

SCHOOL EXPECTATIONS AND INITIATIVES FOR
PARENTAL INVOLVEMENT IN 30 NATIONS:
A COMPARATIVE STUDY USING TIMSS 1999 DATA

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By
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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

SCHOOL EXPECTATIONS AND INITIATIVES FOR
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SCHOOL EXPECTATIONS AND INITIATIVES FOR PARENTAL INVOLVEMENT
IN 30 NATIONS: A COMPARATIVE STUDY USING TIMSS 1999 DATA

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ABSTRACT

Using the TIMSS 1999 data, this study examined school expectations and initiatives for promoting parental involvement at middle school level in 30 nations. In most countries, schools were more likely to expect parental involvement at home (e.g., prepare child lunchbox) and less likely to get parents involved in school governance. No significant relationship was found between national level of school expectations for parental involvement and national level of student academic achievement or attendance rate.

Contrary to our expectation, the relationship between the national level of school expectation for direct parental involvement and national level of educational inequality was positively significant. In addition, national level of school initiatives in parental involvement was also positively associated with educational inequality. Comparison of six nations (United States, Canada, the Czech Republic, Hong Kong¹, Taiwan, and the Netherlands) revealed that different school characteristics were associated with high levels of expectations and initiatives for parental involvement in different nations.

Unlike other countries whose schools' expectations were influenced by at least one of those structural characteristics (school location, school size, class size, school mean SES), U.S.

schools' expectations for parental involvement were more likely to be affected by schools' cultural factors, such as teacher collaboration and school disciplinary issues. In

¹ For convenience, in this article Hong Kong is referred to as a nation. Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

the United States, students attended school more often in those schools that had higher levels of expectations for parental involvement. Students in the United States were more likely to achieve better if their schools had higher expectations for parents' direct involvement. However, in Czech and Taiwan, school expectations or initiatives were negatively related to student attendance rates or mathematics achievement. Implications for educational policies and practices in these nations and future research were discussed.

Chapter 1

INTRODUCTION

This study examines parental involvement at the middle school level from a cross-national perspective. Using the Trends in International Math and Science Study (TIMSS) data collected during 1999, the present study seeks to examine the relationships among school characteristics, school expectations and initiatives for parental involvement and eighth graders' academic achievement and school attendance in 30 nations. This chapter presents the background of the study, analysis of the problem, purpose of the study, research questions, and significance of the study.

Background of the Study

Policymakers and educators in many countries around the world recognize that family, school, and community each has an important role in the process of educating children and have adopted policies to actively involve parents in children's education (Kelley-Laine, 1998). While the types of parental involvement vary among countries due to different cultures and changing economic and political climates, studies have found that the practices of parental involvement in many countries have been successful (Epstein & Sanders, 1998; Filp, 1998; Kelly-Laine, 1998; Kohler, 1998; McKenna & Willms, 1998; Ravn, 1998).

When parents are actively involved in their child's education, the results are increased student academic achievement and improved student attitudes (Fiala & Sheridan, 2003; Jones & White, 2000; Zellman & Waterman, 1998). Parental involvement also leads to higher levels of student aspiration, school attendance, and

school adjustment (Gonzalez, 2002; Potter, 1998; Simons-Morton, Bruce, & Crump, 2003). Educators and policymakers are enthusiastic to advocate for the participation of parents in their children's education. The *No Child Left Behind Act* (White House, 2002) addresses the importance of parental involvement in Title I. It emphasizes that the schools and parents should build and develop a partnership to help children achieve the state's high standards. In the U.S., school districts nationwide are encouraged to reexamine their parental involvement policies and programs and to demonstrate innovative approaches in order to obtain Federal education funds (Baker & Soden, 1998).

There are various ways that family members can be involved in their child's education, such as assistance with homework completion and participation in school activities. Different types of parental involvement are effective at different stages of students' development. For example, the effect of parental support for homework completion may diminish when students move from elementary to middle and high schools. Schools need to work with parents to find effective forms of involvement to help students learn and socialize at all levels. Although almost all parents care about their children's education, the opportunities for them to participate in schooling are not even across race, ethnicity, and social class. In addition, schools generally tend to limit the roles parents can take (Abram & Gibbs, 2002; Wanat, 1999). While parents are often expected to help a student complete homework and volunteer in school activities, they are less likely to participate in the decision-making process by being involved in school committees. In order to include all parents in school activities, schools should encourage parents' participation and take initiatives to communicate with them to seek an effective partnership between schools and parents.

Analysis of the Problem

Although parental involvement has gained extensive attention from researchers, educators and policymakers, studies that have examined parental involvement within school reform frameworks and general parental involvement programs have shown mixed findings regarding its effects on student outcomes. From an educational policy perspective, several methodological issues in existing studies need to be addressed. First, the actual level of parental involvement reported by parents, which is the central construct of most existing survey studies, cannot measure the reasons and purposes for parents to participate. Second, researchers have focused on the examination of individual characteristics of parents who have a higher level of participation (Moreno & Lopez, 1999; Wanat et al., 1994). These characteristics are hard to change by education and social policy. Third, while a high level of parental involvement in some other countries is usually cited as evidence for advocating the same effort in U.S. schools (Epstein & Sanders, 1998), there are no cross-national studies that compared a large number of countries.

Previously, researchers have mainly relied on individual responses of parents to investigate the relationship between parental involvement and student outcomes (Griffith, 1998). The measure of the actual level of parental involvement, however, is problematic since it cannot measure the reasons and purposes for parents to participate. For instance, high-income parents are more likely to get involved voluntarily. Also, school-parent contacts seem to be more frequent when students have behavioral or academic problems (Davies, 1993). This limitation has resulted in inconsistent findings in literature about the relation between parental involvement and student achievement (Okpala et al., 2001;

Mattingly et al., 2002; White et al., 1992). Another limitation of the actual parental involvement level is that it cannot show whether all parents are expected to get involved by schools, especially parents of color and low-income parents. Since minority parents and low-income parents participate less frequently and have a relatively alienated relationship with schools than their white or wealthier counterparts (Abrams & Gibbs, 2002), they need to be expected and encouraged to participate in their children's learning. Even though they may not be able to actually participate in school activities, they would feel supported if schools show high expectations for them to be involved.

Many school reform models (e.g., Comer School Development Program, Edison Project) in the U.S. incorporate increased parental involvement into their reform goals. Evaluation of these reform models also provided mixed evidence about the effects of parental involvement on student outcomes. While some researchers found that students achieved better in these schools (Haynes & Emmons, 1997; Landis, 1997a; 1997b), others concluded that students in reform schools were not doing better than control groups of students (Borman et al., 2003; Cook et al., 1999; Miron & Applegate, 2000). Findings from these studies cannot conclude that parental involvement has no effect on student outcomes since it is not known if reform schools actually required parental involvement (Borman et al., 2003). In their synthesis of effects of schools from 29 comprehensive school models, Borman et al. suggested that the effectiveness of school reform initiatives was largely due to unmeasured program-specific and school-specific differences in implementation. Schools enrolled in the reform models might not have actually expected parental involvement or taken initiatives to work with them. Therefore, it is important to measure school expectations and initiatives for parental involvement.

There are many studies that examined parents' individual characteristics — such as ethnicity, family structure, and socioeconomic status — who are more likely to be involved in children's education (Moreno & Lopez, 1999; Wanat et al., 1994). Although information on these factors is useful, they do not acknowledge the dynamic aspects of the family-school relationship and they are hard to change by education and social policy (Feuerstein, 2000). Only a few studies have been published that addressed the influences of school factors on parental involvement (Bauch & Goldring, 2000; Feuerstein, 2000; Griffith, 1998). In these studies, parents' report of involvement was examined and a limited number of school-level factors were investigated. For example, Bauch and Goldring's (2000) study examined the influences of three aspects of teacher work context: a supportive school environment, a caring atmosphere, and whether schools required parents' volunteering. Griffith's (1998) study included class size, student-teacher ratio, and percentage of students enrolled in the free and reduced meal program. Feuerstein's (2000) study is the only study that investigated the influences of both structural and cultural factors. The author found that the most significant factor was the amount of school contact with parents, which suggests that more studies should investigate the practices that school leaders can apply to encourage parents' trust and involvement. The important role of school leaders and teachers in increasing parental involvement was recognized in the past studies (Deslandes & Bertrand, 2005; Hoover-Dempsey & Sandler, 1995; 1997). When parents perceive that their children's schools have an inviting environment, they are more likely to participate in school activities. However, we know little about the degree to which school leaders and teachers expect or take initiatives to involve parents in different activities. We know even less

about what school organizational characteristics are associated with the levels of school expectations and initiatives for involving parents.

Studies conducted outside of the U.S. also indicated that school, family, and community partnerships are core components of school change and improvement (Epstein & Sanders, 1998; Kelly-Laine, 1998). A positive school-family partnership changes teachers' attitudes about parents' role in education, provides parents with the information they need to remain involved in their children's schooling, and allows students to see that their parents care about schoolwork and homework. Parents in Asian countries, such as Japan and Korea, are particularly taking an active role in their children's education (Stevenson & Stigler, 1992). However, in contrast to American parents, parents in Asian countries are more likely expected to be active in home-based activities (Ho, 2003). The high level of parental involvement in Asian countries often leads scholars to believe that it results in the higher mathematics achievement in Asian students (Stevenson & Stigler, 1992). However, there is no solid evidence in the literature since these studies were conducted in individual countries. A comparison between more than two countries on parental involvement and an examination of the relationship between parental involvement and student achievement have not been conducted thus far. Cross-national studies that examine a large number of countries can provide empirical evidence on whether high-achieving countries are more likely to involve parents in education.

Purpose of the Study

Although the importance of parental involvement is often advocated by educational policymakers in the U.S. and many other countries, we know little about the

extent to which school leaders and teachers are expecting and taking initiatives to involve parents in schooling process for students. Neither do we know what school factors influence school's expectations and practices in increasing parental participations. This study examined schools' expectations for parental involvement and initiatives in communicating with parents and community members in 30 nations. The school-level factors that were associated with school expectations and initiatives for parental involvement in six high-performing nations including the U.S. were explored. Finally, the relationships between school expectations/initiatives for parental involvement and student outcomes (academic achievement and attendance rates) were investigated.

Research Questions

In this study, the following research questions are addressed:

- 1) How do levels of school expectations and initiatives for parental involvement vary across 30 nations?
- 2) Are national levels of school expectations and initiatives for parental involvement associated with national levels of student outcomes?
- 3) What school characteristics are associated with school expectations and initiatives for parental involvement, and how do these school characteristics differ among Canada, Czech, Hong Kong, The Netherlands, Taiwan, and USA?
- 4) How do the relationships between school expectations and initiatives for parental involvement and student outcomes differ among Canada, Czech, Hong Kong, The Netherlands, Taiwan, and USA?

Significance of the Study

The importance of parental involvement in schooling is emphasized in the most influential federal legislation on education, *The No Child Left Behind Act* (White House, 2002). The act represents the first time in federal education recommendations to introduce the concept of school-family partnership that schools should build to increase parent participation. However, its recommended strategies for fostering parental involvement do not specifically address how schools should change their structural and cultural elements that may impede parental involvement. Understanding the current state of school expectations and initiatives for parental involvement, the school factors associated with the school expectations and initiatives, and how the expectations and initiatives are related to student outcomes from comparative perspectives should provide U.S. policymakers with new insights and knowledge for developing effective programs for promoting parental involvement.

Compared to the past studies on parental involvement, this study is unique in its central constructs—school expectations and initiatives for parental involvement. From a policy perspective, the school expectations level is a more reliable measure to show whether schools are willing to involve parents, and it is a factor more feasible to be improved by educators and policy makers. Another construct, school initiatives in communicating with parents and community measures how much time schools are actually spending to involve parents and to improve relationships with the community. The importance of school attitudes and efforts to increase parental involvement is documented in literature. This study aims to understand school characteristics that influence schools' expectations and efforts in involving parents. In addition, as a first

cross-national study that quantitatively examines parental involvement in 30 nations, findings from this study provide rich information on this issue around the world. The comparison between the U.S. and other nations are valuable for U.S. educators to recognize their strengths and weaknesses in their efforts for involving parents compared to the other 29 nations.

Defining School Expectation and Initiatives for Parental Involvement

Parental involvement: Parental involvement means “the dedication of resources by the parent to the child within a given domain” (Grolnick & Slowiaczek, 1994, p.538). Epstein (1995) identified six types of parental involvement, which is a widely accepted typology of parental involvement:

- 1) Parenting — parents providing children with food, clothing, health and safety;
- 2) Communicating — parents exchanging information about their children with school;
- 3) Volunteering — parents assisting teachers in classroom, on field trips, or serving in school committees;
- 4) Learning at home — parents helping children with homework or other home learning activities;
- 5) Decision-making — parents participating in school leadership activities and school governance; and
- 6) Collaborating with the community — schools collaborating with the community for the benefits of schools and families.

School expectations for parental involvement: School administrators and teachers consider that parental involvement is important to their schools and students' education and "are willing to invest time needed for organizing" parental involvement practices and programs (Epstein, 1987). More specifically, schools may expect parents to monitor their children's homework completion, communicate with schools about children's problems, assist teachers in school projects, or participate in the school committees.

School initiatives for parental involvement: School administrators and teachers invest time to "design, direct, and support policies and practices" that aim to improve parental involvement (Epstein, 1987). School principals may spend time talking or working with parents and representing schools in the community. School teachers may also take initiatives to communicate with parents regarding their children's development or information about school activities.

Summary

This chapter described the background of the study, analysis of the problem, purpose of the study, research questions, significance of the study, and definition of central concepts. In chapter 2, a review of relevant literature will be presented. An overview of previous studies on parental involvement, social theories relevant to parental involvement, limitations of the past studies, and the importance of studying school expectations and initiatives to parental involvement will be presented. In Chapter 3, the research design will be described. It will include a description of the data source, variables selected, validity and reliability of major measures, data analysis, and a summary of research design.

Chapter 2

REVIEW OF THE LITERATURE

Introduction

Research on parental involvement can be divided into two groups: that examined the predictors of parental involvement and that examined the relationship between parental involvement and student achievement. The current chapter, divided into five sections, reviews literature on parental involvement and presents a conceptual framework and hypotheses. The first section reviews social theories that are broadly used to explain parental involvement. The second section presents an overview of the dimensions of parental involvement and its relations to school reforms in the United States. The importance of measuring school expectations and initiatives for parental involvement is also addressed in this section. The third section discusses the current state of international studies on the phenomenon of parental involvement in schools and suggests a need for studies on this issue from a cross-national perspective. The fourth section focuses on school characteristics that are associated with school expectations and initiatives for involving parents. The relationships between parental involvement and student outcomes are reviewed in the fifth section. In the last section, the conceptual framework and hypotheses in the present study are described.

Social Theories on Parental Involvement

Social Capital Theory

The social capital theory is the most widely cited sociological theory in literature on parental involvement. Coleman is the leading figure in this field, followed by many other sociologists (e.g. Portes, 1998; Sander & Putnam, 1999). Coleman includes social network, trust, information channels, and norms as forms of social capital (Coleman, 1990). Portes (1998) added that the ability of actors to secure benefits by virtue of membership in social networks or other social structures is another form of social capital. Social capital within the family can be regarded as the time and effort that family members contribute to other family members. Children who live with single parent or whose mother has a full-time job would be in a disadvantaged situation since they may receive less attention than those having intact families. The social relationships between parents and students is another influential form of social capital which is reflected in the actions parents take at home, such as talking to their children about school or implementing rules about television viewing. These activities are particularly valuable as they can serve as a conduit through which norms, standards and expectations are conveyed (Schneider, 1993).

Coleman introduced another term—closure—as a social structure that facilitates the emergence of effective norms. Closure means the existence of sufficient ties between certain numbers of people to guarantee the observance of norms (Portes, 1998). In a community “where there is an extensive set of expectations and obligations connecting the adults, each adult can use this drawing account with other adults to help supervise and control his or her children” (Coleman 1990, p.318). For example, through frequent

interactions among parents, they can share information about their children, their children's teachers, new school policies, and they can express their complaints about the school (Schneider, 1993). The informal network among parents consists of another resource for increasing parent involvement because it can generate either positive or negative opinions about various aspects of school life and serve as a vehicle for bringing issues to school boards and school administrators.

Social capital emphasizes the ability of the families to work towards the children's well being and the ability of the community to work towards the common good. Social capital that includes trust, information channels, and norms is a valuable resource parents can use for advancing children's life chances. The social networks parents develop through involvement in schools offer parents and their children needed educational opportunities for success. Social capital theorists do not tackle the issue of social reproduction directly. From their perspective, social networks are resources available to all parents and students rather than a mechanism that regulates the distribution of student achievement. Parental involvement is a way to develop social capital for children, which they believe can lead to improved performance.

Cultural Capital Theory

The level of parental involvement is not simply a matter of individual or school choices, but also reflects larger societal power relationships. Sociologists today pay attention to family beliefs, cultural values and behaviors to understand the dynamics of family involvement in their children's education. From critical and poststructuralist perspectives, the cultural capital theory emphasizes the interactions of parents and

schools as ideologically constructed to maintain individual and group status positions in both education and the larger society. Cultural capital theory has close connections with social capital theory, while it differs from social capital theory in its emphasis on issues of power and class relations in school and family interaction.

Pierre Bourdieu developed the concept of cultural capital and Annette Lareau applies it to school-family relationships. Bourdieu expands the notion of capital beyond its economic conception which emphasizes material exchanges, to include "immaterial" and "non-economic" forms of capital, specifically cultural and symbolic capital. Cultural capital, then, represents the collection of non-economic forces such as family background, social class, values on education, and different resources, which influences children's academic success. Most broadly, Bourdieu argues that through daily life practices and interactions families pass on different skills, habits, and dispositions which influence children's prospects in multiple ways (Bourdieu, 1984). Cultural capital is not a simple byproduct or reflection of class position, but is actively deployed in making hierarchical distinctions and in reproducing social inequalities (Aschaffenburg and Maas, 1997). According to Bourdieu, the initial differences in cultural capital are not equalized over the educational career, but rather are exacerbated. Students with more endowments of cultural capital, for example, students from families with the skills and preferences of the dominant culture, are able to adapt and further develop the cultural skills and preferences rewarded in the schools, and hence are better able to negotiate their way through the highest educational level (Aschaffenburg & Maas, 1997). Further, schools represent and reproduce middle or upper class values and forms of communication since teachers are able to communicate effectively with middle and upper class parents who

share similar beliefs but have difficulty in communicating with parents who come from a different cultural frame of reference or habitus. This promotes the involvement of middle and upper class parents and limits the involvement of those with a lower SES.

Lareau's (1987; 2003) qualitative studies confirm the influence of social class status on student achievement and life attainment. She found that middle- and upper-income parents participated more frequently in their children's schooling than low-income parents. She attributes some of this difference to the fact that middle and upper class parents are familiar with the dominant language of education and have established a positive relationship with the teachers and the principal. Lareau suggests that cultural capital in part determines the unequal distribution of power among parents in public school. Those who speak the language of the White and privileged class are more involved in the education system and the daily operation of the school. Working-class parents share their wealthier peers' desire to help their children. However, they seldom try to influence the core of the educational system. They are often intimidated by teachers' professional authority and not confident to give instructions to their children (Lareau, 2003). Lareau maintains that middle and upper class parents also transmit advantages by intentionally cultivating children's social skills such as interacting and negotiating with authority figures. Interactions with advantaged parents provide children with cultural capital, i.e., shared high status attitudes, preferences, formal knowledge, behaviors, goods or credentials (Lamont & Lareau 1998), which Lareau calls "sense of entitlement" (Lareau 2003). As a result, middle and upper class students benefit more from parental involvement than their peers from working class and poor families.

Cultural capital theory is supported not only by Lareau's studies, but also by evidence from works of several other scholars. For instance, through in-depth interviews with ten mothers from diverse ethnocultural and socioeconomic groups, Abrams and Gibbs (2002) explored parents' role in the home-school relations in an elementary school. They found that the lower status parents, Latina mothers in the case, felt strongly that power at the school was available only to White parents who participated in the parent teacher association, and that power was "closed" because members of the privileged groups restricted minority parents' access to it. Despite these findings ascertaining the role of class in parental involvement, there are studies that found social class and parent education became far less important factors than parental involvement in predicting the children's academic success (Dauber & Epstein, 1993). From a large representative sample of U.S. middle school students, Ho and Willms (1996) found little support for the conjecture that parents with low socioeconomic status were less involved in their children's schooling than parents with higher socioeconomic status. Critics also pointed out that findings from cultural capital studies on parental involvement and student academic outcomes should be taken cautiously because many of them applied only qualitative approaches in their methodology (Schneider, 1993).

Social Ecological Theory

Ecological theory also offers insights to the phenomenon of parent involvement and family-school relationships. The central tenet of social ecological theory is that student development is influenced by the ongoing qualities of the social settings in which he/she lives or participates and the extent and nature of interaction between these settings

(Bronfenbrenner, 1979, 1994). Bronfenbrenner's structure of environment consists of five "layers": micro-, meso-, exo-, macro-, and chronosystem. The *microsystem* encompasses the relationships and interactions a child has with his immediate surroundings. Structures in the microsystem include family, school, or neighborhood. The *mesosystem* provides the connection between the structures of the child's microsystem. The examples may be the connection between the child's teacher and his parents. The *exosystem* is about the larger social system, e.g. child's home and his parent's workplace. The *macrosystem* is the outermost layer in the child's development. This layer is comprised of cultural values, customs, and laws. The *chronosystem* encompasses change or consistency over time that relates to a child's environment. The interaction of structures within a layer and interactions of structures between layers is a core tenet of ecological theory. Rather than viewing individuals as isolated and independent, an ecological perspective emphasizes the interconnections of events and the bi-directionality of effects between organism and environment. Thus, a child must be studied in the context of the family environment and the family must be understood within the context of its community and the larger society.

Ecological theory also emphasizes the importance of consistency in expectations for children between school and family. During children's development process, they are required of specific demands and expectations from home, school, and community. The attitudes, values, skills, and competences that are expected by home, school and community shape children's development. Any differences in these expectations between home and school may contribute to low academic achievement of children (Bowman & Stott, 1994; Powell, 1989). Social ecological theory provides a sound theoretical explanation on the importance of the collaborative relationship between school and

family, in which both sides respect each other and recognize the impacts of their values on the child.

Comer and Haynes (1991) introduced the ecological approach in parental involvement. They stated that parent involvement should be a part of a context-focused school improvement process designed to create positive relationships that support children's development. Instead of addressing parental involvement in isolation, they integrate the parent program with the overall program of the school. Families and schools constitute important sources of influence on the development of children and the best results are achieved only when these two institutions work together. In their experiment in two elementary schools, parental involvement was one of the nine program elements that were designed to promote a systematic school innovation (Comer & Haynes, 1991). Conceptualizing education as a system, their program focused on strengthening relationships by promoting dialogues among relevant participants to pay attention to issues of power and engagement in education at various levels. From their experiment, Comer and Haynes (1991) concluded that parental involvement programs were most effective when they were part of an integrated ecological approach to school enhancement.

School Expectations and Initiatives for Parental Involvement

Dimensions of Parental Involvement

Parents and other family members can involve themselves in their children's education in various forms both in and out of school. In school, parents may attend PTA

meetings, sports events, and other student activities. Parents may also serve as teacher aides in classroom, in various school committees. At home, parents may talk with children about school, monitor their homework completion, or enroll them in various enrichment activities. They also transmit their knowledge, attitudes, and values to children by modeling acceptable behaviors, guiding their activities, and giving direct instructions (Moles, 1993).

Because parental involvement is such a broad term, it causes a major challenge for measuring it in a consistent way across different studies. While many studies have measured the construct of parental involvement, few have used it in the same way (Baker and Soden, 1998). Some researchers included parental aspiration or expectations for children's educational success as a dimension of parental involvement (e.g. Singh, et al., 1995). Other researchers focused on behavioral aspects of parental involvement, such as offering help in homework or attending parent-teacher conferences (e.g. Bauch and Goldring, 2000). In other cases parental involvement was conceptualized as parenting style or family interaction patterns (Lareau, 1987). Such differences in conceptualization and measurement of parental involvement make it difficult to assess cumulative knowledge across different studies (Baker & Soden, 1998).

Even when studying the same aspect of parental involvement, researchers defined it in different ways even with the same data. For example, the National Education Longitudinal Study of 1988(NELS:88) dataset was used by several researchers to examine parental involvement. Ho and Willms (1996) included 12 indicators of parental involvement clustered around four variables: home discussion, home supervision, school communication, and school participation. In analyzing the same NELS:88 data, nine

items were identified as indicators of parental involvement in Feuerstein's study (2000), whereas Kerbow and Bernhart (1993) focused only two forms of parental involvement with school: parent-initiated contact with school and participation in parent-teacher organizations.

Scholars now call for a broader and more powerful definition of parental involvement (Christenson & Sheridan, 2001; Davies, 1993; Epstein & Jansorn, 2004). They suggested that "family involvement" or "family and community involvement" is a more encompassing term because they go beyond parents to include other family members and community agencies and institutions. The term, "partnership" was also introduced in this area which emphasizes that schools, families, and communities share responsibilities for children's education (Comer and Heynes, 1991; Epstein, 1995; Epstein & Jansorn, 2004). Epstein identified six types of parental involvement which consist of a widely accepted typology of parental involvement:

- 1) Parenting — parents providing children with food, clothing, health and safety;
- 2) Communicating — parents exchanging information about their children with school;
- 3) Volunteering — parents assisting teachers in classroom, on field trips, or serving in school committees;
- 4) Learning at home — parents helping children with homework or other home learning activities;
- 5) Decision-making — parents participating in school leadership activities and school governance; and

6) Collaborating with the community — schools collaborating with the community for the benefits of schools and families.

In contrast to the actual level of parental involvement that is often reported by parents, school expectations and initiatives for parental involvement were rarely measured in the previous studies. School expectations for parental involvement is an important measure for us to examine whether school administrators and teachers consider that parental involvement is important to their schools and students' education and whether they are willing to invest time in organizing parental involvement practices and programs. School initiatives in parental involvement are another measure that shows how school administrators and teachers invest their time to support policies and practices designed to increase parent participation and improve school-family relationships.

Parental Involvement and School Reform

Involving parents in schooling is one of the major components of many school reform models (e.g., Edison Project, Comer School Development Program). In a review of schools from 29 comprehensive school reform models, 21 percent required a parent involvement program (Borman et al., 2003). For example, in the Alaska Onward to Excellence program (Landis, 1997a) parents were taught how to interact with their children to encourage and support them. Parent Team is a major integrated part of school reform in Comer's model (Comer, 1986; The Yale School Development Program Staff, 2004). This Parent Team is composed of parents who develop activities through which the parents can support the school's social and academic programs (The Yale School Development Program Staff, 2004). The team also selects representatives to serve on the

school Planning and Management Team. The Intercultural Development Research Association has been implementing the Student Success Initiative program in which parents were asked to participate at all levels in their children's schools (Solís & Romero, 2005). The program was designed to educate parents with skills and knowledge on how to interact with their children. Through a web site, the program offers information and resources for schools and parents.

The emphasis on parental involvement in various educational reform models is supported by research findings which supports the argument that parental involvement is a crucial component of the effective schools, where parents have positive views of the teachers and school and identify with and support the school's missions (Davies, 1993; Goldring & Shapira, 1996). Purkey & Smith's (1983) review of studies on effective schools concluded that parent involvement was a critical organizational variable for effective schools. Another review of 40 school effectiveness studies confirmed that parental involvement was one of the factors that had an important meaning both at the school and classroom levels (Scheerens, 1992). Through various involvement activities, parents and teachers can build a more respectful relationship. Parents would recognize that the teachers are working hard for their children; teachers would also have a positive view of parents and parental involvement activities. Parents provide teachers with helpful information about students, provide different perspectives and insights concerning education issues, and support classroom learning beyond school hours (Filp, 1998). The respect and appreciation would result in a reciprocal way, which may lead to increased funding from the community. Increased parental participations will also change the nature of schools as social systems by expanding their boundaries with the external

environment (Goldring & Shapira, 1996). For example, Epstein and Dauber (1991) conducted a study of elementary students, parents, and teachers and found that teachers who frequently involved parents did not prejudge less educated, poor or single parents. On the contrary, teachers who did not involve parents frequently made more stereotypic judgments about the involvement and abilities of parents who were less educated, parents who were economically disadvantaged and single parents.

Importance of School Expectation and Initiatives for Parental Involvement

Parents' decisions of involving in their children's school largely depend on their perceptions of school expectations for their participation (Eccles & Harold, 1993; Hoover-Dempsey & Sandler, 1995, 1997). Hoover-Dempsey and Sandler (1997) reviewed psychological theory and empirical studies to examine the reasons why parents decide to become involved in their children's schooling. They found that there were three major constructs that critically influenced whether or not parents became involved: role construction, self-efficacy, and invitations to become involved. Parents were more likely to become involved if their school invited them to take a proactive approach to involvement. Their research suggested that a school climate of invitations to involvement influenced parents' understanding of teachers' interest in parental help and support, parents' feeling of being needed and wanted in the educational process, and parents' knowledge about their children's school work. These findings were confirmed in Deslandes and Bertrand's study (2005) which revealed that teachers' demands and provision of opportunities for involvement, coupled with an inviting school climate, were related to a higher level of parental involvement.

The importance of school practices for increasing parental involvement has also been noted in the literature. Hoover-Dempsey and Sandler (1995) found that the teacher who made phone calls to parents and invited them to call anytime with questions tended to encourage an increased level of parent-teacher conversations. Using the NELS:88 data, Anguizno (2004) examined parental involvement and its effect on high school completion of Native American, Asian American, and Latino American students. School involvement was a variable the author created to designate the effort by the educational system to provide opportunities to the family system, such as phone calls and meeting with families. The author found that, after controlling for traditional parental involvement (parents-initiated participation activities), the relationship between high school completion and school involvement (school-initiated parental involvement) did not vary by ethnicity. This finding suggests that the schools' initiative to contact parents is more important than those activities initiated by parents themselves. When schools had a policy that requires parental volunteering, the opportunities the schools provided for involving parents and the extent to which the schools sought their advice increased (Bauch & Goldring, 2000; Feuerstein, 2000). Although requiring parental volunteering may seem bureaucratic, it does help parents know that their participation is important to school personnel (Bauch & Goldring, 2000).

Scholars suggested that parents and schools must have the same or compatible perceptions of the meanings and functions of parental involvement (Chavkin & Williams, 1987; Lawson, 2003). However, schools and parents often see parental involvement in different ways. From a study on the perspectives of parents, superintendents, and school board presidents in six state regions (Arkansas, Louisiana, Mississippi, New Mexico,

Oklahoma, and Texas), Chavkin and Williams (1987) compared the attitudes and feelings of administrators and parents about different aspects of parental involvement at the elementary school level. They found that administrators tended to support involving parents in traditional educational roles (e.g. audience, home tutor, and school program supporter), but substantially less support for the roles that call for shared decision making in education. On the other hand, parents expressed more interest in participating in school decision-making processes.

Many school teachers do not take the initiative to encourage parental involvement. One reason may be that teachers possess doubts regarding parents' competencies or skills to help their children's learning (Gonzalez-DeHass and Willems, 2003). From a study of the perceptions of 333 school teachers, Smith (2002) found that only ten percent of teachers reported parents were actively involved in their school. They attributed the lack of parent involvement to inflexible parent work schedules, negative parent attitudes towards school, and lack of parent concern for children. Some teachers believed that parents were neglecting their responsibilities of helping children (Lawson, 2003). Such perceptions about parents contributed to labeling and stigmatizing practices of parents, which in turn alienated parents from the school. 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 experiences, grade level, student achievement, and average parent education. She found that parents whose child had high-involvement teachers were more positive about school and more aware of teachers' interest in their involvement than were parents with low-involvement teachers.

International Studies on Parental Involvement

Many countries around the world recognize the importance of involving parents in the process of educating children and have adopted policies to increase parental involvement in children's education (Kelley-Laine, 1998). A cross-national study of schools and families conducted by the OECD (Organization for Economic Cooperation and Development) revealed the reasons for its member countries to increase parental involvement in schools: 1) Many countries recognized that parents have rights to be involved in schooling; 2) Parental involvement was associated with higher student achievement; 3) Parents themselves were willing to get involved and applying pressure to schools (Kelly-Laine, 1998). The types of parental involvement vary across countries due to different cultures and changing economic and political climates.

Previous studies found that the practices of parental involvement in many countries were successful (Epstein and Sanders, 1998; Filp, 1998; Kelly-Laine, 1998; Kohler, 1998; McKenna and Willms, 1998; Ravn, 1998). For example, Deslandes, Potvin and Leclerc (1999) conducted a study of 535 Canadian adolescents aged from 14 to 16. This quantitative study examined the relations among family characteristics, school achievement, and student-reported parenting style and parental involvement in schooling. The authors discovered that family characteristics such as parents' education level, family size, and family structure, made a smaller contribution to school achievement than parental practices (i.e. parental warmth, supervision, and affective support).

The sixth issue in the *Journal of Childhood Education* published in 1998 collected articles that examined experiences of parental involvement in various countries. The accumulating evidence "clearly refutes the belief that only parents with many years of

formal education, prior personal success in school, or high socioeconomic status can advocate for and assist their children” (Epstein and Sanders, 1998, p.392). The articles in this issue showed that school, family and community partnerships are core components of school change and improvement. For example, Street (1998) described a two-year national project in England and Wales which aimed at identifying appropriate strategies for involving parents in their adolescents' education. Findings from 10 participating secondary schools indicated that parental involvement in secondary level brought about many positive outcomes, such as improvements in student self-esteem, student behaviors and attendance, improved communication between school and home, and increased professional confidence among teachers in working with parents and families. The article also reported that the support from school administrators and communicating adequate information with parents were both crucial to a positive relationship between families and school.

While similar effects of parental involvement were found across countries, countries with different cultures may find some types of parental involvement are especially successful but others not. In their work on U.S., Chinese, and Japanese schools, Stevenson and Stigler (1992) highlighted the active involvement of Asian mothers in their children's education. However, in contrast to American mothers, Japanese mothers never work in the classroom as instructional aides or assistant teachers. In fact, Japanese mothers avoid entering the classroom while class is in session except on carefully planned observation days for parents (Peak, 1991). Although not present in the classroom, Japanese mothers are expected to be active in home-based activities. From a sample of about 2,100 middle grade students (grades 6-9) and their parents, Ho (2003a)

reported that home-based involvement was significantly associated with students' self-esteem in Hong Kong. Ho suggested that, in East Asian countries or areas such as Hong Kong, teachers viewed parents as the primary educators and supporters in their children's learning process at home. The school-based involvement, such as volunteering or participating in school PTAs, is not common in these countries. Although parental involvement in children's schooling is not a tradition in East Asian countries, its benefits have been recognized in some Asian countries such as South Korea and Taiwan. For example, in the late 1990s, the Ministry of Education in Taiwan started to address parents' rights in their children's schooling in various educational laws and regulations (Ministry of Education, Taiwan, 2007). Many parent-teacher associations and parenting schools have been developed in urban areas of Taiwan since 2003. Learning from the experiences of Western countries, the Ministry of Education in Taiwan allocated funding to parental involvement programs in schools.

Despite the existence of evidence on the effect of parental involvement in individual countries, few studies explored this global phenomenon from a cross-national perspective. Working with the International School Effectiveness Research Project (ISERP), Reynolds and Teddlie (1995) examined whether the "effective" practices at school or at classroom level are the same or different in various countries based on samples of middle schools in the U.S., Australia, Hong Kong, Taiwan, the Netherlands, Canada, Ireland, Norway and the U.K. The ISERP researchers were asked to rank the importance of 12 factors (such as school characteristics, curriculum, principal, parental influence) that had influence on school effectiveness based on their case study in individual countries. By comparing responses from studies from English-speaking and

non-English speaking countries, they found that researchers from non-English speaking countries ranked higher in the influence of parents than those from English-speaking countries. This study implied that the effect of parental involvement might be different across nations. The explanatory value of national measures of parental involvement should be continually examined in international studies. The investigation of the association between national levels of school expectations/initiatives for parental involvement and student outcomes will expand our knowledge about the level and nature of school practice regarding parental involvement in high-achieving countries.

School Characteristics, School Expectation and Parental Involvement Practices

Although research indicates that all parents regardless of ethnicity and socioeconomic status are concerned about their children's education, the opportunities for them to be involved are not even. Generally, middle-class parents have the knowledge and skills to help their children with homework or interact with schools effectively. In contrast, low-income parents do not have sufficient time, knowledge, and confidence to be involved in their children's schools (Gonzalez-DeHass and Willems, 2003). Family structure is another strong predictor of parental involvement (Crosnoe, 2001; Lee, 1993). Children from non-intact families receive lower educational expectations from their parents, less monitoring of schoolwork by parents, and less overall supervision of social activities than children from intact families (Astone and McLanahan, 1991; Kerbow and Barnhardt, 1993). Language barrier is another reason for some parents' lower involvement in school. For those parents whose native language is not English, they do not feel confident or have English skills to communicate in a school setting (Ariza, 2000; Moosa, 2001).

Generally, ethnic minority parents report less participation in school activities than do white parents (Griffith, 1998; Moles, 1993). While the low level of involvement by ethnic minority families is usually a result of low SES and low parent education level, some particular minority cultures also lead to less parent participation in children's schools. In some cultures, parents believe the teacher is above them, and they would not think of interfering with their authority (DeMoss and Vaughn, 2000; Kerbow and Bernhardt, 1993). Different racial and ethnic groups also vary in the types of involvement they have with their children. Using the NELS:88 data, Muller and Kerbow (1993) compared parental involvement patterns across ethnicity. They found that white parents viewed education as a form of cultural enrichment: talking about current school experiences, knowing the parents of their child's friends, and volunteering at school. African Americans appeared to engage in direct involvement activities at higher rates than others, such as checking homework and contacting school about academic matters. Asian Americans exhibited low levels of involvement with the school. However, they were the highest in restrictions on television and highest in enrolling their child in extra classes.

With the unequal levels of parental involvement along the lines of race, education level, and socioeconomic status, the role of schools to facilitate parental involvement becomes especially important. The actual level of parental involvement, especially involvement activities in school, is affected by the opportunities made available by the school (Schneider, 1993). Some schools may encourage parents to contact teachers about their children's academic performance, social development, or future plans. Other schools

may have certain policies or characteristics that discourage parents from being involved in schooling.

Kerbow and Bernhardt's (1993) analysis of NELS:88 data reported that school factors were responsible for up to 18.5% of the variation in formal parental involvement, such as volunteering and parent-teacher organization membership. In the schools with a higher proportion of minority teachers and students, the involvement level of minority parents was higher than those of White or Asian peers with the same social class. The authors suggested that cultural identification or less perceived prejudgment from teachers contributed to the higher level of parental involvement in the schools with a higher proportion of teachers of the same racial and ethnic status. Kerbow and Barnhardt' study also found that the more teachers and school staff contacted the parents specifically about their children, the more they encouraged reciprocal contact initiated by the parents. Similar findings were produced in Feuerstein's (2000) study of the same NELS:88 data which indicated that the most significant factor was the amount of school contact with parents: The more the school contacted parents, the more parents contacted the school.

Grolnick, Benjet, Kurowski, and Apostoleris (1997) analyzed data collected from 209 mothers and their children and from 28 teachers. They found the institutional factors — including school characteristics and school representatives' attitudes, as well as school behaviors towards parents — affected the level of parental involvement in schools. Bauch and Goldring's (2000) study of 13 high schools in an urban area indicated that where teachers perceive the school as having a caring atmosphere, it was more likely that parents are involved and there were more home-school communications even after

controlling for school size, teacher education and seniority, family social status, and school instability.

Other school-level factors, such as school size, class size, and school type may be also associated with the level of parental involvement. The results from parent and student surveys of a sample of 122 public elementary school showed that schools having larger classes and larger student-teacher ratios had a higher level of parent participation, and a lower level of parent participation was found in schools with more student newcomers and with a greater percentage of students enrolled in the free and reduced meal program (Griffith, 1998). However, in the study of 6,141 adolescents participating in the National Longitudinal Study of Adolescent Health, Crosnoe's (2001) found no school characteristics influenced the degree of parental participation in school activities, and only one characteristic (school size) was negatively associated with parental interaction with teachers. Crosnoe's study also found that Catholic school in general did not promote parental participation, but African American parents were more likely to participate when their adolescents were enrolled in Catholic schools.

Parental Involvement and Student Outcomes

Positive parental involvement improves student motivation (Gonzalez, 2002), attitudes towards school (Trusty, 1996), school attendance (Potter, 1998), and school adjustment (Simons-Morton, Bruce, and Crump, 2003), and has a positive impact on students' academic achievement in reading (Fiala and Sheridan, 2003; Zellman and Waterman, 1998) and math and science scores (Jones and White, 2000). Based on analyses of data from a sample of 335 students and parents, Shaver et al (1998) examined

the impact of parent-school involvement on Title I second through eighth graders' reading and mathematics achievement. The researchers found that parental involvement, regardless of child's gender or SES, was a dynamic force influencing students' academic success.

Parental involvement in schools also promotes a smooth transition to high school (Falbo et al, 2001) and leads to high school completion (Astone and McLanahan, 1991). Using the NELS:88 data, Singh and others (1995) assessed the effects of different components of parental involvement on the academic achievement of eighth graders. The four components were: parental aspirations for children's education, parent-child communication about school, home structure, and parental participation in school-related activities. Among the four, educational aspirations had the strongest positive effect on achievement. Instead of focusing only on one wave of NESL-88 data, Fan (2001) examined the data from the first three waves of this longitudinal study. He also found that parents' educational aspiration stood out for its most significant effect on students' academic growth.

Different forms of parental involvement may be effective at different grade levels. While studies found that parental assistance with homework had positive effects on elementary students' academic success (e.g. Balli, 1998), this effect may diminish when student go to higher grades (Desimone, 1999; Singh, et al., 1995). However, parents can find other ways to support their children's education when they move up to middle and high school. Interviews with 26 high school students and their parents revealed that creating a social network for children was critical for parents to help their children with a successful transition to high school (Falbo et al, 2001).

However, some studies found little or no relation between parental involvement and student academic performance. Okpala and others (2001) investigated the influence of parental involvement on the mathematics achievement of fourth graders in a low-income community in North Carolina. The parental involvement in their study was measured by parental volunteer hours per 100 students in each school. Their data analysis showed that parental volunteer hours were not statistically significant in explaining test scores. Singh et al. (1995) study of the NELS:88 data also found no effects of parent-child communication and parental participation in school-related activities on student achievements. In a review of several hundred studies, White, Taylor and Moss (1992) concluded that there was no convincing evidence that parental involvement in early intervention strategies resulted in more effective student performance outcomes. Another review of studies on parental involvement programs (Mattingly et al., 2002) offered a similar result: there was little empirical support for the belief that parent involvement programs are an effective means of improving student academic achievement. Mattingly and her colleagues, however, did not claim that parental involvement was not effective; they pointed out that serious design and plausible methodological and analytical methods were needed in the evaluation studies on parental involvement programs.

Evaluation of school reform models that required a parental involvement component also provided mixed evidence of effects of involving parents on student outcome. While some studies found that students achieved better in these schools (Haynes & Emmons, 1997; Landis, 1997a; 1997b), other studies concluded that students in reform schools were not doing better than control groups of students (Borman et al., 2003; Cook et al., 1999; Miron & Applegate, 2000). We cannot conclude, however, that

parental involvement has no effect on student outcome since it is not known if a reform school actually implemented parental involvement policy. Based on a review of evaluation studies of many comprehensive school reform models, Borman et al. (2003) suggested that unmeasured program-specific and school-specific differences in implementation greatly affected the effectiveness of school reform. Schools that enrolled in the reform models might not actually expect parental involvement or take initiatives to work with them, or not implement it as specified in their reform agenda. For example, school reforms such as Basic Schools specified that parents should be partners of schools. Wanat's (1999) study of the Basic School, however, discovered that teachers simply wanted parents to trust the school to implement the Basic School's reform policies. They perceived that parents' role was to assist the schools do their job, such as volunteering, providing information about the children, and supporting school practices. Even the most open-minded teachers did not want parents to get involved in some aspects. Schools still saw parents as consumers, not as partners. Findings from this study revealed the importance of examining school expectations for parental involvement and the actual school effort in initiating involvement activities.

Current Study

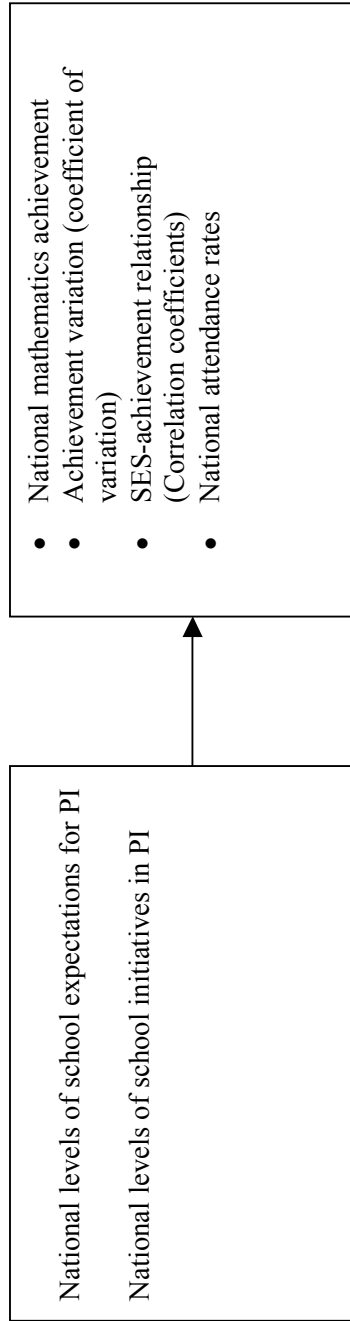
Conceptual Framework

The conceptual framework of the present study builds on sociological theories and the previous empirical studies on parental involvement and its relations to student outcomes. This study proposes a model of relationships among school factors, school expectations and initiatives for parental involvement and student outcomes between

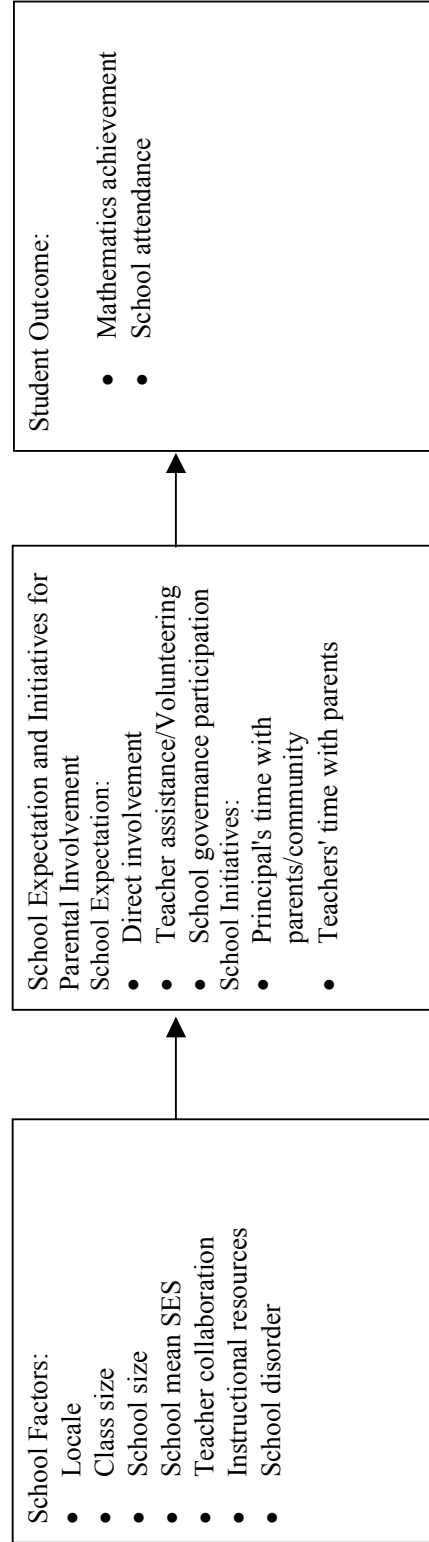
nations and within nations (see figure 1: conceptual framework). Although from different perspectives on the issue of parental involvement and its relations to student outcome, social and cultural capital theories and social ecological theory all suggest that successful parent involvement programs must have a strong component of outreach to families. The importance of school practices and attitudes to parental involvement has also been well documented in the literature (Bauch, 1993; Dauber & Epstein, 1993, Epstein, 1986; Epstein & Dauber, 1991; Hoover-Dempsey & Sandler, 1995, 1997). The effect of school expectations and initiatives for parental involvement on various student outcomes may be an international fact that goes beyond the geographical boundaries. Specifically, the national level of school expectations and initiatives may be associated with higher national level of student achievement and attendance rates. Since active parental involvement can counter the effects of individual characteristics in predicting school performance, a high level of parent participation in schooling may indicate a more equalized education system. Thus, a positive relationship between schools and families, presented as higher level of involving parents in schools, will result in smaller variations in student achievement and a smaller degree of achievement-SES relation.

Within each nation, this present study conceptualizes school expectations and initiatives as related to various schools' organizational structural and cultural characteristics, and various student outcomes. Davies (1987) suggested that schools have common characteristics as other organizations: (1) Organizations perform their functions through routines or standard operating procedures that make it difficult to respond to crises or changing external demands; (2) Organizations tend to avoid uncertainty and seek stable internal and external relationships; (3) Organizations usually change only

Figure 1: Conceptual Framework
 School Expectation and Initiatives for Parental Involvement: School-Related Factors and Relations to Student Outcome
 Between-Nation/Cross-National Analysis (Research Questions 1 &2)



Within-Nation Analysis (Research Questions 3 &4)



incrementally and new reforms typically consist of marginal adaptations of existing programs and activities. These characteristics may impede schools to implement their desired parental involvement policies. Although it is difficult, increasing parental involvement in the public schools should be one of the priorities of the school reform process. School boards, school administrators and teachers should take initiative to develop and implement comprehensive parental involvement programs and involve parents at every step in the process of planning and implementing these programs (Davies, 1987). When school leaders show interest in involving parents in their schools and intentionally create opportunities for them, parents would feel more welcomed by school and the possibilities of participation would increase.

The school characteristics which influence school expectations and initiatives may include teacher collaboration, school disorder, instructional resources, school mean SES, school size, and class size. School climate is an important school-level factor that may affect school expectations for parental participation and the actual involvement of parents. A collaborative climate among teachers may be conducive to the involvement of parents in schools. Conversely, teachers who resist collaboration with their colleagues may be less likely to accept parental involvement as well. Past study showed that parental involvement was high when teachers had positive attitudes toward parents and worked collaboratively with them (Griffith, 1998).

School instructional resources, including physical facilities, materials, textbooks and technology may have an impact on the substantive aspects of teaching including the quality of professional development and the involvement of parents (Loeb et al., 2005). The lack of instructional resources may constrain teachers' time and energy to contact

with parents. It may also lead to a weaker sense of responsibility among teachers for the school mission of building relationships with parents and the community. The effect of students' behavioral problems on schools' attitude to parental involvement was not studied in the previous research. Research did show that schools tended to depend on school psychologists and special education teachers to deal with students' behavioral problems rather than to change school or classroom environments for children at risk to foretell such problems from actually developing (Forness & Kavale, 2001). However, if schools recognize that parents are effective in detecting causes of children's behavioral problems, they would be willing to invite parents to work with teachers.

School size and class size may predict school expectations and initiatives for parental involvement. Research showed that while large school size may predict less parental involvement (Crosnoe, 2001; Griffith, 1998), large class size is significantly related to more parent participation in school (Griffith, 1998). One explanation is that larger schools have greater differentiation in organization and function which may result in more individual alienation and lack of commitment. Organizational members (teachers, students, and parents) may be less likely to take responsible roles because they may recognize that individual performance is difficult to evaluate in large groups and they do not see the relation between individual efforts and the outcomes of their efforts (Griffith, 1998). Therefore, larger schools should allocate more energy and resources to increase parental involvement. Unlike schools with larger enrollments, larger class size predicts more teacher efforts to involve parents (Griffith, 1998). On the one hand, teachers having larger classes may want to seek help from parents. On the other hand, parents whose

children are enrolled in larger classes may want to assist the teacher to gain the benefits of smaller class sizes.

The Hypotheses

Three hypotheses are tested in the current study:

- H1. The countries with a higher mean level of school expectations/initiatives for parental involvement have a higher national mean student achievement and attendance rate and a smaller achievement variation and SES-achievement relationship.
- H2. The schools with a higher level of teacher collaboration, more instructional resources, and a larger class size are more likely to expect and take initiatives for parental involvement. However, the schools with a higher level of school disciplinary issues and a larger school size are less likely to expect or take initiatives for parental involvement. These relationships differ across countries because of the different education systems and societal contexts.
- H3. School expectations and initiatives for parental involvement are significantly associated with student outcomes: student academic achievement and attendance rates after controlling for student and school background information. This relationship differs across countries because of the different education systems and societal contexts.

Significance

While the level of parental involvement may be contingent on family structure, ethnicity, culture, and the grade level in which the student is studying, school expectations, attitudes, and efforts for involving parents play an important role in the process of parental involvement. The role of school administrators and teachers in promoting helpful forms of involvement is crucial. However, the literature tells us little about the influences of school characteristics on school attitudes toward parental involvement and the actual efforts that schools are making to increase such involvement. Most studies on what roles administrators expect parents to take in school involvement are outdated. A reexamination of the current state of school expectations for parental involvement and the actual effort that schools take to involve parents is needed.

The international data on the effect of parents' participation in children's education are preliminary and somewhat intuitive. Most studies were conducted in only one nation and many of them were descriptive in nature. Very few of the past international studies used empirical qualitative or quantitative data to support their arguments. Among the few studies that used quantitative data, most of them used descriptive statistics and few studies applied advanced statistical techniques such as multiple regression or Hierarchical Linear Modeling (HLM). Cross-national studies with a strong methodological approach are needed to examine the current state of parental involvement in other countries.

This study utilized an appropriate existing international dataset and selected important individual and school-level variables. Sophisticated statistical methods were used to explore the relationship among school expectations or initiatives for parental

involvement, school-level factors, and student outcomes across 30 nations. As a first cross-national study that quantitatively examined parental involvement in 30 nations, findings from this study provide rich information on this issue around the world. By identifying school level factors that are associated with higher level of school expectations and initiatives for parental involvement, this study provides policymakers and educators in each nation with information on how to improve parental involvement within their school context. The comparisons between the U.S. and other nations are valuable for U.S. educators to recognize their strengths and weaknesses in their efforts for involving parents compared to the other nations.

Chapter 3

RESEARCH METHOD

Introduction

This study examined the current state of school's expectations and initiatives for parental involvement and their relations to various student outcomes in 30 nations. This section presents the overview of the purpose of the study and research questions, hypotheses, research design, data source, validity and reliability of major measures, and data analyses.

Purpose Overview and Research Questions

The literature review revealed the importance of examining expectations and practices of school administrators and teachers for parental involvement. The purpose of this study is to examine how parental involvement is expected and initiated by middle school administrators and teachers and how their expectations and initiatives are associated with student outcomes across nations. Since the examination of school-level factors produces policy-relevant information, this study also aims to compare the school characteristics that are related to levels of school expectations and initiatives for parental involvement across nations.

Data from 8th graders were examined in this study for several reasons. First, middle school students are in a critical time of transition and uncertainty. On the one hand, they are developing a sense of autonomy and social identity. On the other hand, they are "struggling to find their identities and are often filled with uncertainty, they seek

out and rely on their parents for supportive and active involvement in all aspects of their life-including school" (Beghetto, 2001). The situation can be especially threatening for immigrant families whose language and culture are different from the mainstream. In these families, the natural act of growing up can become a total disengagement from the foundations of that child's heritage (Bermúdez, 1994). Second, parental involvement usually decreases at the middle level (Eccles & Harold, 1993; Epstein, 1987; Gonzalez-DeHass & Willems, 2003; Paulson, 1994). Parents may feel incompetent to offer help in their children's schoolwork as they move to middle level. For many parents, the feeling goes beyond insecurity about their ability to help their young adolescents with schoolwork in the upper grades to negativity about their roles (Bermúdez, 1994). Third, schools' efforts also diminish after the primary grades. Parent-teacher conferences merely become a one-way vehicle for transmitting information from teacher to parent with little impact on long-range activities or follow-up (Bermúdez, 1994). However, almost all parents remain interested in their children's schooling and success, and would like directions and information from the schools about how to help their children (Epstein et al., 1997). School administrators and teachers in middle level can continue working with parents pursuing a collaborative role in promoting student learning. They just need to be aware that the types of parental involvement that best benefit middle-level students would be different from that for elementary students (Beghetto, 2001).

The following research questions were addressed in this study:

- 1) How do levels of school expectations and initiatives for parental involvement vary across 30 nations?

- 2) Are national levels of school expectations and initiatives for parental involvement associated with national levels of student outcomes?
- 3) What school characteristics are associated with school expectations and initiatives for parental involvement, and how do these school characteristics differ across the U.S. and other five high-performing nations?
- 4) How do the relationships between school expectations and initiatives for parental involvement and student outcomes differ across the U.S. and other five high-performing nations?

The Hypotheses

Three hypotheses were tested in this study:

- H1. The countries with a higher mean level of school expectations/initiatives for parental involvement will have a higher national mean student achievement and attendance rate and a smaller achievement variation and SES-achievement relationship.
- H2. The schools with a higher level of teacher collaboration, more instructional resources, and a larger class size will be more likely to expect and take initiatives for parental involvement. However, the schools with a higher level of school disciplinary issues and a larger school size will be less likely to expect or take initiatives for parental involvement. These relationships will differ across countries because of the different education systems and societal contexts.

H3. School expectations/initiatives for parental involvement and student academic achievement, and attendance rates will be positively and significantly associated after controlling for student and school background information. This relationship will differ across countries because of the different education systems and societal contexts.

Research Design

The TIMSS 1999 dataset was used in this study. It is one of the most comprehensive international datasets, and it includes the extensive information on educational activities and beliefs from 8th graders, their teachers and school principals in 38 nations. Compared to other international datasets and the TIMSS 2003 dataset, it contains the largest amount of information on school expectations and initiatives for parental involvement. Therefore, it is the only international dataset that enables researchers to conduct comprehensive analyses on school-level factors associated with school expectations and initiatives for parental involvement. The TIMSS 1999 used a two-stage sampling design. In the first stage, schools were randomly selected in each nation. In the second stage, one or two classrooms per school were randomly selected. All students in selected classrooms were included in the current study.

Data

Data Source

Data from 30 nations in the TIMSS 1999 were selected based on the availability of relevant student, teacher, and school-level variables. The nations included in this study

are from a variety of geographic regions of the world and represent a great range of economic development levels and school systems. The data from the total of 4,851 schools, 137,184 students in 30 nations were included in this study (See Table 1 for the sample size for each country).

Variables

Student level variables.

Student academic achievement and attendance rate were used as two student outcome variables. Three factors — gender, SES and educational aspiration — were analyzed as control variables. The original items for each variable and the coding strategy are discussed in this section.

Academic achievement. In the TIMSS 1999, eighth graders' mathematics achievement level was measured by a standardized test of both basic skills and problem-solving ability. It was assessed using a scale-score based on item response theory (IRT), where each examinee takes only a subset of the test items in any content area. Five plausible values were imputed as the best estimates of each student's performance, based on the test results and the background information for all examinees with similar demographic characteristics and identical response patterns. The first of the five plausible values of math score for each student was analyzed as academic achievement variable in HLM6 software.

School attendance was measured by a question asking students how many times they have skipped class in the previous month prior to the survey administration. The

Table 1: Sample Size for Each Nation

Nation	No. Schools	No. Students
Bulgaria	163	2984
Canada	385	8565
Chile	185	5622
Cyprus	61	3002
Czech	142	3363
Hong Kong	137	5083
Hungary	147	3120
Indonesia	150	5581
Iran	170	4786
Israel	139	3877
Italy	180	3214
Jordan	147	4295
Korea	150	6027
Latvia	145	2808
Morocco	173	3703
Moldova	150	3260
Malaysia	150	5536
Netherlands	126	2869
New Zealand	152	3451
Philippines	150	5915
Romania	147	3244
Russian	189	3928
Singapore	145	4935
Slovak	145	3423
Slovenia	149	3039
Taiwan	150	5691
Thailand	150	5629
Tunisia	149	4710
Turkey	204	6764
USA	221	8760
Total	4,851	137,184

answers were coded into: 1 = skip 5 or more classes, 2=skip 3 or 4 classes, 3=skip 1 or more classes, 4=never skip classes.

Educational aspiration. Students were asked, “How far in school do you expect to go?” The answer was coded into: 1 = some secondary school, 2 = finish secondary school, 3 = some vocational/technology vocational education after secondary school, 4= some university and 5= finish university.

SES. An educational resource index created by Boston College (2001) was used to measure students’ socioeconomic status. The status value is based on education level of their parents, existence of educational aids at home (computer, study desk/table, dictionary), and the number of books at home, and coded into: 1 = low, 2 = medium, and 3 = high.

Gender. Student gender was coded as 1=boy and 0=girl.

School and Teacher Related Variables.

School expectations and initiatives for parental involvement were analyzed as dependent variables in the examination of the influence of school-level factors on school expectations and initiatives. Seven school factors — locale, school size, class size, school mean SES, teacher collaboration, school disorder, and instructional resources — were analyzed as independent variables predicting school expectations and initiatives for parental involvement. The original items for each variable and the coding strategy are discussed in this section. The descriptive statistics of school-level variables are presented in tables 1 to 6 in Appendix.

School expectations for parental involvement. School principals or administrators were asked if their schools expected parents to be involved in ten forms of activities. I created an overall parental-involvement expectations index by summing the ten variables which indicates the number of types of parental involvement the principals expect. I also divided the 10 items into three groups to create measures of three different types of school expectations:

Expectation for direct parental involvement is about parents directly involved in children's daily life and schooling, which includes:

- 1) Notify school about children's problems;
- 2) Prepare child's lunchbox;
- 3) Be sure children complete homework.

It should note that in some nations, children might not bring lunchbox to school but buy lunch at the school café. The cultural difference in this form of parental involvement need to considered when interpreting the findings.

Expectation for teacher assistance concerns about the activities that parents participate in schools to assist teachers, which includes the following four items:

- 1) Serve as teacher aides in classroom;
- 2) Volunteer for projects;
- 3) Assist teachers on trips;
- 4) Patrol school to monitor student behavior.

Expectation for school governance involvement includes three items:

- 1) Raise funds for school;
- 2) Serve on committees to select personnel;

3) Serve on committees to review finances.

School initiatives in parental involvement. The school initiatives index variable was derived from the total hours of the principal and math teacher spent on working/talking with parents or the community. School principals were asked: “As principal of this school, about how many hours per month do you usually spend on each of the following activities? 1) Representing the school in the community and 2) Talking with parents”. The original total number was divided by 4 to get the number of total hours per week that school principal spent with parents or community. In the teachers’ questionnaire, math teachers were asked: “Approximately how many hours per week do you normally spend on meeting with parents?” The answer was coded into: 0=none, 0.5=less than 1 hour (0.5 hour per week), 1.5=1-2hours (1.5 hours per week), 3.5=3-4hours (3.5 hours per week), 5=more than 4 hours (5 hours per week). The teacher data were aggregated to the school level. The school initiatives index then is the sum of total number of hours per week that principals and math teachers spent on meeting with parents/or community members.

Locale. Based on the school report, urban was created as a dummy variable: 1 = close to center of a town/city; 0 = geographically isolated area or village or rural/farm or outskirts of town/city.

School size. School size was created based on the total school enrollment: 1 = less than 500, 2 = 501-1000, 3 = 1001 – 1500... and 11 = above 5000.

School mean SES. It is the mean of student SES for each school.

Teacher collaboration. School principals were asked to answer “yes” or “no” to three questions: 1) Does your school have an official policy related to promoting

cooperation and collaboration among teachers? 2) Are teachers in your school encouraged to share and discuss instructional ideas and materials? And 3) Do teachers in your school meet regularly to discuss instructional goals and issues? Their answers are re-coded as 1 = no answers of yes, 2 = yes to one question, 3 = yes to two questions, and 4 = yes to all three questions.

Disciplinary issues. School principals were asked “About how often does the school administrator or staff have to deal with the following behaviors among students?” on the following items: 1) arriving late at school, 2) absenteeism, 3) skipping class, 4) violating dress code, 5) classroom disturbance, 6) cheating, 7) profanity, 8) vandalism, 9) theft, 10) intimidation or verbal abuse of other students, 11) physical injury to other students, 12) intimidation or verbal abuse of other students, 13) physical injury to teachers or staff, 14) tobacco use/possession, 15) alcohol use/possession, 16) illegal drug use/possession, 17) weapon use/possession, and 18) inappropriate sexual behavior. The answer codes are 1 = never, 2 = rarely, 3 = monthly, 4 = weekly, and 5 = daily, and the mean of the values for these 18 items is assigned as the level of school disciplinary issues.

Instructional resources. Principals were asked “Is your school’s instructional capacity affected by inadequacy of: 1) instructional materials? 2) budget for supplies? 3) school buildings and grounds? 4) heating and lighting system? 5) instructional space? 6) equipment for handicapped pupils? 7) computers for mathematics instruction? 8) software for math instruction? 9) calculators for math instruction? 10) library tools for mathematics instruction? 11) A-V resources for mathematics instruction? and 12) teachers qualified to teach mathematics? The answers are code as 1 = none, 2 = a little, 3 = some,

and 4 = a lot. The average of these 12 items is computed as a composite variable of instructional resources.

National Level Variables.

A set of national-level variables was created from the TIMSS 1999 dataset.

National level of school expectations for parental involvement. National mean score of the average of 10 items of school expectations for parental involvement ($X = 5.31$, $SD = 1.01$).

National level of school initiatives. National mean of the school initiative variable ($X = 5.34$, $SD = 1.32$)

National mean mathematics achievement. Mean of TIMSS mathematics assessment for eighth grader samples ($X = 480.96$, $SD = 75.72$).

Achievement variation. Coefficient of variation of distribution of TIMSS mathematics assessment for eighth-grader samples ($X = 18.50$, $SD = 5.43$).

SES-achievement relationship. Correlation coefficient between SES and achievement of TIMSS eighth-grader samples ($X = .26$, $SD = .07$). This variable will be treated as an indicator of educational inequality in each nation.

National attendance rates. National mean of attendance rates ($X = 3.56$, $SD = .37$).

Validity

Validity refers to measuring factors that accurately reflect the concepts being measured. The purpose of the study is to examine the expectations of school

administrators for parental involvement and the time school principals and teachers spent to communicate with parents and community members. The TIMSS 1999 school and teacher background questionnaires provided appropriate ten items for school expectations which described various activities that parents were expected to participate in children's home and school-related learning activities. These parental involvement activities are congruent with Epstein's typology of parental involvement. The school initiative variable was derived from three items from school and teacher questionnaires which asked them how many hours they spent working/talking with parents or represented the school in the community. The validity of dependent and independent measures across nations is demonstrated through rigorous procedures for translation, cultural adaptations, translation verification, and review of the instruments in the design and implementation of TIMSS 1999 study (Martin, Gregory, & Stemler, 1999).

Reliability

Reliability indicates how consistent the responses are in two different administrations of the same test or survey. Measures of reliability (internal consistency) for survey data are crucial because the results of the study rest entirely on that measurement. Chronbach Alpha is one of the most commonly used reliability coefficients that estimate the proportion of variance that is systematic or consistent in a set of test or survey data. It is based on the mean (absolute value) inter item correlation for all possible variable pairs. For example, if we get a reliability Alpha coefficient of .85 for a set of data (i.e. school expectations for parental involvement), this means that 85 percent of the variability in obtained scores could be said to represent true individual differences

and 15 percent of the variability is due to random error (Warmbrod, 2001). The Chronbach alpha reliability test was used to test the internal consistency of some primary measures in this study, such as school expectations for parental involvement. The alpha values of these measures are greater than .70 in most nations.

Proposed Data Analysis

The following section will describe the statistical methods used to analyze the data for each research question. Prior to analyzing the data, frequencies and percentages on the dependent variables and independent variables are conducted to provide a descriptive profile of each country.

Analysis 1: Comparison of School Expectation and Initiatives for PI across 30 Nations

In order to compare the level of school expectations and initiatives for parental involvement across 30 nations, five sets of descriptive analyses for the five dependent variables were conducted separately: overall parental-involvement expectations, expectations for direct involvement, expectations for teacher assistance, expectations for school governance, and school initiatives in parental involvement. Using the Statistical Package for Social Sciences (SPSS), version 12.0, descriptive statistics (i.e., mean, median, and standard deviation) are conducted to describe the four dimensions of parental-involvement expectations and school initiatives across the 30 countries.

Analysis 2: Relationship between National Levels of School Expectation and Initiatives for PI and National Levels of Student Outcomes

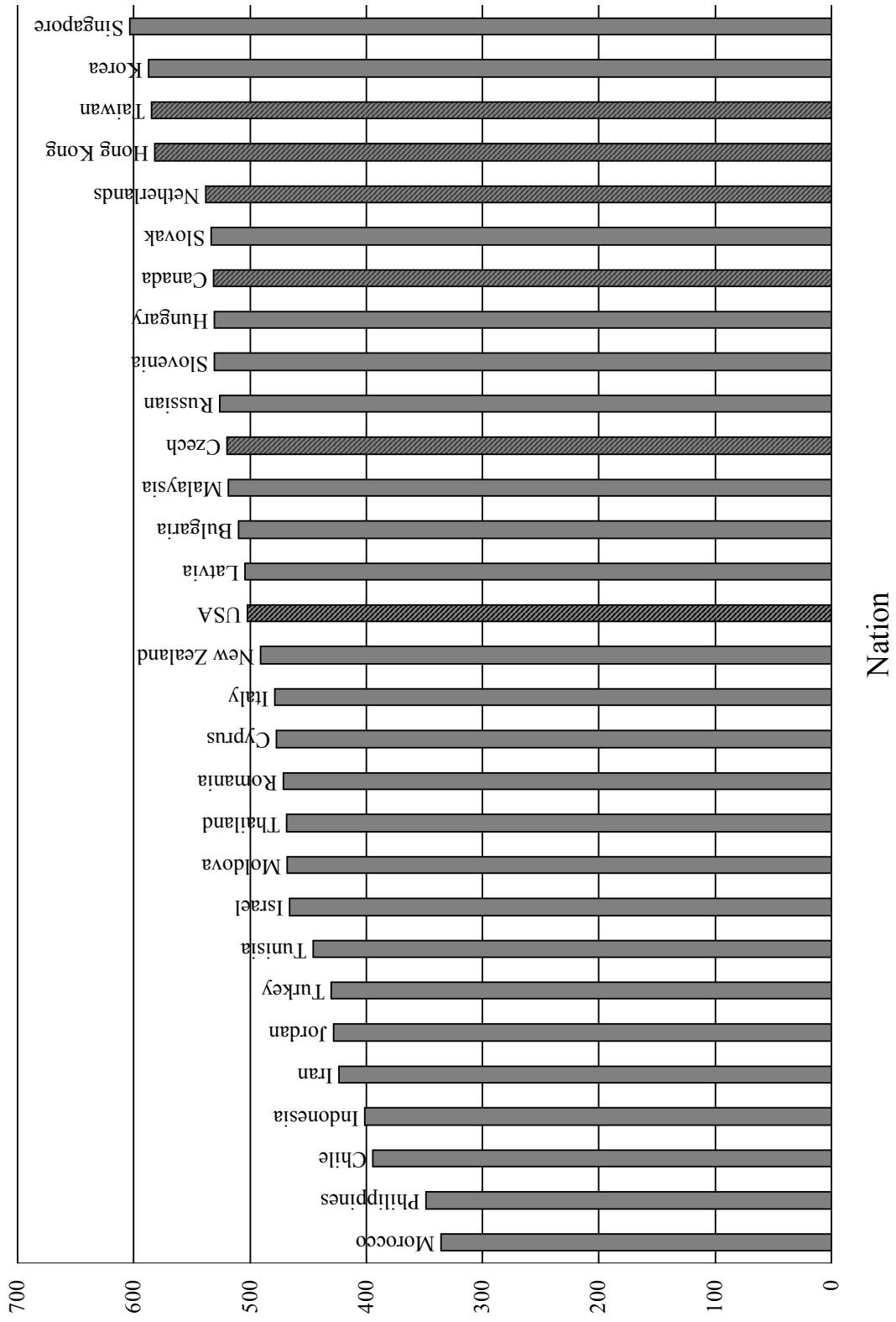
To address the second research questions, two sets of correlation analysis were conducted to examine the relationship between national level of school expectations, national level of school initiatives and national levels of student outcomes (i.e. mathematics achievement, achievement variation, SES-achievement relationship, and national attendance rates). Bivariate correlation analysis was conducted using a Pearson correlation coefficient. The Pearson coefficient determines the strength of the linear relationship between the variables.

Analysis 3: School-Level Factors Associated with School Expectation and Initiatives for PI

In order to examine the relationship between school-level factors and school expectations and initiatives for parental involvement, five sets of multiple linear regression analyses for each nation were conducted. Multiple linear regression is a statistical procedure that is used to find the linear combination of independent variables that best explains the dependent variable. In this study, multiple linear regressions were used to indicate how well school expectations and initiatives for parental involvement could be explained by the independent variables (i.e., school locale, school size, class size, school mean SES, teacher collaboration, instructional resource, and school disorder).

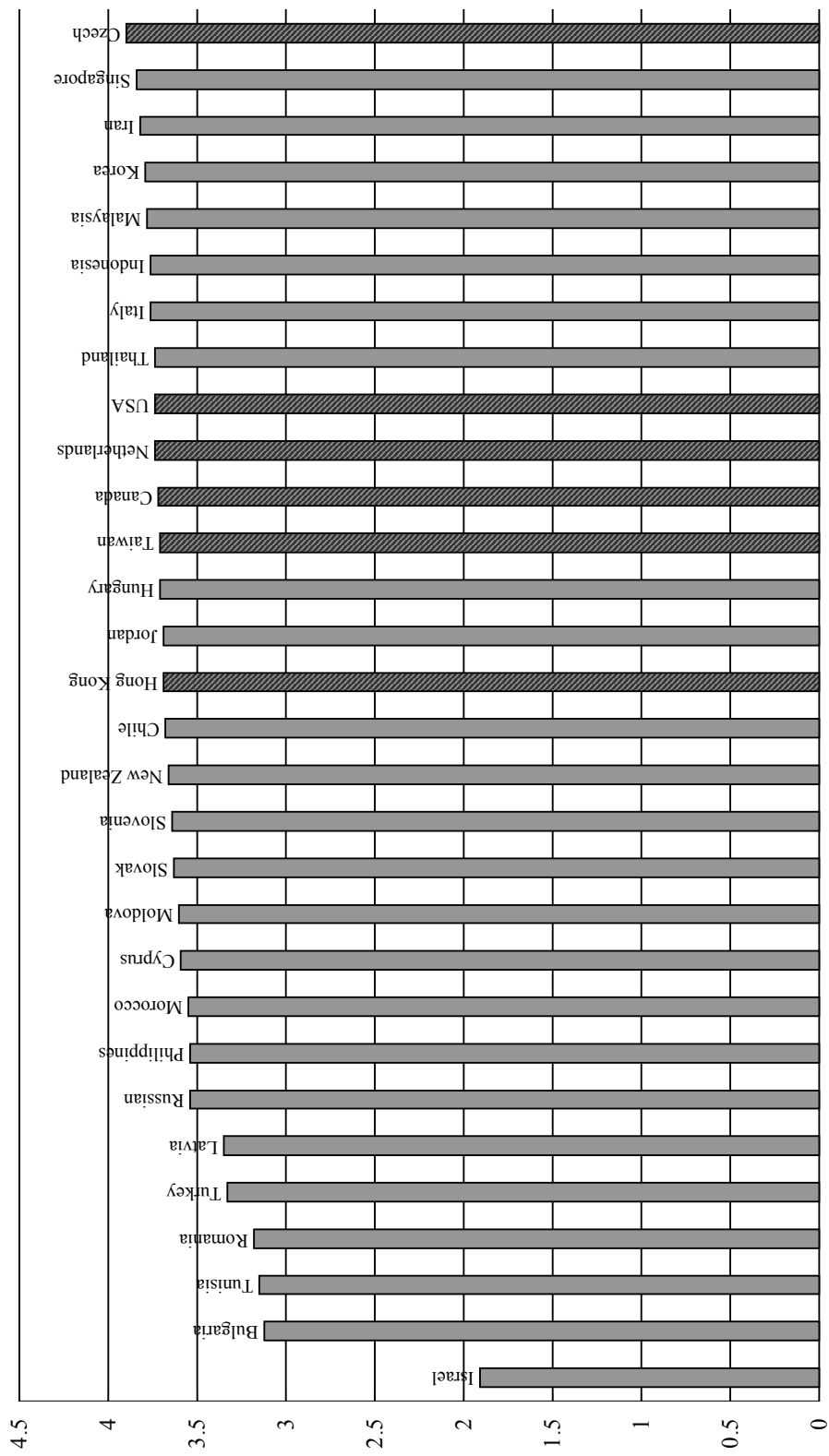
Comparisons were made among the significance levels and the sizes of the regression coefficients in the United States and five high-achieving nations. The other countries selected for the purpose of comparison were Canada, the Czech Republic, Hong Kong SAR, the Netherlands, and Taiwan. Among the six nations, two are from East Asia, two from North American, and the other two from Europe. As can be seen in Figure 2,

Figure 2: Eighth Grade Students' Mathematics Achievement in 30 Nations from TIMSS 1999



Note: Eighth graders' mathematics achievement level was measured by a standardized test of both basic skills and problem-solving ability.

Figure 3: Eighth-Graders' Attendance Rate in 30 Nations



Note: School attendance was coded into: 1=skip 5 or more classes, 2=skip 3 or 4 classes, 3=skip 1 or more classes, and 4=never skip classes.

eight graders in all of the other countries scored significantly higher than U.S. eighth graders on the TIMSS 1999 mathematics achievement test. These six nations also represent a range of nations where parental involvement has been developed substantially such as U.S. and Canada, and nations where parental involvement is quite new to their education system such as Taiwan and Czech Republic. The positions of these six societies among the 30 nations for student attendance are shown in Figure 3. The study hypothesizes that teacher collaboration and small class size are associated with higher levels of school expectations and initiatives for parental involvement in many nations. A school with a collaborative atmosphere is willing to involve parents in schooling and make more efforts in communicating with them. Small class size means a reduced teacher workload, which may allow teachers to contact parents more frequently. A lack of instructional resources and severe disciplinary issues are associated with lower levels of school expectations and initiatives for parental involvement in many nations.

Analysis 4: Relationship between School Expectation and Initiatives for PI and Student Outcome

An HLM analysis was conducted separately for the six selected nations to examine how school's parental-involvement expectations and initiatives are associated with students' school attendance and mathematics achievement. HLM allows researchers to analyze multilevel data such as students nested within schools. It allows unique random effects for each organizational unit, which produces correct standard errors and different slope and intercept for each organization (Raudenbush & Bryk, 2002). Because the study focuses on the direct effects of school expectations or initiatives for parental involvement on student achievement, the "Intercept as Outcome" model was utilized

(Raudenbush & Bryk, 2002). Six school characteristics were included in the school-level as control variables: school location, school mean SES, school size, teacher collaboration, school disorder, and instructional resource. Three student characteristics were included as control variables: gender, SES, and educational aspiration. The study hypothesizes that school expectations and initiatives for parental involvement are associated with higher student achievement in mathematics and a higher level of school attendance, after controlling for the variables described above.

The full two-level analytical model was conducted using HLM6 software. The level one model is similar to the OLS regression: an outcome variable is predicted as a function of a linear combination of one or more level-one variables.

Level-1 Model (Individual/student level):

$$Y_{ij} = \beta_{0j} + \beta_{1j}*(\text{Gender}) + \beta_{2j}*(\text{Educational Aspiration}) + \beta_{3j}*(\text{SES}) + r_{ij}$$

Where Y_{ij} = outcome score of student (i) from 8th grade school (j)

β_{0j} = the intercept of school (j)

$\beta_{1j, \dots, 3j}$ = the slope of independent variables of school (j)

r_{ij} = the residual for student (i) within school (j)

The level-two model is composed of intercept terms and beta coefficient, vectors of explanatory variables for each level one coefficient, and a random error term. The level one intercept becomes the dependent variable being predicted by level 2 variables.

Level-2 Model (School level):

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(\text{Urban}) + \gamma_{02}*(\text{School Size}) + \gamma_{03}*(\text{Resource}) + \gamma_{04}*(\text{PI expectations or initiative}) + \mu_j$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

Where γ_{00} = intercept

$\gamma_{01...04}$ = slopes predicting β_{0j} from school-level variables

μ_j = the error term for school (j)

Limitations of the Study

Due to the nonexperimental nature of the data and design, this study has several limitations that need to be considered in interpreting the findings:

First, cross-sectional data were used in the study. Cross-sectional research design involves the measurement of all variables for all cases only at one time. It is not able to directly assess intra-individual change or make inferences to causal relations. There may be interactions between parent-involvement activities and achievement, and without random assignment or longitudinal analysis using rigorous analytical methods, one cannot rule out nonrecursive relationships. Even if it is feasible to demonstrate convincingly a non-spurious link between parental involvement and student achievement in cross-sectional data, it is impossible to establish the causal direction of such a link from data collected at a single point in time. Therefore, any causal inferences made about the nature of the relationship between the dependent and independent variables in the

study are interpretive in nature and are derived from the strong theoretical and research literature (Desimone, 1999). Longitudinal study design is highly needed in collecting national or international data to examine the effects of school expectations and initiatives on student outcomes.

Second, this study measured the level of school expectations and initiatives for parental involvement rather than the actual parental involvement level. While these are important measures for examining if schools are willing to involve parents in school and how schools are initiating communications with them, they do not necessarily lead to the occurrence of parental involvement (Hoover-Dempsey and Sandler, 1995). The inclusion of actual level of parental involvement should also be encouraged in future international databases.

Third, more school and teacher factors need to be examined in order for us to understand the influences of school structure and cultural factors on school expectations and initiatives for parental involvement. The school factors examined in this study are limited to only seven; more factors are needed to get a better understanding of parental involvement across nations. Further, the number of countries that included in this study was limited to only 30. More countries from a broader range of demographic and economic background are needed to show how parental involvement is expected and initiated globally.

Summary

This chapter reviewed the research methods used in this study. Since this study used an existing international dataset, the data source was described and the research design was specified. The individual-level and school-level variables were identified and discussed in this chapter. For each research question, data analysis strategies were also explained accordingly. The proposed data analyses were presented accordingly for each research question. Finally, the limitations of the research design, data, and method were presented.

Chapter 4

RESULTS

The focus of the chapter is to present the findings for the four research questions of the study using descriptive statistics, bivariate correlations, multiple regression, and HLM. A brief summary of the results concludes this chapter.

Research Questions: The Results

Research Questions # 1. How do levels of school expectation and initiatives for parental involvement vary across 30 nations?

Figure 4 presents the national mean of overall school expectation for parental involvement in 30 nations. School administrators were asked if their schools expect parents to be involved in 10 forms of activities (each item is coded as 1=yes, 0=no). The sum of the 10 items were calculated for each school to create the overall school expectation index. The national mean of the index is shown in the figure. Singapore scored lowest (3.60) and Iran scored highest among these countries (7.46). The U.S. schools ranked the 8th highest among these 30 countries with the mean of 5.80, which means that on average, U.S. principals expect parents to involve in about 6 out of 10 forms of activities.

Figure 5, 6 and 7 presents the national mean of specific types of school expectation for parental involvement in 30 nations. Figure 5 shows the national mean of school expectation for direct involvement; figure 6 shows the national mean of school expectation for parents to volunteer in school activities; and figure 7 shows the national

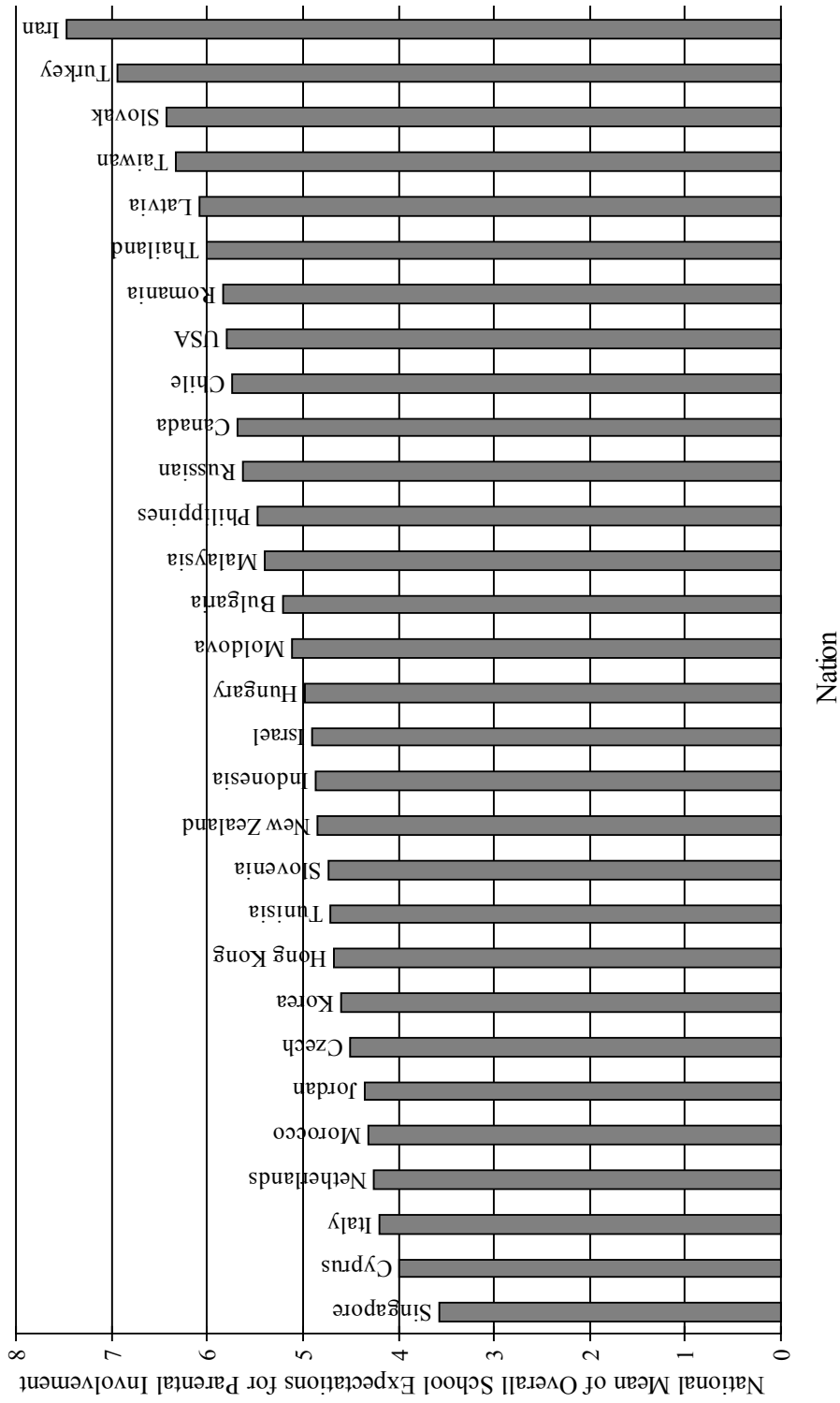
mean of school expectation for participation in school governance committees. Generally, schools in all of these countries were expecting more parents' direct assistance (figure 5) than participation in school governance activities (figure 7) (International Mean 2.33 vs. 1.14).

Among these nations, however, there were also great variations in three forms of involvement that schools expect from parents. For example, Figure 5 shows that Morocco and Singapore are among the countries with the lowest average score of expectation for direct involvement such as preparing children lunchbox and monitoring homework. In contrast, schools in New Zealand, Canada, Hungary, Iran, and Slovak Republic indicated the highest level of expectation for parents to fulfill these basic parenting obligations. The mean of U.S. schools was lower than international average (2.23 vs. 2.33) for such involvement, which means that schools in the United States showed less expectation for parents' direct involvement compared to schools in most other nations.

Figure 6 shows that Singapore, Cyprus, the Czech Republic, and Italy were among the countries that were least likely to expect parents' volunteering and assisting teachers in school, while schools in Taiwan and Iran indicated the highest expectation for this form of parental involvement. The U.S. scored above international average (1.95 vs. 1.75) and was the ninth highest for this type of expectation.

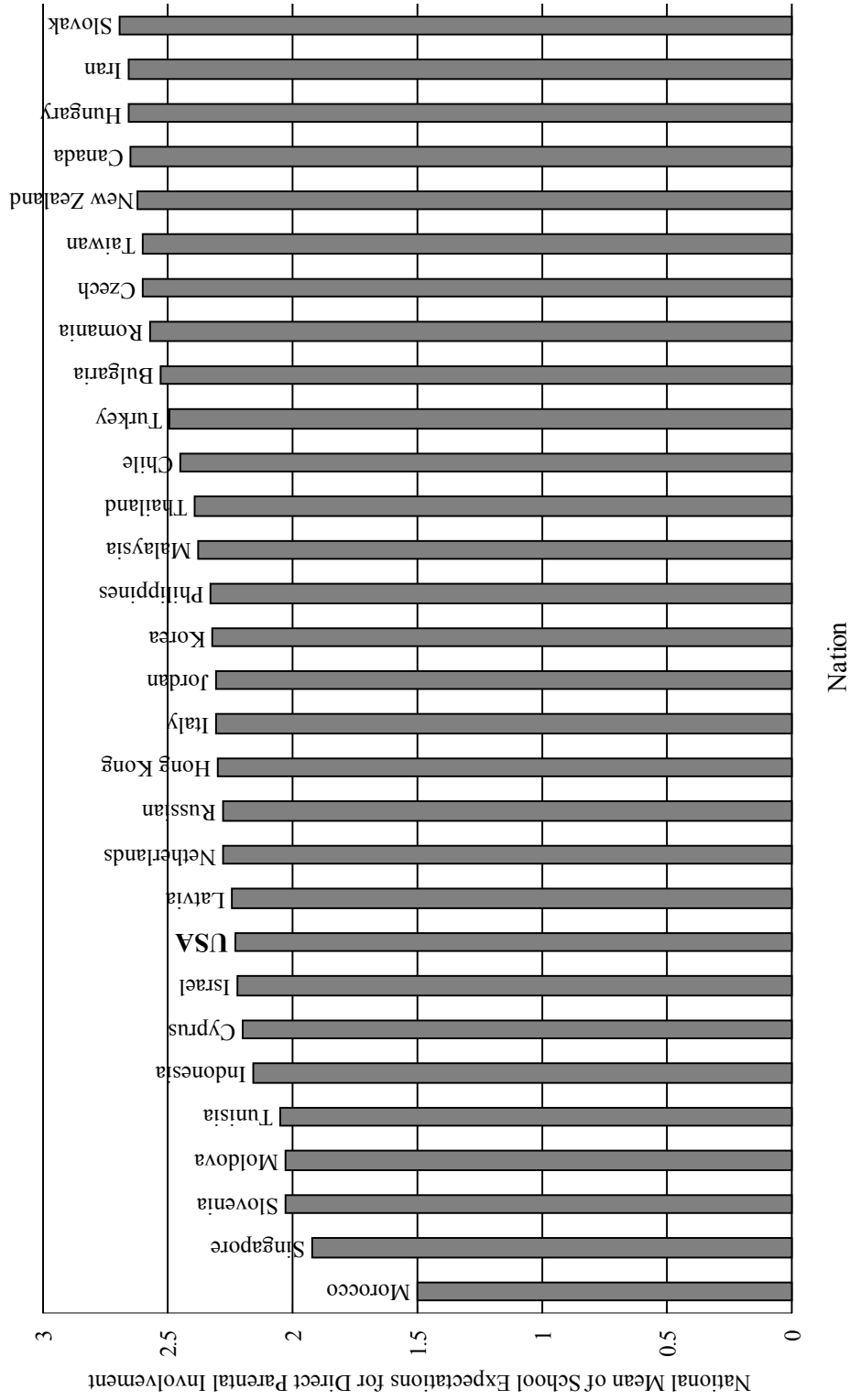
Figure 7 shows the mean score of school expectation for parents' participation in school governance in 30 nations. The United States stands in the top five among the 30 nations. The nations with higher scores than the United States are Romania, Slovak Republic, Iran, and Turkey. Jordan, Hungary, and The Netherlands are among the nations with the lowest mean score for such involvement.

Figure 4: School Expectations for 10 Forms of Parental Involvement Activities



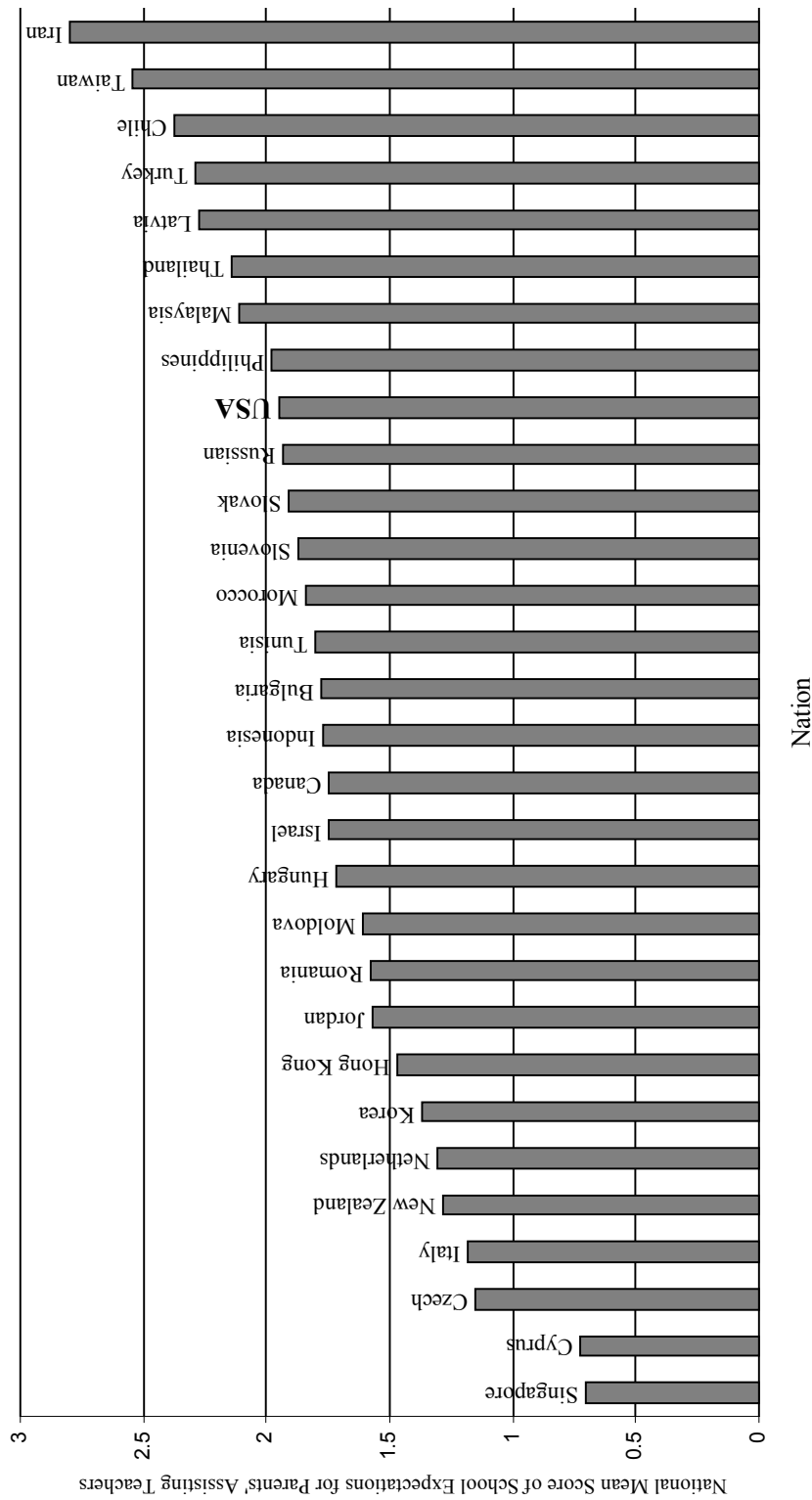
Note: School administrators were asked if their schools expect parents to involve in 10 forms of activities (each item is coded as 1=yes, 0=no). The sum of the 10 items were calculated for each school to create the overall school expectation index. The national mean of the index is shown in the figure. (International Mean = 5.22, SD = .90).

Figure 5. School Expectations for Direct Parental Involvement in 30 Nations



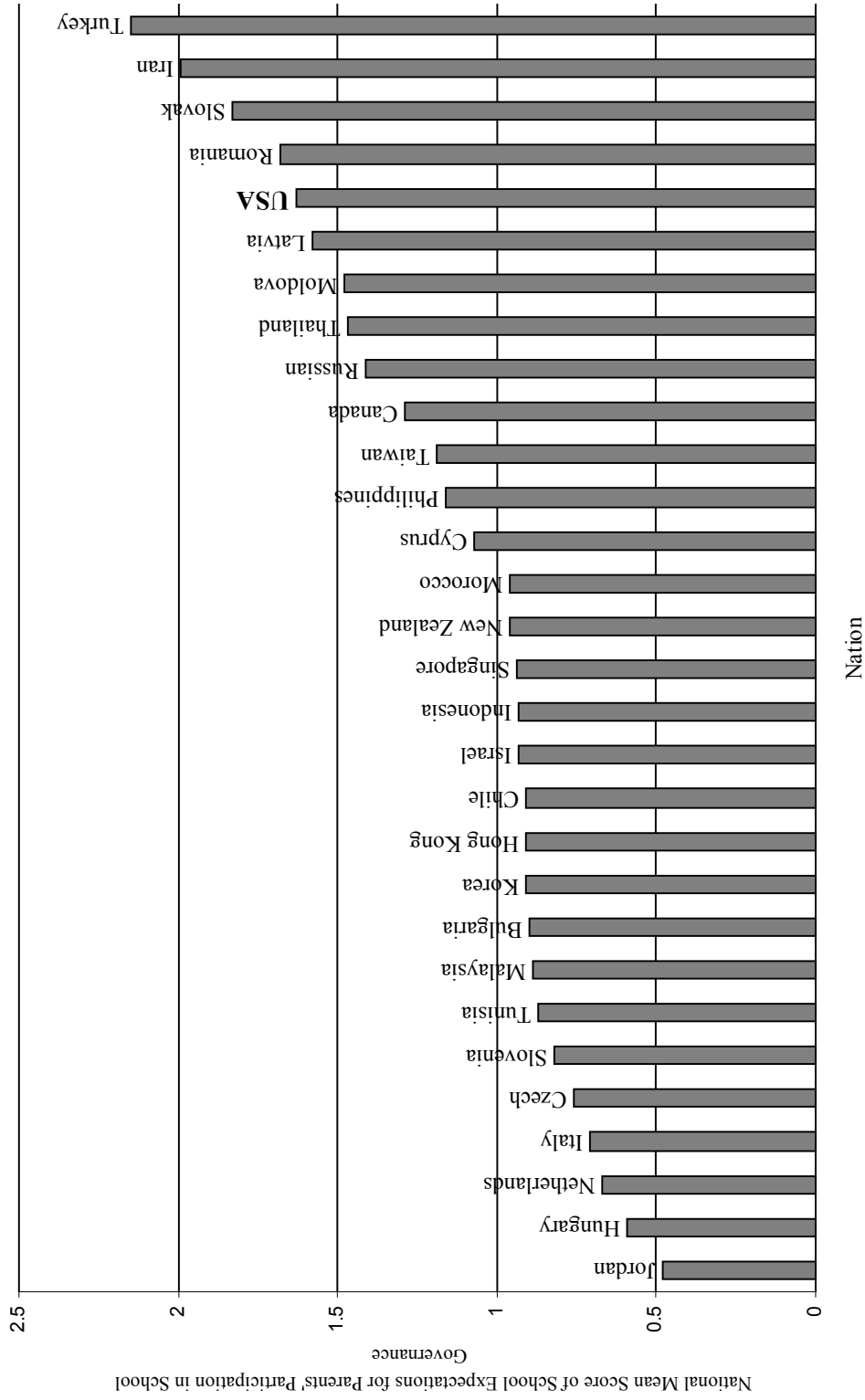
Note: School administrators were asked if their schools expect parents to involve in 3 forms of activities that are related to direct involvement with student life: preparing children lunch, notify school of student unusual behavioral problems, and monitoring homework (each item is coded as 1=yes, 0=no). The sum of the 3 items was calculated for each school. The national mean of the index is shown in the figure. (International Mean = 2.33, SD = .26)

Figure 6: School Expectation for Parents to Assist Teachers in 30 Nations



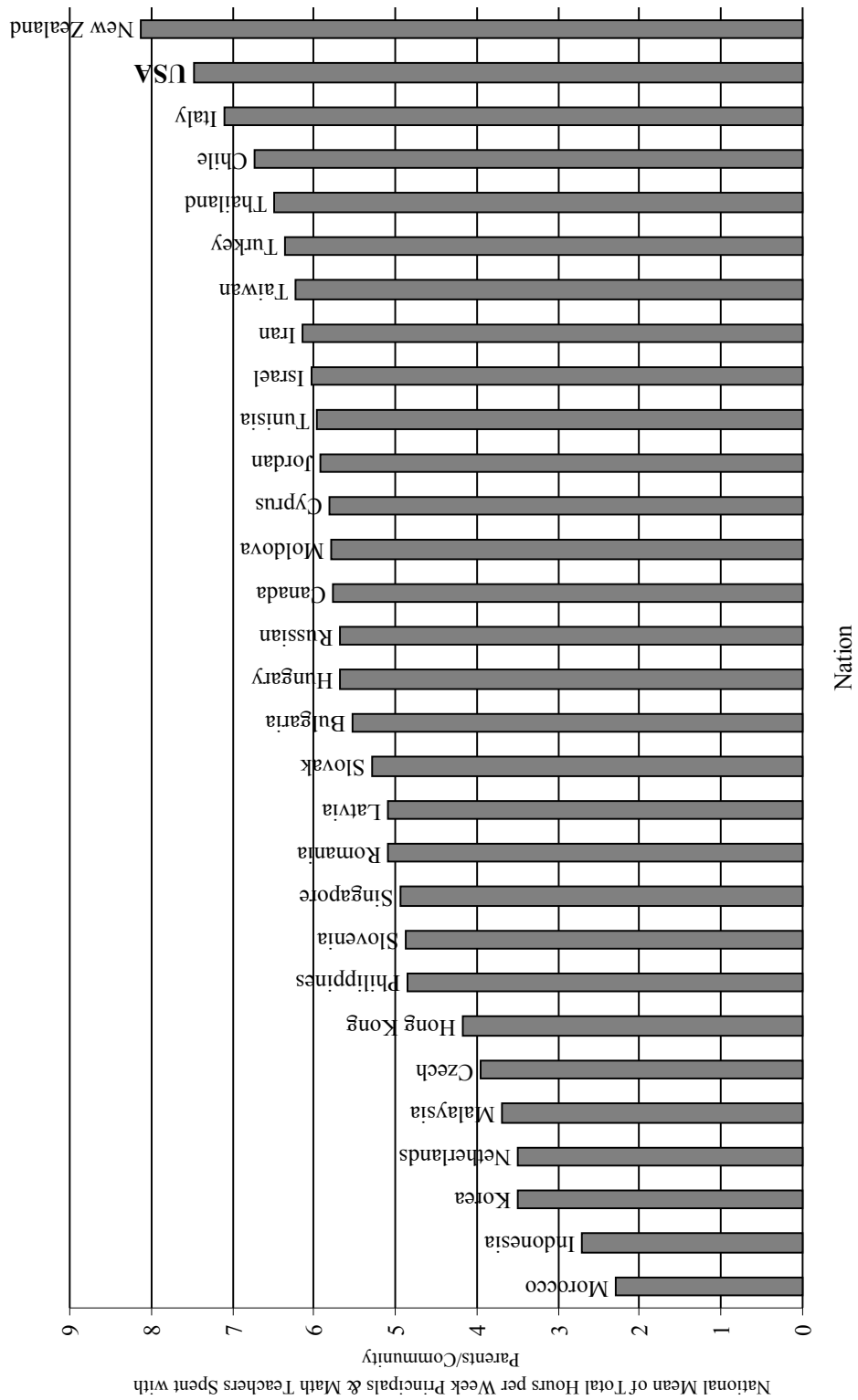
Note: School administrators were asked if their schools expect parents to involve in 4 forms of activities that are related to assisting teachers in classrooms or volunteering in school programs (each item is coded as 1=yes, 0=no). The sum of the 4 items is calculated for each school. The national mean of the index is shown in the figure. (International Mean = 1.75, SD = .48)

Figure 7: School Expectation for Parents' Participation in School Governance



Note: School administrators were asked if their schools expect parents to involve in 3 forms of activities that are related to participation in school governance such as raise funds for school and serve on committees to review finances. (Each item is coded as 1=yes, 0=no). The sum of the 3 items is calculated for each school. The national mean of the index is shown in the figure. (International Mean = 1.14, SD = .42)

Figure 8: Time Principals and Math Teachers Spent with Parents or Community Members (School Initiatives)



Note: The school initiatives index then is the sum of total number of hours per week that principals and math teacher spent on meeting with parents/or community. The national mean of the index is shown in the figure. (International Mean = 5.36, SD = 1.35)

Figure 8 presents the national mean of total hours per week principals and math teachers talked with parents or communicated with the community members. School administrators and teachers in New Zealand reported that they spent more time with parents and community members than their counterparts in any other countries. The United States and Italy are the second and third highest nations where school administrators and teachers took initiative to work with parents or community. The lowest scores were reported in Morocco, Indonesia, and South Korean. Among the three types of school expectation, the school expectation for parents' direct involvement such as lunch preparation and homework assistance had the smallest variation across 30 nations (Mean=2.33, SD=0.26). The position of each country varied in the three types of school expectation for parental involvement. The most dramatic differences existed in New Zealand and Hungary. These two countries were among the top five nations whose schools were most likely to expect direct parental involvement. However, New Zealand ranked among the countries that were least likely to expect parents to volunteer in school and assist teachers, and Hungarian schools were least likely to expect participation of parents in school committees than almost all the other nations.

The United States schools ranked high in the overall expectation level and the United States was the second highest nation where the school principals and teachers were spending more time working with parents or community members. However, US school leaders expected direct parental involvement less than other countries. The school expectation for direct parental involvement in the United States ranked among the lowest 10 countries. Comparing to schools in other countries, United States schools emphasized more on school-based involvement rather than home-based involvement. They expected

to obtain help from parents in their school activities or financial support from the local community. Parent involvement was an extra resource when schools were lacking personnel or in budget crisis. However, compared to their counterparts in other nations, schools in the United States did not have enough recognition of the importance of parents' direct involvement in children's development and education. However, having parents volunteering in school programs and participation in governance committee increase the chances of communicating with parents. This may explain why U.S. school principals and teachers spent much more time talking with parents or working with community members than their peers in almost all nations in the study except New Zealand.

Research Question # 2. Are national levels of school expectation and initiatives for parental involvement associated with national levels of student outcomes?

Table 4 presents the results of correlation analysis between national levels of school expectation and initiatives for parental involvement and national levels of student outcomes. Strikingly, the correlation analysis showed no significant relationship between school expectation and initiatives for parent involvement and student mathematics achievement, and school attendance. Furthermore, although not statistically significant, some negative relationships existed between national level of school expectation and initiatives and national level of student outcomes.

The table shows that at the national level, eighth graders' math achievement was not significantly associated with school expectations or school initiatives for parental involvement. It means that schools in high performance countries did not necessarily show higher levels of expectation for parental involvement or invest more time in

working with parents or community members. Similar to student achievement, school attendance rate was not associated with any of school expectation for parental involvement or initiatives in promoting parent or community participation.

Table2: Correlation between National Level of School Expectation and Initiatives for Parental Involvement and National Levels of Student Outcome in 30 Countries

	Overall School Expectation	Expectation for Direct Parental Involvement	Expectation for Parents' Teacher Assistance	Expectation for Parents' Participation in School Governance	School Initiatives
Math Achievement	-.149	.257	-.314	-.119	.006
School Attendance	-.080	.041	-.085	-.100	-.114
Achievement Variation	.085	-.233	.278	.009	-.090
Achievement-SES Relationship	.179	.487**	.130	-.071	.461*

* p<.05, ** p<.01

Achievement variation is an indicator of heterogeneity of students in terms of their achievement scores. A larger achievement variation may indicate bigger achievement gaps among students. The data show that, unexpectedly, the national level of achievement variation was not significantly associated with the national level of school expectation or initiatives for parental involvement.

Contrary to our expectation, the relationship between school expectation for direct parental involvement and achievement-SES relation was positively significant ($r = .487$), which means that there was greater educational inequality based on students' SES in countries in which schools showed higher levels of expectations for direct parental involvement. In addition, the national level of school initiatives in parental involvement

was also positively associated with SES-achievement relationship at the national level ($r = .461$). These two pairs of significant relationships indicate that in nations where schools had higher expectation for parental direct involvement or spent more time working with local community members and parents, students' achievement was more likely to be affected by their SES status.

Research Question # 3. What school characteristics are associated with school expectation and initiatives for parental involvement, and how do these school characteristics differ across six nations?

The multiple regression analysis revealed that some school-level factors were significantly associated with school expectation and initiatives for parental involvement in many nations. Table 3 presents the school level predictors of overall expectation for parental involvement in the selected nations.

Teacher collaboration, instructional resources, and school disciplinary issues were statistically significant predictors of school expectation for parental involvement in U.S. schools. Schools with higher levels of teacher collaboration and less instructional resources in the U.S. were more likely to expect parents to be involved in their children's education. A negative relationship between school disorder and expectation for parental involvement was found in United States, which means that when schools had more severe disciplinary issues, school leaders were less likely to expect parents to be involved in schools. None of these three factors was significantly associated with the overall expectation level in the other five high-performance nations.

When U.S. schools had a collaborative climate inside, they were also more likely to collaborate with parents by inviting them in schools. This finding revealed the

importance of teacher collaboration in developing parental involvement programs in the U.S. schools. In the U.S., parental involvement was more welcomed in schools with insufficient instructional

Table 3. School Factors Effects on Overall School Expectation for Parental Involvement in Canada, Czech, Hong Kong, The Netherlands, Taiwan, and USA

	Canada	Czech	Hong Kong	Netherlands	Taiwan	USA
Urban	-.052 ^a (.204) ^b	.188 (.334)	-.817 (.387) [*]	.370 (.442)	1.230 (.367) ^{**}	.201 (.303)
Class Size	-.007 (.019)	-.020 (.039)	.030 (.065)	.089 (.061)	-.080 (.035) [*]	-.003 (.028)
School Size	-.524 (.121) ^{**}	-.134 (.301)	-.418 (.431)	.276 (.127) [*]	-.032 (.083)	-.289 (.183)
School SES	-.177 (.511)	-1.622 (.840)	-.331 (1.267)	-1.591 (1.654)	-1.776 (1.231)	.295 (.803)
Teacher Cooperation	.272 (.146)	-.029 (.287)	.428 (.265)	-.288 (.252)	.229 (.322)	.610 (.290) [*]
Instructional Resource	.236 (.159)	-.256 (.343)	.476 (.351)	.438 (.398)	.572 (.295)	.530 (.270) [*]
Disciplinary Issues	-.268 (.191)	-.112 (.392)	.191 (.293)	-.547 (.366)	-.383 (.272)	-.569 (.273) [*]
R ²	.09	.05	.14	.13	.14	.11

Note: ** p<0.01, * <0.05

^a Multiple regression coefficients

^b Standard error

resources. These schools might expect that parent volunteers and parents' participation in fund raising committees would help relieve the resource shortages. Although previous studies confirmed that parental involvement was effective in preventing student behavior problems, schools with more severe disciplinary issues in the U.S. were less likely to

expect parental involvement. These schools might not believe the effectiveness of parental involvement or might tend to blame parents for student's disorder behaviors.

Schools' structural characteristics such as school location, class size, school size, and school SES were not associated with U.S. schools' overall expectation for parental involvement. In contrast, some of these characteristics were associated with the overall expectation level in Canada, Hong Kong, The Netherlands, or Taiwan. For example, schools' urbanicity was negatively associated with the overall expectation level in Hong Kong but was positively associated with the overall expectation in Taiwan. In Hong Kong, urban schools were less likely to expect parental involvement than rural schools. In Taiwan, however, urban schools had higher expectations for parental involvement than rural schools. In addition, the relationship between school size and the overall expectation level was negative and significant in Canadian schools but significantly positive in schools in The Netherlands. To be specific, parents were less likely to be expected to get involved in larger schools in Canada but were likely to be welcomed by larger schools in Netherlands. The table also shows that schools with larger class size were less likely to expect parental involvement in Taiwan.

Table 4 presents the multiple regression results of school-level predictors of school expectation for direct parental involvement in the six nations. Only school disciplinary issues was significantly associated with this type of expectation in the U.S. School disorder problem was also a significant factor that predicted lower level of school expectation for parents' direct involvement in Canadian schools. Canadian schools with small school size also showed higher expectation for direct involvement. In contrast, larger schools expected more direct involvement in Taiwan.

Table 4. School Factors Effects on School Expectation for Direct Parental Involvement in Canada, Czech, Hong Kong, the Netherlands, Taiwan, and USA

	Canada	Czech	Hong Kong	Netherlands	Taiwan	USA
Urban	-.095 ^a (.062) ^b	-.131 (.127)	-.352 (.112)**	.171 (.183)	.149 (.105)	-.034 (.087)
Class Size	.007 (.006)	-.010 (.015)	-.012 (.019)	-.014 (.025)	-.008 (.010)	-.009 (.008)
School Size	-.160 (.037)**	-.091 (.115)	-.077 (.125)	-.023 (.053)	.046 (.024)*	-.074 (.053)
School SES	-.185 (.155)	-.646 (.320)*	-.225 (.367)	-.455 (.686)	.031 (.353)	.082 (.231)
Teacher Cooperation	.015 (.044)	-.063 (.109)	.126 (.077)	-.065 (.105)	-.060 (.092)	.072 (.083)
Instructional Resource	.080 (.048)	-.112 (.131)	-.022 (.102)	.194 (.165)	.035 (.085)	.133 (.078)
Disciplinary Issues	-.141 (.058)*	.089 (.149)	-.037 (.085)	-.088 (.152)	-.072 (.078)	-.246 (.079)**
R ²	.11	.10	.15	.06	.07	.15

Note: **p<0.01, *<0.05

^a Multiple regression coefficients

^b Standard error

School's location was a strong predictor of school expectation for direct involvement in Hong Kong. More specifically, urban schools in Hong Kong were more likely to expect parents to take responsibility on children's basic needs and home supervision. Schools in the Czech Republic that had a higher mean SES were less likely to expect parents to fulfill the basic obligations for their children. No significant relationship between school-level factors and school expectation for parents' direct involvement was found in the Netherlands schools.

What school-level factors were associated with school expectation for parents' participation in school activities such as assisting teachers in classroom and helping with school programs? Table 5 presents the multiple regression results for this question. Significant school-level factors were found in only Canadian, Taiwan, and United States middle schools. Specifically, in the United States, higher expectation for parents volunteering was found in schools with higher levels of teacher collaboration and lower

Table 5. School Factors Effects on School Expectation for Parents' Volunteering in Canada, Czech, Hong Kong, the Netherlands, Taiwan, and USA

	Canada	Czech	Hong Kong	Netherlands	Taiwan	USA
Urban	-.058 ^a (.106) ^b	.052 (.163)	-.252 (.219)	.016 (.287)	.719 (.201)**	.169 (.147)
Class Size	-.008 (.010)	-.026 (.019)	-.009 (.037)	.045 (.040)	-.036 (.019)	-.007 (.014)
School Size	-.282 (.063)**	-.010 (.147)	-.240 (.244)	.142 (.082)	-.034 (.045)	-.120 (.088)
School SES	.178 (.266)	-.511 (.409)	-.600 (.718)	-.048 (1.073)	-1.289 (.672)	.016 (.389)
Teacher Cooperation	.148 (.076)*	.008 (.140)	.199 (.150)	-.138 (.164)	.043 (.176)	.335 (.140)*
Instructional Resource	.087 (.083)	-.077 (.167)	.384 (.199)	.282 (.258)	.220 (.161)	.238 (.131)
Disciplinary Issues	-.049 (.099)	.076 (.191)	.055 (.166)	-.065 (.237)	-.182 (.148)	-.287 (.132)*
R ²	.09	.05	.15	.08	.14	.12

Note: ** p<0.01, * <0.05

^a Multiple regression coefficients

^b Standard error

level of disciplinary issues. Urban schools in Taiwan were more likely to invite parents to their school life than schools in rural areas. In Canada, small schools with collaborative

environment among teachers were more likely to have this kind of expectation for parents.

Having the same structure as previous tables, Table 6 presents the multiple regression results of school-level factors on the expectation for parent's participation in school governance in 6 nations. No school-level factor was found to be associated with this type of expectation in U.S., Canada, Czech, or Hong Kong data. In contrast, some school-level factors were found significant in explaining school expectation for parents'

Table 6. School Factors Effects on School Expectation for Parents' Participation in School Governance in Canada, Czech, Hong Kong, the Netherlands, Taiwan, and USA

	Canada	Czech	Hong Kong	Netherlands	Taiwan	USA
Urban	.101 ^a (.108) ^b	.268 (.165)	-.213 (.198)	.183 (.203)	.363 (.193)	.066 (.167)
Class Size	-.006 (.010)	.017 (.019)	.052 (.033)	.058 (.028) [*]	-.036 (.018) [*]	.013 (.015)
School Size	-.082 (.064)	-.032 (.149)	-.101 (.220)	.158 (.058) ^{**}	-.045 (.044)	-.095 (.100)
School SES	-.171 (.270)	-.465 (.415)	.494 (.647)	-1.088 (.758)	-.517 (.646)	.198 (.441)
Teacher Cooperation	.109 (.077)	.026 (.142)	.103 (.135)	-.085 (.116)	.246 (.169)	.203 (.159)
Instructional Resource	.069 (.084)	-.067 (.169)	.114 (.179)	-.039 (.182)	.317 (.155) [*]	.159 (.148)
Disciplinary Issues	-.077 (.101)	-.277 (.194)	.173 (.150)	-.393 (.168) [*]	-.129 (.143)	-.037 (.150)
R ²	.02	.06	.06	.19	.11	.03

Note: **p<0.01, *<0.05

^a Multiple regression coefficients

^b Standard error

participation in school governance in the Netherlands and Taiwan schools. Smaller school size and class size were highly associated with a higher level of school expectation for parents' representation in school committees in the Netherlands. Schools with lower level of disciplinary issues were also more likely to have parents involved in the decision-making process in the Netherlands schools. In Taiwan, however, larger class size and insufficient instructional resources were related to higher level of school expectation for parents' participation in school committees.

Table 7 shows the relationships between school characteristics and school initiatives for parental involvement in these 6 nations. Again, no school characteristics were found to be associated with school initiatives in U.S. schools. Furthermore, none of the relationships was significant in the Czech Republic or Taiwan schools. School urbanicity was highly associated with the time the school spent with parents or community in Hong Kong and the Netherlands. However, schools with larger class size were less likely to initiate communication with parents in the Netherlands. School mean SES was another factor that was highly related to school initiatives in both Canada and the Netherlands. In both countries, school principals and teachers spent more time with parents or the community when they had a pool of richer students than their counterparts in poor schools.

Interestingly, Canadian schools with higher level of disciplinary issues were less likely to expect parental direct involvement (see Table 4) but more likely to have interaction among school principles or teachers and parents. It might be possible that Canadian schools tend to initiate communication with parents only when students have severe behavioral problems. It is also possible that student disorder behaviors made it

inevitable for schools to contact with parents more frequently. Future survey studies should pay attention to the purpose and the nature of the interaction among schools and parents.

Table 7. School Factors Effects on School Initiatives for Parental Involvement in Canada, the Czech Republic, Hong Kong, the Netherlands, Taiwan, and USA

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Urban	.199 ^a (.360) ^b	-.045 (.345)	1.252 (.564) [*]	1.129 (.561) [*]	-.494 (.670)	.120 (.658)
Class Size	.036 (.033)	.018 (.041)	.049 (.095)	-.212 (.077) ^{**}	-.078 (.064)	-.080 (.060)
School Size	.321 (.214)	-.090 (.311)	-.270 (.629)	-.260 (.161)	-.055 (.151)	.374 (.396)
School SES	1.949 (.904) [*]	.373 (.868)	-.766 (1.849)	6.430 (2.097) ^{**}	-.223 (2.244)	.821 (1.741)
Teacher Cooperation	.404 (.258)	.337 (.297)	.077 (.386)	.539 (.320)	.179 (.588)	.361 (.628)
Instructional Resource	.310 (.281)	-.208 (.354)	.807 (.513)	.418 (.505)	.464 (.538)	-.599 (.585)
Disciplinary Issues	.926 (.337) ^{**}	.618 (.405)	-.087 (.427)	.569 (.464)	.038 (.496)	.608 (.593)
R ²	.08	.04	.07	.21	.03	.04

Note: **p<0.01, *<0.05

^a Multiple regression coefficients

^b Standard error

Research Question # 4. How do the relationships between school expectation and initiatives for parental involvement and student outcomes differ across six nations?

The HLM analyses were conducted to examine the relationship between school expectation and initiatives for parental involvement and student outcomes controlling for

student and school background characteristics. Tables 8 to 12 show the results in six selected nations. First, Table 8 presents the impact of overall expectation for parental involvement and other school- and individual- level factors on student attendance rate. As expected, students' educational aspiration had a significant impact on their attendance rates in most nations. Female students had higher attendance rates than male students in most nations except the Netherlands and Hong Kong. Student SES was a significant factor that predicted student attendance rates in Canada, but not in any other nations. Small schools had higher attendance rates in Canada and U.S. schools. Contrarily, attendance rates tended to be higher in larger schools in Hong Kong.

After controlling for individual and school level factors, the relationship between overall school expectation level and student attendance rate was statistically significant in the United States and Taiwan. However, the directions were different in the two countries. Student attendance rates were higher in schools with a higher expectation for overall parental involvement in the United States, whereas Taiwanese students tended to have lower attendance rates in the schools with a higher expectation for overall parental involvement.

The table also gives sample sizes for each nation and the proportions of variances explained at both level-1 (individual level) and level-2 (school level). The proportions were calculated from the variance components section. In the unconditional model, the total variation in outcome can be clearly divided between variation over students and variation on a school level. In this table, .360 represents the total variance in student attendance rate within Canadian school that can be explained by a level-1 model, while .023 is the total explainable variation at level-2

Table 8: Individual and School Level Factors on Student Attendance among 8th Graders in 6 Nations (including Overall expectation level)

Variables	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	-.047 (.016)**	-.056 (.016)***	-.008 (.023)	-.064 (.034)	-.039 (.020)*	-.047 (.018)*
Educational Aspiration	.127 (.017)***	.018 (.006)**	.046 (.014)**	.017 (.018)	.110 (.010)***	.117 (.015)***
SES	.052 (.014)***	.019 (.014)	.015 (.024)	-.040 (.065)	.029 (.024)	.013 (.019)
Level 2 factors						
Urban	-.024 (.021)	-.014 (.021)	.055 (.044)	-.075 (.086)	.042 (.028)	-.013 (.027)
Resource	-.029 (.016)	.002 (.022)	.011 (.036)	-.059 (.086)	-.008 (.022)	-.013 (.024)
School Size	-.028 (.013)*	-.035 (.018)	.090 (.045)*	.009 (.029)	.000 (.005)	-.031 (.015)*
Overall PI Expect	.003 (.006)	.003 (.005)	.019 (.010)	.014 (.018)	-.013 (.005)**	.020 (.006)**
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained						
	2.74%	0.96%	0.31%	0.29%	2.96%	2.34%
Level 2 variance explained						
	8.26%	7.00%	20.76%	4.73%	10.94%	13.25%

Table 8 continues...
Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	.360	.115	.337	.347	.342	.385
Temporal variation						
Level 2	.023***	.007***	.016***	.060***	.015***	.020***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.018***	.006***	.012***	.058***	.011***	.017***
Intercept						
<i>Fully-conditioned</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.017***	.005***	.010***	.055***	.010***	.014***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
*p<.05, **p<.01, ***p<.001

(schools). The fully unconditional model serves as baseline for comparison with subsequent, more complex models. In “conditional at level-1 only” model, the level-1 model was extended to include the un-centered predictor “gender”, and the grand-mean centered predictor “SES” and “educational aspiration”. The difference in level-1 temporal variations between fully unconditional model and the “conditional at level-1 only” model (.360 vs. 350 for Canada in Table 8) indicates the strength of level-1 factors that added in the second model to explain the variance in student attendance over the schools. It should note that while the introduction of level-1 predictors reduced the level-1 residual variance, it also changed the level-2 variance (.023 to .018 in Canada data in Table 8). It is not surprising because the meaning of the intercept may change when additional level-1 predictors are included.

The last model, “fully conditioned”, added school-level factors in the model. Comparison between “conditional at level-1 only” model and the “fully conditioned” model shows the strength of level-2 factors in explaining the intercept variance at level-2. In this Canadian case, 8.26% of total variance in intercept was explained by adding the level-2 factors. The level 1 percentages of variance is largest in Taiwan and lowest in the Netherlands (2.96% vs. 0.29%), which means that, individual characteristics (gender, educational aspiration, and SES) were stronger predictors of student attendance in Taiwan than in the Netherlands. The level 2 percentages of variance explained are largest in Hong Kong, followed by the U.S., and smallest in the Netherlands. This means that the set of school-level factors selected here, i.e. school location, school size, instructional resources, and school expectation for parental involvement, better explained the intercept variation among schools in Hong Kong than in other nations.

Having the same structure as Table 8, Table 9 to 12 present the results of HLM analyses on the relationship between individual and school factors (including other specific expectation for parental involvement or school initiatives in promoting parent and community involvement) and student attendance rates in each nation. Table 9 shows that small schools in the U.S., Canada, and the Czech Republic tended to have higher attendance rates than larger schools. Table 9 also shows that when US school principals expected parents to fulfill basic obligations such as preparing lunchbox and monitoring homework, students in these schools tended to attend schools more often than students in those schools with lower expectation for these involvement activities. The relationship between school expectation for direct involvement and student attendance rate was not significant in other five nations.

Table 9: Individual and School Level Factors on Student Attendance among 8th Graders in 6 Nations (including Expectation for direct involvement)

Variables	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	-.047 (.016)**	-.056 (.016)***	-.009 (.022)	-.064 (.033)	-.039 (.020)*	-.048 (.018)**
Educational Aspiration	.127 (.017)***	.017 (.006)**	.045 (.015)**	.017 (.018)	.111 (.010)***	.117 (.015)***
SES	.052 (.014)***	.018 (.014)	.014 (.024)	-.040 (.065)	.030 (.024)	.012 (.019)
Level 2 factors						
Urban	-.024 (.022)	-.016 (.021)	.035 (.047)	-.070 (.088)	.025 (.028)	-.008 (.027)
Resource	-.028 (.016)	.000 (.021)	.024 (.040)	-.056 (.085)	-.016 (.021)	-.010 (.023)
School Size	-.031 (.013)*	-.037 (.018)*	.081 (.047)	.012 (.028)	.002 (.005)	-.028 (.014)*
Expect for Direct Involvement	-.001 (.019)	-.007 (.016)	-.007 (.030)	.014 (.049)	-.000 (.021)	.081 (.020)***
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	2.74%	0.96%	0.31%	0.29%	2.96%	2.34%
Level 2 variance explained	8.15%	6.36%	10.63%	4.62%	3.34%	15.11%

Table 9 continues...
Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	.360	.115	.337	.347	.342	.385
Temporal variation						
Level 2	.023***	.007***	.016***	.060***	.015***	.020***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.018***	.006***	.012***	.058***	.011***	.017***
Intercept						
<i>Fully-conditioned</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.017***	.005***	.011***	.055***	.010***	.014***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
*p<.05, **p<.01, ***p<.001

When school expectation for parents' volunteering was included in the model (Table 10), it was significantly associated with student attendance rates in Hong Kong, Taiwan, and U.S. data. However, while higher expectation level for volunteering predicted higher attendance rate in Hong Kong and U.S. schools, it was related to lower attendance rates in Taiwanese schools. Table 10 also shows that students attended school more frequently in larger schools in Hong Kong. In comparison, student attendance rate were lower in large schools in Canada, the Czech Republic, and U.S.

Table 10: Individual and School Level Factors on Student Attendance among 8th Graders in 6 Nations (including Expectation for volunteering)

Variables	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	-.047 (.016)**	-.056 (.016)***	-.008 (.023)	-.063 (.034)	-.040 (.020)*	-.047 (.018)*
Educational Aspiration	.127 (.017)***	.018 (.006)**	.047 (.015)**	.017 (.018)	.110 (.010)***	.117 (.015)***
SES	.052 (.014)***	.019 (.014)	.016 (.024)	-.040 (.065)	.028 (.024)	.013 (.019)
Level 2 factors						
Urban	-.024 (.021)	-.014 (.021)	.052 (.040)	-.068 (.087)	.043 (.027)	-.016 (.027)
Resource	-.028 (.016)	.002 (.022)	.000 (.035)	-.053 (.086)	-.010 (.021)	-.012 (.024)
School Size	-.028 (.013)*	-.036 (.018)*	.097 (.045)*	.012 (.028)	-.000 (.005)	-.032 (.015)*
Expect for Volunteering	.007 (.012)	.011 (.009)	.047 (.016)**	-.001 (.025)	-.026 (.010)*	.038 (.014)**
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	2.74%	0.96%	0.31%	0.29%	2.96%	2.34%
Level 2 variance explained	8.37%	8.11%	31.05%	4.28%	10.94%	11.92%

Table 10 continues...
Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	.360	.115	.337	.347	.342	.385
Temporal variation						
Level 2	.023***	.007***	.016***	.060***	.015***	.020***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.018***	.006***	.012***	.058***	.011***	.017***
Intercept						
<i>Fully-conditioned</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.017***	.005***	.008***	.055***	.010***	.015***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
*p<.05, **p<.01, ***p<.001

No significant relationship was found between student attendance and school expectation for school governance (Table 11). Table 12 shows the results on the relationship between school initiatives for parental involvement and student attendance, controlling for individual and school background characteristics. In the table, when the Netherlands' school principals and teachers spent more time with parents, their students attended schools less frequently than their peers in schools with lower level of school initiatives in parental involvement.

Table 11: Individual and School Level Factors on Student Attendance among 8th Graders in 6 Nations (including Expectation for participation in governance)

Variables	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	-.047 (.016)**	-.056 (.016)***	-.009 (.023)	-.063 (.033)	-.039 (.020)	-.047 (.018) *
Educational Aspiration	.127 (.017)***	.018 (.006)**	.045 (.014)**	.017 (.018)	.111 (.010)***	.117 (.015) ***
SES	.052 (.014)***	.019 (.014)	.014 (.024)	-.041 (.065)	.029 (.024)	.014 (.019)
Level 2 factors						
Urban	-.025 (.021)	-.017 (.021)	.041 (.042)	-.086 (.082)	.033 (.027)	-.011 (.027)
Resource	-.028 (.016)	.002 (.022)	.021 (.039)	-.048 (.082)	-.009 (.021)	-.008 (.024)
School Size	-.030 (.013)*	-.035 (.018)	.082 (.044)	.005 (.029)	.000 (.005)	-.037 (.015) *
Expect for Governance Participation	.006 (.012)	.008 (.009)	.017 (.016)	.061 (.045)	-.022 (.011)	.014 (.013)
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	2.74%	0.96%	0.31%	0.29%	2.96%	2.34%
Level 2 variance explained	8.20%	7.47%	12.60%	6.98%	8.62%	6.62%

Table 11 continues...
 Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	.360	.115	.337	.347	.342	.385
Temporal variation						
Level 2	.023***	.007***	.016***	.060***	.015***	.020***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.018***	.006***	.012***	.058***	.011***	.017***
Intercept						
<i>Fully-conditioned</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.017***	.005***	.011***	.054***	.010***	.015***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
 *p<.05, **p<.01, ***p<.001

Table 12: Individual and School Level Factors on Student Attendance among 8th Graders in 6 Nations (including School initiatives)

Variables	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	-.047 (.016)**	-.056 (.016)***	-.008 (.023)	-.064 (.033)	-.039 (.020)*	-.047 (.018)*
Educational Aspiration	.127 (.017)***	.018 (.006)**	.045 (.015)**	.018 (.018)	.111 (.010)***	.117 (.015)* **
SES	.052 (.014)***	.018 (.014)	.014 (.024)	-.038 (.064)	.029 (.024)	.014 (.019)
Level 2 factors						
Urban	-.024 (.021)	-.014 (.021)	.040 (.045)	-.021 (.093)	.024 (.027)	-.011 (.027)
Resource	-.028 (.016)	.000 (.021)	.025 (.043)	-.031 (.081)	-.016 (.021)	-.005 (.024)
School Size	-.030 (.014)*	-.035 (.018)	.081 (.044)	.003 (.026)	.001 (.005)	-.039 (.015)*
School Initiatives	-.000 (.003)	-.003 (.006)	-.001 (.005)	-.039 (.016)*	-.000 (.003)	.002 (.003)
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	2.74%	0.96%	0.31%	0.29%	2.96%	2.34%
Level 2 variance explained	8.20%	5.88%	10.54%	17.37%	3.43%	5.66%

Table 12 continues...
Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	.360	.115	.337	.347	.342	.385
Temporal variation						
Level 2	.023***	.007***	.016***	.060***	.015***	.020***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.018***	.006***	.012***	.058***	.011***	.017***
Intercept						
<i>Fully-conditioned</i>						
Level 1	.350	.114	.336	.346	.332	.376
Temporal variation						
Level 2	.017***	.006***	.011***	.048***	.010***	.015***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
*p<.05, **p<.01, ***p<.001

Tables 13 to 17 present the HLM findings for the relationship among individual and school- level factors and student mathematics achievement in six nations. Table 13 shows that male students had higher math achievement scores than female students in all six nations. Higher educational aspiration was also related to higher achievement in most nations except the Netherlands. Student SES was a strong predictor of student mathematics achievement in Canada, the Czech Republic, Taiwan, and the U.S. but not in Hong Kong and the Netherlands. Students with higher SES tended to do well in mathematics in Canada, the Czech Republic, Taiwan, and the U.S.

At the school level, urbanicity was significantly associated with higher student achievement in the Czech Republic. Both Canadian and U.S. students scored lower in mathematics when their schools were lacking structural or instructional resources than their peers in schools with more resources. Another school level factor, school size, was

significantly associated with student achievement in Canada, Hong Kong, and Taiwan data. The last school level factor, overall expectation for parental involvement, was negatively associated with student mathematics achievement in Taiwan.

The level 1 percentage of variance explained was largest in Taiwan and smallest in the Netherlands. About 20 percent of the variance in student achievement might be caused by the selected individual level factors in Taiwan. On the contrary, only a little over one percent of the variance was explained in the Netherlands data.

The level 2 percentages of variance explained in the table show the strength of level-2 factors in explaining the differences among schools in terms of their eighth graders' average math achievement in each nation. Again, Taiwan has the largest level 2 percentage and the Netherlands has the smallest percentage.

Table 14 shows that a higher level of school expectation for direct involvement was related to higher student achievement in the U.S. schools. U. S. eighth graders were more likely to do well in math if their schools showed higher expectation for parents to accomplish basic parenting obligations, such as preparing student lunchbox, helping students in homework, and communicating with schools about students' problems. Contrary to the hypothesis, negative relationships were found significant in the Czech Republic and Taiwan schools. In the Czech Republic, student achievement was lower in schools with higher level of expectation for direct involvement (Table 14) and higher level of expectation for volunteering (Table 15). In Taiwan, overall expectation level, expectation for volunteering, and expectation for governance participation were all negatively related to student achievement (Table 13, Table 15, and Table 16). Taiwan students performed worse in schools where school leaders paid higher expectation for

Table 13: Individual and School Level Factors on Student Achievement among 8th Graders in 6 Nations (including Overall expectation)

Variables	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	9.045 (1.651) ^{***}	21.660 (2.562) ^{***}	14.096 (2.641) ^{***}	8.138 (2.301) ^{***}	10.723 (2.448) ^{***}	8.932 (2.154) ^{***}
Education al Aspiration	16.899 (1.119) ^{***}	19.183 (1.149) ^{***}	6.167 (0.991) ^{***}	2.536 (1.435)	41.915 (1.559) ^{***}	19.638 (1.502) ^{***}
SES	23.667 (1.920) ^{***}	10.003 (2.934) ^{***}	-0.709 (2.383)	-2.583 (3.498)	34.527 (3.218) ^{***}	28.568 (3.117) ^{***}
Level 2 factors						
Urban	-1.089 (3.851)	20.184 (7.362) ^{**}	9.078 (13.666)	-12.762 (17.861)	10.070 (5.821)	-1.952 (6.762)
Resource	-11.761 (3.109) ^{***}	-6.637 (7.732)	-8.056 (10.709)	0.007 (12.089)	-6.540 (4.256)	-18.442 (5.299) ^{***}
School Size	10.293 (2.367) ^{***}	-2.461 (6.485)	47.199 (14.006) ^{***}	6.943 (4.773)	3.080 (1.151) ^{**}	-8.882 (4.778)
Overall PI Expectation	-1.270 (1.115)	-3.674 (1.919)	0.611 (2.859)	1.572 (3.916)	-3.137 (1.259)[*]	2.842 (1.889)
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	8.14%	13.57%	2.69%	1.28%	20.48%	8.88%
Level 2 variance explained	13.91%	8.35%	17.95%	3.64%	20.76%	13.10%

Table 13 continues...
Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	3837.111	4002.642	2188.295	1518.977	8158.931	4807.658
Temporal variation						
Level 2	1260.221***	3247.700***	3009.520***	3180.245***	1730.383***	2326.514***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	3524.705	3459.403	2129.458	1499.477	6487.881	4380.610
Temporal variation						
Level 2	1134.441***	1680.145***	2769.603***	3071.519***	748.475***	1717.195***
Intercept						
<i>Fully-conditioned</i>						
Level 1	3525.455	3458.743	2129.160	1499.110	6488.054	4380.332
Temporal variation						
Level 2	956.815***	1522.979***	2253.913***	2957.814***	592.543***	1471.692***
Intercept						

Note: ^a Standard coefficient, ^b Standard error

*p<.05, **p<.01, ***p<.001

parental involvement, especially for parent's volunteering in schools and participation in governance committees. It is possible that low-performance schools in Taiwan were expecting to improve student achievement by collaborating with parents and involving them in schools. No statistically significant relationship was found between school initiatives for parental involvement and student mathematics achievement in any of the six nations (Table 17).

Table 14: Individual and School Level Factors on Student Achievement among 8th Graders in 6 Nations (including Expectation for direct involvement)

Variables	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	9.057 (1.651) ^{***}	21.665 (2.556) ^{***}	14.085 (2.642) ^{***}	8.149 (2.300) ^{***}	10.764 (2.448) ^{***}	8.908 (2.154) ^{***}
Educational Aspiration	16.883 (1.119) ^{***}	19.218 (1.157) ^{***}	6.166 (0.992) ^{***}	2.528 (1.446)	41.937 (1.558) ^{***}	19.645 (1.500) ^{***}
SES	23.659 (1.920) ^{***}	9.948 (2.944) ^{***}	-0.715 (2.381)	-2.582 (3.497)	34.507 (3.211) ^{***}	28.578 (3.129) ^{***}
Level 2 factors						
Urban	-1.102 (3.884)	17.865 (7.429) [*]	6.665 (13.546)	-10.917 (18.061)	6.230 (5.881)	-0.962 (6.673)
Resource	-11.965 (3.145) ^{***}	-6.752 (7.574)	-7.656 (11.388)	1.556 (12.234)	-8.364 (4.129) [*]	-18.205 (5.094) ^{***}
School Size	10.787 (2.329) ^{***}	-2.809 (6.436)	46.383 (13.960) ^{**}	7.088 (4.832)	3.425 (1.270) ^{**}	-7.820 (4.540)
Expect for Direct Involvement	-1.207 (3.374)	-10.585 (5.109)[*]	-4.953 (9.996)	-6.359 (10.679)	0.704 (5.219)	15.800 (7.427)[*]
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	8.14%	13.57%	2.69%	1.28%	20.48%	8.88%
Level 2 variance explained	13.47%	8.96%	18.13%	3.81%	15.60%	15.74%

Table 14 continues...
 Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	3837.111	4002.642	2188.295	1518.977	8158.931	4807.658
Temporal variation						
Level 2	1260.221***	3247.700***	3009.520***	3180.245***	1730.383***	2326.514***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	3524.705	3459.403	2129.458	1499.477	6487.881	4380.610
Temporal variation						
Level 2	1134.441***	1680.145***	2769.603***	3071.519***	748.475***	1717.195***
Intercept						
<i>Fully-conditioned</i>						
Level 1	3525.405	3458.816	2129.170	1498.933	6487.381	4380.398
Temporal variation						
Level 2	959.686***	1510.128***	2247.650***	2947.781***	630.692***	1426.979***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
 *p<.05, **p<.01, ***p<.001

Table 15: Individual and School Level Factors on Student Achievement among 8th Graders in 6 Nations (including Expectation for volunteering)

Variables	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	9.050 (1.651) ^{***}	21.643 (2.567) ^{***}	14.094 (2.642) ^{***}	8.139 (2.301) ^{***}	10.693 (2.442) ^{***}	8.944 (2.153) ^{***}
Educational Aspiration	16.889 (1.119) ^{***}	19.169 (1.149) ^{***}	6.165 (0.992) ^{***}	2.534 (1.437)	41.900 (1.558) ^{***}	19.642 (1.502) ^{***}
SES	23.706 (1.923) ^{***}	10.040 (2.935) ^{***}	-0.712 (2.381)	-2.584 (3.497)	34.455 (3.227) ^{***}	28.568 (3.110) ^{***}
Level 2 factors						
Urban	-1.150 (3.835)	19.429 (7.318) ^{**}	8.416 (13.145)	-12.041 (17.751)	10.464 (5.721)	-2.260 (6.789)
Resource	-11.724 (3.105) ^{***}	-6.256 (7.742)	-7.496 (10.624)	0.145 (12.039)	-6.972 (4.186)	-18.091 (5.310) ^{***}
School Size	9.968 (2.372) ^{***}	-1.802 (6.441)	46.795 (14.270) ^{**}	7.085 (4.816)	2.974 (1.124) ^{**}	-9.188 (4.757)
Expect for Volunteering	-3.606 (2.018)	-8.973 (3.883)[*]	-0.429 (5.351)	1.457 (5.844)	-6.029 (2.326)[*]	4.519 (3.751)
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	8.14%	13.57%	2.69%	1.28%	20.48%	8.88%
Level 2 variance explained	14.40%	9.31%	17.91%	3.49%	21.20%	12.51%

Table 15 continues...
 Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	3837.111	4002.642	2188.295	1518.977	8158.931	4807.658
Temporal variation						
Level 2	1260.221***	3247.700***	3009.520***	3180.245***	1730.383***	2326.514***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	3524.705	3459.403	2129.458	1499.477	6487.881	4380.610
Temporal variation						
Level 2	1134.441***	1680.145***	2769.603***	3071.519***	748.475***	1717.195***
Intercept						
<i>Fully-conditioned</i>						
Level 1	3525.387	3458.544	2129.168	1499.088	6488.031	4380.355
Temporal variation						
Level 2	953.217***	1510.927***	2253.034***	2961.508***	589.312***	1481.508***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
 *p<.05, **p<.01, ***p<.001

Table 16: Individual and School Level Factors on Student Achievement among 8th Graders in 6 Nations (including Expectation for participation in governance)

Variable	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	9.063 (1.652) ^{***}	21.629 (2.561) ^{***}	14.090 (2.641) ^{***}	8.144 (2.300) ^{***}	10.782 (2.451) ^{***}	8.927 (2.155) ^{***}
Educational Aspiration	16.883 (1.119) ^{***}	19.218 (1.152) ^{***}	6.163 (0.992) ^{***}	2.541 (1.433)	41.927 (1.561) ^{***}	19.640 (1.501) ^{***}
SES	23.660 (1.918) ^{***}	10.058 (2.944) ^{***}	-0.715 (2.385)	-2.581 (3.499)	34.570 (3.215) ^{***}	28.579 (3.116) ^{***}
Level 2 factors						
Urban	-0.891 (3.860)	20.017 (7.656) [*]	9.346 (12.706)	-14.618 (17.573)	8.286 (6.011)	-1.639 (6.778)
Resource	-11.967 (3.124) ^{***}	-5.553 (8.037)	-8.258 (10.980)	1.379 (11.937)	-6.638 (4.335)	-17.663 (5.181) ^{***}
School Size	10.924 (2.285) ^{***}	-1.571 (6.623)	46.713 (13.691) ^{**}	6.266 (4.659)	3.040 (1.221) [*]	-9.740 (4.805) [*]
Expect for Governance Participation	-0.655 (2.194)	0.204 (4.416)	4.446 (5.151)	9.137 (9.360)	-5.207 (2.161)[*]	1.354 (3.340)
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	8.14%	13.57%	2.69%	1.28%	20.48%	8.88%
Level 2 variance explained	13.48%	5.93%	18.44%	4.82%	19.41%	11.73%

Table 16 continues...
 Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	3837.111	4002.642	2188.295	1518.977	8158.931	4807.658
Temporal variation						
Level 2	1260.221***	3247.700***	3009.520***	3180.245***	1730.383***	2326.514***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	3524.705	3459.403	2129.458	1499.477	6487.881	4380.610
Temporal variation						
Level 2	1134.441***	1680.145***	2769.603***	3071.519***	748.475***	1717.195***
Intercept						
<i>Fully-conditioned</i>						
Level 1	3525.415	3458.790	2129.152	1499.030	6487.831	4380.463
Temporal variation						
Level 2	959.900***	1562.126***	2250.042***	2920.054***	602.674***	1491.893***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
 *p<.05, **p<.01, ***p<.001

Table 17: Individual and School Level Factors on Student Achievement among 8th Graders in 6 Nations (including School initiatives)

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
Level 1 factors						
Gender	9.070 (1.652) ^{***}	21.624 (2.561) ^{***}	14.105 (2.641) ^{***}	8.133 (2.298) ^{***}	10.775 (2.445) ^{***}	8.932 (2.156) ^{***}
Educational Aspiration	16.898 (1.120) ^{***}	19.214 (1.153) ^{***}	6.166 (0.989) ^{***}	2.545 (1.436)	41.942 (1.558) ^{***}	19.634 (1.499) ^{***}
SES	23.676 (1.919) ^{***}	10.061 (2.945) ^{***}	-0.714 (2.384)	-2.561 (3.499)	34.548 (3.209) ^{***}	28.607 (3.113) ^{***}
Level 2 factors						
Urban	-0.652 (3.862)	20.052 (7.454) ^{**}	10.185 (13.079)	-10.474 (17.546)	6.673 (5.977)	-1.581 (6.751)
Resource	-11.806 (3.161) ^{***}	-5.440 (7.997)	-6.581 (11.583)	1.310 (12.580)	-8.688 (4.116) [*]	-17.870 (5.147) ^{***}
School Size	11.263 (2.269) ^{***}	-1.675 (6.684)	46.627 (13.248) ^{**}	6.991 (4.855)	3.540 (1.240) ^{**}	-9.478 (5.083)
School Initiatives	-0.503 (0.633)	0.723 (1.911)	-1.376 (1.990)	-1.519 (3.471)	0.699 (0.655)	-0.748 (0.832)
N _i (no. of students)	5755	2575	2844	1276	4890	4853
N _j (no. of schools)	332	127	100	74	140	137
Level 1 variance explained	8.14%	13.57%	2.69%	1.28%	20.48%	8.88%
Level 2 variance explained	13.60%	6.04%	18.35%	3.84%	16.32%	12.27%

Table 17 continues...
Variance Components

	Canada	Czech Republic	Hong Kong	Netherlands	Taiwan	USA
<i>Fully Unconditioned</i>						
Level 1	3837.111	4002.642	2188.295	1518.977	8158.931	4807.658
Temporal variation						
Level 2	1260.221***	3247.700***	3009.520***	3180.245***	1730.383***	2326.514***
Intercept						
<i>Conditional at Level 1 only</i>						
Level 1	3524.705	3459.403	2129.458	1499.477	6487.881	4380.610
Temporal variation						
Level 2	1134.441***	1680.145***	2769.603***	3071.519***	748.475***	1717.195***
Intercept						
<i>Fully-conditioned</i>						
Level 1	3525.299	3458.789	2129.186	1499.176	6487.335	4380.622
Temporal variation						
Level 2	958.709***	1559.168***	2242.480***	2953.897***	625.461***	1484.560***
Intercept						

Note: ^a Standard coefficient, ^b Standard error
*p<.05, **p<.01, ***p<.001

Summary

The purpose of this chapter was to present the results on the level of school expectation and initiatives in 30 nations, to identify school-level characteristics that were related to school expectation and initiatives in six selected nations, and to examine the relationship between school expectation and initiatives for parental involvement and student outcomes in Canada, the Netherlands, the Czech Republic, Hong Kong, Taiwan and the U.S. To analyze the data, descriptive statistics, frequency analysis, bivariate correlations, multiple regressions, and the HLM were utilized. Based upon the results of these analyses, the next chapter will present the discussions and implications of the results in this study.

Chapter 5

DISCUSSION

This chapter discusses the results presented in Chapter 4 in relation to the literature, and presents implications for educational policy and practice, study limitations, and suggestions for future research. The chapter will end with the summary and conclusion of the study.

Research Questions: Discussion and Implications

1. Comparison of School Expectations and Initiatives for PI across 30 Nations

Around the world, schools showed different levels of expectations and initiatives for parental involvement. Among the three types of school expectations, the school expectations for parents' direct involvement activities such as lunch preparation and homework assistance had the smallest variation across 30 nations. School administrators and teachers in New Zealand reported that they spent more time with parents and community members than their counterparts in any other countries, followed by the United States and Italy. The position of each country varied in the three types of school expectations and initiatives for parental involvement. The United States schools ranked high in the overall expectations level and the United States was the second highest nation where the school principals and teachers were spending more time working with parents or community members. However, U.S. school leaders expected direct parental

involvement less than other countries. The school expectations for direct parental involvement in the United States ranked among the lowest 10 countries.

As expected, most Asian countries such as South Korea, Hong Kong, and Singapore, showed a lower level of school expectations for parental involvement than other countries. Past studies found that home-based involvement was more common in Asian countries. On the one hand, parents in these countries respect teachers and trust them to educate their children. On the other hand, teachers feel responsible for children's development in all aspects.

Teachers and administrators become "temporary parents" for their charges – they are concerned about clothing, hair length, the child's daily life at home, his potential for the future, and other topics that are, in the West, considered the exclusive purview of parents or religious organizations. (Chyu & Smith, 1991, p.109).

In these countries, parents are encouraged to visit schools and meet with teachers. However, they are not involved with substantive aspects of schooling. It is considered that parents' responsibility is to collaborate with teachers in every aspect of children's life at home, such as monitoring children's homework completion. Parents in Asian countries respect teachers and use ideas from them to help their child learn at home (Krumm, 1996). The fact that teachers in these countries enjoyed both high prestige and responsibility resulted in lower level of schools' expectations for parents' extra input in children's schooling. This traditional family-school relationship in Asian countries prevents teachers from accepting parents' authority to make decisions in school governance issues such as school management, budgeting and staffing (Ho, 2003b). They find it acceptable, however, to communicate with parents about instructional activities. Similarly, this study found that school administrators in Hong Kong showed much lower

expectations for parents' involvement in school governance than direct involvement or volunteering. The involvement of parents in their children's education in Hong Kong is relatively limited in home-based educational activities.

This study also reached a similar conclusion on most Asian countries. Singapore, Hong Kong, and South Korea were among the lowest countries for the overall level of school expectations for parental involvement. However, Taiwan was an exception. Taiwan ranked the fourth highest for the overall level of school expectations and was the second highest for expecting parents to volunteer in schools. The finding is not surprising considering the current educational reform Taiwan is undergoing which emphasizes parental involvement as an important part of the decentralization reform. The political pressure and financial incentive might have led school leaders in Taiwan to start to accept parental involvement in their schools, which helps explain the high levels of school expectations reported by school administrators in Taiwanese schools in this study.

Across these nations, schools may emphasize one aspect of parental involvement more than others. For instance, schools in one nation might expect more in parental direct involvement but less in volunteering than their counterparts in another nation. However, a similar pattern existed across these countries when we compared the levels of the three types of expectations. Generally, parents were more expected to monitor their children's homework, to communicate with teachers about their children's problems, and to prepare lunchboxes, but less likely to be expected to volunteer in school activities and least likely to be invited to be part of school governance committees. This finding is consistent with the past U.S. studies which found that U.S. schools were more likely to expect parents to

take the role of helpers or supporters but not real partners (Abram & Gibbs, 2002; Wanat, 1999).

It is not surprising that schools around the world emphasize more on direct involvement than school-based collaboration. First, schools do not have to put more resources when they ask parents to devote time and energy to meet their children's daily needs or notify schools about their children's problems. However, when schools request parents to volunteer in school programs or participate in school decision-making processes, schools need to invest time in organizing in these involvement activities as well. Second, school bureaucracy has become a barrier to school reform or dynamic schooling such as the involvement of parents and community (Henry, 1996). When parents are expected to volunteer in schools, they are also expected to "commit themselves to consistent schedules and regular availability" (Henry, 1996, p.69). Parents are also expected to participate in certain programs or territories designated by schools. The one-way power relationship between parents and schools results in involvement only meaningful to those parents who understand school's language and follow its rules. Cultural capital theorists stress that school still possesses the power to practice exclusion or to impede parents' utilization of their cultural capital or their voice in their children's schools (Lareau & Horvat, 1999). Parents who question or challenge teachers' authority or who do not mirror the dominant middle-class norms of the school generally feel unwelcome (Lareau 1987, 2003).

For the initiatives that schools were taking to involve parents, schools in New Zealand and the U.S. may be role models for other nations. These two nations were the two highest countries where school principals and teachers were spending more time

talking with parents or representing in the community. Although the data do not show the purpose of communication between parents and schools, simply initiating contact with parents would still bring positive results in school-family relationships, as confirmed by previous studies (Feuerstein, 2000; Hoover-Dempsey and Sandler, 1995).

2. Relationship between National levels of School Expectations and Initiatives for PI and National Levels of Student Outcomes

This study discovered some unexpected findings about school expectations and initiatives and student outcomes. The study hypothesized that the national levels of school expectations and initiatives would be associated with higher national levels of student achievement and attendance rates. These relationships, however, were not found in this study. The study also hypothesized that active parental involvement would counter the effects of individual characteristics on school performance and a high level of parent participation in schooling would produce less inequality that was measured by achievement-variation and achievement-SES relationship. This study, however, reached a reverse relationship: a higher level of school expectations for direct parental involvement and a higher level of school initiatives in promoting parent participation and community involvement were associated with a greater degree of achievement-SES relationship.

Why was there no significant relationship between national level of school expectations or initiatives for parental involvement and national levels of school attendance rate and student achievement? There are several possible reasons. First, as discussed above, the level of school expectations and initiative for parental involvement

was low in most Asian countries since parent participation in schools is not common in these nations. However, students in these countries usually achieve much better than their peers in other countries in many international assessments like TIMSS 1999 study. Second, the current study also found that school expectation level was high in some low-performing countries, such as Turkey and Iran. It is interesting that Turkey scored the second highest for the overall level of school expectations and the highest for the school expectations for parents' participation in school governance while parental involvement is a relatively new phenomenon in Turkey (Akkok, 1999). Unfortunately, due to the limitation of the data set, we do not know how parents and students feel about the message and whether parents were taking steps to be involved in their children's education. It is possible that parental involvement was only a rhetorical policy agenda but not implemented very well in practice or parents were not aware of the school's desire on involving them in schools.

Educational policies usually take time to have an effect on student outcomes such as academic achievement. This may be another reason that this study did not find a significant relationship between national levels of school expectations for parental involvement and student achievement. Many countries started to recognize the importance of parental involvement in 1990s and to consider school policy of requiring or requesting parent's participation in schooling. For example, South Korea began their education reform which emphasizes parental involvement in 1995 (Eoh, 1999), just four years before the TIMSS 1999 study was conducted. It is possible that a parental involvement policy did not come into effect to impact student outcome by the time when the data were collected in many other countries.

The positive relationship between school expectations for direct involvement and school initiatives, and the SES-achievement relationship may imply that the pressure of increasing parental involvement in schools had an impact on schools' attitude to this issue in those nations with higher inequality in student achievement based on their SES status. These nations recognized the inequality in their educational systems and tried to decrease the achievement gap among student from different SES backgrounds via the parental involvement. For example, Hungary and New Zealand were among the top five nations with higher achievement-SES relationships among these 30 nations and their schools also ranked top five for expectations for direct parental involvement.

3. School-Level Factors on School Expectations and Initiatives for PI

What school-level factors predict high level of school expectations and initiatives for parental involvement? Based on the literature, this study selected seven school-level characteristics that may have influences on schools' attitudes to parental involvement in six high performing countries including the U.S. The study found that each of them was significantly associated with some types of expectations or initiative in at least one of the countries.

First, school location was a strong predictor of school expectations or initiative in Hong Kong, Taiwan, and the Netherlands schools. Interestingly, urban schools in Hong Kong were less likely to expect parental involvement, especially parents' direct involvement, than rural schools. However, principals and teachers in these schools spent more time working with parents or community members in Hong Kong. In contrast,

Taiwan's urban schools were more likely to expect parental involvement than suburban and rural schools. Since parental involvement started to attract attention and has developed most rapidly in urban areas in Taiwan (Ministry of Education, Taiwan, 2007), urban schools probably were more able to accept parental involvement. In addition, urban schools in the Netherlands were more likely to taking initiatives to involve parents than rural schools.

Second, class size was another factor that was associated with school expectations for parental involvement in some nations. A previous study in the U.S. reached a similar finding that larger class size predicts more teacher efforts to involve parents (Griffith, 1998). Schools with large average class size might want to seek help from parents. Contrarily, this study also found that small class size was a strong predictor of a high overall level of school expectations for parental involvement and a high level of expectations for governance participation in Taiwan. Taiwanese schools are enthusiastic in developing parental involvement programs, which is totally new in their education system. In this case, teachers in schools with smaller average class size might be able to have more time planning those programs. This helps explain Taiwanese schools with small class sizes showed high level of expectations for parent's participation school committees.

A third school-level factor, school size, was positively related to school expectations for parents' participation in governance in the Netherlands schools, which

indicated an open attitude to accepting parents in school affairs in large schools and schools with large classes in the Netherlands. The study also found that high SES schools in the Netherlands were more likely to have communication and interaction between school administrators or teachers and parents. Similar situation existed in Canada. However, the relationship was reversed in the Czech Republic data: a high school-mean SES was related to a low level of school expectations for direct involvement. Last, the high level of insufficient instructional resources was related to high level of school expectations in the U.S. and Taiwan schools. A reasonable explanation is that that schools lacking instructional resources would expect to support from parents, such as donation and volunteering.

Although many school-level factors were found to have significant relationships with one or more aspects of school expectations or initiatives for parental involvement, the strength and direction of the relationship differed among the six selected nations. For example, only one pair of relationship was found in the Czech Republic schools while there were six pairs of significant relationships found in Taiwanese schools. Even though both are in Asian context, schools in Hong Kong and Taiwan were different in the relation between school location and overall expectations level. Larger school size was a strong predictor of higher school expectations in Canadians schools but was a strong predictor of lower school expectations in the Netherlands schools. These differences may

be caused by different education systems in these nations, their traditions on parent-school relations, and their educational policy on parental involvement.

Unlike other countries whose schools' overall expectation was influenced by at least one of those structural characteristics, U.S. schools' expectations for parental involvement were affected by schools' cultural factors, such as teacher collaboration and school disciplinary issues. In fact, school location, school size, class size, and school SES all had a non-significant relationship with any of the three types of school expectations and initiatives in the U.S. A higher level of school expectation for parents' direct involvement was found in U.S. schools with fewer disciplinary issues. The same relationship was also found in Canadian schools. U.S. schools were more likely to have parent volunteers in their classrooms when they had a higher degree of collaboration among teachers or a lower degree of school disorder. A similar relationship was only found in Canada, which denoted that schools with a collaborative teacher group were more likely to collaborate with parents as well by involving them in school activities. The importance of cultural factors instead of structural factors in schools' expectations for parental involvement in North American countries like the U.S. and Canada supports the tenets of ecological theory on parental involvement. Scholars from ecological theory perspectives like Comer and Haynes stated that parental involvement programs were most effective when parental involvement, as well as collaboration among staff, was an integrated ecological approach to school enhancement (Comer and Haynes, 1991).

Although schools with higher levels of expectations and initiatives may have quite different structural characteristics in different nations, school's cultural characteristics were similar in schools with higher levels of expectations and initiatives across nations. In three nations, a higher level of teacher collaboration and a lower degree of disciplinary issues were found in schools with higher levels of expectations and initiatives for parental involvement. In Canada, the Netherlands, and the U.S., schools were more likely to expect or take initiatives for parental involvement in at least one form of involvement activities when their teachers are collaborating and when there is a lower level of disciplinary issues. This finding offers evidence on the importance of school climate in involving parents in schools in many nations. When schools have a collaborative and orderly environment, they are more likely to be willing to collaborate with parents and other family members.

4. Relationship between School Expectations and Initiatives for PI and Student Outcomes

The association between school expectations for parental involvement and student achievement and student attendance rates in the U.S. schools confirmed that school's attitude to parental involvement had an important contribution to various student outcomes in U.S. schools. Positive relationships were found in the U.S. data between school attendance rates and the overall school expectations for parental involvement, expectations for direct involvement, and expectations for volunteering. This finding might indicate that school's expectations for parents to fulfill their basic parenting

obligations brought a positive result in parents' intervention in their children's education. Observing their parent's presence in schools might also lead students to develop positive attitude to schools and attend schools more often. There was no significant relationship found in the U.S. data between school expectations for parents' participation in governance and student attendance rates. As the literature shows, parental involvement in school governance in the U.S. was limited to parents who had the time to attend those meetings and who were more welcome by schools because of their higher SES status and potential for fund raising. The majority of the students could not benefit from such practices if the majority of parents were not involved.

This study also found a positive relationship existed between school expectations for parents' direct involvement and student achievement in mathematics for U.S. eighth graders. It implies that when schools required parents to communicate with teachers about their children's unusual behaviors or to meet children's basic daily needs such as lunchbox, such expectations or requirements might make parents pay attention to their children's education and development. School expectations for parents to check student's homework completion might be directly leading to a higher level of achievement. The communication between schools and parents and parent's input in children's educational and developmental needs consist of social and cultural capital for student to succeed in schooling. These findings generally support the ideas of social and cultural capital theory.

Hong Kong and Taiwan were two Asian countries selected in this analysis. School expectations or initiatives did not have any influence on students' academic achievement in Hong Kong. Furthermore, the study found negative relationship between school expectations for parental involvement and student achievement and attendance rates in Taiwan. There are several possible explanations for these findings. First, while Asian countries like Taiwan are usually characterized as societies that emphasize the importance of education and have a reputation on greater parental involvement in children's education such as enrolling them in private schools, the actual parental participation in their children's education is not contingent upon the schools' policies on or attitudes to parents' school involvement. In fact, the findings from a previous study found that home-based involvement was more common in the Asian context and parental involvement as a concept was relatively new to Asian schools and parents. It is likely that a positive relationship would be found if the actual level of parental involvements especially home-based involvements is available and being used to examine its relations to student achievement. Second, the high school expectation level for parental involvement is not an indicator of actual parental involvement in Taiwan or might be having a reverse relationship with actual parental involvement in schools. Even though school principals and teachers in Taiwan showed a great interest in seeking more help from parents by inviting them into schools, there was no school policy which specifies how to get parents involved (Liu and Chien, 1998). Furthermore, schools in Taiwan might actually resist parental involvement when parents are defined as surveillance

agents in educational policy. To achieve a democratic educational system in Taiwan, policymakers in Taiwan expect parents to help eliminate some traditional or illegal practices in schools such as requiring parents to pay extra tuition, physical punishment of students, and ability tracking, by reporting any malpractice in their children's schools. In practice, however, this definition of parental involvement must become a barrier to build a real parent-school collaboration (Ministry of Education, Taiwan, 2007).

A similar situation exists in the Czech Republic schools. Negative relationships were found in the Czech Republic data between school expectations for parental direct involvement and volunteering and student achievement. It is likely that schools in the Czech Republic hoped parental involvement could make a difference when their student achieved worse than other schools. On the other hand, traditionally high-performing schools were slow to accept the relatively new concept of parental involvement since it was not urgent for them to make a change. A study on parental involvement in the Czech Republic revealed that school-family partnership was more theoretical than a reality in the Czech Republic schools (Rabusicova & Emmerova, 2001). There are not so many clearly defined conditions for parents' involvement in the school activities. Schools in the Czech Republic are required to inform the public about the co-operation with parents and to build relationships with parents. In reality, however, there is no documentation on such cooperation or relationships (Rabusicova & Emmerova, 2001).

Future Research

This study suggests directions for future research. First, this study examined the school expectations and initiatives for parental involvement instead of the actual level of parental participation in school. While these are important measures for examining if schools are willing to involve parents in school and how schools are initiating communications with them, they do not necessarily lead to the occurrence of parental involvement (Hoover-Dempsey and Sandler, 1995) or indicate of the actual level of parental involvement. A higher level of school expectations for parental involvement may not predict a higher actual level of parental involvement. The inclusion of actual level of parental involvement should also be encouraged in the development of future international databases. The actual level of parental involvement is important for us to examine whether parents from different socioeconomic backgrounds are participating in all kinds of involvement activities.

Second, longitudinal studies are needed to examine the effect of educational policy such as parental involvement on student outcomes. Like many research studies in this area, this study used multivariate regression techniques to attempt to control statistically for pre-existing differences among schools with different levels of expectations or initiatives for parental involvement in cross-sectional samples. However, these statistical controls are invariably inadequate. Because of errors in measurement, statistical methods never completely remove the effects of demographic and other control variables included in the analyses. As a result, associations between school expectations

for parental involvement and student achievement found in cross-sectional studies can be spurious, attributable to pre-existing differences in third variables that are associated with both school expectations and student achievement, such as socio-economic status. For this reason, causal relationships cannot be established in cross-sectional design. There may be interactions between school expectations or initiatives for parent-involvement and student attendance and achievement, and without random assignment or longitudinal analysis using rigorous analytical methods, one cannot rule out nonrecursive relationships. Even if it were feasible to demonstrate convincingly a non-spurious link between school expectations and student outcomes in cross-sectional data, it is impossible to establish the causal direction of such a link from data collected at a single point in time. Therefore, any causal inferences made about the nature of the relationship between the dependent and independent variables in the study are interpretive in nature and are derived from the strong theoretical and research literature (Desimone, 1999).

Further, qualitative methods are also needed to discover the nature of interaction between schools and families. Qualitative data can be helpful to determine the purpose or intention for schools to expect parental involvement in their schools. Interviews with parents in each nation would reveal how schools convey their expectations to parents and how parents act on such a requirement. In addition, qualitative data would be also useful in finding the reasons school principals and teachers are taking steps to communicate with parents and the power structures presented in parent-school interactions.

Last, it should also be noted that the number of countries included in this study was limited. Thirty-eight countries participated in TIMSS 1999 study and only thirty

nations were included in this current study based on the availability of relevant student, teacher, and school-level variables. More countries from a broader range of demographic and economic background are needed to show how parental involvement is expected and initiated globally. The individual and school-level variables included in the study were also limited. Future studies could include more variable such as minority status of student, student SES, and the duration of implementation of parental involvement programs in schools, if there is any.

Policy Implications

The study offers some important policy and practice implications for schools in both U.S. and 29 other nations. First, although many countries are addressing the rights of parents to be included in school's decision-making processes, schools in these countries have not changed their traditional vision about parent's role to a broader one. A further recognition of broader parent roles in children's schooling and parents' rights in their children's education needs to be achieved in many of these countries examined in this study. The low level of school expectations for parents' participation in school-based involvement activities in most countries (such as volunteering, assisting teachers, and participating in school governance) shows the need to emphasize these types of parental involvement. Parents are less likely to be expected to participate in various school committees, which indicates that parents are not involved in decision-making processes

in school affairs. A real school-family partnership has not been achieved in either U.S. or any other nation's schools. School leaders need to reconsider their definition of parental involvement and create broader and more meaningful roles for parents.

The low level of school expectation for parental involvement in school governance in most nations also suggests that the ideal goal of involving parents from different backgrounds in decision-making process has not been met. Parents with lower SES may not be informed of the school policy and expectations for their participation in their children's schooling. Or their working schedule may not allow them to contact schools freely and to become aware of their children's problems at school. When schools try to reach parents or other family members, they may also find that it is easy to work with parents of higher SES because of their flexible working schedule and shared knowledge and culture. For schools to help all students learn, they need to include all parents by creating more flexible parental involvement programs and initiating communication with low-income parents. A further recognition of parents' right in their children's education and more support for active parent roles in children's schooling need to be achieved among school administrators in these nations.

Second, although the U.S. schools showed a higher overall level of school expectations for parental involvement than many other nations, the level of school expectations for parental participation in school governance remained quite low. Parents were less likely to be expected to participate in various school committees, which implies that parents are not empowered in school affairs. A real school-family partnership has not been achieved in most U.S. schools. School leaders need to change their definition of parental involvement to create alternative roles for parents.

Third, the association between school expectations for parental involvement and student attendance rates and mathematics achievement in U.S. eighth graders confirms the need to emphasize parental involvement in U.S. schools, especially the direct involvement activities and volunteering. Since parents are most likely to identify any possible problems happening to their children, schools need to encourage parents to contact teachers on a regular basis rather than waiting until students have problems so contacting parents becomes inevitable. By requiring parents to help to provide children with basic necessities of life such as lunchbox, schools and parents together will build an environment that students feel secure and caring. The U.S. schools also need to recognize the importance of parental involvement in students' homework completion. Although many parents of eighth graders may not be competent in helping their children solve problems in mathematics, making sure their children completing homework would show their children that they place a great emphasis on their academic achievement.

Fourth, for schools in those nations such as Taiwan and Czech Republic where parental involvement was introduced recently, they should consider their traditions when incorporating parental involvement in their school policies. They should also be aware that encouraging parental involvement in schools does not necessarily bring out positive results in student outcomes, especially when schools do not take initiatives to communicate with parents about the benefits of involvement or organizing programs for parents to participate. These nations should also pay attention to the existence of lower expectations or initiative for parental involvement in certain types of schools. For example, urban schools in Hong Kong and small schools in Taiwan need to learn from their counterpart in each nation to expect more direct involvement of parents.

Finally, we need to consider the importance of school context in the process of increasing parental involvement in both the U.S. and other five high-performing countries. Policymakers and educators need to pay attention to those school contextual factors that are highly associated with school expectations for parental involvement: teacher collaboration and school disorder. When schools have a collaborative and orderly environment, they are more likely to be willing to collaborate with an active participation of parents and other family members. A systematic change in school environment is needed in these schools that lack collaboration among teachers and have severe disciplinary issues. When the school environment is conducive to collaborations among teachers, administrators, parents, and students, effective parental involvement could be achieved.

Summary and Conclusions

Parental involvement has been an important part of school reform in many nations. Schools around the world started to recognize parents' right in education and expect parental involvement in their schools. However, schools' attitudes toward parental involvement and their actual effort in increasing parent participation depended on traditions, educational reform, and the duration of implementation of parent involvement policy in different nations. In most nations, schools still saw parents as helpers who should only perform responsibilities for their children's basic needs and stay away from the real school life. Compared to most other nations, the U.S. schools were doing better

in including parents in school governance and having them involved in school activities. However, the U.S. schools were paying much lower expectations for parents' direct involvement than most other nations. Considering the significantly positive relationship between school expectations for direct involvement and student achievement and school attendance rate in the U.S. schools, educators and policy makers may emphasize the importance of this type of involvement. U.S. schools leaders who want to increase their parental involvement practices may need to also foster collaboration among teachers and develop a more orderly environment inside their schools.

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APPENDICES

Table 1. Descriptive Statistics of Overall School Expectations for Parental Involvement in 30 Nations

	N	Minimum	Maximum	Mean	Std. Deviation
Bulgaria	160	1.00	10.00	5.20	2.01
Canada	371	1.00	10.00	5.69	1.86
Chile	185	0.00	10.00	5.73	1.64
Taiwan	150	1.00	10.00	6.33	2.05
Cyprus	55	1.00	8.00	4.00	1.60
Czech Republic	145	0.00	10.00	4.51	1.74
Hong Kong	122	1.00	10.00	4.68	1.87
Hungary	145	2.00	8.00	4.97	1.38
Indonesia	148	2.00	10.00	4.86	1.65
Iran	169	2.00	10.00	7.46	1.76
Israel	126	1.00	9.00	4.90	1.70
Italy	179	1.00	8.00	4.20	1.51
Jordan	146	0.00	10.00	4.36	2.10
Korea	149	0.00	10.00	4.60	2.14
Latvia	127	1.00	10.00	6.09	1.84
Malaysia	150	1.00	10.00	5.39	1.67
Moldova	146	0.00	10.00	5.12	2.42
Morocco	167	0.00	10.00	4.31	1.72
Netherlands	96	1.00	8.00	4.26	1.57
New Zealand	141	1.00	8.00	4.85	1.58
Philippines	148	1.00	10.00	5.47	2.05
Romania	143	0.00	10.00	5.83	1.66
Russian	187	1.00	10.00	5.62	2.25
Singapore	145	0.00	9.00	3.57	1.63
Slovak Republic	141	1.00	10.00	6.43	1.70
Slovenia	146	0.00	9.00	4.73	1.47
Thailand	148	1.00	10.00	6.00	2.19
Tunisia	142	0.00	10.00	4.71	2.55
Turkey	199	0.00	10.00	6.93	2.12
USA	182	0.00	10.00	5.80	1.86

Table 2. Descriptive Statistics of School Expectations for Direct Parental Involvement in 30 Nations

	N	Minimum	Maximum	Mean	Std. Deviation
Bulgaria	160	0.00	3.00	2.53	0.67
Canada	371	0.00	3.00	2.65	0.57
Chile	185	0.00	3.00	2.45	0.63
Taiwan	150	0.00	3.00	2.60	0.57
Cyprus	55	0.00	3.00	2.20	0.78
Czech Republic	145	0.00	3.00	2.60	0.68
Hong Kong	122	1.00	3.00	2.30	0.53
Hungary	145	1.00	3.00	2.66	0.52
Indonesia	148	0.00	3.00	2.16	0.51
Iran	169	1.00	3.00	2.66	0.54
Israel	126	0.00	3.00	2.22	0.76
Italy	179	0.00	3.00	2.31	0.71
Jordan	146	0.00	3.00	2.31	0.83
Korea	149	0.00	3.00	2.32	0.79
Latvia	127	0.00	3.00	2.24	0.76
Malaysia	150	0.00	3.00	2.38	0.62
Moldova	146	0.00	3.00	2.03	0.89
Morocco	167	0.00	3.00	1.50	0.79
Netherlands	96	1.00	3.00	2.28	0.66
New Zealand	141	1.00	3.00	2.62	0.56
Philippines	148	0.00	3.00	2.33	0.71
Romania	143	0.00	3.00	2.57	0.69
Russian	187	0.00	3.00	2.28	0.75
Singapore	145	0.00	3.00	1.92	0.44
Slovak Republic	141	1.00	3.00	2.69	0.57
Slovenia	146	0.00	3.00	2.03	0.30
Thailand	148	1.00	3.00	2.39	0.62
Tunisia	142	0.00	3.00	2.05	0.93
Turkey	199	0.00	3.00	2.49	0.72
USA	182	0.00	3.00	2.23	0.56

Table 3. Descriptive Statistics of School Expectations for Parent Volunteering in 30 Nations

	N	Minimum	Maximum	Mean	Std. Deviation
Bulgaria	160	0.00	4.00	1.78	1.15
Canada	371	0.00	4.00	1.75	0.96
Chile	185	0.00	4.00	2.37	0.84
Taiwan	150	0.00	4.00	2.54	1.11
Cyprus	55	0.00	3.00	0.73	0.89
Czech Republic	145	0.00	4.00	1.15	0.84
Hong Kong	122	0.00	4.00	1.47	1.07
Hungary	145	0.00	4.00	1.72	0.79
Indonesia	148	0.00	4.00	1.77	1.02
Iran	169	0.00	4.00	2.80	0.92
Israel	126	0.00	4.00	1.75	0.84
Italy	179	0.00	4.00	1.18	0.95
Jordan	146	0.00	4.00	1.57	1.13
Korea	149	0.00	4.00	1.37	1.12
Latvia	127	0.00	4.00	2.27	0.95
Malaysia	150	1.00	4.00	2.11	0.97
Moldova	146	0.00	4.00	1.61	1.17
Morocco	167	0.00	4.00	1.84	1.03
Netherlands	96	0.00	4.00	1.31	1.01
New Zealand	141	0.00	3.00	1.28	0.90
Philippines	148	0.00	4.00	1.98	1.13
Romania	143	0.00	4.00	1.58	0.92
Russian	187	0.00	4.00	1.93	1.10
Singapore	145	0.00	4.00	0.70	0.95
Slovak Republic	141	0.00	4.00	1.91	0.88
Slovenia	146	0.00	4.00	1.87	0.91
Thailand	148	0.00	4.00	2.14	1.25
Tunisia	142	0.00	4.00	1.80	1.24
Turkey	199	0.00	4.00	2.29	1.06
USA	182	0.00	4.00	1.95	0.92

Table 4. Descriptive Statistics of School Expectations for Parents' Participation in School Governance in 30 Nations

	N	Minimum	Maximum	Mean	Std. Deviation
Bulgaria	160	0.00	3.00	0.90	0.84
Canada	371	0.00	3.00	1.29	0.94
Chile	185	0.00	3.00	0.91	0.84
Taiwan	150	0.00	3.00	1.19	1.03
Cyprus	55	0.00	3.00	1.07	0.63
Czech Republic	145	0.00	3.00	0.76	0.88
Hong Kong	122	0.00	3.00	0.91	0.89
Hungary	145	0.00	3.00	0.59	0.79
Indonesia	148	0.00	3.00	0.93	0.85
Iran	169	0.00	3.00	1.99	0.89
Israel	126	0.00	3.00	0.93	0.79
Italy	179	0.00	3.00	0.71	0.77
Jordan	146	0.00	3.00	0.48	0.76
Korea	149	0.00	3.00	0.91	1.00
Latvia	127	0.00	3.00	1.58	0.92
Malaysia	150	0.00	3.00	0.89	0.75
Moldova	146	0.00	3.00	1.48	1.05
Morocco	167	0.00	3.00	0.96	0.57
Netherlands	96	0.00	3.00	0.67	0.74
New Zealand	140	0.00	3.00	0.96	0.91
Philippines	148	0.00	3.00	1.16	0.98
Romania	143	0.00	3.00	1.68	0.77
Russian	187	0.00	3.00	1.41	1.06
Singapore	145	0.00	3.00	0.94	0.85
Slovak Republic	141	0.00	3.00	1.83	0.97
Slovenia	146	0.00	3.00	0.82	0.75
Thailand	148	0.00	3.00	1.47	1.05
Tunisia	142	0.00	3.00	0.87	0.95
Turkey	199	0.00	3.00	2.15	0.91
USA	182	0.00	3.00	1.63	0.97

Table 5. Descriptive Statistics of School Initiatives for Parental Involvement in 30 Nations

	N	Minimum	Maximum	Mean	Std. Deviation
Bulgaria	164	1.00	16.00	5.77	3.17
Canada	408	0.75	19.50	5.76	3.04
Chile	189	0.00	23.50	6.73	3.68
Taiwan	150	1.00	18.50	6.22	3.43
Cyprus	61	1.25	19.00	5.81	3.80
Czech Republic	162	0.50	10.50	3.95	1.71
Hong Kong	183	0.50	15.75	4.18	2.18
Hungary	147	0.50	14.10	5.67	2.59
Indonesia	168	0.00	12.50	2.71	1.86
Iran	176	0.00	20.00	6.13	3.73
Israel	139	1.00	16.75	6.04	3.01
Italy	191	1.50	20.25	7.11	3.24
Jordan	148	0.50	20.00	5.93	3.15
Korea	150	0.00	19.25	3.49	2.92
Latvia	152	1.50	21.00	5.10	2.64
Malaysia	152	0.00	14.75	3.70	2.52
Moldova	155	1.00	14.50	5.78	2.17
Morocco	174	0.00	12.00	2.29	1.98
Netherlands	182	0.50	10.50	3.50	1.64
New Zealand	160	2.25	20.00	8.12	3.05
Philippines	152	0.50	30.25	4.85	3.50
Romania	150	0.75	24.00	5.08	3.14
Russian	194	1.50	27.75	5.68	2.78
Singapore	145	1.00	18.00	4.94	2.84
Slovak Republic	145	1.00	15.50	5.29	3.09
Slovenia	153	1.25	13.50	4.87	2.21
Thailand	155	1.00	25.00	6.49	3.81
Tunisia	149	1.25	17.00	5.97	3.53
Turkey	206	0.00	26.50	6.35	4.15
USA	240	1.50	28.00	7.48	3.42

Table 6: Descriptive Statistics of Predictors of School Expectations for Parental Involvement in 6 nations

Variables	Nation	No. of Schools	Minimum	Maximum	Mean	Std. Deviation
Urban						
	Canada	364	0.00	1.00	0.54	0.50
	Taiwan	150	0.00	1.00	0.49	0.50
	Czech Republic	144	0.00	1.00	0.47	0.50
	Hong Kong	128	0.00	1.00	0.70	0.46
	The Netherlands	98	0.00	1.00	0.27	0.44
	USA	182	0.00	1.00	0.56	0.50
Class Size						
	Canada	356	4.00	50.00	26.13	5.63
	Taiwan	148	23.00	56.00	39.03	5.02
	Czech Republic	140	12.00	33.00	25.57	4.59
	Hong Kong	118	24.00	44.00	39.18	3.28
	The Netherlands	89	18.00	32.00	25.31	3.12
	USA	175	9.00	60.00	26.21	6.14
School Size						
	Canada	361	1.00	6.00	1.55	0.84
	Taiwan	147	1.00	11.00	4.59	2.34
	Czech Republic	143	1.00	3.00	1.48	0.54
	Hong Kong	122	1.00	4.00	2.77	0.48
	The Netherlands	87	1.00	8.00	3.49	1.52
	USA	158	1.00	7.00	2.02	0.91
School Mean SES						
	Canada	385	1.74	2.90	2.23	0.20
	Taiwan	150	1.71	2.39	1.99	0.14
	Czech Republic	142	1.83	2.81	2.18	0.21
	Hong Kong	137	1.44	2.24	1.84	0.15
	The Netherlands	126	1.65	2.57	2.08	0.13
	USA	216	1.60	2.77	2.17	0.22
Teacher Collaboration						
	Canada	373	0.00	3.00	2.29	0.67
	Taiwan	150	1.00	3.00	2.66	0.50
	Czech Republic	145	1.00	3.00	2.74	0.55
	Hong Kong	123	1.00	3.00	2.50	0.64
	The Netherlands	99	0.00	3.00	2.58	0.80
	USA	183	0.00	3.00	2.57	0.59

Insufficient Resources					
Canada	373	1.00	3.58	2.09	0.62
Taiwan	150	1.17	3.83	2.46	0.55
Czech Republic	145	1.00	3.25	1.78	0.45
Hong Kong	124	1.00	3.25	2.14	0.54
The Netherlands	97	1.00	4.00	1.90	0.52
USA	180	1.00	3.75	1.92	0.58
Discipline Issues					
Canada	369	1.00	3.94	2.28	0.57
Taiwan	150	1.06	4.00	2.27	0.61
Czech Republic	144	1.11	3.39	1.95	0.42
Hong Kong	118	1.28	5.00	2.19	0.75
The Netherlands	97	1.65	4.06	2.57	0.55
USA	178	1.17	4.22	2.53	0.64

VITA

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