Social Disparity of Family Involvement in Hong Kong: Effect of Family Resources and Family Network

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Abstract

Using data from Programme for International Student Assessment (PISA) developed by the Organisation for Economic Co-operation and Development (OECD), this study examines the social disparity of family involvement. A total of 4,405 students from 140 Hong Kong secondary schools participated in the first cycle of PISA study identifying four types of family involvement: cultural communication, social communication, homework supervision, and cultural activity. Multi-level analysis was used to examine the major family factors related to these types of family involvement. Consistent with previous research, working-class, immigrant, and single-parent families tend to have lower levels of parental involvement. The effect of these structural factors decreased after family resources, family network, and family norms entered into the multi-level regression model. It can be argued that the social disparity of family involvement is mediated by the deprivation of useful resources, lack of network, and low educational aspiration of the disadvantaged families. The results also suggested that it is not only cooperation between home and school, but also connection between parents and their children's peers that provides the necessary chemistry for success. Educators, parents, and policymakers should be aware that family networking should be extended to include the peers of the teenagers if they want to enhance family involvement in education.

Key Words: family involvement, family resources, family network, secondary school students, parents

Background of the Study and Literature Review

The contribution of family involvement to children's education has been a major topic in the field of education over the past decade. From an economics perspective, family involvement represents a potentially cost-effective resource for schools. Family involvement may bring additional resources into public schools to enrich the learning environment for children (Coleman, 1994), and parents may enhance the responsiveness of the schools to the needs of the community (Brown, 1998). From a sociological perspective, family involvement may be one of the mechanisms linking children's schooling outcomes to the social background of their families. Family participation at home and in school not only can improve the quality of student learning but also can reduce the inequality of learning outcomes among students from different social origins (Ho & Willms, 1996). Overall, family involvement in education appears to be a promising avenue to improve school quality and enhance children's learning (e.g., Coleman, 1988, 1994; Epstein, 1990; Epstein & Lee, 1995; Epstein & Salinas, 1995; Fehrmann, Keith, & Reimers, 1987; Greenwood & Hickman, 1991; Ho & Willms; Keith et al., 1993; Muller, 1993).

In exploring the facilitators and barriers for family involvement, researchers have consistently found that family factors are essential determinants of the time and resources devoted to children. Empirical evidence from Brown (1991, 1998), Coleman (1987, 1994), Harker, Nash, Durie, and Charters (1993), Ho and Willms (1996), Lareau (1989, 1994, 2003), and Milne, Myers, and Rosenthal (1986) suggest that family socioeconomic status, ethnicity, and family structure are the most powerful predictors of the extent of family involvement in children's education. Nevertheless, our understanding of family involvement is largely limited to the American or Western experience. Little research examines the nature of family involvement in Asian countries (Ho, 2003; Shen, Pang, Tsoi, Yip, & Yung, 1994).

Students from Hong Kong performed well in a number of international studies (OECD, 2001; 2003; Mullis et al., 2000; Mullis et al., 2001). In both the first and second cycles of the PISA study, Hong Kong 15-year-olds ranked first in mathematics and third in science. More interesting is that family involvement was found to be one of the major contributors to the students' academic success (Ho, 2005; Ho et al., 2003). This paper aims to extend these studies by exploring the essential factors related to family involvement in their children's education in Hong Kong, especially at the secondary school level.

The following literature review includes empirical studies based on interviews, observations, documents, or surveys. The evidence suggests that socioeconomic status (SES), ethnicity, family structure, and family networking are major family factors related to family involvement.

Socioeconomic Status

Brown (1991) interviewed a total of 120 principals, teachers, and volunteers from public elementary schools in British Columbia, Canada. His findings suggest that the most extensive voluntary participation comes from parents who work in professional or managerial occupations, earn relatively high family income, and have higher levels of education. The findings of Brown are consistent with other research (e.g., Ho & Willms, 1996; Lareau, 1989, 2003), which also indicates that socioeconomic status (SES) is a major factor affecting the degree of family involvement. The "family resource hypothesis" (Harker et al., 1993) explains this consistent association, suggesting that SES is likely to affect family involvement by providing different amounts of cultural, social, educational, and economic resources.

Lareau's 1989 ethnographic study, conducted in two predominately white elementary schools in the U.S., provides a detailed explanation of the mechanism of this family resource hypothesis. In-depth interviews explored how and why social class influences the pattern of family involvement. She found that although both classes of parents want to be "supportive" of children's schooling, working-class parents tend to have a "separated" relationship with the school, whereas upper-middle-class parents tend to have a "connected" relationship. Moreover, Lareau noticed three distinctive characteristics that give upper-middle-class parents an advantage in their involvement: first, these parents have competence and confidence to help their children with schoolwork because they have the capacity to understand the curriculum and communicate effectively with teachers; second, they have better social connections with other families, friends, and neighbors, which provide them with important information about their children's schooling; third, such parents have more material resources to pay for childcare, transportation, tutoring, and so on and therefore have the flexibility to reschedule their work and participate in school.

Research literature provides solid evidence to support the family resources hypothesis. Brown and Lareau confirm that parents' education, occupation, and family income provide various forms of resources that are the major factors in determining the level of family involvement in children's education.

Ethnicity

Another major factor impinging on family involvement is the ethnicity of parents. Coleman (1987) suggests that the norms of different ethnic or immigrant groups regarding education may affect the patterns of family involvement. He noted that, "A school district where children purchase textbooks recently found that some immigrant Asian families were purchasing two. Investigation led to the discovery that one book was for the mother, to

enable her to better help her child succeed in school" (1987, p. 15). He argued that Asian mothers, even though some were not well educated, were devoted to helping their children learn. This research suggests that not only the education, income, and occupation, but also the cultural disposition of the parents toward education determines the extent that they are involved in their children's education. For instance, most Chinese people have a tradition that academic pursuit is the most important and valuable among all career endeavors. This cultural norm leads them to maximize their devotion of time and energy to supervise their children's learning at home but not in school (Ho, 2000).

Many Asian immigrant parents hold high aspirations for their children. With the goal of better lives for their children, they supervise their children's study at home and try their best to conform to the requirements of the school. Therefore, the traditional "disposition" of different ethnic groups may affect the pattern of family involvement. Moreover, immigrant parents might have difficulties in connecting with the schools due to a language barrier. As a result, immigrant parents may choose certain types of *involvement at home* in which they feel comfortable and confident; they may also avoid connecting with parents or communicating with teachers, as they lack confidence in doing so.

Family Structure

The impact of family structure is particularly interesting in light of the dramatic increases in the proportion of single-parent families in Western countries in recent decades. In PISA, over 20% of the sampled 15-year-olds in the U.S. reported that they live with a father/male guardian or a mother/female guardian; many of these families are headed by a single mother (OECD, 2003).

Large-scale research studies in the U.S. indicate that family involvement of single-parent families is substantially less than traditional two-parent families (e.g., Ho & Willms, 1996; Milne et al., 1986). Evidence suggests that two-parent families devote more time to monitor elementary children's homework than single-parents; the difference is even greater for high schoolers (Milne et al.). Ho and Willms study of 8th graders also confirms that single parents tend to participate less in their children's education both at home and in school.

McLanahan provides a persuasive explanation of why and how single-parent families, especially female-headed families, participate less in their children's education (1985). Her study does not directly explore the relationship between family structure and family involvement; however, her "Economic-Deprivation" hypothesis helps us understand the impact of family structure. The hypothesis suggests that lower family income, which means having fewer economic resources, stands out as the most important intervening variable to explain the lower level of involvement of single parents.

Family Resources and Network

Overall, the empirical evidence (Brown, 1995; Coleman, 1987, 1990; Ho & Willms, 1996; Lareau, 1989; Milne et al., 1986) suggests that socioeconomic status, ethnicity, and family structure appear to be powerful determinants of the extent of family involvement in children's education, and the impact of these is largely mediated by parents' resources and network. For instance, parents with lower SES have fewer family resources. Parents from ethnic-minority groups may have different dispositions toward education and involvement. Single parents may suffer economic deprivation and simply lack the time to be involved. In addition to the deprivation of "family resources," the negative impact of single or immigrant parents on students' learning is attributable to a scarcity of "social network." Astone and McLanahan (1991) argue that the number of parents in the household and strength of the attachment between parent and child are important indicators of children's social capital and that families with less social capital are less likely to connect with other parents and participate in children's learning. As a result, social disparity of family involvement may be mediated by the differences of family resources and family network. This article aims to clarify to what extent family SES, structure, and immigrant status affect the extent of family involvement in children's education at the secondary school level, and to what extent the impact of social background on family involvement is mediated by family resources and network.

From the theoretical point of view, Bourdieu's and Coleman's concepts of cultural, social, and economic capital can provide a fruitful standpoint to explain the mediating effect of different kinds of family resources and family network on family involvement. According to Bourdieu (1986), there are three fundamental types of capital: *economic* capital, *cultural* capital, and *social* capital. They can exist in three forms: *embodied* form, *objectified* form, and *institutionalized* form. Economic capital exists only in objectified form such as income, ownership of house or other material resources. Cultural capital is embodied in the form of dispositions and aptitudes, such as a sense of familiarity with high status culture and forms of language; in cultural possession, such as owning books and works of art; and in institutionalized form, such as educational qualification, credentials, degrees, or public awards. Social capital consists of networks and connections with significant others, and may be institutionalized through acquaintance in systems of noble title or recognition as a member of some higher occupational status social groups (Jenkins, 1992).

Coleman (1990, 1994) similarly identified three major types of capital: *physical or financial* capital, *human* capital, and *social* capital. To Coleman (1990), physical or financial capital is wholly tangible, and it is embodied in observable material forms; human capital is less tangible, embodied in the skills and

knowledge acquired by individuals; social capital is even less tangible, embodied in the relations among persons. Table 1 shows the synthesis of the various types and forms of capital with the measures of family involvement, family resource, and family network in the present study.

The four types of family involvement examined can be seen as the embodied form of cultural and social capital. The extent of family involvement is related to the family resources available (which can be seen as objectified forms of economic and cultural capital) and family network established (which can be seen as an institutionalized form of social capital). Different types of family involvement can be improved by enriching objectified forms of capital in the community through public policies, and institutional forms of capital can also be enhanced by school practices.

Table 1. Analysis of Forms/Types of Capital Measured in the Present Study

Types	Embodied Form	Objectified Form	Institutionalized Form
1. Economic	Not Applicable	Income, Material Resources	
2. Cultural/ Human	Cultural Activities	Cultural Possessions	Educational Resources
3. Social	Social Communication, Cultural Communication, Homework Supervision	Family Network Family Structure	

Conceptualization and Operationalization of Major Constructs

Family Involvement

In the present PISA study, four types of home-based family involvement were measured:

(1) Cultural Communication: Students' reports on the frequency with which their parents/guardians engaged with them in the following activities: discussing political or social issues; discussing books, films, or television programs; and listening to classical music.
(2) Social Communication: Students' reports on the frequency with which their parents/guardians engaged with them in the following activities: discussing how well they are doing at school; having the main meal with them around the table; and spending time simply talking with them.
(3) Family Homework Supervision: Students' reports on how frequently the mother, father, or brothers and sisters worked with the students on what is regarded nationally as schoolwork. Students responded to each statement on a 5-point scale: "never or hardly ever," "a few times a year," "about once a month," "several times a month," and "several times a week."

(4) Cultural Activities: Students' reports on how often they participated in the following activities during the preceding year: visited a museum or an art gallery; attended an opera, ballet, or classical symphony concert; and watched live theater. Students responded to each statement on a 4-point scale: "never or hardly ever," "once or twice a year," "3 or 4 times a year," and "more than 4 times a year."

These four indices of family involvement were constructed in such a way that the mean of the combined student population from participating OECD countries was set to zero and the standard deviation was set to one. Two-thirds of the OECD student populations were between the values of -1 and 1. A negative value indicates that a group of students responded less positively than all students did, on average, across OECD countries. Conversely, a positive value on an index indicates that a group of students responded more positively than all students did, on average, across OECD countries.

Family Resources and Family Network

Indicators of family resources were derived from the student questionnaire:

(1) "Family wealth" is a composite measure that assessed the availability of a dishwasher, a room of their own, educational software, and a link to the Internet; and the number of cellular phones, television sets, computers, automobiles, and bathrooms at home.
(2) "Home educational resource" is a composite measure that assessed the availability and number of the following items in the student's home: a dictionary, a quiet place to study, a desk for study, textbooks, and calculators.
(3) "Cultural possession" is another composite measure assessing the availability of the following items in their home: classical literature (examples were given), books of poetry, and works of art. These three indices are provided in the PISA+ database.

Three indicators of family network were constructed from three items in the parent questionnaire, which was designed by the author as a national option in the Hong Kong PISA study:

(1) "Peers Net" was derived from parents' reports on the extent to which they know their children's good friends in school.
(2) "Class Net" was derived from parents' reports of the extent to which the parents know other parents of children in the same class as their children.
(3) "School Net" was derived from parents' reports of the extent to which the parents know other parents in their children's school.

Also, parent's educational expectation was derived from parents' reports about their expectation for the highest level of education their children should attain.

Methodology

PISA

The primary database used in this paper is the Organisation for Economic Co-operation and Development's (OECD) Programme for International Student Assessment (PISA). PISA constitutes one of the most comprehensive and rigorous international assessments of student performances to date. Specifically, PISA covers the assessment of three domains: reading literacy, math literacy, and scientific literacy. The population being studied is 15-year-old students. The "PISA-2000" survey was conducted in 2000 in 32 countries. The "PISA+" survey was conducted in 2002 in 11 other countries (OECD, 2003). The countries participating in PISA2000 and PISA+ are listed at www.pisa.oecd.org.

Sample of HKPISA (Hong Kong PISA)

In sampling, schools were stratified based on type of school (government, aided, and private) and student academic intake (high, medium, and low). The stratified sampling method ensures the appropriate proportion of each type of school, which covered different academic abilities in the sample. According to the OECD sampling standard, a total of 4,405 students from 140 schools were accepted for the final analysis.

Analysis

Descriptive analysis was used to examine the extent of family involvement in Hong Kong. Multi-level analysis was used to investigate the effect of family factors on different types of family involvement. Specifically, I examined the variation of family involvement within school and between schools, and then identified student level and school level factors related to the variation of different types of involvement using the HLM software (Raudenbush, Bryk, & Congdon, 2004).

Results and Discussion

The Nature of Family Involvement of Hong Kong from an International Perspective

Table 2 shows the average level of four types of family involvement in Hong Kong. As mentioned in the previous section, the OECD average indices are zero. The results indicate that cultural communication and cultural activities in Hong Kong are slightly higher than the OECD average. In other words, Hong Kong parents have more frequently engaged in discussing political and social issues with their teenage children or talking about books and films, or engaged

their children in cultural activities such as visiting a museum or attending a concert. However, the indices of social communication and homework supervision are below the OECD average. This finding contradicts the common perception that Asian parents often supervise children's homework. These parents also seldom spend time simply talking with their teenage children at home about how well they are doing at school. One possible reason is that many working parents in Hong Kong work long hours and may not have enough time to talk to their children; they may also expect 15-year-old teenagers to be more independent in their learning.

Table 2. Descriptive Analysis of Family Involvement of Hong Kong

	Cultural Communication	Social Communication	Homework Supervision	Cultural Activity
Mean	.215	-.229	-.455	.178
(Std Dev.)	(1.015)	(.989)	(.999)	(.841)

Compared to other Asian countries such as Japan and Korea and some Western countries such as Finland, Sweden, the U.S., and the United Kingdom,[1] it is interesting to find that the level of cultural communication and cultural activities of Hong Kong parents appears to be higher than all these countries except the U.S. As mentioned before, the indices of social communication and homework supervision of Hong Kong are below the OECD average, and on these two indices, Hong Kong is even the lowest of these six countries.

Variation of Family Involvement Among Schools in Hong Kong

Table 3 presents the percentages of variance that lie between and within schools for each of the four types of parental involvement. It shows that over 90% of the variation of three effect types of parental involvement was found within schools, and less than 10% of the variation was found between schools. For the two forms of home communication, only 5.13% and 7.78% of cultural communication and social communication, respectively, lies between schools. For the two forms of home-based support and enrichment, only 0.52% and 9.49% of homework supervision and cultural activity lies between schools. These findings suggest that it is difficult to differentiate secondary schools with particularly high or low levels of involvement in Hong Kong – they do not differ noticeably from each other in the extent of these four forms of involvement. One possible reason is that schools do not have any particular policy to promote home-based involvement in Hong Kong at the secondary school level. Schoolteachers also seldom attempt to mobilize parents to be involved, and these parents may also assume their children to be more responsible and independent in their learning, especially at the secondary school level.

Table 3. Descriptive Analysis of Family Involvement of Hong Kong

	Cultural Communication	Social Communication	Homework Supervision	Cultural Activity
Between School Variance	0.050	0.074	0.005	0.066
Within School Variance	0.928	0.875	0.982	0.632
Between School Variance Explained	5.13%	7.78%	0.52%	9.49%
Within School Variance Explained	94.87%	92.22%	99.48%	90.51%

Effect of Student and Family Social Background on Family Involvement

Multi-level analysis in Table 4 addressed the research question of the effect of student characteristics and family social background on the four types of family involvement. Of the two student background factors, upper grade students tend to have more family-based communication but less homework supervision. It is likely that students tend to discuss cultural and social issues with parents when they get into upper grade levels with more knowledge and experience to share. However, secondary school students are supposed to be independent learners in Asian countries; therefore, their parents and family members tend to have less direct supervision of their homework. Moreover, as students go to upper grade levels, parents might also find it more difficult to get involved in homework supervision because of the more advanced knowledge content. Gender differences exist in all four types of family involvement. Girls communicate more with their parents than boys. Parents are more likely to provide homework supervision and arrange cultural activities for girls than boys.

Consistent with many previous studies (e.g., Ho & Willms, 1996; Lareau, 2003), higher parents' SES, as measured by parental occupation and parental education, is associated with a higher level of family involvement. Immigrant students tend to have lower levels of cultural communication at home and parental supervision of their homework when compared to the local students. Single-parent families show a moderate negative relationship with social communication and homework supervision. Single parents may have less time to communicate with their children on social issues or provide supervision of their children's homework. These results are consistent with many previous studies in the U.S. (Ho & Willms; McLanahan, 1985; Milne et al., 1986). However, the disadvantages of immigrant families and single parenthood on parental involvement are not very serious in Hong Kong.

Table 4. Effects of Family Social Background on Four Types of Family Involvement

Predictors	Cultural Communication		Social Communication		Homework Supervision		Cultural Activities	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Intercept	0.244***	0.019	-0.231***	0.020	-0.445***	0.017	0.185***	0.020
School Level Background								
Mean SES	0.160***	0.039	0.222***	0.042	0.007	0.045	0.265***	0.043
Percentage of Single Parents	-0.406	0.334	-0.994**	0.306	-0.336	0.266	-0.456	0.327
Percentage of Immigrants	-0.106	0.141	-0.500***	0.146	0.211	0.196	-0.124	0.175
Student Level Background								
Grade	0.050*	0.025	0.055*	0.023	-0.084***	0.024	-0.030	0.019
Female Student	0.156***	0.037	0.251***	0.034	0.160***	0.035	0.264***	0.029
SES	0.175***	0.018	0.119***	0.018	0.084***	0.021	0.088***	0.015
Immigrant Student	-0.174**	0.054	-0.040	0.053	-0.193***	0.048	-0.023	0.043
Single Parent	-0.090	0.059	-0.126*	0.057	-0.144*	0.063	-0.023	0.047
Between School Variance	0.017***		0.020***		0.001		0.028***	
Within School Variance	0.884		0.846		0.968		0.614	
Between School Variance Explained	66.01%		72.27%		83.85%		58.06%	
Within School Variance Explained	4.75%		3.22%		1.36%		2.90%	

Note: *p<0.05, **p<0.01, ***p<0.001.

The contextual effect of the student body was also assessed by aggregating the indices of SES, percentage of single parents, and percentage of immigrants at the school level. The results indicate that mean SES^2 has a significant effect on cultural communication, social communication, and cultural activities. These findings suggest that when students of lower class accumulate in certain schools, that may reinforce the disadvantage of family involvement. Since working-class parents may have less connection to other parents in the class or school, they may know less about the school life of their children which, in turn, means they have less to share with their children at home. Upper-class parents may have a stronger network with other parents in the same grade or school, and they may share information about cultural activities with each other, which in turn may motivate them to arrange more cultural activities for their children. The effect of higher percentages of single parents and immigrant students are less obvious in cultural communication, homework supervision, and cultural activities. The tradition of extended family in Asian culture might help to explain why single parents in Hong Kong are not so disadvantaged in terms of their involvement, because many of these single parents may live with grandparents and/or receive support from extended family members. This interpretation is worthy of further investigation in future studies. However, the contextual effects of the percentage of single parents and immigrant students are significant on social communication. It appears that students who study in a school with a high percentage of single parents or immigrant students tend to have a lower level of social communication with their parents.

Overall, SES appears to be the strongest family factor associated with family involvement, and its effect at the school level is also significant. The effect sizes of students from single parent and immigrant households on family involvement are relatively low. The eight factors of student characteristics and social background explain 66.01%, 72.27%, 83.85%, and 58.06% of the between school variance, and 4.75%, 3.22%, 1.36%, and 2.90% of the within school variance for cultural communication, social communication, cultural activities, and homework supervision, respectively.

Effect of Family Resources, Network, and Educational Expectation on Family Involvement

Also analyzed in Table 5 was the effect of family resources, network, and parents' educational expectation on the four types of involvement. The analyses attempt to explore to what extent the effects of family social background factors are mediated by family resources and family network.

Table 5. Effects of Family Social Background, Family Resources, and Network on Four Types of Family Involvement

Predictors	Cultural Communication		Social Communication		Homework Supervision		Cultural Activities	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	SE	Coefficient	SE
Intercept	0.248***	0.018	-0.228***	0.019	-0.444***	0.017	0.187***	0.018
School Level Background								
Mean SES	0.063	0.039	0.151***	0.043	-0.036	0.047	0.175***	0.040
Percentage of Single Parents	-0.141	0.326	-0.681*	0.298	-0.254	0.277	-0.247	0.284
Percentage of Immigrants	-0.024	0.142	-0.445**	0.147	0.269	0.210	-0.085	0.147
Student Level Background								
Grade	0.017	0.023	0.024	0.022	-0.101***	0.024	-0.050*	0.020
Female Student	0.116**	0.036	0.203***	0.034	0.131***	0.035	0.254***	0.028
SES	0.078***	0.020	0.054**	0.017	0.033	0.022	0.012	0.017
Immigrant Student	-0.128*	0.051	-0.035	0.050	-0.162***	0.047	0.007	0.041
Single Parent	-0.021	0.057	-0.087	0.058	-0.106	0.064	0.025	0.048
Family Resources								
Material Resources/Wealth	0.075**	0.029	-0.065*	0.031	0.043	0.030	0.054**	0.021
Educational Resources	0.121***	0.017	0.145***	0.019	0.065***	0.018	0.049***	0.014
Cultural Resources	0.153***	0.018	0.093***	0.017	0.089***	0.022	0.176***	0.014
Family Networks								
Know Peers	0.207***	0.031	0.232***	0.028	0.130***	0.031	0.062*	0.026
Know Parent in Class	0.018	0.043	0.069	0.036	0.045	0.043	0.001	0.033
Know Parent in School	0.043	0.038	0.037	0.039	0.025	0.045	0.084**	0.032
Parent Norms-Educational Expectation	0.019	0.013	0.022	0.011	-0.014	0.012	0.029**	0.011
Between School Variance	0.013**		0.017***		0.001		0.025***	
Within School Variance	0.823		0.793		0.944		0.576	
Between School Variance Explained	73.14%		76.55%		83.85%		62.76%	
Within School Variance Explained	11.34%		9.31%		3.87 %		8.83%	

Results of analysis indicate that family resources including family wealth, educational resources, and cultural possession have a significant relationship with cultural communication. Of the three family network indices, only parent networking with their children's good friends has a significant association with students' cultural communication with their parents at home, yet the regression coefficient is stronger than the coefficients of family resources. The effect of educational expectation is not significant. The coefficient of SES decreases from .175 to .078 and that of mean SES also decreases considerably from .160 to .063 after entering the indices of family resources and family network. The coefficient of immigrant students also decreases substantially from -.174 to -.128. In other words, the disadvantages of working-class families and immigrant students in their levels of cultural communication can partly be explained by the lack of family resources and family network. With the family resources and network in Table 5, the regression model explains 73.14% of the between school variance and 11.34% of the within school variance of cultural communication.

Effects of family resources and family network on social communication are also important. Consistent with the results of cultural communication, results in Table 5 also suggest that the three types of family resources and parents' network with their children's good friends are significant factors affecting the level of social communication. Educational expectation is not significant. With the entering of the indices of family resources and family network, the coefficients of SES and mean SES also decrease substantially; the negative effect of students from single-parent and immigrant households at the student and school levels also decrease. Moreover, the coefficient of parental networking with their children's peers shows the strongest effect when compared to all the predicting variables. These results suggest that the disadvantage of low SES, single parents, and immigrant status can be partly explained by the deprivation of family resources and lack of family network. With the family resources and network in Table 5, the regression model explains 76.55% of the between school variance and 9.31% of the within school variance for social communication.

The impacts of family resources and family network on homework supervision are also significant, but the effect sizes appear to be smaller. Results suggest that educational resources, cultural possession, and parents' network with their children's good friends have significant associations with parental involvement in homework supervision. Educational expectation of parents is not significant. Similar to the previous results, the coefficients of SES, immigrant students, and single parents reduced substantially in Table 5 when compared to Table 4. These findings indicate that family investment in educational and cultural resources and parent networking with their children's good friends are major

mediating factors explaining some of the effect of family social background on homework supervision. With the family resources and network in Table 5, the regression model explains 83.85% of the between school variance and 3.87% of the within school variance of homework supervision, respectively.

Results show that family resources, network, and educational expectations have significant effects on cultural activities arranged by parents. All three types of family resources and parental network with their children's good friends and their network with other parents in school have significant positive effects on cultural activities. In other words, parents with more home resources and stronger networks with students and other parents are more likely to arrange cultural activities for enriching their children's learning experiences. Parents with higher educational expectation on their children also tend to arrange more cultural activities. The effects of SES and mean-SES decrease substantially after entering the factors of family resources, network, and education expectation. With the family resources and network in Table 5, the regression model explains 62.76% of the between school variance and 8.83% of the within school variance of cultural communication, social communication, homework supervision, and cultural activities, respectively.

In sum, the findings suggest that the effects of SES, family structure, and immigrant status on family involvement at student and school levels are significant, and family resources and family network appear to be essential mediating factors on the association between family structural factors and family involvement. It can be argued that the disadvantage of working-class, single parents, and immigrant students in their extent of family involvement can partly be explained by their deprivation of family resources at home and a lack of useful networks with other students and parents within the school.

Conclusions and Implications

The present study examines four types of family involvement: cultural communication, social communication, homework supervision, and cultural activities. Levels of family involvement in cultural aspects (including cultural communication and activities) are generally higher than social communication and homework supervision for the secondary school students in Hong Kong. It is interesting to find that the level of cultural communication and cultural activities appears to be higher in Hong Kong than the other two Asian countries, Japan and Korea, and three European countries, Sweden, Finland, and the U.K., but similar to that of the U.S. However, the level of social communication and homework supervision of Hong Kong are below the OECD average. In fact, these two indices of Hong Kong are lower than all the other

six countries in the analysis. This finding contradicts the common perception that Asian parents often supervise their children's homework.

Student characteristics including grade and gender have significant association with the extent of family involvement with 15-year-olds in Hong Kong. Hong Kong families tend to provide more time to talk to their children when they are in the upper grade levels in secondary school. Girls tend to have more cultural and social communication with their parents, who also tend to provide more cultural activities and homework supervision for their daughters. This gender discrepancy in family involvement has important implications for parent education. The results suggest that parents need to pay more attention to their boys and that effective communication between boys and their parents may be different from girls. These deprivations of communication with parents of boys might have essential impacts on boy's learning in language. The disadvantage of boys in reading literacy has already been reflected in almost all the participating countries in the first and second cycle of the PISA studies.

Of the three major family factors, SES shows the strongest relationship with family involvement in Hong Kong. Consistent with previous research (Ho, 2003; Shen, et al, 1994), parents from the upper class with higher occupational status and a higher level of education tend to have a higher level of involvement. However, the influences of family structure and ethnicity on family involvement are less obvious. Single parent families and immigrant students are more likely to have less family involvement, but the effect size is relatively small in Asian societies. One of the possible reasons is that Asian families often get support from extended family members – grandparents and uncle and auntie – who usually live close to each other or in the same community.

Family resources and family network are also found to be significant factors affecting the level of family involvement, and they mediated the effect of family social background on family involvement. In other words, the four types of family involvement – cultural communication, social communication, homework supervision, and cultural activity – can be influenced by the investment of resources and networking of parents in the community provided by the educators, parents, and policymakers.

It can be argued that the disadvantage of family social background can be partly explained by the lack of family resources and the weakness of family network. These findings have essential implication for public policy. As an individual parent might not be able to afford purchasing essential educational and cultural resources for their children, public policy should address the issue by providing those resources in the community for those in need. Moreover, family networking is essential, and networking should be extended to include the peers of the teenagers. The results of the present study suggested that it is

not only cooperation between parents, but also connection between parents and their children's peers that provides the necessary chemistry for success. This finding provides significant insight for schools when they organize parent activities – children and their peers should be an integral part of the parent program if the school wants to enhance family involvement.

In sum, findings from the present study support the idea that families from different social backgrounds tend to have different capacities and strategies in investing their time and resources. In other words, the socioeconomic status of parents may affect the extent of their family involvement in their child's education, but involvement is also mediated by the amount of social network that could established, and educational, cultural, and economic capital can be invested. Future studies can explore the relative contributions of different forms of capital and the possible interaction of different types of involvement with different forms of family resources and network and how they affect teenagers' learning outcomes.

In many previous home and school studies, family involvement was seen as an essential process for activating different forms of capital (Coleman, 1990; Ho, 1997, 2003; Ho & Willms, 1996; Lareau, 2003). Family involvement can generate social capital (network), economic capital (material resources), and cultural capital (cultural possession and educational resources) directly for children's learning. As Coleman (1994) and Brown (1998) argued, the parents' human (cultural) capital and physical (economic) capital available to the child may be multiplied if the social capital (involvement and network) between child and parent is sufficiently strong. The creation of various forms of capital for children's education through family involvement and the relative contribution of family resources and family network on students' learning outcomes are crucial avenues worthy to explore in future research.

Endnotes

[1]Japan and Korea were chosen because they share similar Asian culture with Hong Kong. Finland and Sweden were included because they have performed very well in reading in many previous international studies. United Kingdom and the United States were also included since educational reform of family involvement was largely influenced by the Parentocracy reform of these two countries.

[2]Mean SES is an aggregating variable which is aggregated at the school level to provide a proxy for the socioeconomic status of the student body. Aggregation of single parent and immigrant student are also used in the analysis because they are reliable social indicators for assessing the contextual effect of the social composition of the student body on family involvement.

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