental values. Moreover, Luster and Rhoades (1989) reported that maternal beliefs of perceived control mediated the relationship between family stress for adolescent mothers and the extent to which they provided supportive, verbally stimulating, and warm homes for their toddlers.

In the past two decades, Stevenson and his colleagues (1986, 1990) conducted extensive research regarding parents' beliefs about education. They studied the relationship between parental beliefs and children's mathematics achievement using data from multinational research. Their data indicated that across the three cultures (U.S., Japan and Taiwan), parents differed in their beliefs about what factors contribute to children's academic success. Compared to U.S. mothers, Japanese and Chinese mothers placed much greater emphasis on effort than on ability, and they tended to hold much higher expectations about children's school performance. The researchers argued that if parents view performance as primarily a function of effort, they may perceive themselves as having a greater effects on influencing children's development and achievement, and thereby do more to encourage their children's achievement.

Given the evidence from Kohn's research and other research, researchers now hypothesize that parental beliefs are important precursors to parent involvement. In particular, parents' beliefs that they can affect their children's education, parents' perception of their roles in children's schooling, parents' beliefs that the school desires their help, and parents' comfort with the school have all been suggested as important predictors of parent involvement (Ames et al., 1995; Hoover-Dempsey & Sandler, 1995, 1997; Sheldon, 2002). Among these beliefs, parents' role construction and parents'

sense of self-efficacy have received the most attention.

Parents' role construction

Roles are generally considered to be sets of expectations held by groups for the behavior of individual members. When applied to parents' involvement in their children's education, the group to which parents belong (e.g., the family, the school, the workplace, close friends) would hold expectations about appropriate parental role behaviors regarding involvement in children's education. Although the definition is clear, the question is: does role construction relate to parental involvement in children's education?

Lareau (1989) compared parental beliefs in a predominantly working-class school with those of parents in a predominantly upper-middle-class school. She found that working-class parents had a separated view of home and school. They tended to believe that their roles involved behaviors such as getting children ready for school, ensuring that children have good manners, and getting them to school on time. However, they did not believe that their roles in their children's education extended far beyond these basic preparations. These parents had a strong tendency to accept the school's decisions about their children (e.g., regarding classroom placement or retention) for they believed that the school—not the parents—were primarily responsible for decisions about educational

progress. Upper middle-class parents, on the other hand, were characterized as having an interconnected view of home and school. These parents saw themselves as having an integral role, together with the school, in educating children. They actively monitored or “kept on top of” children’s progress; they also saw themselves as responsible for intervening in school decisions as necessary. These parents appeared to exert more control over their children’s educational progress than most working-class parents.

In contrast to Lareau’s conclusion, Clark’s (1983) work showed a different perspective. He compared the high- and low-achieving students from low income families and found that low-income parents actually varied considerably in beliefs about parents’ home-support roles. High-achievers’ parents were comfortable with their parental roles as active educators and preparers of their children. These parents believed that they had strong home-based educational responsibilities with their children, and they worked hard consistently to meet these responsibilities.

Moreover, Ritter, Mont-Reynaud and Dornbush (1993) examined the differences in parental school involvement among ethnic groups. Using a large multi-ethnic sample of 7,836 adolescents, with a subsample of 2,955 parents, the researchers divided their sample into four main ethnic groups: Asian, African-American, Hispanic, and non-Hispanic white. Their findings showed that Hispanic and Asian parents had fewer

contacts with the schools and teachers. However, instead of blaming ethnicity, they found that these parents have the following characteristics in common: they tend to trust the school more than the other two groups; they are less comfortable with teachers, less likely to criticize teachers, and more likely to defer to the schools. Moreover, across all four ethnic groups, Ritter et al. (1993) reported that parents who are deferential to and less comfortable with teachers and schools are less likely to attend school programs or discuss problems with the schools. Lower parent involvement was actually associated with trusting schools or a lack of ease in dealing with schools rather than the stereotype that less involved parents are not concerned with their children's education.

The evidence revealed that status or ethnic background could not explain the different behaviors among parents; what parents think of schools and what parents believe they should do in regard to children's education are much powerful influences on their involvement decisions. When parents view participation in children's schooling as one of their responsibilities as a parent, they are more likely to become involved in their children's education. Parents' perception of their relationships with the school (separate roles or partnership) should also influence their behaviors. Overall, parents' ideas of appropriate roles in supporting children's education at home and at school should influence their decisions about involvement in their children's education.

Parental sense of efficacy for helping children succeed in school

In relating parental beliefs to parent involvement, parental role construction alone is not sufficient. As Hoover-Dempsey and Sandler (1997) argued, the presence of such a role construction means that relevant responsibilities and activities have been considered by the parent, thus creating the possibility of involvement. However, to ensure involvement behaviors, the parent must believe that he or she has the skills and opportunities necessary for involvement.

Parental sense of efficacy for helping children succeed in school means that a parent believes that he or she has the skills and knowledge necessary to help his or her children, that the children can learn what the parent has to share and teach, and that the parent can find alternative sources of skill or knowledge when necessary (Hoover-Dempsey & Sandler, 1997). Grounded in Bandura's self-efficacy theory, parental sense of efficacy shares many common components with general self-efficacy theory.

According to Bandura (1993), "people make causal contributions to their own functioning through mechanisms of personal agency. Among the mechanisms of agency, none is more central or pervasive than people's beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives. Efficiency beliefs influence how people feel, think, motivate themselves, and behave"

(p.118). In general, people who have a low sense of efficacy shy away from difficult tasks. They have low aspirations and weak commitment to the goals they choose to pursue. When faced with difficult tasks, they dwell on their personal deficiencies, on the obstacles they will encounter, and on all kinds of adverse outcomes. Because they diagnose insufficient performance as deficient aptitude, they quickly lose faith in their capabilities. On the other hand, people with high efficacy approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficient outlook fosters interest and deep engrossment in activities. These people set themselves challenging goals and maintain strong commitment to them. They attribute failure to insufficient effort or deficient knowledge that are acquirable. They approach threatening situation with assurance that they can exercise control over them. Bandura (1993) further suggested that “self efficacy beliefs contribute significantly to the level and quality of human functioning” (p.145).

Inspired by Bandura’s self-efficacy theory, researchers tried to examine the relationship between efficacy beliefs and the behaviors they may influence across various domains. For example, Coleman and Karraker (2000) studied parenting self-efficacy of mothers with school-age children and reported that parents with high self-efficacy believed that they have the ability to effectively and positively influence the development

and behavior of their children and engaged in positive parenting behaviors. They also reported that parents with high self-efficacy were more responsive to the needs of their children (Donovan & Leavitt, 1985; Donovan, Leavitt & Walsh, 1997); engaged more in direct interaction with their children (Mash & Johnson, 1983); and exhibited active coping strategies (Wells-Parker, Miller & Topping, 1990).

Research outcomes also provided evidence for the role of parental self-efficacy in mediating the effects of parent and child characteristics on parental sensitivity and responsiveness. Teti and Gelfand (1991) examined the impact of parent self-efficacy in depressed mothers of young infants. Depressed mothers often were reported as being hostile and intrusive when interacting with their infants. However, high parental efficacy reduced the potential negative effect of maternal depression. Thus, mothers' sense of parenting efficacy mediated the relationship between personal feelings of hopelessness and responsive parenting with their infants. Gondoli and Silverberg (1997) reported similar findings in their research on parent-adolescent relationships. Emotionally distressed mothers who had a positive sense of capability and skill in handling parenting challenges were more responsive when talking to their adolescents than were mothers with low self-efficacy.

Pelletier and Brent's (2002) study showed further evidence of parent self-efficacy

influencing parental behavior related to children's school readiness. They examined parent factors and teacher strategies to foster parent involvement and efficacy in a unique Canadian preschool intervention program in the greater Toronto area. ESL (n=64) and English speaking (n=59) parent groups, who participated in school-based Parenting and Readiness Center programs with their 4-year-olds, were compared. Their findings suggested that parents who perceived themselves as more effective were more involved in their children's education at the preschool level.

Overall, efficacy theory and related research suggested that parents with a stronger sense of efficacy for helping their children succeed in school will be those most likely to decide that involvement will yield positive outcomes for their children. Research findings (e.g. Stevenson et al.) also suggested linkages between parental efficacy and parents' focus on the value of effort, rather than ability or luck, as critical to children's school success. Research on parental strategies aimed at improving school-related outcomes for children suggested that higher-efficacy parents are more likely to develop and act on strategies intended to solve current or anticipated problems related to school success (Hoover-Dempsey & Sandler, 1997; Stevenson & Baker, 1986; Useem, 1991). Weaving together the theoretical framework and empirical observations, it appears that parents with a strong positive sense of efficacy for helping children succeed in school

tend to develop and implement proactive strategies designed to help children succeed in school. In sum, a stronger sense of efficacy seems essential to a positive parental decision about involvement.

According to the discussion above, *parents' role construction* and *parental sense of self-efficacy in helping children succeed in school* are two significant constructs for examining parental beliefs about school involvement. However, though few empirical studies examined the relationship between parental role construction, parental sense of self-efficacy and parental involvement, this subject requires additional research to test theoretical ideas. Thus the current study is designed to test this theoretical model.

Parental perceived invitations for involvement from children and school

The perceived invitations for involvement from children and from school will be discussed separately.

Parental perceived invitation for involvement from children

Besides parental involvement beliefs, Hoover-Dempsey and Sandler suggested that parental perceived invitations for involvement from the school and children influence parents' involvement decisions. Effective invitations may come from both children and the school. Children may hold more emotional influence over parental decisions

because of the personal relationship involved, but the inviting school environment appears to be similarly influential because of the schools' authority and power in children's lives (Hoover-Dempsey & Sandler, 1997).

Evidence for child-generated invitations influencing parent involvement appears in some research. For example, Dauber and Epstein (1993) reported that parents of younger children tend to have greater involvement as opposed to older children. They suggested that the decline in involvement is often associated with the changes in the level of academic work required across the span of school years, and with changes in parents' beliefs about their ability to help when their children are having problems. Moreover, parents may distance themselves from their adolescent's school affairs in response to the child's bid for autonomy (Ritter, et al., 1993).

Besides age, a child's overall level of performance may also influence parents' decisions about involvement. However, the evidence is mixed. Dauber and Epstein (1993) reported that parents who have children with better academic performance have greater school-related involvement. Baker and Stevenson (1986), on the other hand, found that mothers of lower-performing young adolescents used more involvement strategies than mothers of higher-performing students. Hoover-Dempsey and Sandler (1997) proposed a possible explanation: parents of young children may be motivated

toward involvement in part by the prospect of improving and affirming positive performance, while parents with older children may be more motivated toward involvement if the adolescent's performance is poor.

Children's personal qualities also play an important role in parents' involvement decisions. For example, Eccles and Harold (1993) found that the degree of parent's fondness of their children was related to his/her educational involvement. In addition, parents who had children with slow-learning styles showed greater educational involvement than those with children who demanded a lot of themselves.

Across the elementary age span, it appears that children's development levels, performance and personal qualities function as important influences on parental decisions about involvement.

Parental perceived invitation for involvement from school

Epstein's (1993, 1997, 2002) program of research (family-school partnership, see www.schoolpartnerships.org) has long focused on the potential power of school and teacher invitations for involvement. They have consistently produced evidence that patterns of teachers' attitudes and invitations are important to many parents' decisions about participation in children's schooling. In one survey of parents of elementary school children, Epstein (1986) compared teachers who engaged in many parent

involvement activities (high-involvement teachers) with teachers who engaged in few such activities (low-involvement teachers); teachers were matched for experience, grade level, student achievement, and average parental education. She found that parents with high-involvement teachers were more positive about school and more aware of teachers' interest in their involvement than were parents with low-involvement teachers. Using related research findings, Epstein then developed a model of six types of family-school partnerships (Connors & Epstein, 1995). Her model proposed ways for schools and teachers to take leadership to involve families. Following this line of practice, she further found that when schools take the responsibility to involve parents, parents learn more about the schools' programs and goals, become more effective influencers and supporters of their children's learning, and are more willing to participate in their children's education.

Similarly, Comer's work (1991) has suggested that school organizations oriented toward understanding students' families often experience success in increasing parents' involvement. Epstein and Dauber (1991) also reported that schools where teachers and parents reported strong feelings about parent involvement were also the ones with strong parent involvement programs and practices. Overall, various studies suggest that a school climate of invitations to involvement influences parents' understanding of

teachers' interest in parental help and support, parents' feelings of being needed and wanted in the educational process, and parents' knowledge about their children's schoolwork.

Parental social network

In addition to parental beliefs and perceived invitations for involvement, research showed that the social context in which families live predicts parent involvement.

Wasserman and Faust (1994) defined social networks as the set of social relationships and linkages one person has with other individuals. This context may be an important factor related to the role that parents take in their children's education.

According to Bronfenbrenner (1979), social networks act as channels of communication that helped people identify the human and material resources they need, as well as share and carry information or attitudes from one setting to another. Cochran (1990) suggested that social networks provided parents with emotional and instrumental support and affected parents' attitudes and behaviors.

Sheldon (2002) reported that the resources parents gain through their social networks contribute to their involvement in children's education. In a sample of 155 mothers with elementary school children, Sheldon (2002) found that network size

predicted involvement at home and at school. In addition to network size, the individuals with whom parents interacted were associated with the way parents were involved. The number of parents with children at the same school and with whom a parent interacted predicted parental involvement at school. In contrast, the number of other adults (e.g. relatives, educators, and/or parents with children at another school) with whom a parent speaks about her own child predicted parental involvement at home. Moreover, Sheldon reported that parents' perception of other parents' involvement also was as a predictor of their involvement.

Studies regarding social capital theory have suggested that parents' social network be viewed as social capital, for it's a resource that enhances children's education. Social networks help produce social capital to the extent that social relationships encourage the exchange of information, shape beliefs, and enforce norms of behaviors (Coleman, 1988, 1990; Morgan & Sorensen, 1999). In Lareau's (1987, 1989, 1996 with Shumar) series of studies regarding social class, family and school, she found that parents of elementary school students who maintained ties to teachers and other parents regularly gained access to and exchanged information about the school and schooling. Similarly, Useem (1992) reported that mothers of middle school children who were more integrated into a web of informal parent networks knew more about school tracking policies than isolated

mothers.

The above findings suggested that a sense of social pressure from other parents may influence some individuals to spend more time at their child's school. Having a network of other parents and adults with whom to discuss their child's education may reinforce parents' feeling that they should be involved in their children's education. The behavior of social network members may be associated with norms about becoming involved and helping at school.

Summary

Throughout the literature review, it is evident that there are different forms of parent involvement. A parent who chooses not to go to his/her child's school or have interactions with teachers is not necessarily un-involved in her children's education. Actually, this parent might choose to be involved in another domain of the child's education, such as at-home supervision, creating an academic-enriched home environment or supporting the value of education. Such behaviors also exert tremendous influence on children's school performance. Previous research using a unidimensional definition (such as school communication, volunteering or attending teacher-parent conferences) may overlook the "hidden" dimension of parent involvement. While studying parental involvement, a multidimensional definition is suggested.

It has been well established throughout the review that family status variables (e.g. income, education, ethnicity) are often related to parent involvement and in turn, to children's school success. However, it has been equally well established that family status variables do not explain fully parents' decisions to become involved in their children's education, nor do such variables explain the linkages between parents' involvement and child school outcomes. Status does not determine parents' thinking or actions related to their involvement in their children's schooling. They do not determine the values parents put on education, their interest in having their children succeed in school, or their aspirations for their children's achievement. Throughout the review, process variables (e.g. parental beliefs in what they should do and what they can do) are often found to be more powerful than status variables in predicting parental involvement and children's school outcomes.

The present study, thus, is based on the proposition that maternal beliefs mediate the effect of mothers' demographic characteristics on maternal involvement. Moreover, maternal beliefs, maternal perceived invitations for involvement, maternal social network, along with mother's school experiences, relationship with the child and depression level operate as direct influences on maternal school involvement. The research design and instrumentation used to test these ideas are discussed in the next chapter.

Chapter Three

Research Methodology

This chapter is divided into seven sections. First, information is provided about the sample, followed by the research design. Next, information regarding instruments is presented, followed by the pilot test of the instruments and the reliability analysis of the measures. The sixth section presents the data collection procedures. Finally, in the seventh section, the plan for the data analysis is provided.

Sample

The sample for this study was selected from mothers residing in Kaohsiung, Taiwan. Kaohsiung is the second largest city in Taiwan with a population of approximately 1.5 million. Because the literature review suggested that parents' involvement declined along with children's age, this study only included parents with second-grade children as target participants. These parents are likely to be among those with the highest participation rate, and after one year of experience in their children's schools they should be capable of answering the questionnaires regarding their school involvement.

The majority of elementary schools in Kaohsiung are public schools. There are 86

public schools with a total of 119,840 students and only three private elementary schools with 1,100 students in total. Cluster random sampling was used. There are 11 districts in Kaohsiung. To obtain a diverse and representative sample of the second graders' mothers in Kaohsiung, the investigator randomly picked one school in each district. After being turned down by two schools, the investigator finally received permission from 11 schools from different districts to conduct this research. Four second-grade classrooms were randomly picked in each participating school, with only two exceptions -- one school had only two second grade classrooms, and the other school had only three.

There were 41 classrooms involved in this study. With the assistance of classroom teachers, 1,375 questionnaires were distributed to the mothers. The return rate was high (91.2%) – with 1253 questionnaires being returned. However, there were four blank questionnaires found and seven questionnaires with only the first page completed (29 items). After deleting these 11 cases, the total number of subjects used in the analysis was 1242 (90.3% of those invited to participate).

Research Design

The design of this study is non-experimental and the associations among the variables of interest were examined with data collected at one point in time. The unit of

analysis was the mothers with second-grade children and the investigator collected the data.

The mothers who were willing to participate in the study were given written measures through teachers: a demographic information questionnaire and instruments created to measure mother's educational involvement, involvement beliefs, perceived invitations for involvement, school experiences, mother-child relationship, maternal depression level and parental social networks. All measures were translated into Chinese by the investigator and then translated by another individual back into English to ensure proper translation. More information on the instruments will be provided in the next section.

Instrumentation

There were eight instruments used in this study. They include: the Maternal Involvement Beliefs questionnaire, Maternal Perceived Invitations for Involvement questionnaire, Maternal School Experiences questionnaire, Mother-Child relationship questionnaire, Maternal Social Network Scale, Mother's Depression Scale, Maternal Educational Involvement questionnaire and Demographic Information questionnaire. Copies of the instruments are provided in Appendix I.

Maternal Involvement Beliefs Questionnaire

The maternal involvement beliefs scale has 16 items with responses given in a Likert scale format. Mothers' beliefs towards children's educational involvement were examined through this set of questions; this scale is further divided into two parts—maternal role construction and maternal efficacy for helping children succeed in school.

Maternal role construction. The 8 items for the Parent Role Construction Scale were selected from Hoover-Dempsey et al.'s 10-item scale (last revised edition, 2003) to assess parents' views on their roles in their children's education. The items were selected because they were judged to be the most culturally appropriate for a study in Taiwan. Participants responded to the following prompt: "Parents have many different beliefs about their level of responsibility in their children's education. Please respond to the following statements by indicating the degree to which you believe you are responsible for the following." Sample statements are: "Volunteer at the school", "Communicate with my child's teacher regularly", and "Stay on top of things at school." The scale employs a 6-point Likert-type response format (i.e., Disagree very strongly = 1, Disagree = 2, Disagree just a little = 3, Agree just a little = 4, Agree = 5, Agree very strongly = 6). A total score was computed by computing the mean score of the 8 items with a possible

range from 1 to 6. Higher scores indicate that the parent believes that her role as parent includes involvement in her child's education; lower scores indicate a lower sense of personal responsibility for involvement in the child's education.

Maternal efficacy for helping children succeed in school. The 8 items for the Parent Efficacy for Helping Child Succeed in School Scale were picked from Hoover-Dempsey et al.'s 12-item scale (last revised, 2003) to assess the degree to which parents believe that they can help their children succeed in school. The items were selected because they were judged to be the most culturally appropriate for a study in Taiwan. The following instruction is given before the 12 statements: "Please indicate how much you AGREE or DISAGREE with each of the following statements." Sample statements are: "I know how to help my child do well in school", and "I make a significant difference in my child's school performance". The responses range from *agree very strongly* (6) to *disagree very strongly* (1). Higher scores indicate a stronger sense of efficacy in helping children succeed in school.

Maternal Perceived Invitations for Involvement Questionnaire

The investigator created this questionnaire based on a careful literature review on parental school involvement. To distinguish the impact of invitations from school and from children, this questionnaire is divided into two parts—maternal perceived

invitations from school and maternal perceived invitations from their children.

Maternal perceived invitations from school. There are eight statements in the set with 6-point Likert scale responses provided for each item. Sample questions are: “I feel welcomed in my child’s school”, “I feel comfortable meeting with the teacher when I have a concern about his/her teaching practice.” The responses range from *agree very strongly* (6) to *disagree very strongly* (1). A total score was created by computing the mean of the eight items. Higher scores indicate that mothers perceive stronger invitations for their involvement from the school.

Maternal perceived invitations from their children. There are five statements in the set with 6-point Likert scale responses provided for each item. Sample questions are: “My child wants me to participate in his/her school activities”, “My child usually asks me to check his/her homework.” The responses range from *agree very strongly* (6) to *disagree very strongly* (1). A total score was created by computing the mean of the five items. Higher scores indicate that mothers perceive stronger invitations for their involvement from their children.

Maternal School Experiences Questionnaire

Mother’s school experiences scale has 10 items written in semantic differential format. There are two subscales: (1) Mother’s own school experiences, and (2)

Mother's experiences with her child's school. The following instruction is given before the 10 statements: "Please mark the number on each line below that best describes your feeling." Sample items are: "My school – disliked 1 2 3 4 5 6 liked", "My teachers – were mean 1 2 3 4 5 6 were mean", "My child's teacher – ignored me 1 2 3 4 5 6 welcomed me", and "My experience with my child's school – bad 1 2 3 4 5 6 good". The possible responses range from 1 to 6 with a higher score indicating a more positive perceived school experience. Total scores were created by computing the mean of the items in each subscale.

Mother-Child Relationship Questionnaire

The investigator created this questionnaire. There are four semantic differential items in the scale asking the mothers about how they perceive their child's temperament, their child's performance, their expectation for the child, and their overall relationship with the child. The items are: "My child's temperament is – difficult 1 2 3 4 5 6 easy"; "My child's school performance – disappoints me 1 2 3 4 5 6 satisfied me"; "My expectation toward my child's achievement is – below average 1 2 3 4 5 6 above average"; and "My overall relationship with my child is – bad 1 2 3 4 5 6 good". A total score was created by computing the mean of these items. Higher scores indicate a more positive mother-child relationship.

Maternal Social Network Scale

The social network scale was created to examine the degree to which the participating mothers perceive that parents in their social network are involved in their children's education. The investigator created this scale. There are six questions in the set: "How many parents do you know who you discuss your children's education or school matters with?" "How many parents in your child's class/school do you discuss your children's education or school matters with?" "What percentage of your friends attends school activities?" "What percentage of the parents in your child's class attends school activities?" "What percentage of your friends check their child's homework or do test preparation with their child?" "What percentage of your friends is highly involved at school (e.g. volunteer at school, serve on an advisory committee, plan parties or other social activities at school)?" The responses were coded from 1 to 5, with the higher score indicating greater network involvement in school and learning activities. A total score was created by computing the mean of these items.

Mother's Depression Scale

Maternal depression was assessed with a set of seven questions adapted from a widely used 20-item depression inventory which was developed by Radloff (1977).

Sample items are: "I felt that I was just as good as other people", "I thought my life has

been a failure”, “I enjoy life”, and “I felt that people disliked me”. Each item is scored on a 4-point scale in terms of frequency of occurrence during the previous week with a higher score indicating the higher occurrence. The items are averaged to produce a mean score ranging from 1 to 4. Higher scores indicate higher levels of depression.

Maternal Involvement Questionnaire

The questionnaires are based on a careful review of the literature and are mainly adapted from Epstein’s (1993) “school and family partnership questionnaire” and Wu’s (2003) “Taiwanese mothers’ school involvement questionnaire.” Epstein’s “school and family partnership questionnaire” was originally created to produce a profile of where a school is starting from in its connections with families from the perspectives of teachers and parents. There were two parts to her questionnaire: Teacher questionnaires and Parent questionnaires. The parent questionnaires ask about general attitudes about the school, how parents are currently involved, how the school asks for or guides their involvement, and the partnership programs parents would like to see developed or improved. The current study picked items regarding parental involvement from this questionnaire, then compared them with the items used in Wu’s (2003) “Taiwanese mothers’ school involvement questionnaire”, and finally came up with the measure for the current study by combining content from both measures. The maternal involvement

scale has 34 items with responses given on a Likert scale format. Questions are asked regarding mothers' various forms of involvement in their children's education, which includes home-based, school-based and school governance/advocacy involvement.

Home-based involvement. Home-based involvement refers to the mother-child interactions involving the active promotion of a learning environment at home.

Eighteen items are included in this subscale. Sample questions are: "How often do you read to your child?" "How often do you check to see that your child has done his/her homework?" "How often do you take your child to a library or bookstore?" Responses range from everyday (4) to never (0). A total score was created by computing the mean of these items. Higher scores indicate greater home-based involvement.

School-based involvement. School-based involvement refers to mothers' volunteering or participating in their children's school. Nine items are included in this subscale. Sample questions are: "How often have you visited your child's classroom the previous school year?" "How often have you talked to your child's teacher on the phone the previous year?" "How often have you attended special events at school?"

Responses range from several times per week (4) to never (0). A total score was created by computing the mean of these items. Higher scores indicate greater school-based involvement.

School governance/advocacy involvement. This type of involvement refers to mothers' actions related to school improvement or school decision-making processes. Eight items are included in this subscale. Seven of them are Likert-scale items. Sample questions are: "When I have a concern regarding my child's classroom curriculum, I speak personally or write to my child's teacher," and "I keep myself aware of the trends in educational reform." Responses range from always (4) to never (0). There is one yes-or-no question asking the mother whether or not she sits on the school advisory board. The response will be coded as either 4 (yes) or 0 (no). Total scores were created by computing the mean of these items and higher scores indicate greater school governance/advocacy involvement.

Demographic Information Questionnaire

The participant mothers were asked to provide information regarding their age, educational level, employment status, number of children, maternal relationship status and family income. Responses were provided following each question and the mothers chose one answer that applies to their situations.

Pilot Test of the instruments

Due to the fact that school involvement literature in Taiwan is still limited, the

instruments used in the current study were mainly developed from the Western literature. To ensure the appropriateness of the instrument and to test the return rate, several pilot procedures were done. First, an English teacher in Taiwan translated the Chinese version of the questionnaire back to English. The result was satisfying with only a few minor modifications. Second, the questionnaires were distributed to nine mothers of second graders and six professionals who teach at the college level. The feedback from the mothers was mainly about the wording, the time spent and the difficulties encountered in answering the questionnaire. The professionals gave insights about the items themselves, including the actual situations in Taiwan, the concerns regarding cultural differences, the format and the wording of the items. Combining the feedbacks from the two groups, the questionnaire was modified to form a 100-item questionnaire (Appendix I).

Third, the questionnaires were distributed to mothers through two second grade classrooms. The purpose of this procedure was to test the return rate in Taiwan using the proposed method – distributing the questionnaires through classroom teachers, having mothers fill out the questionnaires and returning it to the pre-arranged boxes in the classrooms. The result was extremely satisfying; 69 mothers out of 75 returned the questionnaires.

Reliability analysis of the instrument

Because there are multiple items in the measures created by the investigator or adapted from various other measures, it was necessary to check their internal consistency with the Taiwanese sample used in this study. The internal consistency was computed using Cronbach's alpha. The following criteria were used to determine whether or not to retain or delete an item from a scale. If the alpha was larger than .7 and there was no specific item that had an extremely low corrected item-total correlation, all items were kept in the measure. If the alpha coefficient was less than .7, the investigator examined what the alpha would be if an item was deleted from the scale; if an item lowered the alpha, it was deleted from the scale. Using this criterion, three items were deleted (Table 1).

Table 1 The items deleted from the scales

Subscale	Deleted item
Maternal Perceived Invitation from School	#24. It is an honor in my child's school to sit on the school advisory board.
Maternal Perceived Invitation from Child	#28. My child <u>seldom</u> shares with me his/her school related matters (e.g. friends, teachers, events). (r)
Maternal School Governance/Advocacy Involvement	#90. I sit on the school advisory board. <input type="checkbox"/> Yes <input type="checkbox"/> No

After deleting these three items, most of the scales had an acceptable level of internal consistency. Table 2 shows the alpha coefficients for the various scales.

Table 2 Internal Consistency of the scales Using Cronbach's Alpha

Maternal role construction belief	.76
Maternal efficacy for helping children succeed in school	.76
Mother's perceived invitations from school	.68
Mother's perceived invitations from the child	.62
Mother's own school experience	.88
Mother's experience with the child's school	.88
Mother-child relationship	.75
Maternal social network	.74
Maternal Depression (CESD)	.77
Mother's home-based involvement	.85
Mother's school-based involvement	.84
Mother's governance/advocacy involvement	.77

Data Collection Procedure

Due to the fact that this study involves human subjects, an approval from the University Committee on Research Involving Human Subject (UCRIHS) was required. The UCRIHS approval letter is provided in Appendix II.

In the hope of getting a high response rate, the investigator carefully orchestrated the data collection procedures. The investigator was referred to each participating school's principal by a senior principal who is from the investigator's social network. On the

first visit to the school, the investigator presented the study thoroughly to the principal and other administrative staff. After the presentation, four 2nd-grade classrooms were randomly picked to participate. It was then left to the schools to inform the chosen classroom teachers and ask for the teachers' voluntary participation. On the second visit, the investigator presented the project and the distribution procedures to the teachers of the participating classrooms. There were opportunities for the investigator to communicate face-to-face with the teachers, answer questions and exchange thoughts on parental involvement in Taiwan.

After thorough communication with the teachers, teachers agreed to encourage mothers' participations in this project. On the day the questionnaires were distributed to parents, a reminder note was put in the home-school communication journal along with the questionnaire packet. The packet included a self-administrated questionnaire, a consent form, and a self-sealed envelope. The consent form informed the parents about the purpose of the study, and provided information regarding the parents' rights as participants. The mothers who agreed to participate in the study completed the questionnaire, put it in the envelope and returned it to the teachers. The mothers were not asked to return the written consent forms in order to reassure them that teachers were not able to identify their responses. A copy of consent letter is provided in Appendix III.

To increase the rate of participation, the researcher coded the questionnaires before distribution. This enabled the investigator to keep track of those parents who did not return the questionnaire the first time. It was planned at the beginning of distribution that a reminder letter along with a blank questionnaire would be sent out to those parents who did not respond initially. However, the response rate was extremely high (91.2%). The investigator did not need to send out reminder letters.

Data Analysis

The analyses involved four major parts: descriptive statistics, correlations, multiple regression and path analysis. The first step involved computing descriptive statistics, which were used to determine the distributional characteristics of each variable. This enabled the investigator to get detailed information about the sample, to learn general facts regarding the predictor variables, as well as to identify the various patterns of maternal involvement.

Zero-order correlations among variables were the next to be calculated. Zero-order correlations were calculated to determine the extent of associations among the predictor variables (i.e. maternal beliefs, maternal perceived invitations, maternal school experiences, mother-child relationship, maternal social network, and mother's depression

level) and the outcome variables (maternal school involvement, and each of its subscales).

Next, multiple regression analyses were conducted to determine which of the predictor variables were related to maternal educational involvement. This regression analysis served as a preliminary analysis and enabled the researcher to delete the unrelated variables from the path analysis. Finally, path analysis was used to analyze the relationships among variables and to determine which of the predictor variables have a direct or an indirect effect on the maternal involvement measures: home-based, school-based and school governance/advocacy involvement.

The following chart summarized the data analyses used in the study:

Research questions (Q)	Method used
Q1, Q2 - Q7 (first part of each question)	Descriptive statistics
Q2 - Q7 (second part of each question)	Correlation
Q8	Multiple regression Path analysis

Chapter Four

Results of Data Analysis

In this chapter, the results of the data are reported. First, characteristics of the sample and the descriptive data are reported, followed by the bivariate analyses. Next the results from some preliminary regression analyses are reported. Finally, a path analysis for each aspect of maternal educational involvement assessed in this study is presented.

Demographic Characteristics of the Sample

In this sample, there are 627 male and 615 female students. The normal age for a second grader in Taiwan is 7 - 8 years old. The age of the respondents' mothers ranged from 22 to 52 years with a mean age of 36.6 years. The majority of the mothers completed a high school education (56.4%), followed by two-year college graduates (18.9%), primary school (13.6), university graduate (9.3%) and graduate school or above (1.8%). Ninety- one percent of the mothers were in their first marriage, and 6.6% were separated, divorced or widowed; only 0.7% of mothers were remarried, 0.7% were single, and 0.7% were in a committed-live-in relationship. When asked about their

employment status, 31% of the mothers reported that they were a homemaker, 8.3% worked less than 20 hours per week, 7.2% worked 21-39 hours per week, and 52.1% were working full time. Forty-nine percent of the mothers had two children, 27% had three children and 18% had only one child. Approximately six percent (6.1%) of the respondents had four or more children.

Descriptive statistics for the variables in the analyses and dealing with missing data

In this section, descriptive statistics for the mothers' role construction belief, mothers' sense of efficacy, perceived invitations from the school as well as from the child, mothers' relationship with the child, mothers' own school experience as well as their experience with the child's school, mothers' CESD score, and mothers' social network will be examined.

There were a few missing items in some cases. To better represent the population, the investigator made efforts to include as many cases in the analyses as possible. Therefore, for each scale, a subject would be included in the analysis as long as the subject answered more than half of the questions in that scale. For each participant, the mean of the items to which they responded on each scale was used as the total score for that measure. Using this criterion, the investigator was able to include around 1,200

cases in the analyses (with the most being 1,239 and the least 1,212). A summary of the descriptive statistics can be found in Table 3.

Table 3 Descriptive data for each variable

Variable	# of items	Valid N	Missing	Min.	Max.	Mean	SD
Role Construction (Possible mean score range: 1-6)	8	1239	3	2	6	4.63	0.56
Sense of Efficacy (Possible mean score range: 1-6)	8	1231	11	1	6	3.96	0.72
Perceived Invitation from school (Possible mean score range: 1-6)	7	1219	23	1.71	6	4.34	0.64
Perceived Invitation from child (Possible mean score range: 1-6)	4	1232	10	2	6	4.84	0.66
Mother's Own School Experience (Possible mean score range: 1-6)	5	1216	26	1	6	4.63	0.92
Mother's Exp. with child's School (Possible mean score range: 1-6)	5	1220	22	1	6	4.98	0.82
Mother's Relationship with Child (Possible mean score range: 1-6)	4	1214	28	1	6	5.02	0.71
Maternal Social Network (Possible mean score range: 1-5)	6	1226	16	1	5	2.87	0.70
Mother's CESD score (Possible mean score range: 1-4)	7	1212	30	1	4	1.81	0.49
Mother's Home-based Involvement (Possible mean score range: 1-5)	19	1232	10	1.21	5	3.71	0.54
Mother's School-based Involvement (Possible mean score range: 1-5)	7	1231	11	1	5	2.11	0.73
Mother's School Governance/Advocacy (Possible mean score range: 1-5)	7	1227	15	1	5	2.48	0.75

Each variable is described in greater detail in the following section.

Predictor Variables

Maternal beliefs about educational involvement

Maternal beliefs about educational involvement were divided into role construction and efficacy in the original proposal. The correlation between these two variables was low ($r = .096$, $p < .01$), thus the decision was made to treat these two measures as separate variables.

On the maternal role construction measures, mothers had a mean score of 4.63 on the 6-point scale (possible range was 1-6) indicating that mothers agreed with the maternal roles assessed in this study to some degree. Among the items assessed, mothers highly agreed that it is mother's responsibility to talk with the child about the school day (mean=5.41), communicate with the child's teacher regularly (mean=5.19), and help the child with homework (mean=4.99). The lowest mean scores were for sitting on the School Advisory Board (mean=3.45) and volunteering at the school (mean=4.00).

On the maternal efficacy measures, mothers had a mean score of 3.96 on the 6-point scale indicating that mothers, on average, slightly agreed that they could help their child succeed in the school. Among the items assessed, the item with the highest mean score was, "If I try hard, I can get through to my child, even when he/she has

difficulty understanding something,” (mean=4.64) and the item with the second highest mean score was, “I feel successful about my efforts to help my child learn” (mean=4.58). There is also one other noteworthy statistic -- the mean for the item, “Other children have more influence on my child’s motivation to do well in school than I do” was 4.38 with more than 52% of the mothers coded as 5 or 6 (i.e. agree or strongly agree). The original measurement developer, Hoover-Dempsey (2004), claimed that the more efficacious the mother is, the more she would believe in her ability to influence her children. However, over 80% of the mothers believed that other children have more influence on their children than the mothers themselves do. This phenomenon will be discussed further in the next chapter.

Maternal Perceived Invitation for Involvement

The concept of maternal perceived invitation for involvement was divided into two subscales – perceived invitation from the school and perceived invitation from the child. On the perceived invitation from the school measure, mothers had a mean score of 4.34 on the 6-point scale indicating that, to some degree, mothers perceived a welcoming climate for their involvement from the school. Among the items assessed, “My child’s teacher usually encourages me to help my child with homework or upcoming tests” (mean = 4.89) stood out with nearly 94% of the mothers agreeing with this

statement. “I receive encouragement from the school to attend parent-learning programs prepared by the school” (mean = 4.67), “I feel that my child’s teacher welcomes my assistance in classroom or school-wide activities” (mean = 4.65) and “I feel welcomed in my child’s school” (mean = 4.61) were other statements that most mothers agreed with. Nearly 90% of mothers agreed with all three of these statements. Meeting school authorities was rated as the least comfortable thing to do in the school. Forty-seven percent of the mothers agreed with the statement, “I don’t feel comfortable meeting with school authorities about my concerns regarding school.”

Perceived invitation from the child had a mean score of 4.84 on the 6-point scale. When there were difficulties regarding homework, nearly 98% of the mothers reported that their child would seek help from them. In comparison with this high rate, only 77% of the mothers agreed that their child would want them to help out at the school.

Mother’s School Experiences

There were two subscales measuring the concept of maternal school experiences – mother’s own school experience and mother’s experience with the child’s school. The mean for mother’s own school experience was 4.63 on a 6-point scale indicating that Taiwanese mothers’ own school experiences were more towards the positive end.

Among the item assessed, “feeling towards my own teachers” had the highest mean score (4.77).

Mother’s experiences with the child’s school were generally positive, with a mean score of 4.98 for the total measure. Similar to their own school experiences, the mothers responded most positively to the item assessing their feelings towards the child’s teachers (mean = 5.28).

Maternal Relationship with the child

Among all the independent variables, the maternal relationship with the child scale had the highest overall mean score, with a mean of 5.02. The mothers responded to items about their relationship with their child on a 6-point Likert scale with higher numbers indicating more positive feelings. Looking at the distribution, over 90% of the mothers selected a response of three or higher on each item assessed. Moreover, when looking at the highest two points (i.e. responses of 5 and 6), 70% of the mothers rated their child’s temperament as easy; 67% rated their child’s school performance as satisfying; 72% reported that their expectation towards child’s achievement was above average. In addition, 91% of the mothers rated their overall relationship with their child as a 5 or 6 on the 6-point scale.

Maternal Social Network

The social network referred to the degree to which the participating mothers perceive that parents in their social network were involved in their children's education. There were six items in the scale, each ranging from 1 to 5 with the higher score indicating greater network involvement in school and learning activities. The mean for the social network measure was 2.87 indicating that Taiwanese mothers perceived a low to moderate level of school involvement among members of their social networks.

When asked about members of their network with whom they could discuss education issues, 13% of the mothers reported that there was no one. An even larger percentage (23%) of mothers reported that there were no parents of their child's schoolmates with whom they could discuss education issues. Thirty percent of mothers reported that they had at least 5 people with whom they could discuss education issues, while only 16% of them reported that they could find at least 5 parents in their child's school to discuss their education concerns with.

When asked about attendance at school activities, 23.7% of the mothers reported that over half of their child's classmates' parents would attend school events, while 26% of them reported that half of their own friends would do so. However, when asked about test preparations or providing help with homework, 62.7% of mothers reported that

over half of their friends would do so.

Regarding the percentage of friends who were highly involved at the child's school, only 16.6% of the mothers said that over half of their friends were highly involved parents.

Maternal Depression Level

Seven items were adapted from Radloff's (1977) CESD scale to create the measure for the current study. Each item was scored from 1 to 4 with a higher score indicating a higher level of depression. The mean score for this measure was low (mean = 1.81) indicating that most mothers had low levels of depressive symptoms. However, one observation is noteworthy – this subscale had the highest non-response rate in the study. Items in this measure had 28 to 61 non-responses compared to 10 to 20 non-responses for items from other scales.

Outcome Variables

Home-Based Involvement

Nineteen items were used to assess the mother's involvement in the active promotion of a learning environment at home. The most frequent activity engaged in by Taiwanese mothers was "check and sign the daily home-school communication journal"

with 92% of them checking a response of 4 (several times per week) or 5 (everyday).

Using the same criterion (counting those coded as 4 or 5), the next four most frequent activities were: “keep a regular morning and bedtime schedule during weekdays” (90%), “check to see if the child has done his homework” (90%), “make sure the child is on time for school” (89%), and “make sure that child has breakfast before attending school” (85%). Mothers engaged in the above activities almost on a daily basis.

The activities engaged in less frequently by mothers (counting those coded as 1-never or 2-less than one time per week) included: “take child to library or bookstore” (63.6%), “take child to special places or events in the community” (62.5%), “read to your child” (54.2%), “listen to your child read” (44.7%), and “take your child to extracurricular activities” (41.3%).

The following table (Table 4) provides a clearer picture of Taiwanese mothers’ home-based involvement patterns.

Table 4 Taiwanese mothers' home-based involvement patterns

Frequent activities (On a daily basis)	<ul style="list-style-type: none">• Check and sign the daily home-school communication journal• Keep a regular morning and bedtime schedule during weekdays• Check to see if the child has done his homework• Make sure the child is on time for school• Make sure that child has breakfast before attending school
Moderately frequent activities (At least 1-2 times per week)	<ul style="list-style-type: none">• Talk to your child about school• Review and discuss the work your child brings home• Tell your child how important the school is• Limit the time that your child plays video games• Tell your child how important the academic achievement is• Supervise your child's TV viewing• Help your child plan time for homework or other chores• Practice writing, math or other skills before tests
Least frequent activities (Less than 1 time per week or never)	<ul style="list-style-type: none">• Take your child to extracurricular activities• Listen to your child read• Read to your child• Take child to library or bookstore

School-based involvement

School-based involvement was assessed with a 7-item scale with possible responses coded from 1 (never) to 5 (several times per week). The mean score was 2.11 (SD = 0.73) with a response of 2 indicating 1-2 times per semester. Given the nature of these activities (e.g., going on a class trip), a modest mean score was expected. “Visit the child’s classroom”(mean=2.86) and “talk with the child’s teacher at school” (mean=2.51) were the items with the highest mean scores. “Go on a class trip with child” (mean=1.57) and “help with class or school events”(1.70) were the items with the lowest mean scores. Most notably, 60% of the mothers reported that they never helped with class or school events, and 63% of the mothers reported that they never went on a field trip with their child.

School governance/advocacy involvement

Seven items were used to assess mother’s actions related to school improvement or school decision-making processes. The mean score was 2.48 (SD=0.75). Looking at the individual items, “Speak personally or write to the child’s teacher when there was concerns” (mean = 3.27), “keep self aware of the trends in educational reform”(mean = 3.24), and “read the school advisory board’s meeting reports carefully”(mean=3.17) were the three activities engaged in most frequently by the mothers. Mothers were least

likely to “speak/write to the school advisory board members” (mean = 1.62) and “speak/write to the principal or related school authorities” (mean= 1.88). Overall, 61% of the mothers reported that they had never spoken or written to school advisory board members, and 49% of them never contacted the principal or related school authorities.

Correlations Among Variables

Pearson correlation matrices were created to determine the relationship among the predictor variables (Table 5), outcome variables (Table 6), the relationship between the demographic variables and predictor variables (Table 7), the relationship between the demographic variables and outcome variables (Table 8), and the relationship between the predictor variables and outcome variables (Table 9). Due to the large sample size, all of the correlations were statistically significant except one pair (maternal CESD and School-based involvement). Using Cohen’s (1988) interpretation of the magnitude of a correlation, a correlation greater than .5 is considered large, a correlation that ranges from .5 to .3 is considered moderate and a correlation of .3 to .1 is considered small. Most correlations among the variables in this study were small to moderate in magnitude.

Table 5 Pearson Correlation Matrix of Predictor Variables

	Role Construction	Efficacy	Perceived Invitation from School	Perceived Invitation from Child	Maternal Own School Experience	Maternal Experience w/ Child's School	Mother-Child Relationship	Social Network	Depression
Role Construction	1								
Efficacy	.10*	1							
Perceived Invitation from School	.40***	.37***	1						
Perceived Invitation from Child	.46**	.25***	.42***	1					
Maternal Own School Experience	.17**	.11***	.21**	.14***	1				
Maternal Experience w/ Child's School	.32**	.11***	.44***	.25***	.47**	1			
Mother-Child Relationship	.17**	.28**	.18***	.30***	.31***	.41**	1		
Social Network	.20*	.28***	.32***	.31**	.18**	.21***	.17***	1	
Depression	.09**	.39***	.25***	.17***	.27***	.23**	.28**	.27***	1

Correlation is significant at the .05 level*(two-tailed); at the .01 level** (two-tailed); at the .001 level*** (two-tailed)

Table 6 Pearson Correlation Matrix of Outcome Variables

	Home-based involvement	School-based involvement	School governance/advocacy involvement
Home-based involvement	1		
School-based involvement	.35***	1	
School governance/advocacy involvement	.35***	.47**	1

Correlation is significant at the .05 level*(two-tailed); at the .01 level** (two-tailed); at the .001 level*** (two-tailed)

Table 7 Pearson Correlation Matrix between Demographic and Predictor Variables

	Role Construction	Efficacy	Perceived Invitation from School	Perceived Invitation from Child	Maternal Own School Experience	Maternal Experience w/ Child's School	Mother-Child Relationship	Social Network	Depression
Age	-.01	.07*	.06*	.07*	.06*	.10	.14*	.09*	.05
Educational Level	-.01	.31**	.07*	.11*	-.01	-.05	.01	.21*	.12**
Marital Status	.03	.06	.03	.08*	-.03	-.02	.07*	.13*	.05
Employment Status	-.08*	.07	-.003	-.04	-.01	-.10	-.03	.01	.07*
Family Income	.02	.25**	.14*	.12*	-.001	.05	.08**	.22*	.14**

Correlation is significant at the .05 level*(two-tailed); at the .01 level** (two-tailed); at the .001 level*** (two-tailed)

Table 8 Pearson Correlation Matrix between Demographic and Outcome Variables

	Home-based involvement	School-based involvement	School governance/advocacy involvement
Age	.05	.03	.08**
Educational Level	.05	.08**	.11**
Marital Status	.13*	.06	.09*
Employment Status	-.11**	-.19*	-.02
Family Income	.06*	.06*	.10**

Correlation is significant at the .05 level*(two-tailed); at the .01 level** (two-tailed); at the .001 level*** (two-tailed)

Table 9 Pearson Correlation Matrix between Predictor and Outcome Variables

	Home-based involvement	School-based involvement	School governance/advocacy involvement
Role Construction	.270***	.250***	.248***
Efficacy	.206***	.124***	.223***
Perceived Invitation from School	.194***	.189***	.253***
Perceived Invitation from Child	.327***	.249***	.237***
Maternal Own School Experience	.171***	.084**	.104***
Maternal Experience w/ Child's School	.164***	.176***	.150***
Mother-Child Relationship	.278***	.080**	.119***
Social Network	.248***	.291***	.300***
Depression	.176***	.038	.099**

Correlation is significant at the .05 level*(two-tailed); at the .01 level** (two-tailed); at the .001 level*** (two-tailed)

Correlations among the predictor variables

Maternal role construction was positively related to all other variables. Among them, three correlations were considered moderate; the mothers who perceived stronger responsibilities to be involved in their children's education also perceived a greater invitation from child's school (.40), from their own child (.46), and had a more positive experience with their child's school (.32).

Although positively and significantly related to all other variables, maternal efficacy only showed moderate correlations with the following two variables: perceived invitation from the child's school (.37) and maternal CESD (-.31). In other words, mothers who had higher confidence in their abilities to help their child succeed in school also perceived that their involvement was welcomed by the school and showed relatively few symptoms of depression.

Respondent mothers who perceived greater invitations from the child's school were not only more likely to have greater maternal role construction beliefs and efficacy, but also believed that their children encouraged their involvement in school (.42), had better experiences with the child's school (.44), and perceived greater educational involvement from members of their social networks (.32). Moreover, those who perceived greater invitations from their child tended to report better relationship with their child (.31) as

well as greater educational involvement among members of their social networks (.33).

Mothers who had better experiences with their own schools were more likely to have a satisfactory relationship with their child's school (.47) and a better relationship with their child (.31).

In regards to mothers' experiences with their child's school, it was found to be moderately correlated with maternal role beliefs (.32), perceived invitation from the child's school (.44), mother's own school experiences (.47), and the mother-child relationship (.41).

Correlations among outcome variables

The three outcome variables were found to be moderately correlated with each other. Mothers who reported greater home-based involvement tended to have greater school-based involvement ($r=.35$, $p<.001$) as well as greater school governance/advocacy involvement ($r=.35$, $p<.001$). In addition, mothers who were more involved in school-based activities also were found to be more involved in school governance/advocacy ($r=.47$, $p<.001$).

Correlations among demographic variables and other variables

Most of the correlations between the demographic variables and all other variables were very small. There was only one moderate correlation between the demographic

variable and all other variables. The mothers who had higher levels of education perceived higher efficacy in helping their child succeed in school ($r=.31$, $p<.001$).

Correlations between predictor variables and outcome variables

There were only two moderate correlations between the predictor and outcome variables. The mothers who perceived a greater invitation from the child were more likely to be involved in home-based activities ($r=.33$, $p<.001$). The mothers who perceived greater involvement from their social network members were more likely to participate in school governance/advocacy activities ($r=.30$, $p<.001$).

Although all the correlation coefficients except for one (Depression and School-based involvement $r=.04$) were significant, most of the coefficients were small in magnitude. Yet there were two noteworthy observations. First, maternal role construction, perceived invitation from the child, and maternal social network variables tended to have slightly higher correlations with the three outcome variables (i.e., home-based, school-based, and school governance/advocacy involvement) than the other predictor variables. Second, the correlations between maternal depression, mother's own school experience, mother's experience with the child's school and the outcome variables were all very small ($<.20$).

Multiple Regression Analysis

Multiple regression analyses were conducted to determine which of the predictor variables were related to maternal educational involvement. All the nine proposed predictor variables were regressed upon each outcome variable, and the results are presented in Table 10. Four variables were significant predictors of home-based involvement when the other predictors were controlled: maternal role construction, invitation from the child, the mother-child relationship, and the educational involvement level of the mother's social network. Three variables were associated with school-based involvement: maternal role construction, invitation from the child, and mother's social network. Similarly, there were three significant predictors of school governance/advocacy – maternal role construction, maternal efficacy, and maternal social network. Table 10 showed that perceived invitation from the school, maternal own school experiences, maternal experiences with the child's school, and maternal depression level were unrelated to all of the three outcome variables at the 99% confidence level. This regression analysis served as a preliminary analysis, and these four variables were excluded from the path analysis.

Table 10 Significant regression coefficients upon each outcome variables

	Home-based involvement (Standardized Beta)	School-based involvement (Standardized Beta)	School governance/advocacy involvement (Standardized Beta)
Role construction	.155***	.151***	.153***
Efficacy			.116***
Invitation from school			
Invitation from child	.165***	.100**	
Maternal own school experiences			
Maternal experience w/ the child's school			
Mother-child relationship	.156***		
Maternal social network	.126***	.234***	.199***
Mother's depression level			

Coefficient is significant at the .01 level**

Coefficient is significant at the .001 level***

Path Analysis

Having examined the results of the preliminary regression analyses, the results of the path analysis are examined next. The path analysis was done in a series of steps. First, all the demographic variables were entered as exogenous variables and the predictor variables as endogenous variables. Second, the outcome variables were entered one at a time as endogenous variables, while all demographic and predictor variables were entered as exogenous variables. Only respondents who had valid scores for all of the variables in the analysis were included in the path analysis. The number of cases included in the analysis was 1,047.

The demographic variable, number of children, was dropped from the path analysis based on preliminary bivariate analyses showing that the correlations between number of children and all three outcomes were less than .10. Predictor variables that were unrelated to all three outcomes in the preliminary regression analysis also were excluded from the analysis in order to trim the model. The variables excluded for this reason were: perceived invitations from the school, mother's own school experience, mother's experience with the child's school and mother's depression level (CESD).

The results of the path analysis are presented in Figure 2.

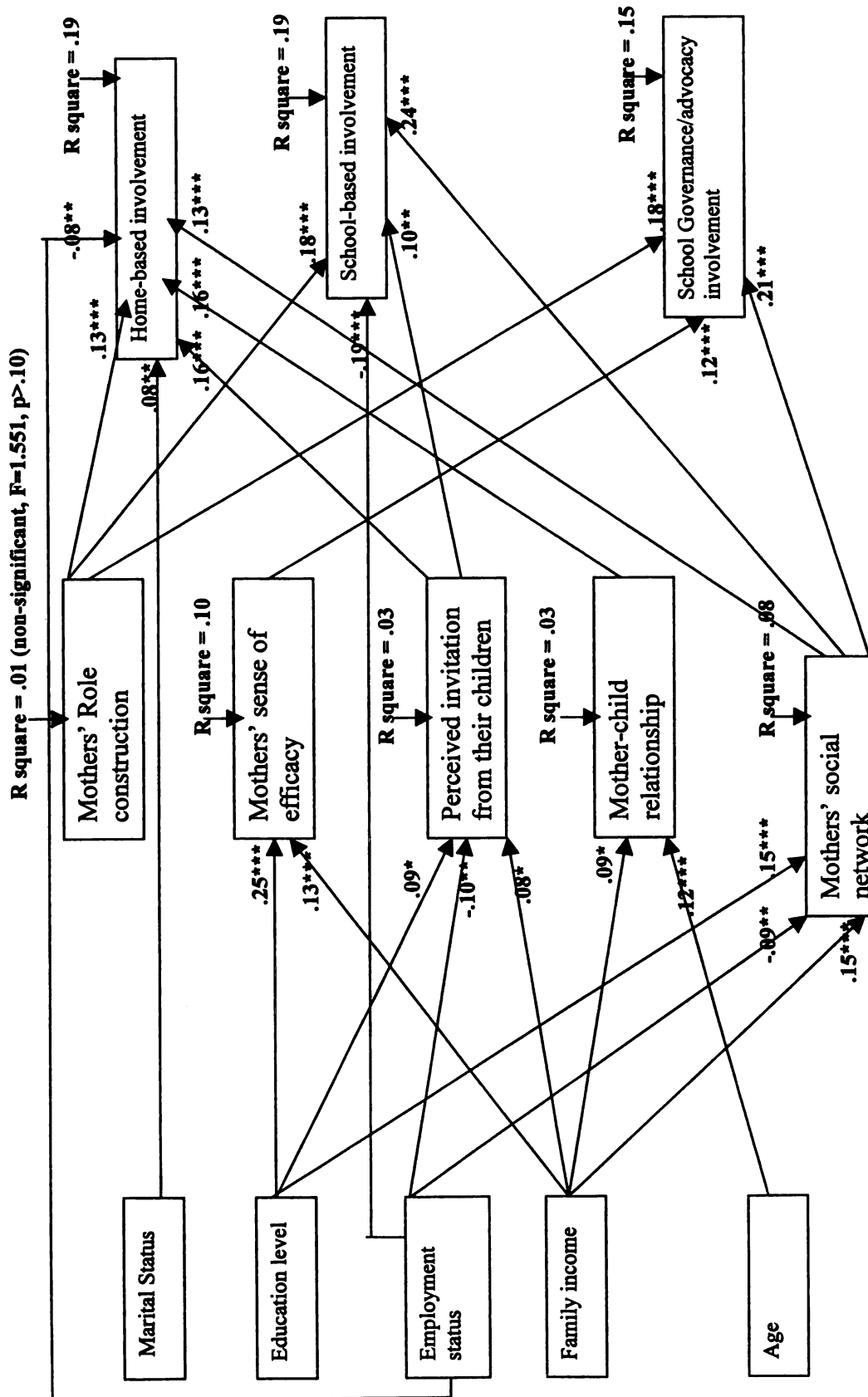


Figure 2 Result of path analysis with standardized beta coefficients (* $p<.05$; ** $p<.01$; *** $p<.001$)

Table 11 Significant path coefficients between background and mediator variables

	Role Construction	Efficacy	Invitation form the child	Motehr-Chil d relationship	Maternal social network
Marital status					
Education level		.25***	.09*		.15**
Employment status	-.09**		-.09**		-.09*
Family income		.13***	.08*	.09*	.15***
Mother's age				.12*	

Coefficient is significant at the .05 level*(two-tailed);
at the .01 level** (two-tailed);
at the .001 level*** (two-tailed)

Table 12 Significant path coefficients between background and outcome variables

	Home-based involvement	School-based involvement	School governance/advocacy involvement
Marital status	.08***		
Education level			
Employment status	-.08**	-.19***	
Family income			
Mother's age			

Coefficient is significant at the .05 level*(two-tailed);
at the .01 level** (two-tailed);
at the .001 level*** (two-tailed)

Table 13 Significant path coefficients between mediator and outcome variables

	Home-based involvement	School-based involvement	School governance/advocacy involvement
Role construction	.13***	.18***	.18**
Efficacy			.12**
Invitation from child	.16***	.10**	
Mother-child relationship	.16***		
Maternal social network	.13***	.24***	.21***

Coefficient is significant at the .05 level*(two-tailed);
at the .01 level** (two-tailed);
at the .001 level*** (two-tailed)

In the current study, five background variables (i.e., marital status, educational level, employment status, family income, and mother's age) and five mediators (i.e., role construction, efficacy, perceived invitation from child, mother-child relationship, and maternal social network involvement) were proposed to explain the variance in involvement activities. The significant path coefficients are summarized in Table 11, Table 12 and Table 13.

With respect to home-based involvement, the total variance explained by the path model (R square) was .19 with an F value for the overall model of 23.52 ($p < .001$). Marital status, employment status, maternal role construction, perceived invitation from child, mother-child relationship and maternal social networks significantly predicted home-based involvement. Mothers who were more involved in their children's education at home tend to be in a married relationship, not working full-time job, perceive enhancing children's education as one of their maternal responsibilities, perceive a positive mother-child relationship, and have greater network involvement in school and learning activities.

For school-based involvement variable, the total variance explained by the path model (R square) was .19 with an F value for the model of 24.01 ($p < .001$). Employment status, maternal role construction, perceived invitation from child, and

social networks significantly predicted school-based involvement. To be more specific, mothers who were not working full-time, who believed that their children wanted them to be involved in the school, who perceived a positive relationship with their child, and those who thought that their network members were involved in their children's education were more involved in school-based activities.

In regard to school governance/advocacy involvement, the total variance explained by the path model (R square) was .15 with an F value of 17.67 ($p < .001$). Maternal role construction, efficacy and social network significantly predicted school governance/advocacy involvement. In other words, mothers who were more involved in school governance/advocacy tended to believe that they should be responsible for enhancing children's education. These mothers also had greater perceived efficacy in helping children succeed in school. In addition, they perceived greater school involvement from their social network members.

Furthermore, the results of path analysis also showed predictive effects of demographic variables on some other variables. Maternal employment status has a direct effect on school and home-based involvement, and marital status had a direct effect on home-based involvement. The involvement of mother's social network members and mother's perceived invitations from their child were predicted by the same three

demographic variables: mother's education level, family income, and maternal employment status. Moreover, mother's education and family income also predicted mother's sense of efficacy; and family income and mother's age predicted mother-child relationship.

In the next chapter, a summary and interpretation of the results will be presented. In addition, the implications and limitations of this study will be discussed. Moreover, directions for future research are noted.

Chapter 5

Discussion and Conclusions

This chapter is divided into three parts. The first part presents a summary of the findings and a discussion of the findings. The second part presents the limitation of this study. The last part presents the implications of the findings and directions for future research.

Summary of the Findings and Discussions

In this first section, findings pertaining to the research questions are summarized and discussed. In addition, discussion of path analysis results, the picture of Taiwanese mothers' educational involvement and the cultural interpretation of these results are included at the end of this section.

Research Question 1:

How involved are Taiwanese mothers in their children's education? How involved are they in the following categories: home-based, school-based, and school governance/advocacy?

In general, Taiwanese mothers showed different degrees of educational involvement in the three areas: home-based involvement was high, involvement in school

governance/advocacy was modest, and school-based involvement was slightly lower.

This outcome is consistent with studies suggesting the multidimensional nature of parent involvement (Epstein & Salinas, 1993; Epstein, 1995; Epstein, Sanders, Simon, Salinas, Jansorn, & Van Voorhis, 2002; Grolnik & Slowiaczek, 1994). However, after looking closely at the involvement patterns, it was found that Taiwanese mothers were more engaged in “monitoring” types of home-based activities rather than “cognitive-enrichment” types of activities (Table 4). Mothers made sure that they signed the daily home-school journal, kept the bedtime and morning breakfast routine, and checked homework; however, they were less likely to read to their child, listen to their child read, or take their child to extracurricular activities or the bookstore/library.

With respect to school-based and school governance/advocacy involvement, the result was somewhat surprising, with the governance/advocacy involvement slightly greater than school-based involvement. There were numerous studies suggesting that school governance/advocacy involvement was the most rare type of parent involvement among American families (Christenson & Sheridan, 2001; Epstein, 1995, 1997; Epstein, et al., 2002; Mole, 1993). Do Taiwanese mothers differ from American parents?

Examining the findings more carefully, one pattern was noteworthy -- Taiwanese mothers actually were more engaged in the “passive” kind of governance. They engaged in

activities such as discussing issues with teachers, keeping themselves aware of the trends in educational reform and reading board meeting minutes. However, they did not exert their influences on school policies or the educational system by meeting people who have more authority such as the principal or school advisory board members. In other words, Taiwanese mothers seemed to define their school governance/advocacy involvement more as carefully monitoring the situation rather than intervening.

Along with this line of thinking, it is not surprising that mothers kept themselves aware of classroom activities – they would visit their child’s classroom or talk to the teacher at school. However, the more active involvement behaviors, such as helping with class events or going on a class trip, were rare among Taiwanese mothers. Nearly two-third of the mothers had never participated in those activities.

Research Question 2:

What are Taiwanese mother’s beliefs regarding parent involvement? Is there a relationship between maternal involvement beliefs and level of involvement?

This study investigated Taiwanese mothers’ role construction beliefs and their perceived efficacy in helping children succeed in school. The result showed that Taiwanese mothers viewed things directly relating to their child to be more of their responsibilities compared to circumstances that the child was embedded in that may not

have a direct effect on their child. To be more specific, Taiwanese mothers emphasized communicating with the child, the child's teacher and helping with homework; they assumed less responsibility for supporting the teacher's decisions or communicating with other parents from their child's school. In addition, their behavior suggested that they did not seem to care too much about volunteering at school or sitting on the advisory board. It seemed that mothers were more interested in helping their children to fit into the current educational system rather than trying to alter the system to fit their child's unique needs.

This phenomenon has much to do with Chinese culture. Unlike Western culture, which emphasizes individual differences, Chinese culture is group-oriented. Because the educational system and scholars are highly valued in the society, they are empowered with the authority for "educating the children for the good". The society also places a high value on individual's educational achievement, and it is believed that an individual's success in learning is through efforts rather than fixed intelligence (Li, 2003, Tweed & Lehman, 2002). Therefore, one of the parents' responsibilities is to encourage their children to work harder in order to achieve the standards set up by "educational authorities" rather than arguing with the authorities to change their expectations for their children. At the same time, underlying the role beliefs is the parent's actions of shaping

their children to fit into the group. Consistent with this cultural understanding, the current study showed that Taiwanese mothers believed that their role as a mother was “facilitating” help for their children rather than “challenging” the authorities for their children.

As to mothers’ efficacy in helping children succeed in school, mothers were found to be more confident about interacting with their children, such as helping the child get through difficult materials, helping the child learn, or understanding the child. However, when it came to the things related to the school, mothers were less confident about themselves. The mean score dropped on items such as “helping child do well in school”, and “helping child to get a good grade in school”. In addition, mothers seemed to believe that their child’s teacher exerted more influence on their child’s school success than the mothers themselves.

Most interestingly, over 80% of the mothers believed that their children’s peer group had the most profound influence on their children’s motivation to do well in school. This phenomenon actually has a lot to do with Chinese culture.

There is a very famous Chinese folklore about Mencius (Confucius’s first and most famous disciple). When Mencius was very young, he and his widowed mother lived next to a butcher shop, and young Mencius developed an interest in butchery. His

mother was very concerned and decided to move. Their second residence was near a market; young Mencius then imitated the bargaining behaviors he saw in the market. Mencius's mother was afraid that her son would learn to become a businessman, which was not a decent job, so she decided to move again. Their third residence was near a school. Young Mencius listened to the children reading aloud everyday and became interested in studying. Mencius's mother was very pleased and supported his interests, so Mencius finally got to study with Confucius and became a great scholar. This story is so famous that it is even included in Taiwan's elementary textbooks. Every Chinese reads about the story, and the implications underlying the story is well recognized in Chinese culture. Chinese people believe that the environment and one's friends have a tremendous influence on the individual. Moreover, mothers play an important role in shaping the child by steering the child toward certain environments.

The current study is consistent with these cultural beliefs. No matter the level of Taiwanese mothers' efficacy in helping children succeed in school, they weighed the influences of teachers and the peer group to be paramount. Hoover-Dempsey (2004) claimed that the more a mother is efficacious, the more she would believe in her ability to influence her children. Taiwanese mothers' perceptions seemed to be inconsistent with this conclusion.

Maternal role construction and efficacy were found to have moderate relationships to all three types of educational involvement, which was consistent with a large body of prior research (Clark, 1983; Lareau, 1987, 1989; Ritter, Mont-Reynaud, & Dornbusch, 1993; Hoover-Dempsey, 1997, 2004).

Research Question 3:

What are Taiwanese mothers' perceptions about the educational climate for involvement? To what degree do they perceive invitations from the school and their children to be involved? Is there a relationship between the mothers' perceived invitation from the school/child and their level of involvement?

Taiwanese mothers perceived a positive atmosphere for them to get involved in their child's education. They reported perceiving encouragement from the teacher and the school to help with the child's homework, test preparation, attending parent-learning programs, and assisting in school activities. Overall, the Taiwanese mothers perceived a welcoming atmosphere from the school regarding general school activities or academic-related activities. However, mothers reported being uncomfortable meeting with school authorities to express their concerns.

In general, Taiwanese mothers perceived greater invitations to be involved from their child than from the school. Ninety-eight percent of the mothers reported that their child would seek their help when confronting homework difficulties. Because the

current study used the sample targeting only second graders' mothers, there were no comparison groups to understand the differences between various age groups. However, this result is somewhat consistent with previous studies suggesting that parents of younger children are more involved than those of older children (Dauber & Epstein, 1993; Eccles & Harold, 1993). In addition, not only do younger children express more interest than older children in parental involvement, but also parents of younger children express more confidence in helping younger children with academic work (Dauber & Epstein, 1993).

Overall, Taiwanese mothers thought that their child and child's teacher encouraged their help for homework-related activities, and they actually believed it was an important responsibility of being a mother. However, just like they did not extend their involvement from "monitoring" to "intervening", they perceived invitations to monitor or help their child but did not perceive encouragement to be more "actively" involved in school events or other bigger issues.

The bivariate correlation analysis showed that invitations from the school and the child were both related to all three types of parent involvement. However, the regression analysis suggested that maternal perceived invitation from the child better predicted mothers' involvement than the perceived invitation from the school. Maternal

perceived invitation from the school did not predict any of the three types of involvement in the regression analysis. This result is different from a large body of prior research suggesting that the invitations and demands from the school influence parents' decisions about getting involved in their children's education (Comer & Haynes, 1991, Connors & Epstein, 1995, Epstein, 1986, 1993, 1997, 2002, Hoover-Dempsey & Sandler, 1997).

There are two possible explanations for this unanticipated finding. First, the relatively high mean score on the perceived invitations from the school measure might have attenuated its influences on the outcome variables (i.e., a restricted range problem). Second, the relatively high correlation between perceived invitations from the school and perceived invitations from the child ($r=.42$) might raise questions about the ability to detect the unique contribution of these two variables.

The path analysis 1 (see figure 2) again indicated that perceived invitations from the child significantly predicted mothers' home-based and school-based involvement. This finding suggested that the motivation behind mothers' involvements in the three different domains may be different. Further research is needed to differentiate the effects of these two variables on mothers' involvement.

Research Question 4:

What are Taiwanese mothers' school experiences? Is there a relationship between maternal school experiences and their educational involvement?

Taiwanese mothers had positive experiences with their own school as well as their child's school. Among the different aspects of school experiences examined, they were most satisfied with teachers, including their own teachers as well as their child's teacher. Moreover, Taiwanese mothers' experiences with the child's school were even better than their own given that their own experience had already been a positive one.

The result of the bivariate correlation analysis showed that, to some degree, having a better school experience was related to greater involvement in their children's education. However, the preliminary regression analysis revealed that mother's own school experience and experience with the child's school did not significantly predict parent involvement of all three types at the 99% confidence level when other predictor variables were controlled. Therefore, this variable was removed from the path analysis.

Research Question #5:

What are Taiwanese mothers' relationships with their children? Is there a relationship between the mother-child relationship and their educational involvement?

Taiwanese mothers responded that they had positive relationships with their second-grade child. With a child at this age, most mothers held high expectations for their child's performance and over two-third of them were satisfied with their child's achievement.

The bivariate correlation analysis showed that the mother-child relationship had moderate correlations with home-based and school governance/advocacy involvement but a very small correlation with school-based involvement. Preliminary regression analyses and path analysis further showed that the mother-child relationship only significantly predicted home-based involvement.

This result is somehow consistent with Eccles and Harold's (1993) research – they found that the degree of parent's fondness of their children was related to his/her educational involvement. Moreover, the current research was unique in the way that it was able to differentiate the effects of mother-child relationship on various types of parental involvement. The current study showed that Taiwanese mothers' relationship with their child was a predictor of mother's home-based involvement.

Research Question #6:

What is the level of educational involvement of the Taiwanese mothers' social network members? Is there a relationship between social network involvement and maternal educational involvement?

Overall, Taiwanese mothers seemed to perceive that their social network members get involved in their children's education to some degree. They responded that their friends were highly involved in homework helping sorts of activities; however, they did not feel that their network members participated regularly in helping with school events.

Interestingly, although the mean participation rate of social network members was not high, social network involvement significantly predicted all three types of parent involvement. Bivariate correlations revealed moderate relationships between social network involvement and all three types of maternal educational involvement.

Preliminary regression analyses and path analysis further confirmed social network involvement to be a significant predictor to all three types of involvement.

This result is consistent with prior research findings that social network members' educational involvement affect parents' involvement in their children's education (Coleman, 1990; Griffith, 1998; Portes, 1998; Sheldon, 2002).

Research Question #7:

What is the level of Taiwanese mothers' depression level? Is there a relationship between maternal perceived depression level and their educational involvement?

Overall, Taiwanese mothers had low levels of depressive symptoms. The bivariate analysis revealed that mother's depression level was related to maternal educational involvement, although the relationship between them was not strong. However, the regression analysis showed that mother's depression level did not predict any of the three types of involvement when other variables were controlled. As a result, mother's depression level was dropped from the path analysis.

However, the high non-response rate in this scale led to the suspicion that Taiwanese mothers did not like to reveal their depressive feelings. Recall the decision that a subject would be included in the analysis if she completed more than half of the items in a certain scale. The low mean on this scale was possible due to the fact that mothers did not respond when they felt that their answer might not be consistent with social expectations, and therefore attenuated the effect of mother's depression level on their involvement. Future research could address how to help respondents deal with the pressure to give answers consistent with social expectations and how best to measure depressive symptoms with this population.

Research Question #8:

What factors are related to the three types of maternal involvement: home-based, school-based and school governance/advocacy?

As presented in the path analysis section in chapter four, maternal home-based involvement was predicted by marital status, employment status, maternal role construction, perceived invitation from the child, mother-child relationship, and level of involvement of the mother's social network. Maternal school-based involvement was predicted by employment status, maternal role construction, perceived invitation from child, and social network involvement. Finally, maternal role construction, efficacy and

social network involvement significantly predicted school governance/advocacy involvement.

Among all the predictor variables, maternal role construction and maternal social network involvement were the only two variables that significantly predicted all three types of involvement. This result is consistent with prior research. Parents are more likely to become involved in their children's education if they view such participation as one of their responsibilities as a parent (Ames et al., 1995; Hoover-Dempsey & Sandler, 1995; Sheldon, 2002). The results from the current study supported the idea that parents' social networks contributed to their involvement in their children's education (Sheldon, 2002). The finding also suggested that a sense of social pressure from other parents might influence Taiwanese mothers to participate more in their child's education. Furthermore, having a network of other parents and adults with whom to discuss their child's education might reinforce mothers' feeling that they should be involved in their children's education. Social networks, for some, might be associated with norms about becoming involved, helping and governing the school.

The picture of Taiwanese mothers' educational involvement

Taiwanese mothers did value the importance of education. They viewed parent

involvement as part of their responsibilities of being a mother. The nature of multidimensional involvement was confirmed in this study – Taiwanese mothers behaved differently in terms of home-based, school-based and school governance/advocacy involvement. Taiwanese mothers' involvement was more as “monitoring” their child's activities to fit in the school system rather than “intervening” in the school system to fit their child's need. Therefore, Taiwanese mothers did more in-home supervision of their children than advocating or participating in school activities. They were active in “receiving” the decisions made by schools or authorities and then preparing their child to be ready for the system.

Taiwanese mothers did not have relatively high efficacy regarding their ability to help their children succeed at school. They believed that schoolteachers and their child's peer groups had more influence on their child's motivation to do well in school than they did. Although they believed that they could help their child with general tasks or homework, they were not confident about influencing their children's motivation, which is even more important in children's achievement.

Taiwanese mothers viewed their own school experience and their experiences with their child's school as positive. They were highly satisfied with their relationship with their 2nd grade child. They perceived a welcoming atmosphere from the school and

from the child for their involvement; however, it was limited to helping the child rather than “actively” participating in helping with school events or policymaking.

In terms of social network, many Taiwanese mothers got the impression that other parents helped with their child’s homework-related activities; however, they did not perceive great pressure to help with school-level activities.

Taiwanese mothers were highly involved in home-based educational activities. Again, they focused more on “monitoring” the child’s daily life rather than doing “cognitively enriched” activities with their child. However, they seemed to follow the teacher’s and the school’s demands seriously. The majority of them signed the daily home-school journal, supervised homework completion, and tried to keep routines to help their child be ready for school. Taiwanese mothers did keep themselves aware of developments in the school or education system; however, they did not seem to be particularly interested in “altering” the system. Unlike their middle-class Western counterparts who play an integral role with the school in educating their child and actively intervening in school decisions when necessary (Lareau, 1989), Taiwanese mothers seldom “physically or financially” participate in school events nor do they intervene in the school decisions.

In summary, although there is no doubt that Taiwanese mothers value the importance

of education, they react in a “passive” way and view the school and the educational system as the authorities in educating their child.

The cultural interpretation of Taiwanese mothers’ educational involvement

Education and scholars have long been respected in Chinese culture. There is an invisible caste in the society with scholars on top, farmers second, workers third, and businessmen last. To help children acquire a “noble” life, Chinese parents are willing to sacrifice themselves to ensure the child’s academic success. In traditional Chinese families, the child’s personal academic achievement affects the value and honor of the whole family. Therefore, Chinese mothers make great efforts to help children succeed in their academic field. Moreover, because Chinese people respect scholars and teachers, teachers are given great respect and power to do what they think is the best for the students. Parents believe that educators and the school system are most knowledgeable in teaching their children.

With this cultural understanding in mind, it is not hard to explain Taiwanese mothers’ parental involvement patterns. The present findings indicated that Taiwanese mothers valued the importance of school and education; however, they did not exert much effort to alter the school system. Taiwanese mothers participated most frequently

in home-based involvement, and they did mostly “monitoring” types of activities. They followed the demands of the school and teachers to prepare their children; however, they relied on teachers and educational authorities to inspire their children “cognitively”. This attitude might, in a way, explain the phenomenon of less maternal involvement in the school-based activities and school governance/advocacy.

This study responded to the suggestions from cross-cultural research emphasizing the importance of interpreting parent involvement from the aspect of cultural norms. Research showed that Euro-Americans feel more efficacious in their interactions at school in comparison with their African American counterparts (Desimone, 1999; Kohl et al., 2000). Other cross-cultural research also suggested that parents from different ethnic backgrounds might have different understandings of their role in their children’s school context (Chao, 1996; Hill, 2001; Lareau, 1996; Muller & Kerbow, 1993). The “western” norms that use the active level of parental school participation as an index of parental involvement might not explain well Taiwanese mothers’ involvement. Taiwanese mothers’ low school-based involvement should not be explained as a lack of educational involvement. Instead, they focused more on getting their child ready for academic demands by working on in-home activities.

Limitation of the study

The instruments used in this study are self-report instruments. There is an advantage to use the self-report measures in this study. The investigator is interested in mothers' involvement decision-making processes. All of the predictor variables discussed in this study are about how mothers think and how mothers feel in making decisions about whether or not to get involved in their children's education. This set of variables is best examined through honest self-reports. However, while there is an advantage to using self-report instruments in the study, there are problems related to the use of them as well. For one, mothers may not be aware of certain aspects of their own behaviors. Secondly, subjects may vary in their subjective interpretation of questions. In addition, susceptibility to response sets, particularly to social desirability, is also a problem. The limitations of using self-report instruments must be considered when interpreting the data.

Using a single source of data is another limitation of the study. There might be problems with shared method variance and its possible distortion of the results (Machida, Taylor, & Kim, 2002). However, getting information from teachers would be extremely difficult for an individual student's project, and the second-grade children are too young to report their mothers' behaviors. Therefore, only the mother's self-report was used in

the study.

In addition, no information is available on the children's achievement. Therefore, the extent to which parental involvement predicts achievement in the children in this sample is not known.

Finally, in regard to the sample in this study, the results cannot be generalized to mothers living in rural areas of Taiwan, nor Taiwanese mothers living outside of Taiwan. However, it might apply to Taiwanese mothers living in urban areas in different geographical locations, to some degree, due to the fact that they all grow up and live under the same social-cultural environment. Generalization of the findings to Taiwanese mothers' educational involvement with children in a different age group (such as preschools, middle school, or high schools) must be done with caution.

Recommendations for Applications of the Results and Future Research

In this study, maternal role construction and social network involvement were found to be the two factors that were most predictive of parent involvement. In other words, how mothers define their responsibilities as a parent and how they perceive other parents' participation are most influential in their educational involvement. It implies that social norms play critical roles in Taiwanese mothers' involvement decisions. Therefore,

current school practices that facilitate parent involvement by encouraging interactions between school/educators and parents need to be reconsidered. In Taiwan, schools most commonly encourage teachers to communicate with families and provide individual parents opportunities to help shape school policies. Neither practice treats parents as social actors, and the latter strategy involves very few parents at a school. In this study, 61% of the mothers responded that they never communicated with school advisory board members, and 36% of them never discussed concerns with other parents in their child's school. In a society with "passive" parents and highly respected (sometimes even unchallenged) educators, it needs tremendous courage for any "singular" parent to stand out, speak up or advocate policies. Therefore, to promote the climate for Taiwanese mothers' involvement, helping mothers build connections with other parents would be a promising avenue for schools. Instead of focusing solely on educator-parent relationships, future parent programs should be designed to encourage the establishment of networks among parents.

Moreover, the findings showed maternal role construction to be a powerful predictor on all three types of parent involvement. If a mother believes that she should be involved in her child's education, she would participate more in all kinds of children's education-related activities. In the tradition of Taiwan's school practice, the school

initiates parent programs and parents are invited to participate voluntarily. However, teachers and school staff often reported that the parent-learning programs could not attract parents with whom the teachers really want to communicate (Wu, 2003). To change this situation, a more effective parent education program should be launched to reinforce parental educational involvement as part of the social norm. Future parent education programs should be integral with governance policies to arouse the public attention on parent involvement issue. In a society that defines parents as a subordinating role to teachers in educating children, it takes efforts to “advocating” the concept of being a “helpful and active” parent in the child’s education. Future parent programs should be developed beyond the boundary of the school; that is, not only the families and the school, but also the community and the society should all be taken into consideration.

This study examined the involvement patterns and the contributing factors only from the perspective of mothers. The other important viewpoint on parent involvement – the teachers’ perspective -- was left out. In this study, mothers generally perceived a welcoming atmosphere from teachers and schools; however, this welcoming climate did not predict any of the three types of parent involvement. It arouses the suspicion about whether or not the teachers and school really invite parental “in-depth” participation.

What level of participation do schools and teachers expect from parents? Wu (2003) reported that “passive” parent involvement programs, such as teacher-parent communication regarding children’s development and performances and directly informing parents about school policies or demands, are the most common in Taiwanese schools. It was rare in Taiwan’s schools to employ more “active” parent involvement programs such as encouraging volunteering, fund-raising, or helping shape school policies or curriculum. Is it possible that there is an invisible line perceived by parents and teachers to limit parent involvement in certain domains or to some level? Do teachers view parent involvement as reinforcement for their teaching or a distraction to their curriculum? Finding out the schools’ and teachers’ attitudes towards parent involvement would be a valuable future research topic.

This study employed a quantitative approach to examine the factors related to mothers’ involvement decision. It explored Taiwanese mothers’ involvement patterns and some of the factors that predicted involvement. However, some subtle observations revealed by this study could be further examined using a qualitative approach. How would mothers define “educational involvement? How would mothers describe their roles as a mother? How do social norms influence mothers’ role construction? How do mothers react to the behaviors of their social network members? To what extent do

mothers perceive pressure from social network members to alter their behaviors? Future qualitative research should aim to reveal this more subtle information regarding the mothers' thoughts.

Finally, due to the limited measures available in studying Taiwanese parent involvement, the current study mainly adapted its instruments from the Western literature. It would be useful in future research to put more efforts in developing more culturally sensitive instruments.

APPENDIX I

Instruments

Maternal Involvement Beliefs Questionnaire (including 2 subscales)

(1) Maternal role construction Subscale

Parents have many different beliefs about their level of responsibility in their children's education. Please respond to the following statements by indicating the degree to which you believe you are responsible for the following.

1=disagree very strongly, 2=disagree, 3=disagree just a little, 4=agree just a little, 5=agree, 6=agree very strongly.

I believe it is my responsibility to ...

1. Volunteer at the school.
2. Communicate with my child's teacher regularly
3. Help my child with homework
4. Support decisions made by the teacher
5. Stay on top of things at school
6. Talk with other parents from my child's school
7. Talk with my child about the school day
8. Sit on the School Advisory Board.

(2) Maternal efficacy for helping children succeed in school

Please indicate how much do you agree or disagree with each of the following statements.

1=disagree very strongly, 2=disagree, 3=disagree just a little, 4=agree just a little, 5=agree, 6=agree very strongly. Scores of the items marked with (r) will be reversed.

How much do you agree or disagree with each of the following statements

9. My child is so complex. I never know if I'm getting through to him/her. (r)
10. I don't know how to help my child do well in school.(r)
11. I don't know how to help my child make good grades in school. (r)
12. I feel successful about my efforts to help my child learn.
13. Other children have more influence on my child's motivation to do well in school than I do. (r)
14. Most of a student's success in school depends on the classroom teacher, so I have only limited influence.(r)
15. If I try hard, I can get through to my child, even when he/she has difficulty understanding something.
16. I make a significant difference in my child's school performance.

Maternal Perceived Invitations for Involvement Questionnaire
(including 2 subscales)

(1) Maternal Perceived Invitations from the School

Please indicate how much do you agree or disagree with each of the following statements.

1=disagree very strongly, 2=disagree, 3=disagree just a little, 4=agree just a little, 5=agree, 6=agree very strongly. Scores of the items marked with (r) will be reversed.

How much do you agree or disagree with each of the following statements

17. I feel welcomed in my child's school.
18. I feel that my child's teacher welcomes my assistance in classroom or school-wide activities
19. My child's teacher does not like to be challenged about his/her teaching practice.(r)
20. I don't feel comfortable meeting with the teacher when I have a concern about his/her teaching practice.(r)
21. I don't feel comfortable meeting with school authorities about my concerns regarding school.(r)
22. My child's teacher usually encourages me to help my child with homework or upcoming tests.
23. I receive encouragement from the school to attend parent-learning programs prepared by the school.
24. It's is an honor in my child's school to sit on the school advisory board.

(2) Maternal Perceived Invitations from their children

Please indicate how much do you agree or disagree with each of the following statements.

1=disagree very strongly, 2=disagree, 3=disagree just a little, 4=agree just a little, 5=agree, 6=agree very strongly. Scores of the items marked with (r) will be reversed.

How much do you agree or disagree with each of the following statements

- 25. My child wants me to participate in his/her school activities.
- 26. When there are difficulties regarding homework, my child wants me to help him/her.
- 27. My child usually asks me to check his/her homework.
- 28. My child seldom shares with me his/her school related matters (e.g. friends, teachers, events). (r)
- 29. My child wants me to help out at the school.

Maternal School Experiences Questionnaire (including 2 subscales)

(1) Maternal Own Prior Experiences to School

People have different feelings about school. Please mark the number on each line below that best describes your feeling about your own school experiences when you were a student.

30. My school: disliked 1 2 3 4 5 6 liked
31. My teachers: were mean 1 2 3 4 5 6 were nice
32. My teachers: ignored me 1 2 3 4 5 6 cared about me
33. I felt like: an outsider 1 2 3 4 5 6 I belonged
34. My overall school failure 1 2 3 4 5 6 success
experience:

(2) Maternal Prior Experience with Child's School

Please recall the previous year of your encounter with your child's teacher and school, and mark the number on each line below that best describes your feelings.

35. My child's school: disliked 1 2 3 4 5 6 liked
36. My child's teachers: were mean 1 2 3 4 5 6 were nice
37. My child's teachers: ignored me 1 2 3 4 5 6 welcomed me
38. My experience with my child's school: bad 1 2 3 4 5 6 good
39. My relationship with my child' an outsider 1 2 3 4 5 6 a partner
teacher:

Mother-Child Relationship Questionnaire

Please think of your relationship with this second grade child. Please mark the number on each line below that best describes your situation.

40. My child's temperament is: difficult 1 2 3 4 5 6 easy

41. My child's school performance: disappoints me 1 2 3 4 5 6 satisfies me

42. My expectation toward my below above
child's achievement is: average 1 2 3 4 5 6 average

43. My overall relationship with bad 1 2 3 4 5 6 good
my child is

Maternal Social Network Scale

44. How many parents do you know who you discuss your children's education or school matters with? (1) none, (2) 1 or 2, (3) less than 5, (4) 5-10, (5) more than 10
45. How many parents in your child's class/school do you discuss your children's education or school matters with? (1) none, (2) 1 or 2, (3) less than 5, (4) 5-10, (5) more than 10
46. What percentage of the parents in your child's class attend school activities? not aware of that, (2) less than 25%, (3) 25% to less than 50%, (4) 50% to less than 75%, (5) 75% or more
47. What percentage of your friends who are parents attend school activities? (1) none, (2) less than 25%, (3) 25% to less than 50%, (4) 50% to less than 75%, (5) 75% or more
48. What percentage of your friends who are parents check their child's homework or do test preparation with their child? (1) none, (2) less than 25%, (3) 25% to less than 50%, (4) 50% to less than 75%, (5) 75% or more
49. What percentage of your friends who are parents is highly involved at school (e.g. volunteer at school, serve on an advisory committee, plan parties or other social activities at school)? (1) none, (2) less than 25%, (3) 25% to less than 50%, (4) 50% to less than 75%, (5) 75% or more

Maternal Depression Scale (Reduced items from CESD, by Radloff, 1977)

Please indicate how often you have felt this way during the past week by checking the appropriate space.

1=rarely or none of the time (less than 1 day)

2=some or a little of the time (1-2 days)

3=occasionally or moderate amount of the time (3-5 days)

4=most or all of the time (5-7 days)

50. I felt that I was just as good as other people.(r)

51. I felt depressed.

52. I felt hopeful about the future.(r)

53. I thought my life has been a failure.

54. I enjoy life.(r)

55. I felt that people disliked me.

56. I could not get “going”.

Maternal Involvement Questionnaire (including 3 subscales)

(1) Home-Based Involvement Subscale

Please recall the previous year of your child's schooling and respond to each question by how often it describes you or your situation:

5=Everyday, 4=Several times per week, 3=1-2 times per week,

2=Less than 1 time per week, 1=Never

- 57. Check and sign the daily home-school communication journal.
- 58. Check to see that your child has done his/her homework.
- 59. Practice writing, math or other skills before a test.
- 60. Read to your child.
- 61. Listen to your child read.
- 62. Talk to your child about school.
- 63. Review and discuss the work your child brings home.
- 64. Help your child plan time for homework or other chores.
- 65. Supervise your child's TV watching.
- 66. Limit the time your child plays video games.
- 67. Play with your child.
- 68. Keep a regular morning and bedtime schedule on weekdays.
- 69. Make sure your child has breakfast before attending school.
- 70. Make sure your child is on time for school.
- 71. Take your child to extracurricular activities.
- 72. Take your child to a library or bookstore.
- 73. Take your child to special places or events in the community (e.g. museums, festivals, ...).

74. Tell your child how important school is.
75. Tell your child how important the academic achievement is.

(2) School-Based Involvement Subscale

Please recall the previous year of your child's schooling and respond to each question by how often it describes you or your situation:

5= Several times per week, 4=Several times per month,

3= Several times per semester, 2=1-2 times per semester, 1=Never

76. Visit your child's classroom.
77. Talk with your child's teacher at school.
78. Talk to your child's teacher on the phone.
79. Go to parent-teacher or school meetings.
80. Help with a class or school events (such as helping on school Celebration Day, Sports Union Day).
81. Go to special events at school.
82. Go on a class trip with your child.

(3) School Governance/Advocacy Involvement Subscale

Please recall the previous year of your child's schooling and respond to each question by how often it describes you or your situation:

5=Always, 4=Most of the time, 3=Sometimes, 2=Occasionally, 1=Never

83. When I have a concern regarding my child's classroom curriculum, I speak personally or write to my child's teacher.
84. When I have a concern regarding my child's school, I speak personally or write to the principal or related school authority.
85. When I have a concern regarding my child's school, I speak personally or write to the members in school advisory board.
86. When I have a concern regarding my child's school, I discuss it with other parents in my child's classroom or school.
87. I keep myself aware of the trends in educational reform.
88. When the time to change the principal comes, I pay attention to this matter.
89. When the school advisory board's meeting reports are distributed to me, I read them carefully.
90. I sit on the school advisory board. ☐ Yes ☐ No

Demographic Information

91. Please indicate your age? _____

92. What is the birth order of this second grade child? (1) First born (2) Second born
(3) Third born (4) Fourth born (5) Others

93. Ages of your other children (rather than this second grader)?

94. Please indicate your educational level:

_____ (1) primary school

_____ (2) high school

_____ (3) 2-year college graduate

_____ (4) university graduate

_____ (5) graduate school and above

* Number of years is not used as a measure of education level in Taiwan

95. Please indicate your current relationship status:

_____ (1) Married,

_____ (2) Separated, Divorced or Widowed,

_____ (3) Remarried,

_____ (4) Single,

_____ (5) In a committed, live-in relationship.

If you are not currently married, please proceed to question number 98.

96. Please indicate your husband's educational level if you are married:

- ____(1) primary school
- ____(2) high school
- ____(3) 2-year college graduate
- ____(4) university graduate
- ____(5) graduate school and above

97. Please indicate how helpful your husband is when dealing with the following matters.

(1) Child's behavior problems: Not helpful at all 1 2 3 4 5 6 very helpful

(2) Child's learning problems: Not helpful at all 1 2 3 4 5 6 very helpful

(3) Taking children to the extra curricular activities:

Not helpful at all 1 2 3 4 5 6 very helpful

(3) Communication with child's teachers:

Not helpful at all 1 2 3 4 5 6 very helpful

(4) Communication with school authority:

Not helpful at all 1 2 3 4 5 6 very helpful

98. Please indicate your employment status:

- ____(1) Homemaker,
- ____(2) Part -time employee (1-20 hours per week),
- ____(3) Part -time employee (21-39 hours per week),
- ____(4) Full-time employee (40 hours or more per week)

99. Does your work have different shifts other than regular business hours (8 am – 5 pm)?

___(1) Yes (indicate the shift: _____) ___(2) No

100. Please indicate your **family monthly** income:

___ Under NT 20,000 dollars,

___ NT 20,001 – 40,000 dollars,

___ NT 40,001 – 60,000 dollars,

___ NT 60,001 – 80,000 dollars,

___ NT 80,001 – 100,000 dollars,

___ NT 100,001 – 120,000 dollars,

___ NT 120,001 – 140,000 dollars,

___ Above NT 140, 001 dollars

*NT: New Taiwan Dollars;

*1 US dollar= 34 Taiwanese dollars

APPENDIX II

Consent letter

Dear Participating Mother:

I am a doctoral student at Michigan State University and currently work as a lecturer in the Department of Early Childcare and Education, Fooyin University, Taiwan. I am working on my dissertation under the supervision of Dr. Tom Luster from the Department of Family and Child Ecology at Michigan State University. This research is designed to study Taiwanese mothers' educational involvement.

Attached are a self-sealed envelope and a questionnaire which you are being asked to complete, if you choose to participate in this research project. The questionnaire asks about your involvement in your children's education, about your beliefs regarding educational involvement, about your perceived invitations from the school and children, and the educational involvement of your social network members. There are also questions about you and your family.

To indicate your voluntary agreement to participate in the study, complete the questionnaire, put it in the envelope and return the sealed envelope to the box located in your child's classroom. I will collect them later. There is no personal risk involved

with this research. The information you provide is confidential. As the investigator, I will be the only person with access to your questionnaire. Your responses will not be shared with the teacher. Your privacy will be protected to the maximum extent allowable by law. If there are questions that you are not comfortable with answering them, or if you do not wish to finish the questionnaire at any time, please feel free to do so. There is no penalty for your withdraw or refusal.

I sincerely hope that you will take time to complete the questionnaire. It should take no more than 30 minutes of your time. Thank you in advance for your time and cooperation.

If you have any questions about this study, please contact the investigator—
Pi-Hun Yang, Ph.D. student at Michigan State University and Lecturer at Department of Early Childcare and Education, Fooyin University by phone: (07) 7811151 ext. 364, email: yangpihu@msu.edu, or regular mail: No. 151, Jin-Sheh Rd., Da-Liao Shiang, Kaohsiung 831, Taiwan. Or you could contact the investigator's advisor-- Tom Luster, Ph.D., Professor at Department of Family and Child Ecology, Michigan State University by phone: (517) 432-3323, email: luster@msu.edu, or regular mail: 13 Human Ecology, Michigan State University, East Lansing, MI 48824

If you have questions or concerns regarding your rights as a study participant, or

are dissatisfied at any time with any aspect of this study, you may contact - anonymously,
if you wish -Peter Vasilenko, Ph.D., Chair of the University Committee on Research
Involving Human Subjects (UCRIHS) by phone: (517) 355-2180, fax: (517) 432-4503,
e-mail: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Sincerely,

Pi-Hun Yang

Ph.D. candidate, Michigan State University

Lecturer, Fooyin University, Taiwan

References

- Adams, G. R., Ryan, B. A., Ketsetzis, N., & Keating, L. (2000). Rule compliance and peer sociability: A study of family process, school-focused parent-child interactions, and children's classroom behavior. *Journal of Family Psychology, 14*, 237-250.
- Ames, C., DeStefano, L., Watkins, T., & Sheldon, S. (1995). *Teachers' school-to-home communications and parent involvement: The role of parent perceptions and beliefs* (Report No. CFC28). Baltimore, MD: Center on Families, Communities, Schools, and Children's Learning.
- Baker, D. P., & Stevenson, D. L. (1986). Mothers' strategies for children's school achievement: Managing the transition to high school. *Sociology of Education, 59*, 156-166.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.
- Bandura, A. (1989). Human agency in social cognition theory. *American Psychologist, 44*, 1175-1184.
- Bandura, A. (1989). Regulation of cognitive processes through perceived self-efficacy. *Developmental Psychology, 25*, 729-735.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*(2), 117-148.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.
- Becker, H. J., & Epstein, J. L. (1982). Parent involvement: A study of teacher practices. *Elementary School Journal, 83*, 85-102.

- Brody, G. H., Flor, D. L., & Gibson, N. M. (1999). Linking maternal efficacy beliefs, developmental goals, parenting practices, and child competence in rural single-parent African American families. *Child Development, 70* (5), 1197-1208.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*, 723-742.
- Chao, R. K. (1996). Chinese and European American mothers' beliefs about the role of parenting in children's school success. *Journal of Cross-Cultural Psychology, 27*(4), 403-423.
- Chavkin, N. F. (Ed.) (1993). *Families and schools in pluralistic society*. Albany, NY: State University of New York Press.
- Christenson, S. L. (1995). Families and schools: What is the role of the school psychologist? *School Psychology Quarterly, 10*, 118-132.
- Christenson, S. L., & Sheridan, S. M. (2001). *Schools and families: Creating essential connections for learning*. New York: The Guilford Press.
- Clark, R. (1983). *Family life and school achievement: Why poor black children succeed or fail*. Chicago: University of Chicago Press.
- Clark, R. (1993). Homework-focused parenting practices that positively affect student achievement. In N. F. Chavkin (Ed.), *Families and schools in a pluralistic society* (pp.85-106). Albany, NY: State University of New York Press.
- Cochran, M. (1990). Personal networks in the ecology of human development. In M. Cochran, M. Lerner, D. Riley, L. Gunnarsson, & C. R. Henderson, Jr. (Eds.), *Extending Families: The Social Network of Parent and Their Children* (pp.3-33). Cambridge, MA: Cambridge University Press.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Science* (2nd ed.). New Jersey: Lawrence Erlbaum.

- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 495-512.
- Coleman, J. S. (1990). *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.
- Coleman, P. K., & Karraker, K. H. (2000). Parenting self-efficacy among mothers of school-age children: Conceptualization, measurement, and correlates. *Family Relations*, 49, 13-24.
- Comer, J.P., & Haynes, N. M. (1991). Parent involvement in schools: An ecological approach. *Elementary School Journal*, 91, 271-277.
- Connell, J. P., Spencer, M. B., & Aber, J. L. (1994). Educational risk and resilience in African-American youth: Context, self, action, and outcomes in school. *Child Development*, 65, 493-506.
- Connors, L. J., & Epstein, J. L. (1995). Parent and school partnership. In M. Bornstein (Ed.), *Handbook of Parenting, vol. 4, Applied and Practical Parenting* (pp.437-458). Mahwah, NJ: Lawrence Erlbaum Associates.
- Dauber, S. L. & Epstein, J. L. (1993). Parents' attitudes and practices of involvement in inner-city elementary and middle schools. In N. F. Chavkin (Ed.), *Families and Schools in a pluralistic Society* (pp.53-71). Albany, NY: State University of New York.
- Desimone, L. (1999). Linking parent involvement with student achievement: Do race and income matter? *The Journal of Educational Research*, 93, 11-30.
- Eccles, J.S., & Harold, R.D. (1993). Parent-school involvement during the early adolescent years. *Teachers College Record*, 94, 568-587.
- Eccles, J.S. & Harold, R.D. (1996). Family involvement in children's and adolescents' schooling. In A. Booth & J. Dunn (Eds.), *Family-school links: How do they affect educational outcomes?* (pp. 3-34). Mahwah, NJ: Lawrence Erlbaum and Associates.

- Epstein, J. L. (1986). Parents' reactions to teacher practices of parent involvement. *Elementary School Journal*, 86, 277-294.
- Epstein, J. L. (1989). Family structures and student motivation: A developmental perspective. In C. Ames & R. Ames (Eds.), *Research on motivation in education: Vol. 3. Goals and cognitions* (pp.259-295). New York: Academic Press.
- Epstein, J. L. (1991). Effects on student achievement of teachers' practices of parent involvement. In S.B. Silvern (Ed.), *Advances in reading/language research: Vol. 5. Literacy through family, community, and school interaction* (pp.261-276). Greenwich, CT: JAI Press.
- Epstein, J. L. (1995). School/family/community partnerships: caring for the children we share. *Phi Delta Kappan*, 76, 701-712.
- Epstein, J. L. & Dauber, S. L. (1991). School programs and teacher practices of parent involvement in inner-city elementary and middle schools. *The Elementary School Journal*, 91(3), 290-305.
- Epstein, J. L., & Salinas, K. C. (1993). *School and family partnerships: Surveys and summaries*. Baltimore: John Hopkins University, Center on Families, communities, Schools and Children's Learning.
- Epstein, J. L., Sanders, M. G., Simon, B. S., Salinas, K. C., Jansorn, N. R., & Van Voorhis, F. L. (2002). *School, family, and community partnerships: Your handbook for action* (2nd ed.). Thousand Oaks, CA: Corwin Press.
- Fantuzzo, J., Davis, G. Y., & Ginsburg, M. D. (1995). Effects of parent involvement in isolation or in combination with peer tutoring on student self-concept and mathematics achievement. *Journal of Educational Psychology*, 87, 272-281.
- Fantuzzo, J., Tighe, E., & Childs, S. (2000). Family involvement questionnaire: A multivariate assessment of family participation in early childhood education. *Journal of Educational Psychology*, 92(2), 367-376.

- Fuller, M. L., & Olsen, G. (1998). *Home-school relationships: Working successfully with parents and families*. Needham Heights, MA: Allyn & Bacon.
- Galloway, J., & Sheridan, S. M. (1994). Implementing scientific practices through case studies: Examples using home-school interventions and consultation. *Journal of School Psychology, 32*, 385-413.
- Gecas, V. (1979). The influence of social class on socialization. In W. R. Burr, R. Hill, F. I. Nye, & I. L. Reiss (Eds.), *Contemporary theories about the family (Vol. 1, pp. 365-404)*. New York: Free Press.
- Gondoli, D. M., & Silverberg, S. B. (1997). Maternal emotional distress and diminished responsiveness: the mediating role of parenting efficacy and parental perspective taking. *Developmental Psychology, 33*(5), 861-868.
- Goodnow, J. J. (1994). Parents' ideas about parenting and development: A review of issues and recent work. In M. E. Lamb, A. L. Brown, & B. Rogoff (Eds.), *Advances in developmental psychology (Vol. 3, pp.193-242)*. Hillsdale, NJ: Lawrence Erlbaum.
- Griffith, J. (1998). The relation of school structure and social environment to parent involvement in elementary schools. *Elementary School Journal, 99*, 53-80.
- Grolnick, W. S., Benjet, C., Kurowski, C.O., & Apostleris, N. H. (1997). Predictors of parent involvement in children's schooling. *Journal of Educational Psychology, 89*(3), 538-548.
- Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). The inner resources for school achievement: Motivational mediators of children's perceptions of their parents. *Journal of Educational Psychology, 83*, 508-517.
- Grolnick, W. S., & Slowiaczek, M. L. (1994). Parents' involvement in children's schooling: A multidimensional conceptualization and motivational model. *Child Development, 65*, 237-252.

- Haddow, J. A. L. (2003). *Everyday resilience in Japanese youth: Individual and ecological protective factors and risk factors*. Dissertation: Michigan State University.
- Harkness, S., & Super, C. M. (1996). *Parents' cultural belief systems: Their origins, expressions, and consequences*. New York: Guilford Press.
- Hess, R. D. & Holloway, S.D.(1984). Family and school as educational institutions. In R. D. Parke (Ed.), *Review of child development research: Vol.7. The family* (pp.179-222). Chicago: University of Chicago Press.
- Hill, N. E. (2001). Parenting and academic socialization as they relate to school readiness: The role of ethnicity and family income. *Journal of Educational Psychology*, 93, 686-697.
- Hill, N. E., & Craft, S. A. (2003). Parent-school involvement and school performance: Mediated pathways among socioeconomically comparable African American and Euro-American Families. *Journal of Educational Psychology*, 95(1), 74-83.
- Hiner, N. R. (1989). Look into families: The new history of children and the family and its implications for educational research. In W. J. Weston (Ed.), *Education and the American family: A research synthesis* (pp. 4-31). New York: New York University Press.
- Hoover-Dempsey, K. V. (2004). *Parental role construction for involvement in the child's day-to-day education*. Retrived on Aug. 1, 2004 from http://www.vanderbilt.edu/Peabody/family-school/scale_descriptions/sd_role.html.
- Hoover-Dempsey, K. V., Bassler, O. C., & Brissie, J. S. (1987). Parent involvement: Contributions of teacher efficacy, school socioeconomic status, and other school characteristics. *American Educational Research Journal*, 24, 417-435.
- Hoover-Dempsey, K. V., Bassler, O. C., & Brissie, J. S. (1992). Explorations in parent-school relations. *Journal of Educational Research*, 85, 287-294.

- Hoover-Dempsey, K. V. & Sandler, H. M. (1995). Parent involvement in children's education: Why does it make a difference? *Teachers College Record*, 97 (2), 310-331.
- Hoover-Dempsey, K.V. & Sandler, H.M. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, 67(1), 3-42.
- Hoover-Dempsey, K.V., Walker, J.M.T., Jones, K.P., & Reed, R.P. (2002). Teachers Involving Parents (TIP): An in-service teacher education program for enhancing parental involvement. *Teaching and Teacher Education*, 18(7), 1-25.
- Izzo, C. V., Weiss, L., Shanahan, T., & Rodriguez-Brown, L. (2000). Parental self-efficacy and social support as predictors of parenting practices and children's socioemotional adjustment in Mexican immigrant families. *Journal of Prevention and Intervention in the Community*, 20, 197-213.
- Izzo, C. V., Weissberg, R. P., Kasprow, W. J., & Frenndrich, M. (1999). A longitudinal assessment of teacher perceptions of parent involvement in children's education and school performance. *American Journal of Community Psychology*, 27, 817-839.
- Keith, T. Z. (1991). Parent involvement and achievement in high school. *Advances in Reading/Language Research*, 5, 125-141.
- Kessler-Sklar, S. L., & Baker, A.J.L. (2000). School district parent involvement policies and programs. *Elementary School Journal*, 101, 101-118.
- Kohl, G. O., Lengua, L. J., McMahon, R. J., & the Conduct Problems Prevention Research Group. (2000). Parent involvement in school: Conceptualizing multiple dimensions and their relations with family and demographic risk factors. *Journal of School Psychology*, 38, 501-523.
- Kohn, M.L. (1963). Social class and parent-child relationships. *American Sociological Review*, 68, 471-480.

- Lamb-Parker, F., Piotrkowski, C. S., Baker, A. J. L., Kessler-Sklar, S., Clark, B., & Peay, L. (2001). Understanding barriers to parent involvement in Head Start: A research-community partnership. *Early Childhood Research Quarterly, 16*, 35-51.
- Lareau, A. (1987). Social class differences in family-school relationships: The importance of cultural capital. *Sociology of Education, 60*, 73-85.
- Lareau, A. (1989). *Home advantage: Social class and parent involvement in elementary education*. New York: Falmer Press.
- Lareau, A. (1996). Assessing parent involvement in schooling: A critical analysis. In A. Booth & J. F. Dunn (Eds.), *Family school links: How do they affect educational outcomes* (pp. 57-64). Mahwah, NJ: Lawrence Erlbaum.
- Lareau, A., & Shumar, W. (1996). The problem of individualism in family-school policies. *Sociology of Education, 69*, 24-39.
- Lekskul, K. (2003). *Factors related to the school performance of second grade children born to low-income adolescent mothers*. Dissertation: Michigan State University.
- Li, J. (2003). U.S. and Chinese cultural beliefs about learning. *Journal of Educational Psychology, 95*(2), 258-267.
- Luster, T., Bates, L., Vandenbelt, M., & Casady, A. (2001). *Family influences on the early academic success of children born to low-income teenage mothers: A qualitative study*. Paper presented at the Society for Research in Child Development, Minneapolis, MN.
- Luster, T., & Rhoades, K. (1989). The relation between child rearing beliefs and the home environment in a sample of adolescent mothers. *Family Relations, 40*, 272-278.
- Luster, T., Rhoades, K., & Haas, B. (1989). The relation between parental values and parenting behavior: A test of the Kohn hypothesis. *Journal of Marriage and the Family, 51*, 139-147.

- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In E. M. Hetherington (Ed.), P. H. Mussen (Series Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (pp.1-102). New York: Wiley.
- Machida, S., Taylor, A. R., & Kim, J. (2002). The role of maternal beliefs in predicting home learning activities in head start families. *Family Relations, 51*(2), 176-184.
- McBride, B. A., Rane, T. R., & Bae, J. H. (2001). Intervening with teachers to encourage father/male involvement in early childhood programs. *Early Childhood Research Quarterly, 16*, 77-93.
- Moles, O. C. (1996). New national directions in research and policy. In A. Booth & J. Dunn (Eds.), *Family-school links: How do they affect educational outcomes?* (pp. 247-254). Mahwah, NJ: Lawrence Erlbaum and Associates.
- Morgan, S. L., & Sorensen, A.B. (1999). Parental networks, social closure, and mathematic learning: A test of Colenan's social capital explanation of school effects. *American Sociological Review, 64*, 661-681.
- Muller, C., & Kerbow, D. (1993). Parent involvement in home, school and community. In B. Schneider & J. S. Coleman (Eds.), *Parent, their children, and schools* (pp.13-42). Boulder, CO: Westview Press.
- Pelletier, J., & Brent, J. (2002). Parent participation in children's school readiness: The effects of parental self-efficacy, cultural diversity and teacher strategies. *International Journal of Early Childhood, 34* (1), 45-60.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology, 24*, 1-24.
- Reynolds, A. J. (1991). Early schooling of children at risk. *American Educational Research Journal, 28*(2), 392-422.

- Reynolds, A. J. (1994). Effects of a preschool plus follow-on intervention for children at risk. *Developmental Psychology*, 30, 787-804.
- Ritter, P.L., Mont-Reynaud, R. & Dornbusch, S. M. (1993). Minority parents and their youth: Concern, encouragement and support for school achievement. In N. F. Chavkin (Ed.), *Families and schools in a pluralistic society* (pp.107-120). Albany, NY: State University of New York.
- Sheldon, S. B. (2002). Parents' social networks and beliefs as predictors of parent involvement. *The Elementary School Journal*, 102(4), 301-316.
- Stevenson, D. & Baker, D. (1987). The family-school relations and the child's school performance. *Child Development*, 58, 1348-1357.
- Stevenson, H. W., Chen, C., & Uttal, D. H. (1990). Beliefs and achievement: A study of Black, White, and Hispanic children. *Child Development*, 61, 508-523.
- Stevenson, H. W., Lee, S., Chen, C., Lummis, M., Stigler, J., Fan, L., & Ge, F. (1990). Mathematics achievement of children in China and United States. *Child Development*, 61, 1053-1066.
- Stevenson, H. W., Lee, S. Y., & Stigler, J. W. (1986). Mathematics achievement of Chinese, Japanese, and American children. *Science*, 231, 693-699.
- Sui-Chu, E. H., & Willms, J. D. (1996). Effects of parental involvement on eighth-grade achievement. *Sociology of Education*, 69, 126-141.
- Teti, D. M., & Gelfand, D. M. (1991). Behavioral competence among mothers of infants in the first year: The mediational role of maternal self-efficacy. *Child Development*, 65, 918-929.
- Topping, K. (1985). Parental involvement in reading: Theoretical and empirical background. In K. Topping & S. Wolfendale (Eds.), *Parental involvement in reading* (pp. 17-31). London: Croom Helm.

- Thurston, L. P. (1989). Helping parents tutor their children: A success story. *Academic Therapy*, 24, 579-587.
- Tweed, R. G., & Lehman, D. R. (2002). Learning considered within a cultural context: Confucian and Socratic approaches. *American Psychologist*, 57, 89-99.
- Useem, E. L. (1991). Student selection into course sequences in mathematics: The impact of parent involvement and school policies. *Journal of Research on adolescence*, 1, 231-250.
- Vincent, C. (1996). *Parents and teachers: Power and participation*. Washington, D.C.: Falmer Press.
- Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and application*. New York: Cambridge University Press.
- Watkins, T. (1997). Teacher communications, child achievement, and parent traits in parent involvement models. *The Journal of Education Research*, 91, 3-14.
- Wu, P. J. (2003). A study of maternal involvement in education. *Educational Research & Information (Taiwan's Journal)*, 11 (5), 85-112.

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