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EDUCATIONAL PERFORMANCE OF YOUNG  
IMMIGRANTS IN HONG KONG, MACAO AND  
VANCOUVER

Cheong CHOI

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A Dissertation Submitted to the School of  
Education of the University of Durham,  
United Kingdom

In Partial Fulfilment of the Requirements for the  
Degree of Doctor of Education



11 JAN 2005

August 2004

To My Parents

Mr. CHOI So and Ms. HO Wing Man

# EDUCATIONAL PERFORMANCE OF YOUNG IMMIGRANTS IN HONG KONG, MACAO AND VANCOUVER

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## ACKNOWLEDGMENTS

I would like to acknowledge, first among all, all the participating pupils and the three schools in this study for their contribution in providing valuable data in the two surveys. Without their participation, this study will never become a reality.

I would also like to thank Mr. Titus Siu-pang LI for his reliable and prompt assistance in the whole administration process of data collection. In particular I would like to thank Ms. Monica Lan Heng LOU, Ms Lou Lou LAO and Ms. Ka Man Tang for their continuous and generous support in the whole process in Macao and Hong Kong. Their friendly cooperation will be deeply memorised.

Without the clerical and data entry support by Ms. Pive Ma Lei Chang and Ms. Hou Ian Lei, Joyce, this study will never be the same again. I am sincerely thankful to them for their efficient and reliable work, especially when I was away from the field and worked in other cities.

I am also thankful to Mr. David Chen and the Board members of the Chinese school at Vancouver. Their kind assistance and approval of providing pupils for the surveys helped to make this study a success. To them, I am indeed grateful. I shall remember the time I spent in Vancouver, be it a sunny morning or a snowy afternoon.

My special thanks should also go to Prof. Carol T. Fitz-Gibbon, my thesis supervisor, who has guided me with intellectual insights earnestly through these years while I embark on an exciting journey of knowledge seeking. I am indebted to Carol for my hesitation in the course of exploration. My excuse, however, would be partly attributed to my experience of many life changes, including emigration.

I shall also remember the first time when I was in Durham. I was with other students in a summer school taught by a number of distinguished scholars. These include Prof. Michael Byram, Prof. Peter Tymms, and Prof. David Galloway, Prof. Keith Morrison. Their teaching has illuminated my thoughts and expanded my knowledge to a wider context in education and social sciences. The short time in Durham and the subsequent summer course in Hong Kong are without a doubt one the most memorable experience in my academic career. To the teaching team from Durham I shall send my greatest gratitude.

I certainly would love to send my deepest regard to my wife, Amelia Sau-Man LAU for being not only a life partner but also a companion in my endless course of academic pursue. In particular I would like to acknowledge Amelia for assisting me in the completion and editing of the chapters. Her meticulous and efficient administrative support during the whole course of this study is far beyond any thankful words.

## **SYNOPSIS**

Cheong Choi  
Educational Performance of Young Immigrants  
in Hong Kong, Macao and Vancouver  
(Thesis supervisor: Prof. Carol T. Fitz-Gibbon)

The influx of school-age Chinese immigrant children to Hong Kong, Macao and Vancouver in recent years has caused a concern to local schools and educators. The change of learning environment and how it relates to school performance is a topic useful for explaining school success or failure among the groups of immigrant children. One way to explore the factors affecting school performance is to adopt a system model with variables under a four-domain design. The individual, family, school, and peer effect are major factors that cause school performance variations.

The first aim of this study was to determine if any of the four domains could be related to school performance. The results of simple correlation indicated that there were four variables (future aspiration, school attachment, after-school activity participation, and peer influence) significantly associated with school performance of the three groups of immigrant children. Family variables were all insignificantly associated with school performance.

The second aim of this study was to determine if the variables under the four domains could predict school performance. The results of the multiple regression indicated that there were six variables (gender, future aspiration, intention of stay, school attachment, after-school activity participation, school or other trip participation) that predicated school performance.

The third aim of this study was to determine if there was a significant difference between different groups of immigrant children. The results of the t-test indicated that there was no significant difference between the mean school performance scores of groups with entrance examination and those that did not have entrance examination. Another t-test also revealed that there was no significant difference between the mean school performance scores of groups that entered to preferred class after migration and those that entered to not-preferred class. A one-way ANOVA test of three groups assigned to different grade upon arrival, moreover, found insignificant mean school performance among the groups in lower, just-right or higher grade.

The fourth aim of this study was to examine the difference of school performance in the two surveys of the three cities. The results of t-test indicated no significant difference between the mean school performance scores of the two surveys in the Hong Kong and Vancouver but a significant difference in the Macao sample.

The fifth aim of the study investigated the difference of selected variables among the three cities in the two surveys. Vancouver group achieved the highest median value in school performance scores in the first survey. Macao group outperformed Vancouver and obtained the first place in the second survey. Among the three, Vancouver group again obtained the highest median value in the two surveys of school attachment.

Additional qualitative data from the Macao group also revealed other effects on school performance that quantitative data did not uncover. The effects were grouped into "feeling happy", "feeling unhappy", and "future educational expectation" domains. A culturally-based explanation of school performance of immigrant children was suggested for future evidence seeking activity.

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## **Chapter 1 Introduction**

Human migration is a constant social reality. People move to other region or country for various social, economic and political reasons. The migration involves, in many cases, not only adults but also school-aged children. Children, who migrate either voluntarily or involuntarily with their parents or guardians to a new country, face new educational challenges, albeit other life demands. Placed in a different context of school environment, classroom language, curriculum, or peer groups, the migration can bring about a change of school performance among the immigrant children. Many scholars have attempted to adopt different theoretical perspectives to explain the school success or failures among immigrant children. One of the perspectives looks into the ecological aspects of the immigrant pupils. The ecological approach on school performance of immigrant children has leaped through several stages during its course of development. It first developed from a 'blaming the victim' perspective.

Early researchers on educational performance of immigrant pupils, such as Asian or African groups in the US, UK or Australia, adopted a deficiency theory in attempting to explain the poor performance of the immigrant pupils in society dominated by Anglo-middle class white population. The theory ascribed poor school performance of the immigrant group to, for example, a lack of English language ability or mainstream cultural characteristics. Comparing to the host society, some immigrants were viewed as from regions with inferior social or cultural background. This deficiency theoretical approach tended to 'blame' the immigrant groups for their 'misfit' into the mainstream educational environment. The immigrant children are to be responsible for the poor school performance because they do not have the required

educational characteristics to become successful as their Anglo-middle class-white schoolmates.

The deficiency explanation of school success or failure was echoed by an approach advocating a central theme of deprivation. The school failure of young immigrants, accordingly, resulted in having the children being placed in an inferior familial or environmental background. Poor school performance of the children was therefore due to a fact that they were deprived of educational or cognitive inputs because of their individual characteristics including, for example, the status of being a new immigrant. An example of effect of deprivation on school performance can be found in immigrant pupils being placed in lower grade or prohibited to attend certain class because of their language deficiency problem. A family, which cannot meet the immigrant children's educational needs because of economical reasons, is another illustration on learning deprivation. For instance, an immigrant child from a poor family may not have access to textbooks or computer facility.

Both deficiency and deprivation approach tend to argue on a perspective following the mainstream society yardsticks in explaining school performance of new immigrants. The two approaches attempt to ascertain 'have' or have-not' of certain social, economic or cultural resources that are akin to the characteristics of the mainstream society as an analytical base of school success or failure of immigrant pupils. In essence, immigrant pupils will succeed educationally if they can integrate into the mainstream society or in possession of the society's dominant characteristics. School failures are those who are incompatible to the mainstream society's requirements.

The argument relating to the influence of mainstream society on school performance among immigrant children was later challenged by an approach that gives credit to the resources found in the young immigrant groups. Unlike the deficiency and deprivation approaches which take little notice of the values of the young immigrants, the difference approach places considerable attention on the types of capital brought along by the immigrants to their new learning environment. Previous learning experience of the immigrant children is now viewed as characteristics of the individual, instead of a problem or a deficiency. Under the notion of difference, yardstick from the mainstream society no longer dominates the standard of measure on success or failure in school or society. In other words, the new approach attempts to explain school performance based upon standard drawn from different sources, including the young immigrant group. Success or failure in school is not necessarily a result of deficiency or deprivation. It can also be a result of measure skewed in favour of a particular group, such as the one from the mainstream society.

The three theories of deficiency, deprivation and difference explain the ways immigrant pupils succeed or fail in schools in the host country. They characterize deficiency or difference in a notion of capital. The deficiency or difference, according to researchers, can be conceptualized into three different kinds of capital, namely economic, cultural and social capital. (Coleman, 1988; Chow, 2000, p. 106)

In principle, immigrant pupils succeed educationally in the new environment because they have with them the essential economic, cultural, or social capital after their migration. The three are important elements to help the immigrant children to cope with the demand of the changed learning environment. Economic capital can

also be named financial capital. It refers to the general notion of monetary resources available to the immigrant pupils to carry on with their schooling or studying in the host country. This includes, for example, going to a desired school, buying of learning materials or joining of school activities. A lack of financial resource will certainly jeopardize the learning opportunity of the child, especially when immigrant children are yet to share the equal educational benefits enjoyed by local pupils. Cultural capital is best defined using Bourdieu and associates' terminology. (Bourdieu, 1977 & 1986; Bourdieu and Passerson, 1977; Coleman, 1988; Sullivan, 2001) The concept generally refers to the educational attainment and cognitive characteristics possessed by family members. Moreover, cultural capital can also be divided into two types for further conceptualization: active and passive cultural capital. (Looker, 1994) Active cultural capital refers to dynamic interaction between parties, for example, interaction between parents and the child in the process of learning. Passive one, on the other hand, refers to the provision of static capital, such as books or computers, to the child for their learning. A passive cultural capital thus may not involve any verbal or physical interactions between persons. It is suggested to provide active, such as visiting library with the child, rather than passive cultural capital to enhance learning. For example the visiting of library or museum with the child has proven to enhance school performance. (Fehrmann, Keith & Reimers, 1987; Reynolds, 1992; Comers & Haynes, 1991) In essence, the measure of cultural capital focuses on the effect of family or family members, with a consideration of their educational attitudes behaviours, on the child's school performance. Social capital is defined as a possession of social connections or networks with different social parties, including individuals and organizations. As far as immigrant family or children is concerned, this will involve

the participation in social or school activities, and the connections with social or peer groups.

The discourse on capital characteristics is basically an attempt on individual or family domain. Other feature contributing to a change of school performance in immigrant pupils can, and indeed need to, include other macro factors like the school or peer groups. In other words, the micro and macro arena on study of school performance should consist of individual, family, school or organization, and peer group factors.

Besides individual characteristics or family cultural capitals, life events are also a significant effect on school performance among the immigrant groups. It goes without saying that any life change can have considerable impacts upon an individual, including the immigrant. Among every life event, as an illustration, a move of home or a recent change of family environment because of migration or economic change can bring stress to the individual. An individual under any influence of life change can be affected psychologically or emotionally, and thus perform abnormally in work or school study. Migration can be one of the most influential life events, as the experience constitutes a change of many aspects. A young immigrant can perform poorly at school, for instance, if he/she shows a resistance mentality toward schooling in a new environment as shown in some African American students. A study of the effect of life events is therefore useful in forming the piecemeal of social reality of school performance of immigrant pupils.

As far as school effect is concerned, school attachment is found to be a significant factor in explaining education performance. Pupils who attach to school are more willing to accept the school rules and show higher learning interest. In other words, pupils with strong school attachment are less likely to behave unruly and obtain poor academic results. Although there is still argument or dubious conclusions on attachment and school success, the causal link between the two variables shall also be applicable to immigrant pupils. The study of school performance in immigrant groups shall therefore include the school attachment effect as one of the significant influential factors.

Besides school effect, peer group influence is another important feature in investigating the subject matter of school performance. Peers are significant others to young persons next to family members. Peer groups can affect an individual in becoming a good pupil or an at-risk gangster. Both the social cultural and social learning approach on deviancy study, for example, have illustrated the peer influence on juvenile delinquency. The social control theory by Travis Hirschi in early year suggests that youth with deviant peers tend to be weakly bonded with traditional norms and thus more likely to become poor pupils and subsequently deviants (Hirschi, 1969). Sutherland and Cressey (1978), on the other hand, adopt a social learning perspective and used a differential association theory in an attempt to explain the undesirable effect from deviant peers to youngsters. To Sutherland, individuals who make up with deviant friends copy the deviant behaviours and become unruly. This can bring about poor school performance. As a fact, peer groups can be remarkably important to young immigrants when the immigrants are separated from family members because of migration, or when they are new to the country or school

environment. To discern school performance of young immigrants, it is therefore necessary to include peer group influence, such as their attitude or behaviour, onto the model of investigation.

Considering the myth of school performance of immigrant pupils, it is therefore necessary to investigate not only the ‘capitals’ of the group but also include factors found within the four areas of individual, family, school and peer groups. It is only through the integration of ecological and cultural model that we can strive to achieve a better understanding of the myth and to move policy-making toward a more evidence-based direction. Innovations depend on hunches are dangerous and expensive. Fitz-Gibbon has courageously pointed out the problems resulting from a lack of evidence-based evaluations (Fitz-Gibbon, 2000). This study is also meant to provide supplementary data in the area of performance of immigrant pupils. As Fitz-Gibbon says,

“If indicators are to be beneficial in their impact  
then we need more data not less”. (Fitz-Gibbon,  
2000, p. 35)

Data are useful only if they are properly analysed and structurally and meaningfully presented. Bearing this in mind, this dissertation is structuralized into seven chapters. Besides this first chapter of introduction on immigrant pupils and related theories, chapters two and three are dedicated to topics on school educational performance of immigrant pupils from Mainland China to Hong Kong, Macao and Vancouver. Chapter two depicts educational situations and problems experienced by newly arrived immigrant pupils in the three cities. Chapter three is an attempt to draw up elements for model building in subsequent chapters. Effects from different socio-

cultural areas on educational performance are discussed. Based on the discussion, a theoretical framework of educational performance on immigrant pupils is discerned in the chapter. Chapter four to five are the two main chapters used to portray the methodology of this study. The chapters cover the research design and basic findings and scale construction. Chapter four is a chapter on model building, research questions and hypotheses, as well as the research design consisting of sampling and variables description. Following the research design, chapter five begins to report basic findings in the two phases of surveys. These include an overview of respondents' demographic background and results of measures of the variables in the surveys. The analysis and discussion of the findings are presented in chapter six, with an inclusion of factors affecting the educational performance and comparisons between cities and surveys. Specifically, significant variables found in the correlation and regression analysis, and educational performance among the three cities will be explored. The last chapter-chapter seven-concludes the study and brings out potential topics for future investigation based upon findings in this exploratory study of immigrant Chinese pupils. Scientific investigation gives not only solutions but in many occasions digs out new problems to be studied. This is the strength of research: an error elimination process in human inquiry of social regularities or irregularities. (Babbie, 1989)

## **Chapter 2 Young immigrants from Mainland China in Hong Kong, Macao and Vancouver**

### 2.1 An Overview

Hong Kong and Macao has become two Special Administrative Regions (SAR) since 1997 and 1999 under the Basic Law, a mini constitution of the People Republic of China. The return of sovereignty of the two cities to Mainland China followed the “one-country, two-systems” political model with an aim to end the British and Portuguese colonial rule of the two before the millennium.

The process of reunification of the two cities with Mainland China has stirred up waves of immigration and emigration beyond 1997 and 1999. This includes an unprecedented large influx of Mainland immigrants into Hong Kong and Macao, and the emigration of Hong Kong or Macao residents to foreign countries like Canada, Australia or New Zealand. Richmond is a small city adjacent to the city centre of Vancouver, Canada. The city has been a popular migration place for Chinese immigrants from Hong Kong and Macao since 1997 and 1999. Despite a sharp decline in the number in recent years, Hong Kong was still the top country by birth (28 per cent) of the total immigrant population in Richmond in 2001. Accordingly, a total of 25925 residents in Richmond use Cantonese, a dialect commonly used by people from Hong Kong and Macao, as their mother tongue. (<http://www.city.richmond.bc.ca/services/forms/policy/hotfacts>)

The population of Hong Kong and Macao in 2000 were 6.8 millions and 0.43 million respectively. The two cities, with much heated debates in the early years, have made efforts to limit the daily intake of Mainland Chinese immigrants into the

territory to 150 and 200 respectively. The figures include a substantial number of school-aged decedents of permanent residents of the two SAR.

Without much doubt, the migration of Mainland Chinese into Hong Kong and Macao is a consequence of cross-border marriage. According to an early informal survey (Skeldon, 1994), there were 92,500 Hong Kong people who got married in the mainland and approximately 312,000 of their offspring remained in the Mainland. Despite a controversial issue, these children are in possession of legal right of abode in Hong Kong or Macao where their parents are permanent residents. Inevitably, immigration brings to society diversified and changing social needs. Although the cultural and social diversity issues resulting from migration in the two SAR appear less complex than those in the United States, UK, Canada or Australia, it is still a new challenge to the policy-makers. Besides the debates on the right of abode and legal status of these “new immigrants”, there are other social issues requiring substantial attention. These include, inter alias, social and educational needs of the school-aged children.

Generally speaking, the newly arrived children (NAC) from Mainland China in Hong Kong and Macao come from families with diversified background. They bring along with them, like other immigrant children in the US or UK, diversity in language, culture, religion and even academic preparation. (Garcia, 1999, p.15) It is such a diversity that characterizes the important work of schools and schoolteachers. However, whether teachers are ready or well prepared to take up such important and needed role in educating these newcomers is still disputable.

Immigrant children have long been identified as a high “at-risk” group in schools. A US study shows the dilemma. According to the U.S. Bureau of the Census Report “Poverty in the United States: 1995”, 20 million U. S, children under the age of eighteen lived in poverty. Among them, 45 per cent were non-white and Hispanic. The number of children in poverty will be doubled in 2026 and over half of them would be non-white and Hispanic unless poverty is checked. (Cited by National Centre for Children in Poverty, 1995) Evidence has also shown that immigrant children in the U.S. are placed in economic and social situations that increase their social, economic and educational vulnerability as a result of their non-mainstream background. Such educational vulnerability is reflected in dropout rate, academic achievement, and education funding policy. (Garcia, 1995, p.23-30) It is indeed necessary for educators in Hong Kong, Macao or even Vancouver to place considerable support to immigrant children in their cities.

## 2.2 Young immigrants & Their Educational Provisions in Hong Kong and Macao

In Hong Kong, as many as 10147 primary and secondary pupils were young immigrants in 2001. (Table 2.1) The figure accounts for about 1.1 per cent of the total primary and secondary pupil population of the year. (There were 949530 pupils in the academic year of 2001/2, with 493075 primary and 456455 secondary pupils respectively) Before 1993, the daily quota for one-way permit holders to Hong Kong from the mainland was 75. It was increased to 105 in late 1993 and further increased to 150 after 1995. Amongst this increase, half are allocated to eligible minor aged under 21. And within this quota, a large proportion of young immigrants fell into the age group within 6 to 11 (roughly 65 per cent) and 12 to 14 (roughly 22 per cent)

(Table 2.2). Approximately 85 per cent of the young immigrants in Hong Kong need to enrol in primary schools. Such number of young immigrants has caused a remarkable increase in the demands for school places since 1993.

Table 2.1

Newly Admitted Students from the Mainland in Day Schools in Hong Kong, from 1987 to 2001

Year#	Number of newly admitted students in primary schools	Number of newly admitted students in secondary schools	Total	% changed in comparing to previous year
1987	4869	509	5378	N.A.
1988	4936	591	5527	+2.8%
1989	5177	679	5856	+5.9%
1990	4985	773	5758	-1.7%
1991	5021	942	5963	+3.6%
1992	4701	837	5538	-7.1%
1993	5437	904	6341	+14.5%
1994	6485	1031	7516	+18.5%
1995	8801	1186	9987	+32.9%
1996	12966	1962	14928	+49.5%
1997	12112	2484	14596	-2.3%
1998	17799	3141	20940	+43.5%
1999	17518	2614	20132	-0.04%
2000	11630	3030	14660	-27.2%
2001	8775 (493075)	1372 (456545)	10147	-30.8%

Source: Hong Kong Monthly Digest of Statistics, August 1998

[www.info.gov.hk/english/resumes/key-statistics/index.htm](http://www.info.gov.hk/english/resumes/key-statistics/index.htm)

Surveys on children from the Mainland newly admitted to school, October 2000 –September 2001.

# Figures are from October of the preceding year to September of the year.

() figure denotes the total number of students in the level of the year.

Table 2.2 depicts the numbers of young immigrants moved into Hong Kong from China in 1987, 1992, 1997 and 2001, a large percentage of the young

immigrants fall in the 6 to 11 school-age groups. In 2001 alone, the group constituted about 68 per cent of the total number of immigrant children in day schools in Hong Kong.

Table 2.2

Age Distribution of Newly Arrived Children from the Mainland in Day Schools in Hong Kong, in 1987, 1992, 1997 and 2001

Age Group	1987 (%)	1992 (%)	1997(%)	2001 (%)
5	6.7	5.8	3.6	4.0
6-11	64.9	62.2	64.7	67.9
12-14	23.5	23.4	20.7	20.1
15-16	4.2	7.0	8.9	5.8
17 and over	0.7	1.7	2.1	2.3
Total	100	100*	100	100

Source: Hong Kong Monthly Digest of Statistics, August 1998

Surveys on children from the Mainland newly admitted to school, October 2000 –September 2001.

\* Percentages might not add up to total due to rounding.

Hong Kong and Macao are a tale of two cities: both share very similar history of colonization and ethnic background. Although the population and migration are relatively small in scale when compared to that of Hong Kong, Macao is also in urgent need to address the young immigrant issue beyond 1999. As shown in Table 2.3, a dramatic increase of young immigrant students aged from 10-19 was witnessed in the academic year of 1998/99. 2524 pupils or about five per cent of the age group of 10-19 in Macao were young immigrants in the year. Comparing to that of 1997/98 academic year, there was less than one per cent of the 47093 students who was young immigrants aged from 10-19.

The total number of young immigrants coming to Macao has been on the increase since 1996. There were 3491 young immigrants aged below 19 in Macao in 1999. The figure represented an increase of 4.7 times of the numbers in 1996. The young immigrants coming to Macao in 1998/1999 academic year was about four per cent of the total student population of the year. The number of school-aged young immigrants coming to Macao, like the situation in Hong Kong, is expected to increase in the foreseeable years.

Table 2.3

Number and Age Distribution of Newly Arrived Children from the Mainland in Macao, from 1996-1999.

Age Group	1996/97	1997/98	1998/99
0 - 9	492 (46446)	462 (45286)	967 (40126)
10 -19	240 (43799)	442 (47093)	2524 (50265)
Total	732 (90245)	904 (92379)	3491 (90391)

Source: Homepage of The Department of Statistics and Census Services, Macao. [www.dsec.gov.mo](http://www.dsec.gov.mo), and The Department of Education and Youth Services, Macao. [www.dsej.gov.mo](http://www.dsej.gov.mo)

( ) denotes the total number of students in the age group.

Both the government of Hong Kong and that of Macao have taken measures to tackle the education problems of young immigrant in Hong Kong and Macao. In Hong Kong, the Education Department has provided various support programmes to the young immigrants since 1995. Upon their arrival, all young immigrants from Mainland China receive at the border checkpoint a leaflet on the education system of Hong Kong and the services provided by the Education Department. A Central Placement Unit has also set up to help handling the more difficult cases and cases

which require cross-district placement. Young immigrants coming to Macao, on the other hand, can approach the Education Office of the Bureau of Education and Youth Services in case they could not find a school place or in need of further services.

Besides the school placement assistance, the Hong Kong Education Department has also conducted four different programmes to help young immigrants in academic and social adjustment. In April 1995, a 60-hour Induction Programme (IP) for young immigrants aged 6 years to 15 years was introduced and run by non-government organisations (NGOs) with subsidy from the Education Department. This programme originally aimed to help young immigrants in social adaptation and adaptation to the local education system in the first two to three months while they were waiting for a school place. Although the period of school placement has greatly shortened since 1997, the programme retains its purpose as a means to assist adaptation of young immigrants. The programme content includes study skills, knowledge about Hong Kong and learning about traditional Chinese characters and Cantonese. The class size for this programme was initially between 15 to 20 children but has been relaxed to 10 to 15 children for more effective teaching and learning.

It is a fact that the English standard of young immigrants is lower than that of their local counterparts. As such, another 60 hours of English Extension Programme (EEP) was introduced in October 1995 to help the young immigrants with their learning of English Language. This programme was also run by NGOs with the same amount of subsidy as the IP. A handbook with teaching contents and strategies, prepared by the Curriculum Development Institute of the Education Department, is used as a framework.

With young immigrants getting more quickly “settled” at school, a school-based approach was identified as a more effective way of helping them adapt to local life. Accordingly, a School-Based Support Scheme (SBSS) was introduced in September 1997 to schools with an aim of encouraging schools to design support programmes for young immigrants. A block grant is given to schools upon application at the rate of HK\$2,750 at the primary level and HK\$4,080 at the secondary level for each newly arrived child. Schools can use this money flexibly to assist students through the purchase of teaching aids or organisation of supplementary lessons or extra-curricular activities.

The Hong Kong Education Department has also launched a Short-term Full-time Preparatory Course (SFPC) beginning 1997 after a pilot trial in five primary and two secondary schools in the 1997/98 academic year. One additional teacher is recruited for the school to conduct three consecutive classes in one academic year. The duration of the classes lasts for three months. The number of students served in 1997/98 was around 400 and 21 classes were operated. In 1998/99, the number of participating schools increased to 28 primary and 3 secondary schools. About 1600 young immigrants were served and 93 classes were operated.

To make the support programmes more effective and coping better with the educational and social needs of the young immigrants in Hong Kong, the Education Department re-designed the mode of support in late 1999. The SFPC was re-organised and a new “Setting-off” programme is initiated with effect from March 2000. The programme is to provide a six-month full-time integrated academic and non-academic training to young immigrants prior to their joining the formal school class. The

programme commences in March and September and is school-based with a class size of about 20 pupils.

Services provided to young immigrants in Macao are similar to those in Hong Kong. The Bureau of Education and Youth Services has organized a plan with schools on “Helping young immigrants to Learn” since 1997. The plan consists of series of talks and workshops aimed at helping the young immigrants to cope with their new life in Macao since 1997. There are four kinds of courses in the plan. They include “Macao cultural talks and tour”; “Talks in psychological counselling services”; “Knowing Cantonese and complicated Chinese characters class”; and “Introduction to English class”. All courses are held in weekends and after school hours to facilitate participation.

The “Macao cultural talks and tour” is meant to enable the young immigrants to know more about Macao and her culture. There are two trips in the course to the country parks, monuments and temples in Macao. Two talks on “psychological and counselling services for young immigrants” are also conducted to help participants gain the learning skills needed in Macao schools. Both classes on “Knowing Cantonese and complicated Chinese characters” and “Introduction to English”, on the other hand, are to help young immigrants to be as competent as the locals in using the two languages. The two classes last for three months and are run for two hours and three hours per week.

Like the practice in Hong Kong, young immigrants in Macao join the courses in voluntary basis. School participated in the plan will receive subsidy from the

Bureau accordingly. Data obtained from the Bureau showed that as many as 880 young immigrants have registered and 38 schools have participated in the four courses since their commencement in 1997.

Besides school run courses, some non-government organisations or voluntary organisations receive grants from the government to conduct adaptation programmes for the young immigrants in Macao. One of the organisations, the Macao United Kai-fong (community) Society, provides integrated services to new immigrants to Macao. These services are sponsored by the Department of Social Services and include “language classes” and “tuition classes” for young immigrants. Apart from classes specifically organised for young immigrants, other tuition classes run by non-government organizations also provide timely services to young immigrants in need. The Macao branch of the World Vision, for example, conducts a programme for both locals and young immigrants to befriend and learn from one another. All in all, the support programmes in Macao are less structuralized and systemised than those held in Hong Kong.

### 2.3 Young immigrants & Their Educational Provisions in Vancouver

Vancouver of Canada has long been one of the most popular migration cities to Chinese from the Mainland China, Hong Kong and Taiwan. According to the 2001 census in Canada, there were about one million ethnic Chinese immigrants in Canada. The figure accounted for around three per cent of the 30 millions of population in Canada. The western-most province of the country, British Columbia had a total population of about 3.9 millions in the 2001 census. The metropolitan city of Vancouver, on the other hand, has a population of about two millions in 2001. The

figure was an increase of 8.5 per cent as compared to the population of around 1.8 millions in 1996. Among the two millions of people in Vancouver in 2001, about 340,000 of them were Chinese. The city of Richmond is one of the cities in the Greater Vancouver metropolitan. It has a population of about 164071 and ethnic Chinese alone accounted for over 34 per cent of the population. It reached 57250 in the 2001 census. (Statistics Canada, various sources, census 2001; A profile of the Canadian population: where we live, 2003)

In Richmond, 31.6 per cent of students were categorized as English as Second Language (ESL) students in the 2000/2001 academic year. (British Columbia Ministry of Education, 2002, p. 26) Among them included Chinese students. On average, students whose mother tongue is Chinese reach about 35 per cent of the total student population in Richmond. In the 1996/97 academic year, there were 24107 primary and secondary students in the city. The number came to 23961 in 2000/2001. (British Columbia Ministry of Education, 2002, p. 23) Table 2.4 shows the grade distribution of Chinese young immigrants in Richmond from 1997 to 2000.

Table 2.4

Number and Age Distribution of Newly Arrived Children from China in Vancouver, Canada, from 1997-2000.

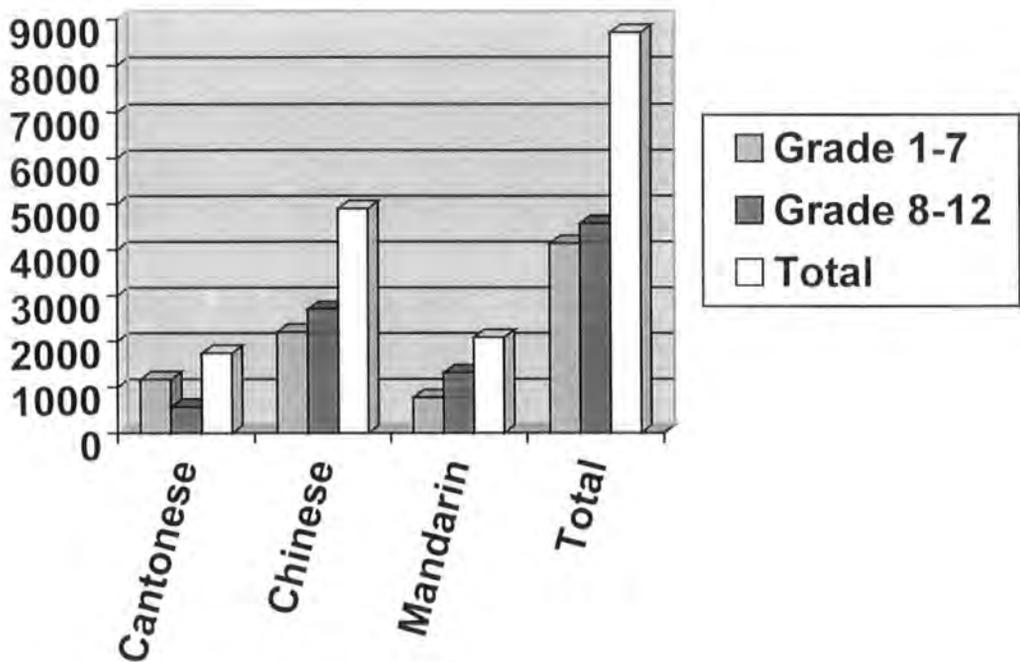
Number of Chinese-speaking pupils from grade 1 to 12 in Richmond, Vancouver, Canada

Language spoken at home	Grade 1 to 7	Grade 8 to 12	Total
Cantonese	1167	568	1735
Chinese	2199	2694	4893
Mandarin	770	1312	2082
Total	4136	4574	8710

Source: British Columbia Ministry of Education, 2002.

Figure 2.1

Grade distribution by Chinese language types of young immigrant pupils in Richmond, Vancouver, Canada



New arrivals in Vancouver whose native language is not English are classified as English as Second Language (ESL) pupils. They will go through a series of placement assessments to identify their current level of English proficiency and needs

for ESL service. The initial assessment includes topics in listening and speaking, reading and writing. The British Columbia Ministry of Education provides some sample assessment resources to schools, but encourages individual school districts like the Richmond school district to use other appropriate test instruments for pupils whose age and developmental maturity correspond to that of English-speaking peers at a particular grade level (Entry into the school system, BC Education-ESL Specialists, 2003). A placement will follow the assessment. In British Columbia, the placement will result in a number of choices offered to the immigrant pupils in their school district. Different school district may adopt different model of language service.

Taking into account the increasing need of a wide range of service to accommodate ESL pupils with diversified background, school district like Richmond offers a variety of service delivery models. The models include full day self-contained classes, half-day self-contained classes, school-based teachers pullout classes, itinerant teachers pullout classes, elementary in-class ESL support, and secondary in-class ESL support (Model of service delivery, BC Education-ESL specialists. 2003). Table 2.5 provides a brief description of the models.

Table 2.5

Model of service delivery to ESL pupils in British Columbia

Model	Description
Full day self-contained classes	<ul style="list-style-type: none"> <li>* Classes consist of entirely of ESL pupils,</li> <li>* ESL teachers teach them for all or most of the day,</li> <li>* Small class to cope with the heterogeneity of pupils' background.</li> </ul>
Half-day self-contained classes	<ul style="list-style-type: none"> <li>* Pupils spend the morning or the afternoon in an ESL class and the rest in the regular class,</li> <li>* Pupils may come from other school to attend the ESL class.</li> </ul>
School-based teachers pull-out classes	<ul style="list-style-type: none"> <li>* Individuals or groups are withdrawn from their regular classes to receive ESL support (elementary),</li> <li>* Individuals are given block of ESL instead of certain subject courses (secondary),</li> <li>* ESL teachers are designated space, supplies, and materials in one school.</li> </ul>
Itinerant teachers pull-out classes	<ul style="list-style-type: none"> <li>* Pupils are withdrawn from their regular classes singly or in groups,</li> <li>* Support time varies to provide for individual needs,</li> <li>* ESL teachers travel among schools carrying materials with them.</li> </ul>
Elementary in-class ESL support	<ul style="list-style-type: none"> <li>* Pupils receive ESL help in their regular classrooms,</li> <li>* Collaboration is essential for classroom and ESL teachers to plan service for pupils,</li> <li>* Level of teacher collaboration progresses through planning for, to planning with, the classroom teacher. Ultimately, the classroom teacher plans pupil service independent of the ESL teacher.</li> </ul>
Secondary in-class ESL support	<ul style="list-style-type: none"> <li>* Pupils receive ESL help in their regular classrooms,</li> <li>* Collaboration is essential for subject-area and ESL teachers to plan service for pupils,</li> <li>* Level of teacher collaboration progresses through planning for, to planning with, the subject-area teacher. Ultimately, the subject-area teacher plans pupil service independent of the ESL teacher.</li> </ul>

Source: BC-Education, Model of Delivery, 2003, p. 2-5

## 2.4 Analysing Educational Problems of Young immigrants

The large influx of young immigrants to Hong Kong and Macao in the past ten years has captured the attention of myriad social service organizations in both cities. A flourish of studies has been undertaken by organizations with an aim of investigating the adaptation needs of these young people. (Hong Kong Federation of Youths Groups [HKFYG], 1995; Chan, Ip & Yuen, 1996; Leung and Chiu, 1996; Education Department, 1997; HKFYG, 1997; International Social Service-Hong Kong Branch [ISS-HK], 1997; Chan and Ma, 1999; Chan, 1999; Li, 2000) Accordingly, young immigrants from the Mainland have numerous problems in schooling and family life after they move into Hong Kong or Macao. In essence, young immigrants face problems such as English language deficiency, difficulty in using traditional Chinese characters, placement in lower grade upon arrival, at-risk family background, and poor parenting. The first two of the problems are related to language use.

### **English language deficiency**

Young immigrants are generally criticized to have low standard of English and great difficulty in learning the language. This is particularly evident for pupils enrolled in the higher school-grades (Leung and Chiu, 1996; Chan et. al., 1996, Education Department, 1997; Li, 2000). In a Hong Kong Education Department's annual survey on "Children from the Mainland newly admitted to schools from October 1995 to September 1996", for example, 50 per cent of young immigrant pupils at primary schools and 53 per cent of the pupils at secondary level were perceived by their teachers to have level of attainment in English below present grade. A study on life adaptation by Leung and Chiu (1996) explained the low English

standard among young immigrants in Hong Kong. The researchers attributed the cause to time factor. They found that over 75 per cent of the sampled young immigrants in the study started learning English in primary four in the Mainland. Moreover, about 30 per cent of the sample began their learning of the English language only after they entered secondary education. Comparatively, schools in Hong Kong and Macao begin teaching English at a much earlier stage. The two regions have English teaching at kindergarten or even pre-nursery schools level. Consequently, the lagging behind of English proficiency has caused difficulty to the young immigrants in school learning. (Chan et. al, 1996; ISS-HK, 1997) Similar results were identified in Macao studies. The English language inefficiency was also cited as one of the four major educational and social adaptation problems encountered by young immigrants in Macao. (Chong, et. al. cited in Li, 2000) Such English language problem found in young immigrants is a significant cause to lower school grade enrolment upon their arrival in Hong Kong and Macao. Besides English, young immigrant also have problem with their spoken language in the regions of Hong Kong and Macao. The problem becomes even more severe when English is used at schools but different Chinese dialects are spoken among schoolmates or family members.

### **Having difficulty in speaking fluent Cantonese and reading or writing complicated (traditional) Chinese characters in Hong Kong and Macao schools**

Both Hong Kong and Macao schools use Cantonese and complicated Chinese characters in teaching, while their Mainland counterparts use Mandarin and simplified Chinese characters. Such differences posed considerable learning difficulty to the young immigrants. A Hong Kong study showed that poor Cantonese substantially hampered and agonized the young immigrants, as they could not normalize their

social life such as making new friends, shopping or visiting new places in Hong Kong. (HKFYG, 1995) Another Hong Kong study by Chan and his associates (1996) also pointed to a similar fact that as high as 30 per cent and 38 per cent of the 1033 sampled young immigrant students found Cantonese and complicated Chinese characters difficult to learn. In another study on problems encountered by young immigrants in Macao, 29 per cent of the school heads interviewed held that young immigrant pupils in the school could not speak Cantonese. (Li, 2000, p.7) It is evident that spoken and written Chinese can also be a problem besides English to the young immigrants in their new learning environment in Hong Kong or Macao schools.

Language deficiency causes considerable learning difficulty to immigrant pupils. Grade assigned to the immigrant pupils upon arrival, on the other hand, affects the pupils psychologically. Pupils who are assigned to lower school grade may develop a sense of rejection or low learning motivation.

### **Placed to lower school grade upon arrival**

It is common to see young immigrants being enrolled one or two grades lower than their local schoolmates in Hong Kong or Macao schools. In an annual survey by the Hong Kong Education Department (1997), about 70 per cent of newly arrived primary school children and 91 per cent of newly arrived secondary school children were over-aged for their grade. The percentage was much higher than all over-aged pupils from the whole primary school population (8 per cent) and secondary school population (20 per cent) in Hong Kong in the year. The placement to lower grade is drastic. In the study of 1033 newly arrived students in the Sham Shui Po District, Hong Kong, Chan and his group (1996) found that over 40 per cent of young

immigrants had to lower one grade, 28 per cent lower two grades and 12 per cent to lower even 3 grades in their schools.

The reasons behind the lower school grade placement were manifold. A qualitative study by the HKFYG (1995) revealed that young immigrants normally came in very short notice and the waiting time for their application for approval was often haphazard. Thus, they may not be able to plan and prepare their education in Hong Kong, or in Macao. This could cause them to enrol in lower grades. Secondly, the weaker English proficiency among the new arrivals compared to local students also forces schools in Hong Kong or Macao to put the young immigrants into lower grades. Thirdly, schools may not have vacancy in the grades the young immigrants wish to enrol. This is especially the situation in Macao or in Hong Kong when school place is in shortage in some school districts. Fourthly, some parents may want their young immigrants to study in a lower grade so as to catch up with the local standard. Consequently, children of 12 and 13 may request a place in primary five in the school. Both voluntary and involuntary downgrading of school years, needless to say, can be an unpleasant experience to the young immigrants psychologically or educationally. Psychologically the young immigrant may feel uncomfortable when compared with his/her younger classmates in school activities. Educationally, the young immigrants may be bored in some classes because they have already learned the subjects in their Mainland schools. Such adversely psychological and educational effects can affect the overall educational performance of the young immigrants.

### **At risk family background**

A substantial number of young immigrants in Hong Kong and Macao come from at risk families. Following a research undertaken by the International Social Service-Hong Kong Branch (ISS-HK) (1997) which investigated the difficulties of 999 new immigrants' households in Hong Kong, about one quarter of the household breadwinners were unemployed or social benefits recipients. The unemployment figure far exceeded the overall unemployment rate of the population (about 3 per cent) at the time of the survey. The median salary of the working male new immigrants was only HK\$7,000<sup>1</sup> and female \$5,000, which was also lower than the then median of the whole population in Hong Kong, which was HK\$175000 monthly. The median earning of the new immigrants were as much as 50 per cent lower than the general population in 1996. (Hong Kong Federation of Youth Groups, 1999, p. 11)

Similarly, the study by Leong (2000) also indicated that young immigrants in Macao suffered from family problems. The young immigrants in Macao were "from poor families that parents could not give the child full support", and they felt "helpless when experiencing difficulty or discrimination". (Leong cited in Li, 2000, p.4) In a survey on school heads by Li, two in five school heads interviewed reported that young immigrants "had insufficient parental care" and "they came from problem family". (Li, 2000, p.7) It is commonly believed that not all young immigrant families are intact structurally in the new homeland as a result of immigration control over the border in Hong Kong or Macao. Or in the case of Vancouver, family structure is broken because of one of the parents, mostly the father, works in the homeland. The change in family structure manifests in a way that significant numbers of pseudo-

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<sup>1</sup> HK\$7.8 is about US\$1.0

single parent families with either father or mother still in China are found among young immigrants. Such pseudo-single parent family factor has caused children in primary or secondary schools unattended after school.

### **Poor parenting**

The parents of young immigrants are said to have difficulties in disciplining and guiding the schooling of their children. The ISS-HK study (1997) as well as Hung's study (1996) indicated over half (55 per cent) of the respondents felt that their children needed tuition. HKFYG's (1995) report showed that most parents only advised their children not to turn deviant and they could not give further help in the latter's psychological adaptation in the new environment. The report concluded that while parents faced serious employment, housing and financial problems in adaptation; children faced with different set of problems and they could seldom find consolations from their parents. A similar study in Macao revealed, "Parents did not understand the learning problems of the young immigrants. They simply compelled their children to gain good academic performance. Once the children failed, they were heavily scolded or punished". (Chong, et. al. cited in Li, 2000) Poor parenting has given a negative feeling to the young immigrants at home and in school. The lack of parental support also jeopardizes the needed adaptation in the young immigrants, and causes them more vulnerable to failure in school and in the new society.

### 2.5 Concluding Remarks

With an anticipation of incessant large influx of school-aged immigrants into Hong Kong, Macao and Vancouver in coming years, educational needs and especially the school performance of the groups require special attention from schools and

teachers alike. Cultural differences among the young immigrant groups and the local pupils, together with other factors such as individual, school or peers, can all have substantial influence on learning and school life of the groups. Taking this into consideration, all three cities provide educational supports to the young immigrants.

The support programmes offered by different government departments in Hong Kong and Macao, for example, adopt an unbalanced theme by concentrating on culture of the host society. This could cause prejudice and discrimination and is undesirable to the future development of a diversified society. The present monocultural literacy or cultural illiteracy could shape the students in a way that is irresponsive to the economic, scientific, environmental, and cultural realities of future's world. As Cummins and Sayers stated in their "Brave New School" declaration "(that) monocultural curricula in schools and monocultural policies have reached a point of diminishing returns, even for the "mainstream" groups whose cultures are represented". (Cummins & Sayers, 1995, p.10) It is only after the realisation of a multicultural education model in society than other changes, like teacher education and curriculum, can be reorganized to cope with the need of a diversified population. To affirm diversity and to become a member in the "global village", Hong Kong and Macao have to think about changing the existing adaptation model for the young immigrants. It is suggested that a multicultural perspective should be the major framework behind all theoretical considerations. As to Vancouver, the present models of support will also need modification to provide a genuine multicultural atmosphere in the school campus.

## **Chapter 3 School Educational Performance of Young Immigrants**

### **3.1 Deliberating Effects on Educational Performance of Young Immigrants**

Life is a series of problem-solving activities. (Fitz-Gibbon, 1996, p. 47) This is evidently true for most immigrant children and their family when they painstakingly begin their re-adaptation process, before and after the immigration, in a new society. One major concern to immigrant children is about their educational needs and adaptation. The two can have influences on their educational outcomes or performance. In addition to problems in school subjects, immigrant children face extra difficulties in schooling not generally encountered by local pupils in the same school. Immigrant children may have different educational performance as a result of their immigrant background. To the immigrant children, they could experience a lengthy problem-solving process until they are “fully” integrated or adapted to the new society.

Karl Popper, the renowned scientists’ philosopher, regards living as the first and foremost a process of problem solving. The difference in educational performance of young immigrants is but one of the many scientific enquiries that requires solutions. Nevertheless, when problems don’t have solutions but outcomes, issues such as educational performance of immigrant children becomes both a problem to look into and an outcome that warrants investigation. (Magee, 1976, pp.74-75 cited in Fitz-Gibbon, 1996, p. 47) A better understanding of factors or areas contributing to a successful or failing educational performance thus help to provide possible answers to address the agony and difficulties facing young immigrants at school. Finding out what to be avoided thus becomes a trick. By investigating and collecting information on the effects on educational outcomes is one but a necessary scientific way to achieve such an important aim of deliberation.

There are different kinds of explanatory framework on educational outcomes; they range from factor listing approach to dichotomy approach, factorial approach, and system approach. (Suen, 1999, 58-66)

There are studies that employ a multi-facet framework to analyse the causality of successful or failed school educational performance in immigrant pupils. Because of the complexity of the problem, the success or failure in school is caused by multi-dimensional factors. Some studies use a simple single factor listing approach in addressing the issue. Studies based on this approach stipulate that whether a student is good or bad can be attributed to his/her cognitive ability, emotional factor, personality factor, will power, and/or personal value. This factor listing approach disregards the inter-relationship of the factors but simply outline the significant contributions of the independent factors to the problem under study. Such approach fails to address the complexity of the question.

Other studies dichotomise the causal effects when investigating educational outcomes. The pair can be the psychological and physiological effect, intellectual and non-intellectual effect, within school and outside school effect, intrinsic and extrinsic effect, or effects on psychological and sociological domain. The pioneer study by James Coleman on educational equality suggested the significant contribution of non-school factors on student's academic performance was but one of the many examples of such dichotomised approach. In revisiting the International Evaluation Agency data, Heyneman and Loxley (1982) also identified the important contribution of non-school factors in pupils' school or educational outcomes. They further stressed the family social capital as one of the main effects in affecting the educational outcome. This dichotomised approach can provide a simple and clear sketch of the factors affecting the school educational performance. The approach, however, fails to address the different levels of effects in each of the two dichotomies. More, it does not facilitate a path analysis of the different effects.

In an attempt to remedy the deficiency of the single and dichotomy approach, subsequent studies adopted a factorial method in addressing the issue. Multi-factorial method focuses on studying the school educational performance in more than two factors but unlimited itself in merely listing different factors. The approach strengthened the theoretical elements to explain different outcomes of school educational performance. In a study on academic difficulties of junior secondary pupils in China, for example, main causes of the problems were classified as system

problem in four domains, namely: knowledge domain, non-intellectual domain, intellectual domain, and ability domain. (Suen, 1999, p. 59-61)

System problem in knowledge domain, for instance, includes pupils who do not understand classroom teaching, are passive in class discussions; fail in submitting homework or in examination. Because of this, the knowledge system of the pupils fails him or her and handicapped the pupils from satisfactory school educational performance. The poor knowledge system is related to other factors. These can be the poor teaching methodology, overload of schoolwork or poor fundamental training. The system problem with non-intellectual domain, on the other hand, is represented by a lack of self-confidence, and will power or determination, poor learning motivation, poor attachment with school, teachers and family, or affiliation with “unpromising” peers. System problem in ability domain refers to the disparity between knowledge and performance. This can be resulted by teachers’ labelling effect to poor pupils and consequently providing limited opportunity to participate in class activities. This unprofessional practice deprives the pupils of their opportunity to develop independent and active participation mentality. Consequently, academically at-risk pupils perform poorly at the end of the school year.

Another similar study using the factorial design to investigate educational outcomes in junior secondary pupils was found in a Shanghai project. (Suen, 1999) The study identified both internal (e.g. cognition, emotion, and level of knowledge) and external factors (e.g. school, family and community) on outcome variations. Under the two factors, the Shanghai team clustered the sample of pupils under study into different types for subsequent analysis. Accordingly, pupils were grouped as momentary difficult group, ability deficient group, dynamic difficult group and holistic difficult group. Although the factorial approach has made use of multi-factors in studying educational outcomes, it lacks a study of inter-relations and the overall effects among the factors.

The fourth kind of framework of study is a system approach of enquiry. A system approach is a comprehensive method containing characteristics of the above three kinds of investigations. Besides, the approach focuses more on the multiple

effects of the contextual factors and their interrelatedness. This approach puts all factors into a system for framework of analysis. Investigations of educational outcomes using system approach can be found in various examples. Some, as an illustration, group factors under five clusters or factors and study their effect. The clusters or factors can be of familial-social or -cultural level including parents' educational level, parents' occupation, number of siblings, etc, school type like public or private school, teaching quality like teachers' qualification, teacher-student ratio, number of pupils in a class, student's learning ethos such as learning motivation, self expectation and peer associations.

Like the dichotomy approach, some researchers in the system approach relate educational outcomes under the effects of internal and external forces. Internally, a student may be handicapped by his/her undesirable physical or psychological development. While there are internal effects, educational defects such as teaching and school effect are classified as external force. The two forces are interrelated and affect the pupils' educational outcomes. Some researchers, on the other hand, suggest three levels of investigation. The first level relates to teaching and learning in which the teaching approach, learning motivation, habits and methods are studied. The second level under scrutiny is the personal characteristics of the pupils. This includes psychological elements like cognitive, emotional and personality development. The final level includes the school, family and peer influences. The three could have sequential effects. The first level, for example, could be more influential than the second and third. This kind of investigation helps to provide a clear outline of different effects to school educational performance or educational outcomes. Its limitations could be on over-emphasizing of a particular level or on psychological reasons.

Another studies on educational outcomes differentiate various factors on a spatial scale. The scale measures different direct and indirect effects. The most direct effect or the core level will include variables like pupils' cognitive ability, learning motivation and behaviour, classroom management, classroom atmosphere, teacher-pupil interactions, teaching quality and/or parents' participation and support. While the core level consists of variables affiliated to the individual and the classroom, the

intermediate level relates to school aspects. Variables in this intermediate level, among others, are the school quality, school policy, social influence, and/or peer influence outside the school. The outer-most level in these studies includes the macro-variables like school district student population, national and/or provincial policy, and/or local school authorities policy. This system approach is characterised by its focus on measures of different level, direct and indirect effect, and proximal and distant effect upon educational outcomes.

The input-output model, on the other hand, forms another kind of system approach in studying school and educational performance. Such approach concerns with how schooling 'inputs' bring about certain schooling 'outputs'. There is a theory underlying a notion that educational outcomes of pupils are largely determined by family influences and pupils' experiences at school, and that the latter is shaped by the organizational structural and practices of the classroom, school, and school district. Exploration on the relationship between schooling inputs, such as pupil, teacher, and school resources, and the school outputs, such as their overall educational attainment or examination results, are conducted regularly. Willms (1996) stated that early day's "Input and Output" studies focused on investigations of the effects of various teacher and school on pupil outcomes by controlling statistically for pupils' entry-level ability and for factors associated with their family background. The 'Input and Output' model was however being criticised because of its "black box" nature that offered little to educators in improving school practice. (Willms, 1996, p.28-31) To tackle the inadequacy problem, researchers in the eighties emerged to use school process rather than solely emphasizing on the inputs hypothesis. Consequently, a new model was postulated. The new 'Input-Process-Output' model recognized the multilevel structural of the schooling system, and separated school processes from factors that lie outside the control of teachers and administrators.

After considering similar models in the literature, Willms (1996) once suggested a three-tier model to study of effect on educational outcomes. In the 'Input-Process-Output' model Willms engaged another four levels under each of the Input-Process-Output domain. The four levels were 'Pupil level', 'Classroom Level', 'School Level', and 'District and Community Level'. Besides levels, Willms further

named factors behind the Input stream into two separate categories. They were factors describing the ecology and milieu of the school. To Willms, the ecology factor referred to the physical and material aspects of the environment. This included, for example, class size and school size. The milieu factor was about characteristics of school staff. It could be teacher characteristics or turnover. (Willms, 1996, p.33)

Inputs in the model include pupil-input level, school level, district level and community level. The pupil-input level included “sex, race & ethnicity, prior achievement, cognitive ability, parent’s occupation, parent’s education, number of siblings, and family composition”. There were five variables under the classroom-input level. They were class size, intake composition, quality of curriculum, instructional resources, teacher characteristics, and appearance of classroom. The school level input included variables of school size, intake composition, per-pupil expenditure, teacher turnover, age & appearance of building, and access to community resources. The last level of the input stream, the district and community level in the model had four measures. They were the district size, community SES, per-pupil expenditure and opportunity for employment.

The Process stream also had four levels. The pupil-process level consisted of quality of school life, pupils’ sense of efficacy, and pupils’ attitude towards school. The classroom-process level measured working condition, teacher sense of efficacy, teacher commitment and morale, disciplinary climate, ability grouping, and academic press. There were three measures in the school-process level. They were principals’ instructional leadership, disciplinary climate, tracking or streaming, parents-school relations. Lastly, the district and community level included the between-school segregation and community – school relation measures. (Willms, 1996, fig. 3-1, p.33)

Adopting Bloom’s educational taxonomy, Fitz-Gibbon (2000) discerns another views on evidence-based measure of educational or school educational performance. Accordingly, performance can be approached in two basic directions: the three goals and three contexts. The three goals and three contextual factors model helps to typify indicators for educational measures. (Fitz-Gibbon, 2000, p. 70) Bloom proposed three educational objectives: the cognitive goals that measure the children’s

learning, the affective goals that concerns about happiness, satisfaction with school, educational aspiration, and the behavioural goals that include attending school, dropping out, or behave well in class.

A range of other contextual factors also affects outcomes (Fitz-Gibbon, 2000, p. 72). The demographic characteristics, the service expenditure, and the flow politics suggest that it is useful to look into the individual background, the school practice and the policy aspects in drawing education appraisal evidence.

There are myriad of factors that directly or indirectly affect educational outcomes in immigrant pupils. It is suggested that the different investigation frameworks can be defined in three levels: i.e., individual, familial, and organizational. The three are unique but are also interrelated with one another. They cause changes independently and as well interwoven with one another in affecting the educational outcomes of the pupils. One interesting question, though, would be which level causes much effect and how the effects of the three related to one another. The following discussion is on the three individual and interdependent levels.

### 3.1.1 The Individual Level

Individuals bring with them their own personal, cultural and social experience to school. These personal, cultural and social backgrounds shape his/her school experience, including social life and learning, which in turn have effects on one's educational performance. Immigrant pupils, in particular, experience different problems in coping with new environment on one hand, and their new schooling on the other. The difficulties envisaged by new immigrant pupils, like foreign language proficiency, can be a salient problem to the individual and greatly affect his/her subsequent class performance.

Generally speaking, the individual level refers to the physical and social characteristics of an individual. Such characteristics include one's physical status like age, sex and ethnicity, and individual social characteristics such as educational history, educational expectation, language proficiency, peer association, and one's

psychosocial perception about the host society and schooling. The perception measurement includes general evaluations of the host society and her education system, like the views on educational opportunity and equality. The love or reject mentality to the new schooling context is also crucial to success or failure in academic endeavour.

The educational background of an individual prior to his/her move to a new country can have an effect on one's school educational performance in the host country. It is therefore useful to investigate one's pre- and post-migration school results. A promising student with good academic result in his/her home country should generally perform well in the new environment, if not in the first or second term. The present study will include questions to explore this relationship.

Language is a cultural capital to every individual. It is the kind of capital that enables an individual to understand what the teachers deliver in class and to befriend with classmates. Language proficiency has long been viewed as a key factor in determining school educational performance and eventual adaptation of the individual to the new school and society. Language assessment has in fact been used in most occasions to determine the level of academic standard one withholds. To a substantial number of immigrant pupils, the language barrier can cause them much troubles and destroy most of their self-esteem and confidence towards learning and in socializing with others. Different schools adopt different academic standard and admission requirements. It is commonplace for schools to test the language proficiency of new applicants before placing them in certain school levels. It is also common to see the kind of language barrier that causes most of the agony to new immigrant pupils in their new school environment. Questions related to the language standard shall be investigated. More specifically, the language standard shall be focused on English proficiency since all three regions use the language as a kind of benchmark of proficiency test. In Vancouver, for example, new immigrants who do not have a

history of public school in British Columbia are required to take an English proficiency assessment before admitting to a school or a course. The English proficiency assessment costs C\$20 in 2001 and is provided and conducted by different School Boards within the Province. Pupils will be placed in one of the five grades after their English as a Foreign English (ESL) assessment. Higher grade represents a better English performance.

Language also reflects the kind of cultural capital one's family holds. To Bernstein, the use of elaborated code in a family allows an individual to learn better and faster than those in which restricted code are practised. Families using the elaborated code use more pro-school wordings or terms in their daily conversations with the children, and help them to build a more analytical and critical mind that is useful in school learning activities. On the contrary, families in the restricted code tend to have limit choice of words and terms in their daily conversations. The use of language and wordings in restricted coded families discourages the language development of children in a way that they are incompatible to those used in school. Children from family of restricted code are said to find schooling uninviting because language used by the teachers disadvantaged them in the daily classroom activities.

It is suggested that educational outcomes have something to do with the active response one takes in life. Contrasting to the passive response to the socio-economic process that adds upon individuals, people actively make choices and gain relatively autonomy from structural constraints. (Mehan, 2000, p.517) When an individual rejects achievement ideology, subverted the authority of teachers and school administrators, and disrupted classes, it is a fact that the individual identifies himself/herself with a norm away from success in school learning. In other words, the individual has made his/her own choice of future life. The resistance theory in the sociology of education, in this regard, helps to shed light on the explanation of school educational performance among some pupils. When people resist the school, they are more likely to exhibit poor academic results and/or disrupting behaviours.

Bonding to school also demonstrates how an individual accept or reject school. Whether or not an individual is a conformist to school or social rules can have effects

on his/her school educational performance. Again, the student's view of the real world counts. (Mehan, 2000, p.519) Not surprisingly, children of the same social class react differently to schooling. Researchers of social stratification on school educational performance used to adopt a 'Reproduction theoretical perspective'. To the reproduction theorists, social class reproduce the conditions of reproduction, and thus perpetuates the inequality in education and social status. On top of this structural point of view, Ball argues it is important to include the student's view or perception of the reality in order to broaden the view. (Ball, 1995) It is commonly understood that different reaction to schooling will bring about different educational attainment. To pupils who conform themselves to school rules, attend class regularly, and follow what the school and teachers tell them to, they are conformists and will most likely succeed in their school experience. However, there are always deviants. Some pupils will choose to reject socially accepted norms. They cut class, smoke and drink, fail to submit the required work, and drop out eventually. This "deviant" group, though with similar socio-economic background as the conformist, will most likely become academic failures. However, economically and culturally determined forces cited by Bowles and Gintis (1976) do not account adequately for different actions taken by pupils in similar socio-economic circumstances. The perception of the individual to the real world, in this regard, merits an exploration. It is suggested that questions such as "I really like my school", or "I get on well with most of my teachers" be included in the questionnaire as a test of school attachment of the young immigrants.

The question remains, however, why some immigrant children conform while some deviate? Is it because of the individual background or because of other, like peer or school influence?

Peers are important to young persons. Peer influence has long been argued as one of the most significant factors affecting adolescents in their development. As an illustration, Sutherland and Hirsch's delinquency theories have shown that bonding and differential association with different peers lead to different results of conforming or delinquent behaviours. Specifically, individuals whose friends follow the school rules and norms are normally capable of achieving school success. The individuals are more likely to become a school failure when they have friends who do not get good

results in school test, or are rude to teachers. Likewise, there should be some questions on the young immigrant's peers as an evaluation of peer effect on educational performance. The questions can include, for example, how the peers feel towards deviant or good behaviours.

### 3.1.2 The Family Level

Both subjective and objective factors in family have significant effects on children's educational performance. Popular objective family factors include social class of parents, parents' education, and family income. Blau and Duncan (1967), for example, investigated the integrated effects of different familial factors in early America. The two built a status attainment model in explaining the acquisition of personal socio-economic status. In their regression and path analysis model, they studied the father's educational level and occupation, son's educational level, and his first occupation and current occupation. Their findings suggest that the education received by the father has significant and major effect on the education and occupations of the son. Like other empirical studies, there are methodological disputes in Blau and Duncan's measure. As an illustration, the two American sociologists included educational elements in the measure of the son's occupational status in their model. Consequently, the correlation of education and occupation appeared to be a repeated measure. (Tsang, 1993)

Some subjective familial factors, like parental educational attitudes and language used in the family, have also been studied and found to have clear and significant effect on educational performance or attainment of the children. The effect of family on education is related to its structure - social class. The social class of a family has been found to make a significant effect on parenting and on educational attainment of the children. It is said that families in different social class level carry with them different cultural capital. The French sociologist, Pierre Bourdieu (1930 -), in responding to the economic capital point of view by the Marxist school, developed a new idea of cultural capital. To Bourdieu (1977a, 1977b), cultural capital includes knowledge, way of thoughts that represents a kind of capital or wealth that may legitimise the status and power. Different families transmit different cultural elements

and knowledge to the children. It is this cultural capital that makes the children succeed or fail in their school learning. Since schools have basically internalise the kind of knowledge or skill that they view as important and necessary, such practice favours children from a particular class background. Specifically, children from dominant class gain the kind of knowledge or skill that are treasured by the school. This group of children, who inherits certain linguistic and cultural competency acquired through family socialization, will be more successful in school. On the contrary, children from a social class that does not encourage reading, going to museum, attending cultural activity, deviate themselves from the dominant culture that the school or educational system implicitly require their pupils for academic attainment. This group of student will be more likely to be reproduced as a class to be explored.

Bourdieu (1977a and 1977b) and others (Bourdieu and Passerson, 1977) have put forward a cultural reproduction theory in assessing social class effect on education. They evaluated cultural elements that mediate the relationship between economic structures of the family, schooling and the lives of people. To the scholars, the families of each social class transmit distinct cultural elements and knowledge and they are important for academic attainment.

Besides family structure, it will be useful to study the cultural capital of new immigrant children. Questions about parents' educational level and occupational status can be used to measure social class of the family. Conceptually, familial cultural capital can be investigated in two dimensions. They are the educational attitude and the language used.

Family educational attitudes include the ways parents act upon the children. A child's educational performance has largely related to the support and encouragement from the family. Whether the parents demonstrate a high or "don't care" attitude towards the children's schooling can have a substantial effect on one's educational attainment. Language use in family, on the other hand, suggests that there may be a discontinuity between the home-use and school-use language. Following Bernstein, language use is class specified. It is said that language use in middle-class families

matches the often implicit and tacit demands of classroom. Middle-class children are said to have been equipped with the various language skills and techniques that are rewarded in the classroom. Under this notion of cultural capital perspective, a group of children will certainly attain higher school results simply because of their language advantage.

Following the discussion on family's cultural capital, questions for measuring the area can thus include both parents' educational attitude and language used at home. For the measure of attitude, this can incorporate questions on parents' school participation, family's learning culture, or family's social class. The measure can indeed include the use of language at home to evaluate the language effect on performance as suggested by Bernstein.

### 3.1.3 The Organizational Level

If home background does not play a significant role in educational outcomes of pupils, will school effects do? Some researchers shift their attention to the organization level in an attempt to explore its potential effects on educational performance.

School influence was defined in the late sixties and seventies as the effects of particular school practices or policies, or the effects of some interventions. To illustrate, this can be a focus on academic achievement of an increase of per-student expenditures, or the effects of a reorganization of a curriculum. Schooling inputs and processes, such as teacher practices, were two main focuses in the early days of school effect studies. The Coleman study in 1966, for example, conceptualised school factor to include teachers' expectation, lesson planning, and intake composition school or class size. Although the Coleman study has been widely discussed, it has also been criticised as having adopted a relatively limited measure of the school-related variables in comparing to the effects of family background. Such methodological constraint has led to a pessimistic conclusion that "schools don't make a difference" (Alverch, Carroll, Donaldson, Kiesling, and Pincas, 1974). Another significant critique by Carver also points out that Coleman has measured aptitude,

instead of achievement and thus made a biased conclusion (Carver, 1975, p. 78, p. 83).

As Carver pointed out:

The tests used by Coleman were purported to be achievements tests but they were not designed to be achievement tests; they were designed to be aptitude test, to discriminate between those individuals who possess varying degrees of certain traits or abilities. (Carver, 1975, p. 82)

Willms (1996), on the other hand, defines school factors in a different perspective in which more focus is on school educational performance comparison. He refers the effect of a particular school as the difference between the (estimated) average outcome score for a child with certain background characteristics attending that school, and the (estimated) average outcome score for the same child in the entire schooling system. (Willms 1996, p. 39) Considering this, Willms suggests two types of school factors: Type A and Type B. The first refers to the overall effect of attendance at a particular school and includes the effects of school composition and wider social and economic elements. The second one relates specifically to school policies and practices. (Willms, 1996, p. 39-41; Willms and Raudenbush, 1989) Specifically, Type A addresses the question: 'How well would we expect a pupil with average background characteristics to perform in school X, compared with the average performance of the entire school system?' Type B school effects ask: 'How well does school X perform relative to other schools with similar composition and similar social and economic contexts?' Teachers and administrators will be more interested in Type B estimates because they includes the effects of policy and practice, and exclude factors outside their control; while parents would be particularly interested in Type A. Parents want to know the effects of schooling on their child, rather than the performance of the school.

According to Willms, the estimation of Type A and type B school effects is based on a model that describes the influences affecting an individual pupil's outcome score. The model can be described as follows: Pupil's outcome score = the average

score for all pupils in the schooling system (e.g., school district, region, country) + the effects of pupil background (e.g., pre-entry ability, SES, sex) + the effects of school policies and practices (e.g., school resources, organization structures) + the effects of school characteristics (e.g., class size, per-pupil expenditures) + the effects of school composition (e.g., average SES of the school) + the effects of social and economic factors (e.g., local unemployment rate) + any unmeasured effects to the child's school + random error (e.g., error in measurement due to unreliability of the test). (Willms, 1996, p. 40)

The two Types are not identical. Contextual effects distinguish them. For example, it is important to take into account the intake composition and pupils' individual and social class background when measuring their educational outcome. As Willms stated, schools with high social class or higher ability intakes have some advantages associated with their context. The pupils, on average, are more likely to have greater support from parents, fewer disciplinary problems, and an atmosphere conducive to learning. (Willms, 1996, p. 41) Similarly, immigrant pupils are also subject to such contextual effects in school. They may be put into classes on the basis of their ability or have greater or weaker teacher support. Contextual school effects play a significant role in determining educational outcomes. It is, however, necessary to notice the changeability of contextual effects over time and place.

The pursuit of education quality and the quest of educational reforms began in the 1980s. The movement has brought about an unprecedented attention to the notion of school effectiveness study. In promoting the measure of school effectiveness, Cheng (1996) put forward a comprehensive and dynamic model on how schools can effectively operate in order to provide quality or value-added education to children. (Cheng, 1996) It can be said that elements in effective schools are also the elements affecting educational performance of immigrant pupils. When we ask what factors or effects in a school that could possibly affect academic performance of a child, we are simply asking the same question as how effective the school is. Although Cheng's discussion is more organizational oriented, his effective school research sheds light on school effect on educational outcomes.

Cheng (1996) classified the study of school effectiveness into four areas: technical effectiveness (or internal effectiveness), technical efficiency (or internal efficiency/internal economic effectiveness), societal effectiveness (or external effectiveness) and societal efficiency (or external efficiency/external economic effectiveness). School effectiveness, following Cheng, refers to those grouped under non-monetary inputs or processes, such as number of textbooks, classroom organization, professional training of teachers, learning arrangements, etc. To achieve a clearer conceptualisation, school effectiveness can further be differentiated into school's technical effectiveness and societal effectiveness. The former relates relatively closer with school outputs limited to those happening in school or just after schooling, like learning behaviour, skill obtained, attitude change, etc. School efficiency, on the other hand, has to do with monetary inputs, such as cost of schooling per pupil, cost of books, teachers' salary, opportunity cost, etc. There are two types of school efficiency. The school's technical efficiency means those discussed outputs that happen in school or just after schooling. School's societal efficiency refers to the school outputs that are effects on the society level or the life-long effects on the individuals. The four kinds of conceptualisations of school effectiveness clarify what kind of school effect will be discussed. (Cheng, 1996, p.2-4)

#### 3.1.4 The Educational Outcomes

The investigation of educational outcomes can include two aspects: a subjective and an objective measure.

Subjective measure refers to those measures of psychological or mental domains found in the pupils. This part focuses on a measure of social development of the children as a reflection of the integration magnitude of the group of immigrant children. Objective measures include the GPA of subjects and/or post-migration academic performance in various school-subjects, the change of subject results, particularly language results after migration, and performance in school like dropping out, and class attrition. Specifically, following Bloom's classification of three educational objectives, the subjective measure concentrates on the affective or

attitudinal side of the educational performance, while the objective part focusing on the behavioural and cognitive side.

It is easier to draw information on objective measures, such as an individual's Grade Point Average (GPA) of a subject, or his/her record of dropping out and class attendance since they are more readily available in school or class record. These subjective records, however, fail to reflect how the individual feels towards schooling in general, and his/her thought over learning. In other words, researchers will have difficulty to comprehend one's ideas of his/her learning if data from objective measures are obtained. It is thus suggested to make use of questions designed to draw subjective data be included in the measure of educational performance in this study. Questions on how the young immigrants feel towards different subjects can be included. Do they, for example, find it hard to get to work in Mathematics and Science, do they think a lot about English even in their spare time, or do they find the subject of Chinese easy?

### 3.1.5 A Theoretical Framework of the Study

Adopting the theoretical suggestions by the system approach, the input-process-output approach by various researchers, it is plausible to design a framework of study of immigrants' educational performance based on a socio-cultural system perspective. Specifically, the design will first incorporate into the model of analysis the four key socio-cultural areas that affect educational performance. A number of individual variables will then be included into the four areas to assist subsequent analysis of the model.

As illustrated in section 3.2.4, there are four key areas/levels of investigation on educational performance in young immigrants. The four are individual dimension, family dimension, school dimension and peer dimension. The four areas, in fact, also resemble certain parts of the ecological approach of study on human development proposed by Urie Bronfenbrenner.

Bronfenbrenner's sociocultural view of development consists of five environmental systems ranging from inputs of direct interactions with social agents to

inputs of culture. The five systems are the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. (Bronfenbrenner, 1993) The microsystem is the setting in which an individual lives. The contexts include the individual's family, peers, school, and neighbours. Most researches on sociocultural influence focus on microsystem because it is where most direct interactions with social agents take place. The mesosystem is about relations between microsystems, such as the relations of family experience to school experience. Accordingly, influences from different settings can have effects on an individual's behaviour. The exosystem, on the other hand, looks into how the experiences in another social setting affect what an individual experiences in an immediate setting. An example of exosystem can be the experiences of family composition, such as single parent, on an individual's teacher-pupils interaction at school. The macrosystem involves the culture in which one lives. It studies how attitudes and ideologies of the culture affect development. The last of the five, chronosystem investigates the pattern of environmental events and transitions over the life course and sociohistorical circumstances. (Santrock, 1995, p. 49) Example of studies on chronosystem can be seen from different effects of life events on development.

Apart from adopting a four-factor approach to investigate educational performance of young immigrants, the present study thus get further insights from the ecological theory in designing different variables of the key areas. The four key areas in the model of study, the individual, family, school and peers, are both macro and micro dimensions of Bronfenbrenner's theory of development. Family, school and peer groups, for instance, are subsystems in the microsystem of the ecological theory. They are the systems in which individual live and socialize themselves. Beside individual variables such as gender, age, or year of schooling, the present study will also consist of variables under the subsystem of family, school and peer group. As illustrated in the ecological theory, the effects and interactions of the subsystems on an individual will be used to design variables in the model. Under the notion of mesosystem, the study will design variables to investigate the family or peer group experience on an individual's educational performance. The effect of immigration experience on schooling, on the other hand, will be explored in the exosystem perspective. More, cultural influences are the key concept in Bronfenbrenner's

macrosystem perspective. The impact of cultural difference between social or immigrant and host groups on school performance is therefore another area of investigation in the present study. Lastly, the immigrant experience and life event experience will also be considered under the notion of chronosystem perspective.

## **Chapter 4 Research Design on Study of Educational Performance of Young Immigrants**

### 4.1 Model Building and Hypothesis

#### 4.1.1 A Model of Investigation

Adopting the theoretical framework discussed in precedent chapters, the main objectives of this research are:

(1) to investigate the factors which are related to school educational performance of young immigrants in Hong Kong, Macao and Vancouver.

Following the theoretical discussions, major factors of influences on educational performance can be classified into four main areas. They are:

- a) the Individual Factor dimension;
- b) the Family Characteristic dimension;
- c) the School Influence dimension;
- d) the Peer Effect dimension.

A total of 33 variables are designed in the four dimensions. There are 11 variables subsumed under the Individual Factor dimension, nine in the Family Characteristic, 10 in the School Influence, and three in the Peer Effect dimension. Table 4.1 shows the details.

(2) to investigate the degree of school educational performance of young immigrants in Hong Kong, Macao and Vancouver.

The dependent variable of the study is school educational performance. The variable is studied using self-rated performance in four school subjects: Mathematics, English, Social Studies, and Chinese.

(3) to explore the effects of the independent variables on school educational performance in young immigrants.

Variables within the four dimensions can affect school educational performance of young immigrants differently. The present study attempts to assess their intensity of influence by means of statistical analysis.

(4) to explore the difference in school performance among the three cities under studied.

This study will also investigate the difference in school performance among the three cities and different groups of respondents. Table 4.1 describes the variables used in the study.

Table 4.1

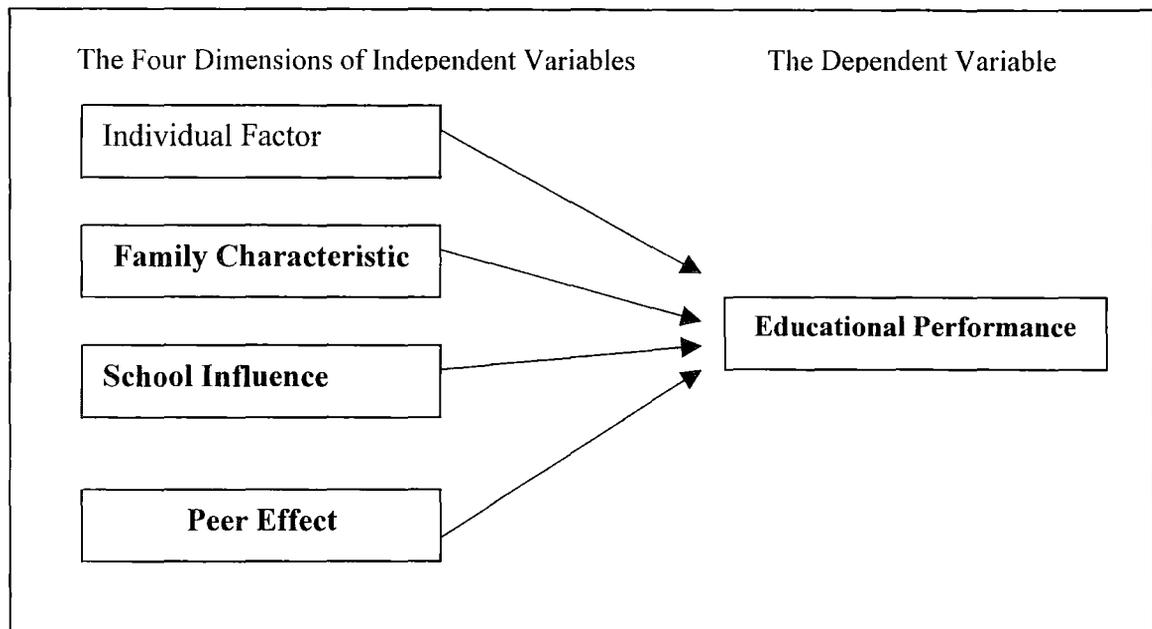
Independent variables under the four major dimensions

Dimension	Variables
Individual Factor	Gender
	Grade
	Years in School
	Number of School
	Age
	Years in Receiving Country
	Future Aspiration
	Future Study in Technical School
	Intention of Stay
	Job Aspiration
	Stressful Life Events
Family characteristic	Family Social Class
	Father's Expectation of my Job
	Mother's Expectation of my Job
	Family Learning Culture
	Parent School Participation
	Number of Siblings
	First Language
	Other Language Used at Home
Family Composition	
School Influence	Grade Placement upon Arrival
	School Attachment
	School Day Activity Participation
	After School Activity Participation
	School or Other Trip Participation
	School Day Missed
	Missed School Day Unauthorized
	Frequency of Skipping School Lesson
	School Problem Frequency
School Problem Occurrence Place	
Peer Effect	Number of Friends
	Number of Mandarin Friends
	Peer Influence

To achieve the objectives of this study, a research model is designed to facilitate a better understanding of the potential effects of the variables within the dimensions on school educational performance. Specifically, the model illustrates the association of variables in the dimensions with educational performance. Graph 4.1 is the model.

Figure 4.1

A Research Model on School Performance of Young Immigrants



4.1.2 Research Hypotheses

Following the dimensions of the variables described in 4.1.1 and based upon the theoretical assumptions of social-cultural perspectives on immigrants' academic attainment, research hypotheses pertaining to the study are formulated.

Hypothesis 1: Male immigrant pupils achieve better performance than female immigrant pupils.

Hypothesis 2: Higher-grade immigrant pupils achieve better performance than lower-grade immigrant pupils.

Hypothesis 3: The longer the years in the school, the better the performance.

Hypothesis 4: The greater the number of schools attended, the poorer the performance.

Hypothesis 5: The elder the immigrant pupil, the better the performance.

Hypothesis 6: The longer the years in receiving country, the better the performance.

Hypothesis 7: The stronger the future aspiration, the better the performance.

- Hypothesis 8: The smaller the chances of future study in technical school, the better the performance.
- Hypothesis 9: The stronger the intention to stay in host country, the better the performance.
- Hypothesis 10: The higher the job types in job aspiration, the better the performance.
- Hypothesis 11: The more stressful life events, the poorer the performance.
- Hypothesis 12: The higher the family social class, the better the performance.
- Hypothesis 13: The greater father's expectation of one's job, the better the performance.
- Hypothesis 14: The greater mother's expectation of one's job, the better the performance.
- Hypothesis 15: The better the family learning culture, the better the performance.
- Hypothesis 16: The greater the parent school participation, the better the performance.
- Hypothesis 17: The smaller the number of siblings, the better the performance.
- Hypothesis 18: Immigrant pupils speaking Cantonese achieve better performance.
- Hypothesis 19: The greater the incongruent use of language at home and school, the poorer the performance.
- Hypothesis 20: Immigrant pupils from 'intact' family achieve better performance.
- Hypothesis 21: The better the grade placement upon arrival, the better the school educational performance.
- Hypothesis 22: The stronger the school attachment, the better the performance.
- Hypothesis 23: The greater the school day activity participation, the better the performance.
- Hypothesis 24: The greater the after school activity participation, the better the performance.
- Hypothesis 25: The greater the school or other trip participation, the better the performance.
- Hypothesis 26: The less the school days missed, the better the performance.
- Hypothesis 27: The less the school days missed unauthorized, the better the performance.
- Hypothesis 28: The lower the frequency of skipping school lessons, the better the performance.
- Hypothesis 29: The lower the school problem frequency, the better the performance.

Hypothesis 30: The more the school problem occurrence place, the poorer the performance.

Hypothesis 31: The more the number of friends, the better the performance.

Hypothesis 32: The less the number of Mandarin friends, the better the performance.

Hypothesis 33: The stronger the peer influence, the better the performance.

Besides these 33 hypotheses, this study also aims at testing the individual effect of the four dimensions on school educational performance in young immigrants. Four additional hypotheses are thus formulated.

Hypothesis 34: The stronger the Individual Factor, the better the educational performance.

Hypothesis 35: The stronger the Family Characteristic, the better the educational performance.

Hypothesis 36: The stronger the School Influence, the better the educational performance.

Hypothesis 37: The stronger the peer effect, the better the educational performance.

As the respondents in this study are from three different cities, a hypothesis is formulated to evaluate the difference among the city samples.

Hypothesis 38: There is a significant difference in educational performance in Hong Kong, Macao and Vancouver, with the highest mean in Vancouver and the lowest in Hong Kong.

Respondents of this study were also invited to provide information in the stage one surveys on their early school experience upon arrival. The respondents were asked if they took entrance examinations or entered a school grade they wanted. Three separate hypotheses are so designed to test such difference on educational performance of the young immigrants.

Hypothesis 39: Immigrant pupils with entrance examinations perform better educationally than immigrant pupils without examinations.

Hypothesis 40: Immigrant pupils in desired school grade perform better educationally than immigrant pupils placed in undesired school grade.

Hypothesis 41: Immigrant pupils in 'just-right' school grade perform better educationally than immigrant pupils in school-assigned school grade.

Lastly, four individual hypotheses are employed to test the difference of educational performance among respondents in the two surveys.

Hypothesis 42: There is a significant difference of educational performance in Hong Kong respondents between the first and the second survey.

Hypothesis 43: There is a significant difference of educational performance in Macao respondents between the first and the second survey.

Hypothesis 44: There is a significant difference of educational performance in Vancouver respondents between the first and the second survey.

Hypothesis 45: There is a significant difference of educational performance in respondents between the first and the second survey.

## 4.2 Research Methodology of the Study

### 4.2.1 The Research Design

Data in this study of immigrant school performance was obtained from self-administered questionnaire surveys from three cities that have a substantial number of Chinese immigrants. The population under study was school-aged children immigrated to their new country from one to five years. Both the schools and the respondents in the surveys were not randomly selected because of technical difficulty. The schools and the respondents participated in the surveys were selected in a convenience sampling method.

### 4.2.2 The Samples

The three samples of immigrant children were drawn from Hong Kong, Macao and Vancouver of Canada in late 2001 and 2002. The Vancouver school first phase

survey began in early January of 2002 and completed in late February after consent forms were collected from parents in late December of 2001. The first survey of the Hong Kong school was conducted in March 2002, and the two Macao school surveys were completed in January and March respectively. The same group of respondents were re-surveyed in a second phase of survey. The second surveys were done in the month of June for the Hong Kong and Macao groups. The Vancouver survey was conducted after September 2002 because of their term break in early June.

Participants in Hong Kong and Macao came from three primary schools, whereas the participants from Vancouver were from a Chinese Language tutorial school in the township of Richmond. One subsidised primary school participated in this study in Hong Kong and one private Chinese primary school and one Luso-Chinese government primary school participated in Macao. The schools were chosen because they all satisfied the criterion of admitting a considerable number of new immigrant pupils.

Prior approval was sought from the school heads with the assistance of teachers and old colleagues. Once the schools agreed to participate, related teachers were invited to coordinate with the researcher to conduct the surveys with potential pupils. The schools were responsible for the selection of pupils to take part in the surveys. Three selection criteria were given to the schools to facilitate them in the selection of participants in the surveys.

The three criteria were as follows:

- 1) The newly arrived children (NAC) who have taken some admission examinations for their class allocation,
- 2) The NAC were placed in their self-selected class,
- 3) The NAC were admitted to a class that they preferred.

Data of the two phases of surveys was crosschecked to avoid flaws during input process. A random selection of about 10 per cent of the cases from each school grade was performed to ensure data correctness.

Table 4.2 illustrates the number of pupils and their respective percentage in each of the participating schools in the first and the second self-administered survey in Hong Kong, Macao and Vancouver. A total of 167 newly arrived children participated in the first survey. Sixty of them were from the Hong Kong school and 87 from the two Macao schools. Of the 87 Macao pupils, 44 were drawn from a private Chinese primary and 43 from a Luso-Chinese government primary school. There were 20 pupils in the first Vancouver survey. Of the 167 pupils in the first survey, 140 were re-contacted and participated in the Hong Kong and Macao sample, and nine pupils participated in the second survey in the Vancouver sample. The high attrition rate in Vancouver was due to a fact that pupils no longer registered in the private school after the summer break. About 90 per cent of the 167 pupils in the first survey were re-surveyed.

Table 4.2

Number of Participants in the Three Cities

	First Survey n (%)	Second Survey n (%)
Hong Kong school	60 (36)	53 (36)
Macao private school	44 (26)	44 (30)
Macao government school	43 (26)	43 (29)
Vancouver school	20 (12)	9 (5)
Total	167 (100)	149 (100)

Table 4.3 shows the total number of pupils and newly arrived pupils in the Hong Kong and Macao schools in the academic year of 2001/2002. There were 60 newly arrived children in the four grades of the Hong Kong school. All newly arrived pupils were invited to participate in the first survey. The number represented 54.5 per cent of the total number of 110 pupils in the four grades.

Three school grades of pupils from the Macao private school took the first survey in this study. Altogether there were 270 pupils in the three grades of primary 4-5 in the school. Of the 270 pupils, 51 of them were newly arrived pupils and 44 of them took part in the first survey. Around 16.3 per cent of the 270 pupils were surveyed.

Pupils from two school grades of the Macao government school participated in the first survey. There were 162 pupils in the two grades of P. 5 and P. 6. A total of 43 newly arrived pupils were identified in the two grades and all of them joined the first surveys. About 26.5 per cent of the 162 pupils were surveyed.

Table 4.3

Number of pupils and newly arrived pupils in Hong Kong and Macao schools in the first survey

		P.3	P.4	P.5	P.6
Hong Kong	Boy	12	21	16	16
	Girl	9	7	13	16
	Total in class	21	28	29	32
	Total NAC	7	13	14	26
	Total NAC surveyed	7	13	14	26
Macao private school	Boy	NA	48	45	48
	Girl	NA	42	45	42
	Total in class	NA	90	90	90
	Total NAC	NA	23	18	10
	Total NAC surveyed	NA	23	14	7
Macao government school	Boy	NA	NA	45	48
	Girl	NA	NA	40	29
	Total in class	NA	NA	85	77
	Total NAC	NA	NA	17	26
	Total NAC surveyed	NA	NA	17	26

NA denotes no survey in the class

Table 4.4 shows the breakdown of the number of pupils in class and newly arrived pupils in the second survey. All 87 pupils from the two Macao schools were

re-surveyed. Fifty-three, instead of 60 pupils, from the four grades were re-contacted for the second survey in the Hong Kong school.

Table 4.4

Number of pupils and newly arrived pupils in Hong Kong and Macao schools in the second survey

		P.3	P.4	P.5	P.6
Hong Kong	Boy	12	21	16	16
	Girl	9	7	13	16
	Total in class	21	28	29	32
	Total NAC	7	13	14	26
	Total NAC surveyed	7	10	10	26
Macao private school	Boy	NA	48	45	48
	Girl	NA	42	45	42
	Total in class	NA	90	90	90
	Total NAC	NA	23	18	10
	Total NAC surveyed	NA	23	14	7
Macao government school	Boy	NA	NA	45	48
	Girl	NA	NA	40	29
	Total in class	NA	NA	85	77
	Total NAC	NA	NA	17	26
	Total NAC surveyed	NA	NA	17	26

NA denotes no survey in the class

Table 4.5 presents the school grade, and sex of respondents in the three cities of the first survey. There were altogether 44 pupils from the private Macao school in the first survey. Twenty-three of them were pupils in P. 4, 14 were from P. 5 and the rest seven from P. 6. Of the 44 pupils, 28 of them were male pupils and 16 were females.

Newly arrived pupils participated in the first survey in the Hong Kong school came from four school grades. Seven of the pupils were from P. 3, 13 from P. 4, 14

from P. 5 and another 26 from P. 6. Among the 60 participating newly arrived pupils from Hong Kong, 32 of them were males and 28 were females.

Forty-three pupils from a government school in Macao participated in the first survey. Seventeen of them came from P. 5 and 26 from P. 6. Among the 43 pupils, 19 were boys and 24 were girls.

Pupils from the Vancouver sample were drawn from seven school grades, ranging from grade three to grade eleven. There were 12 male and 8 female pupils in the Vancouver first survey. A majority, or four of the Vancouver pupils were in grade six.

The total number of pupils in each school in the three cities of the second survey can be seen in Table 4.6. Altogether there were 149 pupils in the three schools in the second survey. All 87 pupils in the first survey from the two Macao schools were again contacted and participated in the second survey. Fifty-three, instead of 60 pupils were re-surveyed in the Hong Kong school. Three male pupils from P. 4 and four males from P. 5 of the Hong Kong school did not participate in the second survey. Only six male and three female pupils were re-surveyed in the second Vancouver survey.

#### 4.2.3 Conceptualization and Operationalization of Variables

The present study adopts a pre- and post- questionnaire survey in collecting data from non-randomly selected new immigrant pupils. The major instruments used in the two surveys were a close-ended self-administered questionnaire. The questionnaire was adapted from the Student Attitudes Information System (SATIS) project (paper-based) from the University of Durham in England.

The original SATIS questionnaire has 12 sections, prompting respondents from school life to their academic performance in subjects like science and design and technology. The present study has made some modifications, such as school grade, on

the original questionnaire to make it compatible with the school and social context of the study.

A Chinese questionnaire was used in the Hong Kong and Macao samples. The questionnaire was a direct translation from the English questionnaire. There were 12 sections in the questionnaire in the first phase of survey. The 12 were:

- A. About yourself
- B. About your school
- C. About your future
- D. Activities during this school year
- E. About you and your family
- F. About you
- G. About your family
- H. Problems at school
- I. Personal events
- J. About your friends
- K. About lessons
- L. Final comments

There were 13 questions in section A in both Hong Kong and Macao samples. The Vancouver questionnaire had only 11 questions. The questions on if admitted to desired class when came to Hong Kong/Macao, if entrance examination taken when applying for school, and subjects tested in the entrance examination were not asked to the Vancouver respondents. Questions included in this section were name of the respondent, name of their school, age, years in the school, number of elementary school attended, date of birth, year in Hong Kong/Macao/Canada, school grade before coming to the new country, and first school grade in the new country.

A total of 18 questions on the school were asked in section B. Respondents were prompted to indicate their preference to the questions on a five-point scale. The response categories ranged from “strongly disagree”, “tend to disagree”, “neither agree or disagree”, “tend to agree” to “strongly agree”. A score was assigned to each

of the questions. To adjust the dimensionality of the items, some questions, such as question eight “Most of the time I wish I wasn’t in school at all” or question 11, “Most lessons in the day school are dull”, were recoded in an opposite score range. A higher score generally indicates a higher degree of school favouritism or school attachment.

Section C consisted of ten questions on the respondent’s planned future. The first five questions asked about the intention of study or work after grade 12 in the Vancouver sample, and F.3 in the Hong Kong/ Macao sample. In the province of British Columbia in Canada, the provincial government provides free and compulsive education up to grade 12. The free and compulsive education is provided up to F. 3 or junior secondary in Hong Kong or Macao. Answers to these five questions ranged from “very likely”, “fairly likely”, “possible”, “unlikely”, or “not a chance”. The respondents were asked to indicate if they would stay on at school/to F.4; go to College/university/technical School; take the provincial examination/apply for a Mainland secondary school; try to get a job; or stay in Canada/Hong Kong/Macao.

The next five questions in the section were about occupation of the respondents and their parents. The questionnaire provided the respondents with five boxes that contained examples of different occupational groups. Respondents were asked to answer each of the five questions by referring to the boxes. The first question of the five asked the occupation that the respondent was most likely to aim at. The second and the third were about occupation of both parents. The last two were about occupation that both parents wanted to see the respondent to pursuit. Answers in these five questions varied from A to E, representing a group of occupations in similar economic rewards and social honour.

There were five questions in section D. This section investigated the frequency of activities played by the respondents during the school year. The respondents were prompted to choose from the following five answers: “once or never”, “twice”, “several times”, most weeks”, to “every week”. The first two questions asked if the respondent joined any school clubs in free time or after school. The next three were on school trips since last September.

Section E had seventeen questions on the respondents and their family. The questions were aimed at measuring the reading habit of both the respondents and parents, and the parental involvement in school activities. The answers to the seventeen questions focussed mainly on the frequency of occurrence of the activities. The first two questions, for example, invited the respondents to indicate their frequency of book borrowing from school and other library. The respondents were to choose among the five answers from “never”, “less than once a month”, “once every 2 to 3 weeks”, “about once a week”, to “more than once a week”. There were other questions in the section which inquired about family reading atmosphere, number of books possessed inside the family, and hours of reading and homework doing by the respondents during weekday evenings. Questions 10 to 16 in this section were devoted to assessment of parental involvement in school activities. The questions asked if the parents visited the school for a number of occasions in the year, such as “to help in the classroom”, “parents’ evening”, or “social event at school”. Respondents were to indicate if the parents visited or not, or if they did not know the answers to the questions. A parental school activity involvement scale was constructed using the seven questions. A higher score in the scale would mean a high parental involvement in the various school functions. One question needs special attention, however. Parents could make the visit as a result of being summoned by the teacher or the school for the pupil’s undesirable academic or disciplinary performance. Question 15 was a question on evaluating the respondents’ trouble with teacher at school. The last question of the section asked for the number of elder and younger siblings the respondents have.

There are three questions in Section F. The section was about the respondents’ school days experience. The questions asked for the number of school days missed or skipped in the last school term. A five-point scale was used to measure the skipped school days in question 3. The answer ranged from “never” to “more (often)”.

Section G was about the family, including language used at home and parental educational level. There were five questions in this section and the first two were assigned to language spoken at home. Since language used was different in Hong Kong/Macao and Vancouver, answers in the two language questions had changed to

reflect the social context. Respondents were asked to indicate if they first spoke English, Cantonese, or Mandarin in the Vancouver sample, or Cantonese, Mandarin, or other language in the Hong Kong/Macao sample. They were also asked to indicate if parents completed their full time education within the answers of 'little or no formal education', 'at the minimum school leaving age', 'after 'O' levels or similar', 'after college', or 'after university or polytechnic'.

Section H used twelve questions to probe problems at school. Answers to the twelve questions ranged from 'never', 'less than once a fortnight', 'about once a fortnight', 'once or twice a week', to 'almost every day'. The first five questions investigated discrimination at the school. They included how often the respondents "feel threatened or bullied by other pupils", 'see other pupils being threatened or bullied', 'hear racist insults used around school', '(are) upset by racist insults', and '(are) upset by name calling'. The next seven questions invited the respondents to report the occurrence frequency of the problems in various locations. These included 'on the bus to school', 'walking to school', 'in the school playground or open space', 'in classroom', 'in outdoor lesson', 'in corridor', and 'in toilets'. A school problem scale will be constructed by summing up the score of each of the questions. A higher score will reflect bigger and higher frequency of school problems.

Section I evaluated personal events and their desirability of effect to the respondents. There were nineteen questions in this section. Seventeen of them were about life events and another two were on discussions of the problems with people. For the life event questions, respondents were first asked to indicate if the event happened to them last year, and what was the effect on their work if it did happen. The respondents were to choose from 'none', 'moderate', 'bad', or 'very bad' effect to their work if the events liked 'moved home', 'road accident', 'illness', 'nightmare', or 'death of a friend' did happen. The last two probed respondents to show if they had discussed the events with their teachers or any other person. A stressful life event scale will be constructed using the seventeen life event questions. To facilitate the understanding of the effect of the events, two sub-scales will be constructed under the stressful life event scale. One of the sub-scales is from responses of "no event happened last year". This sub-scale shall be named as "eventless subscale". The

second sub-scale made use of the responses in the 'effect on work' and shall be named "perceived event effect subscale". The higher the score in the perceived event effect subscale, the greater the adverse effect to one's work would be. Construction of the two sub-scales would be on a summation of the responses in each of the questions.

Section J was devoted to questions about friends. There were fourteen of them. The first two questions asked the number of close friends one have and the number of friends who spoke English in the Vancouver sample, and Mandarin in the Hong Kong and Macao sample. The next twelve questions attempted to explore their friends' response to different situations. They will be formed into a 'friend's general attitude' scale. Respondents were asked how their friends would think if someone 'stayed in for an evening to do homework', 'got a good mark in a school test', 'was rude to a teachers', or 'smoked a cigarette'. They were to choose from a set of five answers ranging from 'it was very bad', 'it was good', 'no opinion', 'it should not happen', to 'it was very bad'. After reversing scores assigned to some negative questions like 'was rude to a teacher', a higher score in this 'friend's general attitude' scale would indicate a positive attitude among friends.

Section K was used to draw information on four school subjects. Respondents were asked to indicate if they 'strongly disagree', 'tend to disagree', 'neither agree nor disagree', 'tend to agree', 'strongly agree' with the questions on mathematics, English, Social Studies and Chinese.

There were seven questions on mathematics in the Vancouver questionnaire and nine questions in the Hong Kong/Macao questionnaire. The two extra questions in the Hong Kong/Macao survey included "I always find Mathematics in Cantonese and complicated Chinese characters rather difficult" and 'I always don't understand Maths in Cantonese and complicated Chinese characters'. The other seven questions in the three sets of questionnaire were 'I find it hard to get down to work in Maths', 'I look forward to Maths lessons', 'I like doing work in Maths', 'I think a lot about Maths, even in my spare time', 'I generally find Maths lessons rather easy', 'I am often lost and confused in maths', 'My maths result in school is generally good'. The dimensions of four of the nine questions in the Hong Kong and Macao questionnaire

were reversibly coded. The questions were: "I find it hard to get down to work in Mathematics", "I always find Mathematics in Cantonese and complicated Chinese characters rather difficult", "I am often lost and confused in Mathematics" and "I always don't understand Mathematics in Cantonese and complicated Chinese characters". Questions 1 and 6, which corresponded to questions 1 and 7 in the Hong Kong and Macao questionnaire, were recorded in the Vancouver part. Adding up the answers in the sub-section composed a perceived subject performance scale. A higher score in this perceived Mathematics scale indicated a more positive orientation toward the subject.

There were the same number of seven questions on English in the Vancouver, and Hong Kong/Macao questionnaire. The questions were very similar to those of Mathematics except the subject name. Question 1 and 6 were recoded. Again, a perceived English performance scale was formulated and a higher score indicated a more positive perception to the subject.

Two extra questions, similar to those in the Mathematics part, were added to the measure of Social Studies. Beside the seven questions, there were two other questions probing on Cantonese and complicated Chinese character in the Hong Kong/Macao questionnaire. The other seven questions, except the subject name, were identical to those in the Mathematics. There were four recoded questions in Social Studies. They were question 1, 2, 7 and 8. A higher score in this perceived Social Studies performance scale would refer to a better self-reported performance in the subject.

There were seven questions in the Vancouver sample on measuring foreign language performance. Eight questions were used in the Hong Kong/Macao sample. Foreign language in all samples referred to the subject of Chinese language to the new immigrant children. The seven questions in the Vancouver sample were identical to those found in the Mathematics. In the Hong Kong/Macao sample, on the other hand, one extra question was included: "I always find Chinese in Cantonese and complicated Chinese characters rather difficult" and the question "I am often lost and confused in this lesson" was modified to become "I am often lost and confused in

Chinese in Cantonese and complicated Chinese characters'. A higher score on the questions represented a higher perception on the performance of the subject.

The last section M was an open-ended question for comments by the respondents. Written opinions about the survey and the questionnaires were collected from some respondents and they would be used in subsequent analysis.

The second phase of questionnaire surveys was conducted to the same groups of respondents in Vancouver, Hong Kong/Macao. There were some modifications in the questionnaires in the second phase of surveys.

The questionnaires in this second phase consisted of six sections. All questions in the sections were identical to those found in phase one, except that not every questions were asked in the section. In section A, only the name, sex, name of school and grade were asked. Only the first six questions in the questionnaire of phase one were used in section C. There were again only six questions in section E. These included: "How often do you borrow books from the school library?" "How often do you borrow books from some other library?" "How often does someone at home ask you what you've been learning at school?" and three questions on hours during weekday evenings doing leisure reading, watching TV, and doing homework. The K sections were identical questions on the four subjects of studies. The sections were:

- A. About yourself
- B. About your school
- C. About your future
- E. About you and your family
- K. About lessons
- L. Final comments

The second survey on the schools adopted a shortened version of the first survey. Only basic demographic data, such as name, sex and school grade, in section A was asked. Section B was again used in the second survey but only part of section C and section E were included in the second questionnaire. Sections D, F to J were

not asked. Questions on the four subjects on section K were, however, included in the second questionnaire.

#### 4.2.4 Methods of Analysis

This study explored the relationships of the variables under studied in three levels. The first level was a descriptive statistics of the constructed scales. Statistical technique used to test the research hypotheses was then followed by the Pearson's product moment correlation. This was followed by multivariate analysis adopting stepwise regression analysis to investigate the effect of the causal factors upon the school performance of the immigrant children in the three cities. ANOVA was also employed to assess the statistical difference in educational performance between cities and groups.

## Chapter 5 Basic Findings and Scale Construction

### 5.1 The First Survey

#### 5.1.1 General Profile of Respondents in the First Survey

##### 5.1.1.1 An Overview of Respondents in the Three Cities

This section describes the respondents' profiles of the first survey in the three cities. Basic demographic information found in the first section of the questionnaires is reported. Demographic characteristics in the individual city will be illustrated in section 5.1.1.2 to 5.1.1.4.

A total of 167 newly arrived pupils were surveyed in the first survey. 91 of them were males and 76 were females. Although the cases in the samples were not randomly selected, the gender in the schools was rather evenly distributed. For example, there was about 53 per cent of male and 47 per cent of female cases in the Hong Kong or Macao sample. Male pupils comprised of 54 per cent of the total surveyed population, whereas female was 46 per cent. Table 5.1 illustrates the gender distribution of the sampled schools in the three cities.

Table 5.1

Number of Male and Female Participants in the Three Cities in the First Survey

City	Male (%)	Female (%)	Total (%)
Hong Kong school	32 (53)	28 (47)	60 (100)
Macao two schools			
Private	28 (64)	16 (36)	44 (100)
Government	19 (44)	24 (56)	43 (100)
Total	47 (54)	40 (46)	87 (100)
Vancouver school	12 (60)	8 (40)	20 (100)
Total (%)	91 (54)	76 (46)	167 (100)

Question four in the questionnaire was about year groups at school. Respondents came from four year-groups in the schools. There were 7, 36, 45, and 59 respondents respectively from primary three to primary six in the Hong Kong and Macao schools. The largest group of respondents was found in primary six. There were 59 of them, representing about 40 per cent of the sample population. The second largest group came from primary five. There were forty-five of them and they accounted for 31 per cent of pupils in the selected Hong Kong and Macao schools. Thirty-six respondents were from primary four and seven from primary three. The two levels represented about 24 per cent and 5 per cent of the sample population. Table 5.2 shows the number of male and female and year group distribution of the Hong Kong and Macao schools in the first survey.

Table 5.2

Number of Male and Female Participants by Class in the Hong Kong and Macao Schools in the First Survey

		Age	Male (%)	Female (%)	Total (%)
Hong Kong school	Primary 3	9	3 (43)	4 (57)	7 (100)
	Primary 4	10	12 (92)	1 (8)	13 (100)
	Primary 5	11	5 (36)	9 (64)	14 (100)
	Primary 6	12	12 (46)	14 (54)	26 (100)
Macao school					
Private School	Primary 3	9	0 (0)	0 (0)	0 (100)
	Primary 4	10	14 (61)	9 (39)	23 (100)
	Primary 5	11	8 (57)	6 (43)	14 (100)
	Primary 6	12	6 (86)	1 (14)	7 (100)
Government School	Primary 3	9	0 (0)	0 (0)	0 (100)
	Primary 4	10	0 (0)	0 (0)	0 (100)
	Primary 5	11	9 (53)	8 (47)	17 (100)
	Primary 6	12	10 (39)	16 (61)	26 (100)
Total (%)			79 (54)	68 (46)	147 (100)

Respondents in the Vancouver survey came from students studying Chinese language in a tutorial school. They were from different year-groups because of the different school system in relation to those found in Hong Kong and Macao, and also because of their admission to the Chinese language classes based on their level of proficiency of the language. The respondents in the Vancouver sample were from year-groups ranged from beginner to grade nine. Table 5.3 reveals the details.

Table 5.3

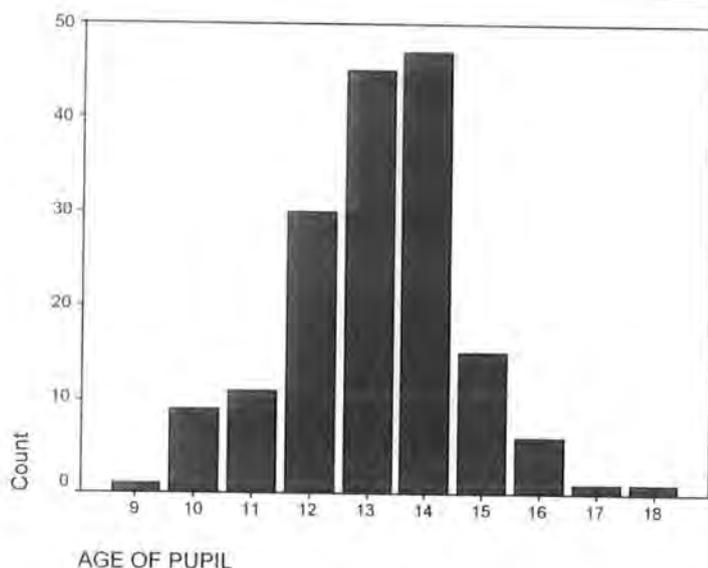
Number of Male and Female Participants by Class in Vancouver in the First Survey

	Age	Male (%)	Female (%)	Total (%)
Grade Beginner	9	2 (100)	0	2 (100)
Grade 3	10	2 (67)	1 (33)	3 (100)
Grade 4	11	1 (33)	2 (67)	3 (100)
Grade 5	12	2 (100)	0	2 (100)
Grade 6	13	2 (100)	0	2 (100)
Grade 8	15	1 (25)	3 (75)	4 (100)
Grade 9	16	2 (50)	2 (50)	4 (100)
Total (%)		12 (60)	8 (40)	20 (100)

Question five of section A in the questionnaires asked about year group of the respondents. Graph 5.1 shows the distribution. The age groups in the three cities were from nine years old to 18 years old. The largest single group, about 28 per cent of the total, was found in the age of 14. Details of age distribution can be seen in Table 5.4 of the Appendix A.

Figure 5.1

Age Distribution of Respondents in the Three Cities of the First Survey (n = 167)



The following three sections are devoted to descriptions of data in the three cities. The Hong Kong sample will be illustrated first, followed by Macao and Vancouver. The data were from the first section of the questionnaire at the first survey. The section included questions on demographic characteristics and questions on their admission examinations to the school.

#### 5.1.1.2 Respondents in the Hong Kong Survey

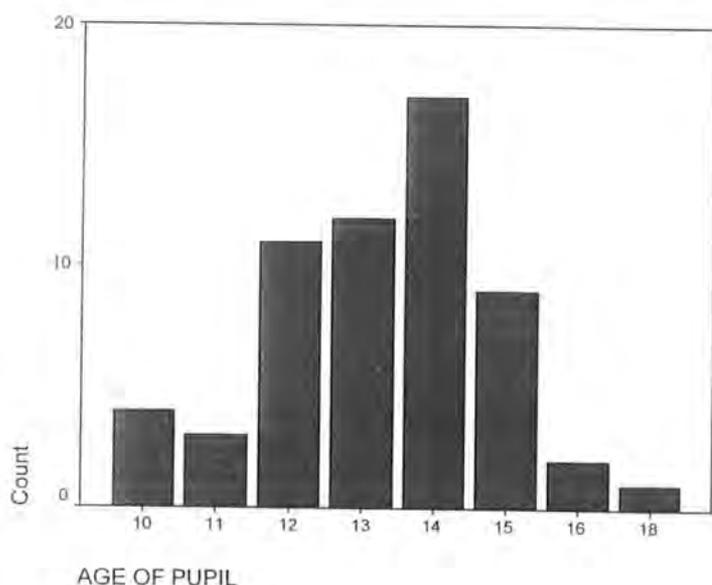
Sixty newly arrived pupils participated at the first phase of the Hong Kong school survey. There were 32 male and 28 female pupils in the first phase of survey in the selected Hong Kong school. Among all the newly arrived pupils in the sample, nine reported they had stayed in the school for one year or less. Another fifteen indicated they had been in the school for two years. Comparatively, most had been in the school for more than two years. Thirty-three pupils, or 55 per cent, reported that they were in the school for three years or more.

Theoretically, all new immigrants pupils in Hong Kong should have attended more than one school before their existing one. However, 12 among the valid 57 pupils claimed to have attended no school before. Besides these 12 pupils, 39 pupils had been attended at least one school before the present one. Five answered that they had been to two schools before and one replied to have attended three schools. Nine of the pupils did not answer.

The age groups spanned from 10 to 18 in this Hong Kong sample. Four of the pupils aged 10 and one aged 18. 17 of them were in the modal age of 14, accounting for 28.8 per cent of the group. The second largest age group came from age 13. There were 12 of them. Another 11 of them were 12 years old, and there were nine pupils aged 15 in the Hong Kong sample. One pupil did not disclose his/her age. Graph 5.2 shows the distributions.

Figure 5.2

Age Distribution of Respondents in Hong Kong of the First Survey (n = 59)



The newly arrived children were asked to indicate their year of stay in Hong Kong. About 42 per cent or 25 of them reported they had been in Hong Kong for three years. The next largest group, 30 per cent or 20 of them, was in Hong Kong for

four years or more. Nine of the pupils had been in the territory for less than one year, and five had been for two years.

The children were either in kindergarten or primary class in Mainland China before coming to Hong Kong. Most, or 17 of them, were in primary three in Mainland China schools. The second largest groups were found in primary two and primary five. There were 9 pupils in each class.

The newly arrived children were admitted to different school year in Hong Kong. As a result of the different school system and curriculum between Mainland China and Hong Kong, the newly arrived children were seldom placed in school year corresponding to what they had been in Mainland China. A question was thus used to prompt the first Hong Kong school grade of the immigrant pupils. Fourteen of the children reported to be placed in primary one and 19 in primary three when they first arrived Hong Kong. These two groups accounted for over 54 per cent of the total number of pupils in the sample. There were also 13 and 11 pupils in primary two and primary four correspondingly.

The newly arrived children would also be asked to join a school class that they did not like to. In a question taping the acceptance of the school level, 28 out of the 60 replied that the school level was not their desired one. Thirty-two of them, or 53 per cent indicated the level was what they wanted to have.

Some schools would invite the new pupils to take an entrance examination before placing them in corresponding school class. In this study of newly arrived children in Hong Kong, thirty-seven of the 60 pupils, representing over two-third of the group, had taken some forms of examination before their school class placement.

Among the 37 who had taken entrance assessment, thirty-five had a Chinese test; and 28 had taken both mathematics and English test. Two replied they had also been assessed in subjects other than Chinese, English and Mathematics.

### 5.1.1.3 Respondents in the Macao Survey

Two schools in Macao were invited to participate in this study. A total of 87 newly arrived pupils in Macao answered the questionnaire. Forty-four of the pupils came from a private Chinese school and the next 43 came from a government Chinese and Portuguese school.

There were 47 male and 40 female pupils in the Macao sample. The 87 pupils were rather evenly distributed in three school years. Twenty-three of them were found in primary four, while 31 in primary five and 33 in primary six.

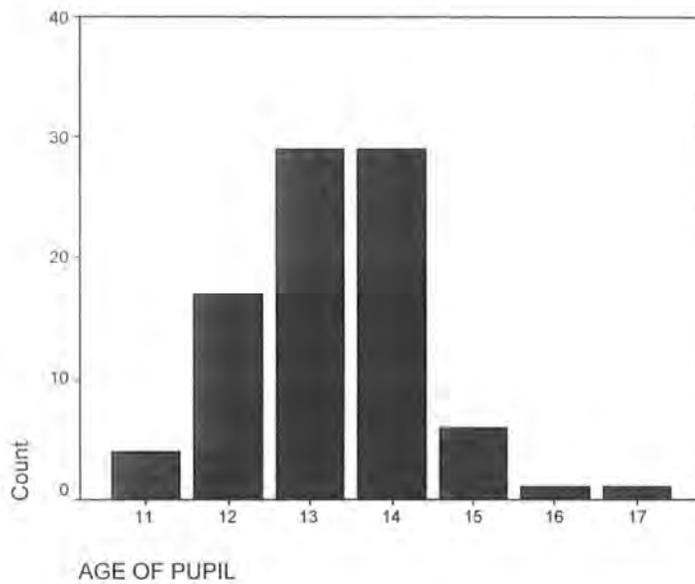
Among all the newly arrived pupils in the Macao sample, twenty-nine had stayed in the school for one year or less. A majority, however, had been in the school for two years. There were 34 of them, representing over 39 per cent of the total cases. Another 24 indicated they had been in the school for three years or more.

Three pupils among the valid 87 pupils claimed to have attended no school before. Fifty-six of the 87 pupils or over 67 per cent had been to one school before they joined the present one. Nineteen of the pupils had been to two schools and seven had attended three schools previously. Two in the group indicated they had studied in four or more schools formerly.

Pupils in the Macao sample aged from 11 to 17. There were four pupils from the youngest age cohort and one in either of the 16 or 17 age group. Most pupils were found in age 13 or 14. Both groups had 29 pupils, each accounting for 33 per cent of the Macao sample population. Graph 5.3 shows the distribution details.

Figure 5.3

Age Distribution of Respondents in Macao of the First Survey (n = 87)



Resembling the Hong Kong sample, the newly arrived children were asked to indicate their year of stay in Macao. Fourteen per cent or 12 of them reported they had been in Macao for less than one year. Relatively, most pupils had been in Macao for two or three years. Thirty-seven pupils, or 43 per cent had been in Macao for two years; whereas 31 pupils or 36 per cent for three years. There were six of them who had been in Macao for four years or more. One pupil did not give answer to the question.

The children were either pupils in kindergarten or primary classes in Mainland China before moving to Macao. Among the 87 pupils in this study, most, or 28 of them, were in primary five in Mainland China schools. The second largest group was found in primary four. Twenty-seven pupils were in such school level before they migrated to Macao.

A majority of the pupils were either admitted to primary four or primary three when they first arrived Macao. The two school grades accounted for about 70 per

cent of the total sampled pupils. Eighteen pupils were admitted to primary five, four to primary one and three to primary six.

Of the surveyed pupils in Macao, about 56 per cent or 49 of them replied they entered a desired grade in the Macao school. About 42 per cent, or 37 answered that they had been assigned to a school grade that they did not like to when they first arrived Macao.

Schools in Macao, like those in Hong Kong, would invite the new pupils to take an entrance examination before placing them in corresponding school level. Fifty out of the 87 took an entrance examination, representing about 57 per cent of the total. Thirty-seven Macao pupils did not have any placement or entrance examination.

Among the 50 who had taken entrance assessment, 47 had a Chinese test; 45 had a Mathematics test, and 4 had an English test. One of them said he/she had also been assessed in subjects other than the three.

#### 5.1.1.4 Respondents in the Vancouver Survey

There were 20 pupils participating in the first Vancouver survey. Twelve of the pupils were males and eight were females. All pupils were selected from a Chinese language school in the city of Richmond. They were all full-time students studying in schools under the administration of the Richmond School Board.

Many of the pupils were new to their day schools. Six of them replied that they had been in the school for one year, while five had been for two years. There were, however, seven of them who had been in the school for four years, and one for five years or more.

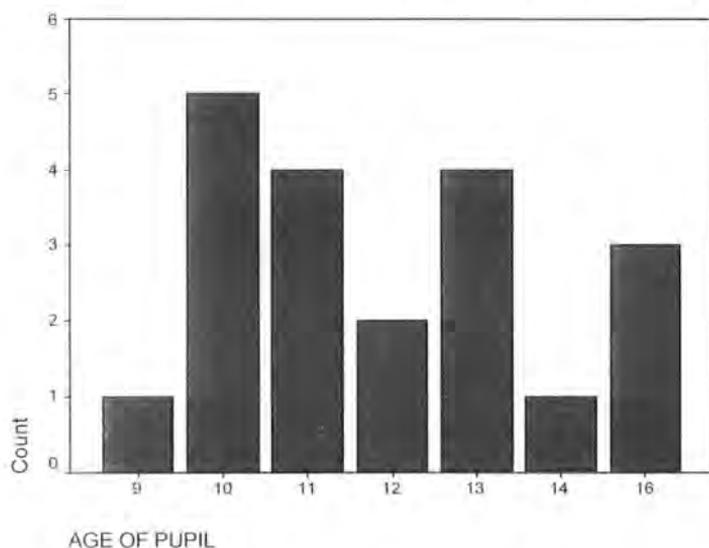
When asking whether they had been studying in other elementary or high school, five answered none. While seven said they had studied in one school, three respectively indicated they had been in two or three schools before. One of the pupils

had changed school more frequently than the others. He/she had been in four or more schools previously. One pupil did not answer this question.

Pupils in this Vancouver sample were from 9 to 16 years of age. A majority of them were found in the age groups of 10, 11 and 13. One of the pupils aged nine and there were three of them in the age group of 16. Graph 5.4 has the details.

Figure 5.4

Age Distribution of Respondents in Vancouver of the First Survey (n = 20)



Among the 20 pupils, 12 answered they had been immigrated to Canada for four years of more. The other eight pupils were either in Canada for less than one year to three years.

The pupils in the group came to Canada when they were young. Nine of them were in kindergarten before moving to Canada. One of them was in grade one before the move and three were in grade two. Another two were in their grade three and four in their grade four before they were uprooted to the Maple land. One was in his/her senior elementary school year; grade six, before the move.

Immigrant children to Vancouver might join different school level, as required by the respective school or school board. Of the 20 pupils in the Vancouver sample, seven of them started their schooling in Canada in the kindergarten level. While three

began their schooling in grade one, one were in grade two. Another five pupils were admitted to grade three when they first came to Canada. One pupil respectively was in grade four or grade five, and two were in grade six.

The Vancouver sample was not asked about their admission examination because of different school system in the province of British Columbia. New immigrant children to the province were usually asked to sit in a test to determine their level of English proficiency. The municipals' school boards conducted the test and pupils were then allocated to different English as Second Language (ESL) classes in their school to satisfy the language requirement for graduation. There are four levels of English proficiency requirement for the new immigrant children, and it could take up to a year or more to complete one of the levels.

#### 5.1.2 Educational Performance of Young Immigrants in the First Survey

This part is devoted to a description of section K in the questionnaire. Section K asked respondents of their self-evaluation on four school subjects: Mathematics, English, Social Studies, and Chinese. All four subjects are core curriculum in primary school in Hong Kong and Macao. In Vancouver elementary and junior secondary/high schools, all three subjects of Mathematics, English, and Social Studies are core subjects. Foreign language, like Chinese, on the other hand, is a selective. The self-evaluations were used to reflect the school performance of the immigrant children in this study.

The individual city sample in an order of Hong Kong, Macao and Vancouver will first be reported. It is then followed by an overview of the performance of the immigrant children in the three cities.

It is useful to construct multi-item scales to avoid cumbersome descriptions of individual measures in the four subjects. A multi-item scale will also promote the reliability and representativeness of the questions. Questions in the four subjects were summed and divided by the total numbers of question to draw their mean and standard deviation. The new composite scale of each of the four subjects was scored in a five-

point Likert-type scale, with 1 being “strongly disagree” and 5 “strongly agree”. A higher score represented a more positive orientation to the subject.

There is error in every measurement and the extent to which a measure is consistent needs special attention. (Fitz-Gibbon, 1987, p. 106) The scales of the four subjects were therefore subject to a number of statistical tests to examine their characteristics. Bearing this, Cronbach’s Alpha test was adopted to test the scales’ reliability. Reliability, following Carmines and Zellers (1979), is a concern to any measuring procedures that could yield identical results on repeated trials. In other words, a reliable measure refers to a high degree of consistent measurement. Besides Cronbach’s test, a simple correlation analysis was also used to reveal the representativeness of the questions upon the individual scale.

#### 5.1.2.1 Educational Performance in the First Survey of Young Immigrant in Hong Kong

Except English, the Hong Kong respondents reported an above average rating on other three subjects of study. The three subjects were Mathematics, Social Studies and Chinese, which all had a mean of above three out of a total of five. Higher mean indicated that respondents were likely to “look forward to Maths lessons”, “think a lot about Social Studies, even in their spare time”, or “find Chinese rather easy”. The mean for Mathematics was 3.33, Social Studies was 3.51, and Chinese was 3.49.

Comparatively, respondents tended to disagree with questions in the subject of English. The mean of the subject was below average. It had a mean of 2.74. In other word, respondents would be likely to “find hard to get down to work in English”, and likely to disagree to the statement that he/she “find English rather easy”. Table 5.5 in Appendix A shows the details.

All four-subject scales ascribed a reasonably high level of reliability under the Cronbach’s alpha test. Mathematics ascribed the highest coefficient of all four subjects. It achieved an alpha of 0.81. This was followed by the alpha of 0.76 in

English. While Chinese had an alpha of 0.61, Social Studies obtained the lowest of all. It had an alpha of 0.55. Table 5.6 in Appendix A shows the details.

All but one of the questions, "My Chinese result in school is generally good", correlated significantly with the constructed scales. Table 5.7 to Table 5.10 in Appendix A shows the correlations of questions and the constructed scale.

#### 5.1.2.2 Educational Performance in the First Survey of Young Immigrants in Macao

Like the school performance of Hong Kong pupils, the mean, reliability test of the four subject indices will be reported in this section.

All means of the four subjects in the Macao sample were over 3, with the highest being found in Mathematics. The subject had a mean of 3.43, indicating a positive answer on the questions. Respondents, for example, inclined to report that they agreed to the questions such as "I look forward to Mathematics lessons", or "I like doing work in Mathematics". The second highest mean was found in the subject of Social Studies. It had a mean of 3.40. Like the Hong Kong sample, English ascribed the lowest mean among the four subjects. The subject had a mean of 3.10, which was higher than the mean of 2.74 in Hong Kong. The difference of means between Hong Kong and Macao showed a stronger desire to learn English in the Macao groups. Table 5.11 in Appendix A shows the mean and standard deviations of the four indices from the Macao sample.

Following the same steps in constructing a composite scale of the four subjects in the Hong Kong sample, the four subject scales in the Macao sample were also tested using the Cronbach's reliability Alpha.

All four Macao scales achieved a reasonably high Cronbach's reliability coefficient, indicating a rather stable measurement of the indices. As shown in Table 5.12 in Appendix A, English obtained the highest Alpha of 0.84. Both subjects of

Mathematics and Chinese obtained an Alpha coefficient of 0.77, and Social studies had an alpha of 0.78.

A simple bivariate correlation was computed on the four scales. The correlation matrix of the four subjects can be found in the following Tables 5.13 to Table 5.16 in Appendix A.

As shown in Table 5.13, all questions were found to have a positive and significant correlation with the constructed composite Maths Scale. This indicated a good representativeness of the questions to the constructed scale. Question six or "I generally find Maths rather easy" alone accounted for the greatest proportion of explained variance in the Maths Scale. The question alone explained 62 per cent of the total variance of the scale. Question two or "I always find Mathematics in Cantonese and complicated Chinese characters rather difficult" has the weakest correlation with the Scale. It had a correlation coefficient of 0.35 ( $n=83$ ,  $p < 0.01$ ). The item alone explained 12 per cent of variance of the scale. (Fitz-Gibbon, 1987, p.82) Correlations of the scale and all questions were significant at the 0.01 level.

The English Scale in Table 5.14 also ascribed a good representation of the seven questions. All questions had a significant and strong positive correlation with the scale. The strongest correlation was found between questions two "I look forward to English lessons" and the scale. It had a coefficient of 0.79 ( $n=84$ ,  $p < 0.01$ ) and accounted for 62 per cent of variance of the scale alone. The weakest correlation was from question one "I find it hard to get down to work in English". It had a correlation coefficient of 0.66. The question alone explained 44 per cent of variance in the English Scale. Correlations of the English Scale and the questions were all significant at the 0.01 level.

The Social Studies Scale in the Macao sample consisted of nine questions. Again, all questions were found positively and significantly correlated with the composite scale in Table 5.15. The strongest correlation with the scale was found in question six on "I generally find Social Studies lessons rather easy". The two had a correlation of 0.75 ( $n=85$ ,  $p < 0.01$ ) and the question alone accounted for 56 per cent

of the total variance of the scale. Question eight, or “I always don’t understand Social Studies in Cantonese and complicated Chinese characters” had the weakest but still significant correlation with the scale. The correlation of the question and the scale was 0.34 ( $n=85$ ,  $p < 0.01$ ). All other questions and the scale had correlations significant at 0.01 level.

The Chinese Scale composed of eight questions. As shown in Table 5.16, all questions and the scale were significantly correlated at 0.01 level. The strongest correlation was between question four “I like doing Chinese exercise” and the scale. The two had a correlation coefficient of 0.80 ( $n=83$ ,  $p < 0.01$ ) Question four explained 64 per cent of the variance of the scale. The weakest correlation of the scale was found in question seven, “I always don’t understand Chinese in Cantonese and complicated Chinese characters”. It had a correlation coefficient of 0.42 ( $n=83$ ,  $p < 0.01$ ).

#### 5.1.2.3 Educational Performance in the First Survey of Young Immigrants in Vancouver

Twenty immigrant pupils were surveyed in the first survey in Vancouver. Similar to the Hong Kong and Macao questionnaires, pupils in Vancouver were asked to indicate their performance in four subjects: Mathematics, English, Science, and Chinese. This section is to report the means and reliability tests of the subject indices. As shown in Table 5.17 in Appendix A, all Vancouver subject scales achieved a mean above 3, with the highest found in the subject of Mathematics. The respondents in the Vancouver sample had indicated an above average rating on their Mathematics performance. They tended to agree with the statement “I look forward to Mathematics lessons” or “My Mathematics result in school is generally good”. Comparatively, the respondents did less well in Science or Chinese.

A test of reliability using Cronbach’s Alpha also demonstrated a stable measure of the four subject scales. Except Science that had an Alpha of 0.52 before deleting question six, “I am of the lost and confused in Science”, all other three indices had a Cronbach’s Alpha over 0.7. Chinese had the highest Alpha of 0.85,

followed by 0.82 in English. Table 5.18 in Appendix A shows the reliability Alpha and Table 5.19 to 5.22 in Appendix A show the correlation of questions in the subject indices.

There were seven questions in all four scales except Science where only six questions were adopted. Question six was deleted because of its adverse effect on the reliability Alpha.

As shown in Table 5.19, all questions had a significant correlation with the composite Mathematics scale. The highest correlation of the scale was found with the question, "I generally find Mathematics lessons rather easy." The two had a correlation of 0.69 ( $n=20$ ,  $p < 0.01$ ). The question alone accounted for 48 per cent of the scale variance. The question, "I look forward to Mathematics lessons" had the weakest association with the composite scale. It had a correlation of 0.46 ( $n=20$ ,  $p < 0.05$ ) and alone explained 21 per cent of the scale variance.

The English composite scale also consisted of seven questions. All questions were found to have significant and high correlation with the composite scale. The reversed question one of "I find it hard to get down to work in English" achieved the highest correlation of all. It had a coefficient of 0.86 ( $n=20$ ,  $P < 0.01$ ) and an explained variance of 74 per cent of the scale alone. The question, "My English result in school is generally good" had the weakest association with the composite scale. The two had a correlation coefficient of 0.52 ( $n=20$ ,  $P < 0.05$ ). Table 5.20 in Appendix A has the details.

The Science scale consisted of six, instead of seven questions. Question six was deleted because of its weak association with the scale. All six questions were significantly associated with the Science scale. The question, "I like doing work in Science" obtained the highest association, with a coefficient of 0.73 ( $n=20$ ,  $P < 0.05$ ). The weakest association with the scale was found in the reversed question one. The two had a coefficient of 0.49 ( $N=20$ ,  $P < 0.05$ ), representing an explained variance of 24 per cent by the question alone. Table 5.21 in Appendix A shows the details.

The Chinese scale was made up of seven questions. All questions except question four in Table 5.22 in Appendix A, “I think a lot about Chinese, even in my spare time”, were significantly and highly associated with the composite Chinese scale. The question, “I look forward to Chinese lessons” obtained the highest correlation with the scale. The Pearson Correlation of the two was 0.87 ( $n=20$ ,  $P < 0.01$ ). Question four had a correlation of 0.37 ( $n=20$ ,  $p > 0.05$ ) with the scale.

#### 5.1.2.4 An Overview of the First Survey on Educational Performance of Young Immigrant in Hong Kong, Macao and Vancouver

This part will provide an overview of the four subjects in all three cities. Answers of the four subjects from cases in the three cities were merged into a unique file. Following the report format in individual city, the individual scale was tested for subsequent use.

All four subjects were rated above the average score in the three-city sample. Social Studies/Science ranked the highest among the four means. The subject had a mean of 3.44 and a standard deviation of 0.51, indicating that respondents inclined to agree with the questions such as, “I look forward to Social Science/Science lessons”, or “I generally find Social Science/Science lessons rather easy. It also showed that respondents would agree to have obtained a good result in the subject. The second highest mean was found in the subject of Mathematics. It had a mean of 3.40 and a standard deviation of 0.64. Chinese ranked after Mathematics and scored a mean of 3.36 and a standard deviation of 0.55. English scored the lowest mean in the four subjects. It had a mean of 3.03 and a standard deviation of 0.76. Respondents were somewhat agree or disagree with the questions about English. They showed an irresolute view on the subject. The respondents, for example, were unable to show if they agree or disagree with their interest to attend English lessons, they were not sure if they understood or did not understand English.

Table 5.23 in Appendix A outlines the means and standard deviations of the subject scales from the three cities.

The four subjects were again subject to a reliability test and the results were depicted in Table 5.24 in Appendix A. All subject scales of the three-city sample had achieved a reasonably high reliability coefficient of 0.70 or above. Social Science/Science scale had the lowest Alpha of 0.70 while English had the highest of 0.83. The high reliability coefficients demonstrated a considerable internal consistency and stability of the constructed scales.

A bivariate correlation was computed on the questions and the scale to test the question representativeness upon the constructed composite subject scale. Table 5.25 to 5.28 in Appendix A show the four subject scales. All scale items demonstrated a high and significant correlation with the respective scale, indicating a high representation of the items to the constructed scales.

## 5.2 The Second Survey

The same but substantially edited questionnaire was used in the second survey in this study of immigrant children in the city of Hong Kong, Macao and Vancouver. Instead of getting repeated measures in some of the sections, such as birth date and language(s) used at home, the participating pupils were asked to provide their responses to modified sections in A (basic demographic information), B (about your school), C (about your future), E (about you and your family), and K (about your subjects). The following two sections are responses on general profile of respondents and school performance from the second survey.

### 5.2.1 General Profile of Respondents in the Second Survey

This section is to provide a general description of the number and gender distribution of the respondents in the three cities.

Out of the 167 respondents in the first survey, 149 of them participated again in the second one. A total of 78 out of 91 male pupils were re-contacted in the second investigation, accounting for 52.3 per cent of the total surveyed population in the three cities. Seventy-one, instead of the original 76, female respondents participated in

the second survey. The female group accounted for 47.7 per cent of the total surveyed population. In terms of individual city under studied in this second survey, there were 25 males (or 47.2 per cent) and 28 females (52.8 per cent) in the Hong Kong school sample, and the same number of 47 males (54 per cent) and 40 females (46 per cent) in the two Macao schools. In Vancouver, six male and three female pupils were re-surveyed. Table 5.29 illustrates the gender distribution of the sampled schools in the second survey.

Table 5.29

Number of Male and Female Participants in the Three Cities in the Second Survey

City	Male (%)	Female (%)	Total (%)
Hong Kong school	25 (47)	28 (53)	53 (100)
Macao two schools			
Private	28 (64)	16 (36)	44 (100)
Government	19 (44)	24 (56)	43 (100)
Vancouver school	6 (67)	3 (33)	9 (100)
Total (%)	78 (52)	71 (48)	149 (100)

All, except three from primary four and four pupils from primary five in the Hong Kong school participated in the second survey. Table 5.30 shows the details.

Table 5.30

Number of Male and Female Participants by Class in the Hong Kong and Macao Schools in the Second Survey

		Age	Male (%)	Female (%)	Total (%)
Hong Kong school	Primary 3	9	3 (43)	4 (57)	7 (100)
	Primary 4	10	9 (90)	1 (10)	10 (100)
	Primary 5	11	1 (10)	9 (90)	10 (100)
	Primary 6	12	12 (46)	14 (54)	26 (100)
Macao school					
Private School	Primary 3	9	0 (0)	0 (0)	0 (100)
	Primary 4	10	14 (61)	9 (39)	23 (100)
	Primary 5	11	8 (57)	6 (43)	14 (100)
	Primary 6	12	6 (94)	1 (6)	7 (100)
Government School	Primary 3	9	0 (0)	0 (0)	0 (100)
	Primary 4	10	0 (0)	0 (0)	0 (100)
	Primary 5	11	9 (53)	8 (47)	17 (100)
	Primary 6	12	10 (39)	16 (61)	26 (100)
Total (%)			72 (51)	68 (49)	140 (100)

Only nine out of 20 pupils were re-surveyed in the Vancouver survey. And because of survey conducted after the summer-break, pupils experienced a change of school grade in the Vancouver sample. As shown in Table 5.31, two male pupils were found in grade 7, 8 and 9, and one female pupil in grade 5, 9 and 12

Table 5.31

Number of Male and Female Participants by Class in the Vancouver school in the Second Survey

	Age	Male (%)	Female (%)	Total (%)
Grade 5	12	0	1 (100)	1 (100)
Grade 7	14	2 (100)	0	2 (100)
Grade 8	15	2 (100)	0	2 (100)
Grade 9	16	2 (67)	1 (33)	3 (100)
Grade 12	19	0	1 (100)	1 (100)

5.2.2 Educational Performance of Young Immigrants in the Second Survey

This part is devoted to a description of the section K in the questionnaire. Section K asked respondents of their self-evaluation on four school subjects: Mathematics, English, Social Studies, and Chinese. The self-evaluations were used to reflect the school performance of the immigrant children in this study.

The individual city sample in an order of Hong Kong, Macao and Vancouver will first be reported. It is then followed by an overview of a group performance of the immigrant children in the three cities.

Following the practice in the first survey, multi-item scales were constructed to represent the four subjects. Questions in the four subjects were summed and divided by the total numbers of question to draw their mean and standard deviation. The new composite scale of each of the four subjects was scored in a five-point Likert-type scale, with 1 being “strongly disagree” and 5 “strongly agree”. A higher score represented a more positive orientation to the subject.

5.2.2.1 Educational Performance in the Second Survey of Young Immigrant in Hong Kong

Again, all except English, respondents of the second survey in the Hong Kong sample reported an above average rating on their four subjects of study. The mean of Mathematics was 3.25 (3.33 in first survey), Social Studies was 3.62 (3.51), and

Chinese was 3.60 (3.49). The mean indicated that respondents were likely to “look forward to Maths lessons”, “think a lot about Social Studies, even in their spare time”, or “find Chinese rather easy”.

Comparatively, respondents tended to disagree with the questions in the subject of English. The mean of the subject was below average. It had a mean of 2.83 (2.74 in first survey) and a standard deviation of 0.69. The slightly below average of the subject indicated that the Hong Kong pupils were still “find hard to get down to work in English”, and likely to disagree to the statement that he/she “find English rather easy”. Table 5.32 of Appendix A shows the details of the means and standard deviation of the four subjects.

All four subjects in the Hong Kong sample in the second survey ascribed a Cronbach’s reliability coefficient of above 0.6. Mathematics again obtained the highest coefficient of all four subjects. It has an alpha of 0.85. This was followed by an alpha of 0.81 in English. Social studies had an alpha of 0.64, and Chinese had an alpha of 0.62. Table 5.33 in Appendix A shows the details.

All but one of the questions, “I look forward to Chinese lessons in Cantonese and complicated characters”, correlated significantly with their respective constructed scales. Table 5.34 to Table 5.37 in Appendix A show the correlations of questions and the constructed scale.

#### 5.2.2.2. Educational Performance in the Second Survey of Young Immigrants in Macao

Following the report format of school performance of Hong Kong pupils, the mean and reliability test of the four subjects of Macao immigrant pupils will be presented in this section.

All mean of the four subjects in the Macao sample were again over 3, with the highest being found in Social Studies. The subject had a mean of 3.66 and a standard deviation of 0.72. The second highest mean was found in Mathematics. It had a mean

of 3.55 and a standard deviation of 0.61. Like the Hong Kong sample, English again ascribed the lowest mean among the four subjects. The subject had a mean of 3.21 and a standard deviation of 0.81. The Macao group had a higher mean when compared to the Hong Kong group. The latter had a mean of 2.83 and a standard deviation of 0.69 in English in the second survey. Table 5.38 in Appendix A shows the mean and standard deviations of the four indices from the Macao sample.

Following the same steps in constructing a composite scale of the four subjects in the Hong Kong sample, the four subject scales in the Macao sample were also tested by the Cronbach's reliability Alpha.

All four Macao scales achieved a high Cronbach's reliability coefficient of above 0.80. Social Studies obtained the highest Alpha of 0.92, and English gained the second highest of 0.89. Chinese and Mathematics obtained 0.85 and 0.84 respectively. Table 5.39 in Appendix A depicts the details of the reliability test.

A simple bivariate correlation was computed on the four scales. The correlation matrix of the four subjects can be found in the following Tables 5.40 to Table 5.43 in Appendix A.

As shown in Table 5.40, all questions were found to have a positive and significant correlation with the constructed composite Mathematics Scale. Question nine on good result in Mathematics at school alone accounted for the greatest proportion of explained variance in the Mathematics Scale. The question explained 64 per cent of the total variance of the scale. Question five on thinking of the subject even in free time had the weakest but significant correlation with the Scale. It had a correlation coefficient of 0.51 ( $n = 84$ ,  $p < 0.01$ ). Correlations of the scale and all questions were significant at the 0.01 level.

The English Scale in Table 5.41 also ascribed a good representation from the seven questions. All questions had a significant and strong positive correlation with the scale. The strongest correlation was found between questions two and five "I look forward to English lessons", "I find English rather easy" and the scale. The two

questions both had a coefficient of 0.83 ( $n=87$ ,  $p < 0.01$ ) with the scale. The weakest correlation was from question three “I like doing work in English”. It had a correlation coefficient of 0.67 with the composite scale. Correlations of the English Scale and the questions were all significant at the 0.01 level.

The Social Studies Scale in the Macao sample consisted of nine questions. All questions were again positively and significantly correlated with the composite scale as shown in Table 5.42. The strongest correlation with the scale was found with question four “I think a lot about Social Science, even in my spare time”. The two had a correlation of 0.85 ( $n=87$ ,  $p < 0.01$ ). Question two on “difficult Social Studies because of Cantonese and complicated characters” in the second survey of the study had the weakest but still significant correlation with the scale. The correlation of the question and the scale was 0.67 ( $n=87$ ,  $p < 0.01$ ). All other questions and the scale had correlations significant at 0.01 level.

The Chinese Scale composed of eight questions. As shown in Table 5.43, all questions and the scale were significantly correlated at 0.01 level. The strongest correlation was found between the scale and question four “I like doing Chinese exercise”. The two had a correlation coefficient of 0.79 ( $n=83$ ,  $p < 0.01$ ). Question four alone explained 64 per cent of the variance of the scale. The weakest correlation of the scale was found with question one, “I find it hard to get down to work in Chinese”. It had a correlation coefficient of 0.63 ( $n=87$ ,  $p < 0.01$ ).

#### 5.2.2.3 Educational Performance in the Second Survey of Young Immigrants in Vancouver

Only nine immigrant pupils were surveyed in the second Vancouver survey. Table 5.44 in Appendix A shows the mean and standard deviation of the four subjects. The four subject scales of Vancouver sample all achieved a mean of above 3. The highest mean (4.00) was again found in Mathematics. The respondents in the survey indicated that they tended to agree with the statements “I look forward to Mathematics lessons” or “My Mathematics result in school is generally good”. The

mean in Chinese was relatively lower than the other three subjects of Mathematics, English and Science.

All four subjects in the second Vancouver survey demonstrated a stable reliability measure. Except Mathematics that had an Alpha of 0.68 after deleting question four, “I think a lot about Mathematics, even in my spare time”, all other three scales had a Cronbach’s Alpha over 0.90. Again, Chinese had the highest Alpha of 0.96, followed by 0.94 in Science and 0.93 in English. Table 5.45 in Appendix A shows the reliability Alphas.

Table 5.46 to Table 5.49 in Appendix A show the correlation of questions and the composite subject scales.

Table 5.46 in Appendix A shows the correlations of items in Mathematics. Six questions were used to compute the composite scale of Vancouver Mathematics scale. Question four was deleted because of its adverse effect on reliability test. Question one and two were significantly correlated with the composite scale. Both questions obtained a correlation coefficient of 0.81 ( $n=9$ ,  $p < 0.01$ ) with the scale. The other four items, however, did not achieve a significant correlation with the scale.

Table 5.47 in Appendix A is on correlation of the English subject and the scale. The English composite scale consisted of seven questions. Similar to result in the first survey, all questions were found to have significant and high correlation with the composite scale. The reversed question one of “I find it hard to get down to work in English” again obtained the highest correlation of all. It had a coefficient of 0.96 ( $n=9$ ,  $p < 0.01$ ). Question seven, or “My English result in school is generally good” had the weakest but still significant association with the composite scale. The two had a correlation coefficient of 0.69 ( $n=9$ ,  $p < 0.05$ ).

Table 5.48 in Appendix A shows the correlations of the Science subject items in the second Vancouver survey. Seven questions were used in this analysis. All seven questions were significantly associated with the Science scale. Question three “I like doing work in Science” obtained the highest coefficient of 0.96 ( $n=9$ ,  $p < 0.01$ ). The

weakest association with the scale was found in question two “I look forward to Science”. The two had a coefficient of 0.75 ( $N=9$ ,  $p < 0.05$ ).

Correlations in the Chinese scale are shown in Table 5.49. The scale was made up of seven questions. All questions were significantly and highly associated with the composite Chinese scale. The question, “I find it hard to get down to work in Chinese” obtained the highest correlation with the scale. The Pearson Correlation of the two was 0.98 ( $n=9$ ,  $p < 0.01$ ). Question seven “My Chinese result in school is generally good” had the weakest correlation of 0.83 ( $n=9$ ,  $p > 0.01$ ) with the scale.

#### 5.2.2.4 An Overview of the Second Survey on Educational Performance of Young Immigrants in Hong Kong, Macao and Vancouver

This section illustrates the group results of the four subjects in Hong Kong, Macao and Vancouver in the second survey.

All four subject composite scales scored above the average. As in the first survey, the subject of Science/Social Studies ranked the first in obtaining a mean of 3.65 and a standard deviation of 0.64. Respondents in the survey were found to show favourable preference to the subject. They found the subject easy and reported to have obtained a good result in it. Following Science/social Studies, the subject of Chinese scored a mean of 3.47 and a standard deviation of 0.59. Concomitant with the first survey, the subject of English scored the lowest mean among the four. The subject obtained a mean of 3.08 and a standard deviation of 0.79. Again, respondents in the second survey were somewhat indecisive in the questions on English.

Table 5.50 in Appendix A outlines the mean and standard deviations of the subjects from the three cities.

Table 5.51 shows the reliability coefficients of the four subjects. The four subject scales from the three cities again obtained a high reliability coefficient of 0.80 or above in the second survey. All four scales in the second survey had a higher reliability coefficient than the first survey. Mathematics, for example, had a

coefficient of 0.85 in the second survey, as compared to 0.78 in the first. English obtained the highest Alpha of 0.88 among the four in the second survey. Social Science/Science scale had an Alpha of 0.86 and Chinese had 0.80. The high coefficients provide internally consistent and stable scales for further tests.

After the reliability test, a bivariate correlation was computed on the questions and the scale to test the question representativeness upon the constructed composite subject scale. Table 5.52 to Table 5.55 in Appendix A show the details. All questions showed a high and significant correlation with the respective scale, demonstrating a high representation of the items to the constructed scales.

Table 5.52 is about the Mathematics scale. All individual items were again significantly and positively correlated with the Mathematics scale at 0.01 level. The question “I like doing work in Mathematics” had the stronger correlation with the scale. The two had a correlation coefficient of 0.79 ( $n=136$ ,  $p < 0.01$ ). This was followed by the question “I generally find mathematics lesson rather easy”, which had a coefficient of 0.76 ( $n=136$ ,  $p < 0.01$ ) with the composite Mathematics scale. The recoded question “I am often lost and confused in Mathematics in Cantonese and complicated Chinese characters” had the weakest correlation with the constructed scale. Correlation coefficient of the two was 0.50 ( $n=136$ ,  $p < 0.01$ ).

Table 5.53 is used to describe the English scale. All seven questions of the subject had a significant and positive correlation coefficient of above 0.70 with the constructed English scale. The questions “I look forward to English lesson” and “I generally find English lessons rather easy” obtained the stronger correlation with the scale. They both had a correlation coefficient of 0.81 ( $n=148$ ,  $p < 0.01$ ). The weakest association was found in question “I like doing work in English”. The correlation coefficient of the two was 0.72 ( $n=148$ ,  $p < 0.01$ ).

Table 5.54 shows the correlations of the nine questions and the Social Studies/Science scale. The strongest correlation with the scale was found in question “I like doing work in Social Studies/science”. The two obtained a coefficient of 0.78 ( $n=135$ ,  $p < 0.01$ ). The weakest correlation was with the recoded question “I find

Social Studies/Science in Cantonese difficult”. The coefficient between the question and the scale was 0.62 (n=135,  $p < 0.01$ ).

All eight questions in the Chinese scale from Table 5.55 were positively and significantly correlated at above 0.5 level. Similar to the first survey, the question of “I like doing work in Chinese lessons” had the strongest association with the scale. The two had a coefficient of 0.76 (n=134,  $p < 0.01$ ). The question “I generally find Chinese rather easy” obtained the second strongest association with a coefficient of 0.75 (n=134,  $p < 0.01$ ). The weakest association with the scale was found in recoded question “I look forward to Chinese lesson”. The two had a correlation coefficient of 0.52 (n=134,  $p < 0.01$ ).

All in all, questions in the respective scales of the four subjects demonstrated a substantially strong and positive association with the constructed scales. All four scales had also obtained a reasonably high reliability test result. The scales were to be used for further analysis.

### 5.3 Variables in the First and Second Survey

This part of chapter five is intended to provide an overview of all independent and dependent variables in the first and second survey. Means, standard deviations, ranges and the Cronbach’s alpha of the variables are categorised into a table for easy reference.

#### 5.3.1 The Independent and Educational Performance Variables in the First Survey

The independent variables in this study were grouped under four dimensions. They were: individual factor, family characteristic, school influence, and peer effect. The dependent variable was school educational performance. Table 5.56 depicts their basic statistics. Further descriptions of the variables can be seen in the Appendix B.

#### 5.3.1.1 Variables of the Four Dimensions in the First Survey

Factors relating to personal characteristics, including gender, grade, years in school, number of schools, age, years in receiving country, future aspiration, further study in technical school, intention of stay, job aspiration, and stressful life events, were grouped into the Individual Factor dimension. There were eleven variables under such dimension.

The family characteristic dimension consisted of nine variables, including: family social class, father's expectation of my job, mother's expectation of my job, family learning culture, parent school participation, number of sibling, first language, other language used at home, and family composition.

A total of 10 variables were used in the school influence dimension. The variables were: grade placement upon arrival, school attachment, school day activity participation, after school activity participation, school trip participation, school days missed, missed school days unauthorised, frequency of skipping school lesson, school problem frequency, and school problem occurrence place.

Three variables were found in the peer effect dimension. All three variables were drawn from questions in section K of the questionnaire. The three were number of friends, number of Mandarin speaking fiends, and peer influence.

#### 5.3.1.2 The Educational Performance Variable in the First Survey

The dependent variable in this study was the school educational performance, which was generally referred to the performance of a respondent in different school subjects. It was operationalized by a subjective evaluation of four school subjects by respondent. The four subjects used were Mathematics, English, Social Studies, and Chinese. Mean score of each of the four subjects were summed to obtain a score to reflect the academic performance of the respondents. The newly constructed variable "School Educational Performance" obtained a mean of 3.26 (1 = strongly disagree, 2

= tend to disagree, 3 = neither agree nor disagree, 4 = tend to agree, 5 = strongly agree) and standard deviation 0.39.

The composite school educational performance variable has an alpha coefficient of 0.57 which is marginally acceptable as a reliable measure. The four scales composing the variable have an item – item correlation coefficients ranged from 0.62 to 0.71. The composite scale thus shows an acceptable internal consistency. As a further check, the composite educational performance scale was correlated with the School Attachment variable. The two has achieved a positive and significant correlation ( $r = 0.59$ ,  $p < 0.001$ ). The composite scale can thus be regarded as reasonably reliable.

Table 5.56

Mean, Standard Deviations, Range, and Cronbach's Alphas of the Independent and Dependent Variables in the First Survey

	n	Mean	sd	Range	Alpha
<b>Independent variables</b>					
<b>Individual factor</b>					
Gender	167	1.46	0.50	1-2	NA
Grade	167	5.25	1.33	3-11	NA
Years in school	164	2.13	0.81	1-3	NA
Number of schools	163	1.23	0.82	0-4	NA
Age	166	13.13	1.50	9-18	NA
Years in receiving country	165	2.67	1.01	0-4	NA
Future aspiration	161	3.70	0.87	1-5	0.44
Further study in Technical school	142	2.87	0.97	1-5	NA
Intention of stay	164	2.27	1.27	1-5	NA
Job aspiration	164	5.24	0.94	1-6	NA
Stressful life events	155	1.31	0.35	1-3	0.76
<b>Family characteristic</b>					
Family social class	147	2.61	0.74	1-5	0.58
Father's expectation of my job	153	4.94	1.05	1-6	NA
Mother's expectation of my job	154	4.77	1.28	1-6	NA
Family learning culture Parent school participation	162	2.37	0.48	1-5	0.49
Number of siblings	163	1.90	0.39	1-3	0.65
	165	1.59	1.39	0-10	NA
First language	166	1.65	0.77	1-3	NA
Other language used at home	158	1.46	0.50	1-2	NA
Family composition	163	1.66	0.56	1-3	NA
<b>School influence</b>					
Grade placement on arrival	166	3.62	1.10	1-7	NA
School attachment 0.86	155	3.73	0.52	1-5	
School day activity participation	162	2.72	1.51	1-5	NA

	n	Mean	sd	Range	Alpha
<b>Independent variables</b>					
<b>School influence</b>					
After school activity participation	165	2.23	1.43	1-5	NA
School or other trip participation	164	1.59	0.74	1-4	0.63
School days missed	167	1.28	2.69	0-21	NA
Missed school days unauthorized	167	0.76	2.46	0-21	NA
Frequency of skipping school lesson	167	1.10	0.32	1-3	NA
School problem frequency	162	1.96	0.88	1-5	0.69
School problem occurrence place	159	2.00	1.11	1-5	0.89
<b>Peer effect</b>					
Number of friends	167	3.50	0.88	0-4	NA
Number of Mandarin friends	167	1.11	1.48	0-4	NA
Peer influences	159	4.07	0.54	1-5	0.87
<b>Dependent variable</b>					
School educational performance	123	3.26	0.39	2-4	0.57

### 5.3.2 The Independent and Educational Performance Variables in The Second Survey

To avoid getting redundant data such as years in receiving country and admission examination, not all variables or constructed scales in the first survey were used in the second survey. In essence, the second survey includes the followings: Individual Factor Dimension - gender, grade, future aspiration, further study in technical school, intention of stay, job aspiration, family learning culture, school attachment.

Family Characteristic Dimension – Family learning culture.

School Influence Dimension – School attachment.



No re-measure was done for the variables in the Peer Effect Dimension. Details of the variables or scales, and the school educational performance of the second survey can also be found in Appendix B.

## **Chapter 6 Correlating and Comparing Educational Performance of Young Immigrants in Hong Kong, Macao and Vancouver**

### **6.1 Factors Affecting Educational Performance of Young Immigrants**

Chapter six has three sections. They are used to analysing the relations of independent variables and school educational performance in the study. Variables from the four dimensions will be employed to analyse their possible effects on educational performance of the new immigrant pupils. The first section of 6.1 is subdivided into five minor sections. Sections 6.1.1 to 6.1.4 discuss the effect of individual variable from the four dimensions. Section 6.1.5 is a lengthy section. It deliberately delineates determinants related to the performance. Correlation and regression analysis were conducted in these section with an aim to illustrate the associations between variables, and to explain the effect of independent variables on the performance variable. Section 6.2 compares different groups and cities in the two phases of this survey. This section provides a collective view of the four dimensions on school educational performance. The section has three subdivisions. Section 6.2.1 is on group differences, and 6.2.2 focuses on differences among the cities. Section 6.2.3 is used to provide additional comparisons of difference of selected variables among the three cities in the two surveys. Section 6.3 is a concluding remark of the chapter. It is also used as a general methodological discourse pertaining to this study.

Findings in this study were mainly based on quantitative data collected through an enquiry attempt to explore the “ educational realities” of new immigrant pupils. This was inevitably an imperfect practice in investigating social relations. Freebody therefore suggested a need of qualitative method because of the inherent complexity of life and human behaviour. (Freebody, 2003, p. 56 & p. 214)

To supplement the discourse on educational performance of immigrant pupils, this study made use of limited qualitative data drawn from first survey’s open-ended questions to enrich our understanding of “typical” new immigrant pupils’ educational or social experience. (Freebody, 2003, p.215) Making use of the domain analysis approach (Neuman, 1997), qualitative data was first grouped into related contextual clusters based upon their generic meanings. The clusters were then subdivided into

subordinate domains. Three main domains were further developed out of the subordinated domains.

As an illustration, respondent A in the survey answered at the end of the questionnaire that he/she “found (learning) complex Chinese characters difficult”; while respondent B pointed out that “people in Macao are not all friendly”. Respondent C, on the other hand, referred that “...many teachers discriminate foreign students”. The three different qualitative answers from respondents A, B and C were then grouped according to their generic meaning into topics classified as “learning”, “social support”, or “teacher-related”. This classification formulated the first level of the domain analysis.

In the second level, different groups of generic answers were clustered into subordinate domain and under a specific name. There were altogether six subordinate domains derived from all coded qualitative answers. They were: learning-related factor, social support factor, school related factor, teacher-related factor, subject-related factor, and concern of academic result factor.

To make better use of the six subordinate domains for explaining the educational performance of immigrant pupils in the three cities, a further work on simplification of the six was conducted. The six subordinate domains were conceptualized into three main domains. They were used for explaining immigrant pupils’ feeling on their new schooling and future educational aspiration. The three domains were named as “Feeling happy”, “Feeling unhappy” and “Future educational expectation” domain. Cautions, however, are needed when comprehend the domains and subordinate domains. They were grouped for the purpose of simplification and easy reference, they are not meant for another type of quantified data.

Table 6.1 illustrates the domains, subordinate domains and their examples of answers from individual respondents.

Table 6.1

A Domain Analysis of qualitative data from the surveys

<b>Domain</b>	<b>Subordinate domains</b>	<b>Generic answers (examples)</b>
Feeling Happy	Learning-related factor	(I) learned new knowledge
	Social support factor	Teachers, classmates are friendly and helpful!
	School related factor	(My) school is well equipped, with good facilities.
Feeling unhappy	Learning-related factor	Learning has become too difficult, and there is always too much homework!
	Subject-related factor	(I) can't follow the class, especially those complex Chinese characters and teachers' teaching styles.
	Teacher-related factor	(Teachers) are unfriendly, they can't discipline "bad" classmates!
Future educational expectation	Learning-related factor	(There are) more to learn. Class and teaching styles are going to be interesting.
	School-related factor	(The) school can have better facilities. There are more rooms.
	Concern of academic result factor	(I) can have better academic result.

We now begin our analysis of the findings. Table 6.2 shows the zero order correlations of key variables in this study.

6.1.1 Correlating Educational Performance with variables from "Individual Factor" Dimension

Future aspiration was the only variable significantly correlated ( $r = 0.26$ ,  $p < 0.01$ ) to the dependent variable, school educational performance within the Individual Factors dimension. Based upon the correlation result, immigrant pupils with higher future aspiration would have a better school educational performance. In essence,

those who would stay on at school, or would not seek job after junior high school tended to perform well in the four subjects under studied.

Male immigrant pupils appeared to have better school educational performance than female pupils, as indicated by a negative association ( $r = -0.15$ ,  $p > 0.05$ ) between gender and school educational performance variable.

Immigrant pupils from lower school grade had better school educational performance ( $r = -0.16$ ,  $p > 0.05$ ). Similarly, the years in school also showed a negative association with the dependent variable ( $r = -0.14$ ,  $p > 0.05$ ). An immigrant pupil in the survey reported to have better school educational performance if he/she is new to the school.

The number of elementary/secondary schools obtained a positive correlation with the dependent variable ( $r = 0.12$ ,  $p > 0.05$ ). Pupils who had been in more schools tended to have better school educational performance than those who had not.

Age was not a factor requiring much attention in this study. Age of immigrant pupils had a negative but trivial correlation with school educational performance ( $r = -0.09$ ,  $p > 0.05$ ).

Table 6.2

Zero-order correlations of key variables in the four dimensions with School Educational Performance in the first survey

Variables	School Educational Performance
<b>Individual Factor</b>	
Gender	-0.15 ns
Grade	-0.16 ns
Years in school	-0.14 ns
Number of schools	0.12 ns
Age	-0.09 ns
Years in receiving country	-0.09 ns
Future aspiration	0.26 **
Further study in Technical school	-0.12 ns
Intention of stay	0.10 ns
Job aspiration	0.11 ns
Stressful life events	-0.14 ns
<b>Family characteristic</b>	
Family social class	0.006 ns
Father's expectation of my job	-0.05 ns
Mother's expectation of my job	-0.04 ns
Family learning culture	0.18 ns
Parent school participation	-0.04 ns
Number of siblings	-0.13 ns
First language	-0.10 ns
Other language used at home	0.06 ns
Family composition	-0.003 ns
<b>School Influence</b>	
Grade placement on arrival	-0.01 ns
School attachment	0.59 **
School day activity participation	0.11 ns
After school activity participation	0.21 *
School or other trip participation	-0.10 ns
School days missed	-0.09 ns
Missed school days unauthorized	-0.06 ns
Frequency of skipping school lesson	-0.09 ns
School problem frequency	-0.14 ns
School problem occurrence place	-0.14 ns
<b>Peer Effect</b>	
Number of friends	0.05 ns
Number of Mandarin friends	0.06 ns
Peer influences	0.19 *

\* Significant at  $p < .10$ ; \*\* significant at  $p < .05$ ; \*\*\* significant at  $p < .01$ ; ns. Not significant.

Period of stay had substantial influence on adaptation to new environment, which could affect a student's school performance. As Figure 6.1 shows, the shorter the stay in the receiving country, the better the school educational performance was. However, the two variables had a small and statistically not significant correlation ( $r = -0.09, p > 0.05$ ).

On the other hand, those who planned to attend technical schools after secondary education demonstrated a poorer school educational performance ( $r = -0.12, p > 0.05$ ). The result showed an extent to which immigrant pupils found it hard to get down to work in the subjects if he/she planned to take technical education after junior secondary.

Immigrant pupils who had desire to stay in the receiving country tended to have poorer school educational performance than those who answer to leave when they finish their junior secondary education ( $r = 0.10, p > 0.05$ ). The correlation between the two variables was significant. The "leavers" work harder could be resulting from their concern of getting a better academic result, so that schools outside their present education system could accept them.

Moreover, immigrant pupils who aspired a higher status job report a better school educational performance ( $r = 0.11, p > 0.05$ ). For example, an immigrant pupil who aimed at jobs of group F (i.e., aircraft pilot, manager, teacher, etc) performed better in the subjects under investigation.

The immigrant pupils performed less favourably at school if they experienced stress from life events. The two variables of school educational performance and life stress had a negative Pearson's Correlation Coefficient of  $-0.14 (P > 0.05)$ .

#### 6.1.2 Correlating Educational Performance with variables from "Family Characteristic" Dimension

All nine independent variables in the Family Characteristics Dimension were not significantly correlated with the dependent variables.

The first independent variable in the dimension: the computed family social class had a positive but very trivial association with school educational performance. The two had a correlation coefficient of 0.006 ( $P > 0.05$ ).

The job expectation of both father and mother of the immigrant pupils were negatively associated with the school educational performance. The results showed that the higher the job expectation from parents, the poorer the school educational performance reported by the immigrant pupils. Father's expectation had a correlation coefficient of -0.05 ( $p > 0.05$ ) with the dependent variable, while mother had - 0.04 ( $p > 0.05$ ).

Family learning culture, which was a measure of reading habits and leisure activities of the respondents inside the family, had a correlation coefficient of 0.18 ( $p > 0.05$ ) with school educational performance. The bivariate analysis of the variables illustrated that a positive learning culture, such as borrowing books from library, associated positively with better school educational performance.

Parent school participation was negatively and not significantly associated with school educational performance of immigrant pupils. The two had a correlation coefficient of -0.04 ( $p > 0.05$ ).

Small family might enhance children's educational performance. A simple bivariate correlation between the variables of number of siblings and school educational performance in this study showed a negative association. The two had a Pearson coefficient of - 0.13 ( $p > 0.05$ ).

An immigrant pupil whose first language was Cantonese reported a better school educational performance than a pupil speaking Mandarin or English. The variables had a Pearson coefficient of - 0.10 ( $p > .05$ ).

Immigrant pupils who spoke other language at home were more likely to have better performance. A trivial association was found between the other language used at home and school educational performance ( $r = 0.06$ ,  $p > 0.05$ ).

Family composition, a variable used to measure the living arrangement among immigrant pupils, was found to have limited association with school educational performance. The two had a coefficient of  $-0.003$  ( $p > 0.05$ ). The association showed pupils living with both parents or guardians might have better school educational performance. The relations, however, were weak and not statistically significant.

### 6.1.3 Correlating Educational performance with variables from “School Influence” Dimension

There were ten independent variables (See Table 6.2) under the school influence dimension. All except two: school attachment and after school activity participation, were not significantly associated with the dependent variable.

Grade placement upon arrival associated mildly with school educational performance ( $r = -0.01$ ,  $p > 0.05$ ). Based upon the correlation, it can be argued that immigrant pupils who were assigned to grades lower than the one before migration had better school educational performance than those who were ‘on-track’ or placed on higher grades.

School attachment was found to correlate significantly and positively with school educational performance ( $r = 0.59$ ,  $p > 0.01$ ). The strong association between the two variables showed that pupils had better school educational performance if they rated their school positively, e.g., they would recommend their school to others.

Both school activity participation variables acquired a positive and non-significant association with the dependent variable. The school day activity participation had a correlation coefficient of  $0.11$  ( $p > 0.05$ ). The after school activity participation variable, on the other hand, was significantly correlated with school educational performance ( $r = 0.21$ ,  $p < 0.05$ ). Immigrant pupils who were active (e.g., take part in school clubs, sports mostly or weekly) after school tended to report better school performance.

There was also a variable assessing participation in school trips. Those who participated less in school trips reported better school educational performance in this

study. The school or other trip participation was negatively associated with the dependent variable ( $r = -0.10$ ,  $p > 0.05$ ).

School educational performance correlated negatively with all three variables measuring school attendance, but the associations were not significant and weak. Pupils who were more frequently absent from school tended to rate their school educational performance lower than those who were not. The three variables: school days missed, the missed school days unauthorized, and the frequency of skipping school lesson, had a correlation coefficient of  $-0.09$  ( $p > 0.05$ ),  $-0.06$  ( $p > .05$ ), and  $-0.09$  ( $p > 0.05$ ) with the school educational performance respectively.

The measures of school problem were negatively associated with school educational performance. Those who encounter fewer school problems, such as bullying or threat in classroom or corridor, performed better at school. The school problem frequency and the school problem occurrence place variables obtained same correlation coefficient ( $-0.14$ ,  $p > 0.05$ ) with school educational performance.

#### 6.1.4 Correlating Educational Performance with Variables from “Peer Effect” Dimension

A total of three variables were included in the Peer Effect Dimension. One of the three, the peer influences variable, was significantly correlated with school educational performance. Those pupils whose friends regarded problem behaviours bad or very bad showed a better self-rated school educational performance. The variables had a correlation coefficient of  $0.19$  ( $p < 0.05$ ).

Besides, both number of friends ( $r = 0.05$ ,  $p > 0.05$ ) and number of Mandarin speaking friends ( $r = 0.06$ ,  $p > 0.05$ ) had positive correlations with school educational performance. In other words, immigrant pupils who had more friends, and friends speaking their language, tended to report a better school educational performance. The associations between the variables, however, were weak and not statistically significant.

#### 6.1.5 Determinants of Educational Performance of Young Immigrants in Hong Kong, Macao and Vancouver

Ordinary least square regression analysis was employed in this section to incorporate a range of individual, school, family and peer factors in an attempt to explain how they influenced school educational performance.

Table 6.3 to Table 6.6 displayed the standardized regression coefficients (Beta value) of each of the four dimensions. School educational performance was the dependent variable in the models. Enter and exclude case listwise method were employed in the analysis. In view of the small sample size, the relationship between two variables was accepted as significant when  $p < 0.10$ . Altogether seven variables in the four dimensions had significant effects on school educational performance.

Table 6.3

Regression Model of School Educational Performance on Individual Factor variables (N= 103)

Variable	Equation	
	Beta	T
<b>Individual Factor</b>		
Gender	-.13	-1.28
Grade	-.22 *	-1.80
Years in school	-.07	-0.62
Number of schools	.02	.18
Age	.03	.26
Years in receiving country	-.01	-0.04
Future aspiration	.28 ***	2.70
Further study in Technical school	-.13	-1.34
Intention of stay	.10	1.00
Job aspiration	.19 **	1.99
Stressful life events	-.13	-1.23
Degree of freedom/residual	102	
R		.46
R Square		.21 **

\* Significant at  $p < .10$ ; \*\* significant at  $p < .05$ ; \*\*\* significant at  $p < .01$ .

Three variables in the individual factors dimension accounted for 21 per cent of the variance in the dependent variable ( $R = 0.46$ ,  $p < 0.05$ ). Within the dimension, future aspiration (Beta = 0.28,  $p < 0.01$ ) had the strongest influence on school educational performance; while job aspiration was another significant variable (Beta = 0.19,  $p < 0.05$ ). Grade was the third variable that had a barely acceptable significant net effect (Beta = - 0.22,  $p < 0.10$ ) on school educational performance when other variables were controlled for in the equation.

Table 6.4

Regression Model of School Educational Performance on Family Characteristic variables (N= 97)

Variable	Equation	
	Beta	T
<b>Family characteristics</b>		
Family social class	-.04	-.40
Father's expectation of my job	-.08	-.65
Mother's expectation of my job	-.01	-.10
Family learning culture	.21 *	.06
Parent school participation	-.01	-.07
Number of siblings	-.10	-.82
First language	-.06	-.50
Other language used at home	.02	.21
Family composition	.01	.09
Degree of freedom/residual	87	
R		.24
R Square		.06 ns

\* Significant at  $p < .10$ ; ns = not significant

The family learning culture variable in the school effects dimension had small significant effect (Beta = 0.21,  $p < 0.10$ ) on school educational performance. It explained a total of 6 per cent ( $R = 0.24$ ,  $p > 0.05$ ) of the variance in the school educational performance.

Table 6.5

Regression Model of School Educational Performance on School Influence variables  
(N= 107)

Variable	Equation	
	Beta	T
<b>School effects</b>		
Grade placement on arrival	.02	.29
School attachment	.55 ***	6.73
School day activity participation	.01	.15
After-school activity participation	.16 *	1.89
School or other trip participation	-.10	-1.16
School days missed	.00	.02
Missed school days unauthorized	-.04	-.30
Frequency of skipping school lesson	-.05	-.58
School problem frequency	-.12	-1.33
School problem occurrence place	-.06	-.63
Degree of freedom/residual	96	
R		.64
R Square		.40 **

\* Significant at  $p < .10$ ; \*\* significant at  $p < .05$ ; \*\*\* significant at  $p < .01$ .

Two variables had significant impact on school educational performance in the school influence dimension. Together the ten variables account for 40 per cent of the variance in school educational performance ( $R = 0.64$ ,  $p < 0.01$ ). School attachment had the strongest effect on the dependent variable (Beta = 0.55,  $p < 0.01$ ). After-school activity participation also had a small significant effect (Beta = 0.16,  $p < 0.10$ ) in the model.

Table 6.6

Regression Model of School Educational Performance on Peer Effect variables (N= 118)

Variable	Equation	
	Beta	T
<b>Peer influences</b>		
Number of friends	.01	.11
Number of Mandarin friends	.04	.43
Peer influences	.19 *	2.04
Degree of freedom/residual	115	
R		.20
R Square		.04 ns

\* Significant at  $p < .10$ ; ns = not significant

Only a trivial and non-significant variance ( $R = 0.20$ ,  $p > .05$ ) was accounted for by variables in the peer effect dimension. The peer influences variable was a weak determinant of school educational performance ( $Beta = 0.19$ ,  $p < 0.05$ ) in this study.

Table 6.7 showed the standard regression coefficients (Beta) of all key variables from the four dimensions. The regression used stepwise method with missing values replaced with mean. Altogether the thirty-five variables accounted for 34 per cent of the variance in school educational performance (adjusted R square = 0.313). Only five variables had significant effect on school educational performance when the effects of other variables are controlled. The five were: gender ( $Beta = -0.24$ ,  $p < 0.01$ ); future aspiration ( $Beta = 0.19$ ,  $p < 0.01$ ); school attachment ( $Beta = 0.50$ ,  $p < 0.01$ ); after-school activity participation ( $Beta = 0.13$ ,  $p < 0.05$ ); school or other trip participation ( $Beta = -0.14$ ,  $p < 0.05$ ). Intention of stay was also found to be statistically significant if the model considered a higher significant level. The

variable was significant at 0.051 level. Concepts borrowed from control theories, cultural system theories and cultural reproduction theories were used to substantiate the discussions of the model. Significant variables were discussed before all other variables in each of the dimensions.

Table 6.7

Regression Model of School Educational performance on all independent variables (N= 167)

Variable	Equation	
	Beta	T
<b>Individual Factor</b>		
Gender	-0.24 ***	-3.70
Grade	0.03 ns	0.39
Years in school	-0.06 ns	-0.89
Number of schools	0.18 ns	0.27
Age	0.08 ns	1.23
Years in receiving country	-0.02 ns	-0.23
Future aspiration	0.19 ***	3.00
Further study in Technical school	-1.14 ns	-1.73
Intention of stay	0.13 *	1.90
Job aspiration	0.03 ns	0.48
Stressful life events	-0.03 ns	-0.39
<b>Family Characteristic</b>		
Family social class	-0.04 ns	-0.65
Father's expectation of my job	-0.01 ns	-0.06
Mother's expectation of my job	-0.08 ns	-1.17
Family learning culture	0.06 ns	0.79
Parent school participation	0.09 ns	1.32
Number of siblings	-0.07 ns	-1.06
First language	-0.04 ns	-0.67
Other language used at home	0.05 ns	0.78
Family composition	-0.01 ns	-0.02
<b>School Influence</b>		
Grade placement on arrival	-0.02 ns	-0.32
School attachment	0.50 ***	7.34
School day activity participation	0.02 ns	0.35
After school activity participation	0.13 **	2.00
School or other trip participation	-0.14 **	2.06
School days missed	-0.04 ns	-0.68
Missed school days unauthorized	-0.01 ns	-0.03
Frequency of skipping school lesson	-0.02 ns	-0.25
School problem frequency	-0.08 ns	-1.18
School problem occurrence place	-0.08 ns	-1.13
<b>Peer Effect</b>		
Number of friends	0.01 ns	0.07
Number of Mandarin friends	0.01 ns	0.14
Peer influences	-0.02 ns	-0.32

n = 167; R = 0.581; R Square = .0338

\* Significant at p &lt; .10; \*\* significant at p &lt; .05; \*\*\* significant at p &lt; .01; ns. Not significant.

School attachment had the strongest “effect” on school educational performance (Beta = 0.50,  $P < 0.01$ ). Immigrant pupils who showed higher preference to school life or got on well with teachers were more likely to perform well at school. Bonding theorists would explain this as a result of the pupils’ attachment to school and hence more acceptable to school norms and regulations. Earlier researchers (Philips & Kelly, 1979; Qui, 1987, p.84), for example, postulated poor school educational performance as a result of negative attitude towards school plus a rejection of school authority. Hirschi’s social control theory, on the other hand, pointed out a relation between strong school commitment and conforming behaviours. (e.g., Hirschi, 1969; Hirschi & Hindelang, 1977) Another study by Ng and Man (1988) in Hong Kong also demonstrated the importance of school commitment and learning. By including items like satisfaction with school, alienation, school life, and law and offender, the study illustrated an association between alienated non-learners and lowest level of school life satisfaction. The students in the sample who were low in both interest in study and identification with school used to report schooling non-appealing and dissatisfied with different aspects of life. (Ng and Man, 1988, p. 57).

More, cultural reproduction theorists suggested a higher acceptance by teachers or school to pupils who attached to school. Pupils carried with them, according to Bourdieu, Coleman and Hoffer, different capitals to schooling. (Bourdieu, 1997, 2000; Coleman & Hoffer, 2000) For example, those who had greater social capital with them would be more likely to attach to school. Social capital was a measure of relationships between persons, such as care and communication between parents and children. (Coleman & Hoffer, 2000, p. 69) Similarly, different pupils possessed distinctive cultural capital transmitted from their family. Cultural capital, in Bourdieu’s term, included certain linguistic and cultural competency acquired through family socialization. (Bourdieu, 1997) The pupils with rich cultural capital therefore learned better and had good educational performance. Resistance theorists, on the other hand, argued that the findings could reflect whether the immigrant pupils resisted schooling or not. Pupils who rejected schooling, they explained, would try their best to fail themselves as a challenge to the institution, or in the case of immigrant pupils, as a protest to discrimination or racism. Low school

educational performance was played as a tool to adapt to the new environment or a strategy to avoid 'acting white'. (Mizokakawa & Ryckman, 1990; Fordham & Ogbu, 2000) As Ogbu put in his study of blacks in California, US:

“The problem of [lower school educational performance] originated in the involuntary subordination and discriminatory treatment of blacks into American society, in the subsequent subordination and discriminatory treatment of blacks and in the adaptive responses of blacks to their caste like status.”  
(Ogbu, 1991, p. 259)

Gender of immigrant pupils could also play a significant influence to school educational performance. The variable, after controlling other variables in the model, explained about 6 per cent ( $\text{Beta} = - 0.24, p < 0.01$ ) of variance of the dependent variable. Male immigrant pupils in this study reported better school educational performance than female pupils. Other related studies, however, drew conflicting results regarding gender influences. Some recent studies indicated that women, regardless of immigrant status, were more likely than men to do well in school (Statistics Canada & Canadian Council of Ministers of Education, 2000, p. 75). In testing African American students' academic achievement, Sanders (1998) found females as a significant variable ( $b = 0.15, P < 0.001$ ) in predicting academic grade point average (Sanders, 1998, p. 399-401). In another study of immigrant pupils in Hong Kong, Chan and his associates also found significant gender effect on adaptation. Immigrant girls were more adaptive than boys ( $F = 6.7169, p < 0.01$ ) (Chan et al, 1996, p.16). A latest study, nonetheless, found gender play a non-significant role in educational success (Wilkinson, 2002, p. 188).

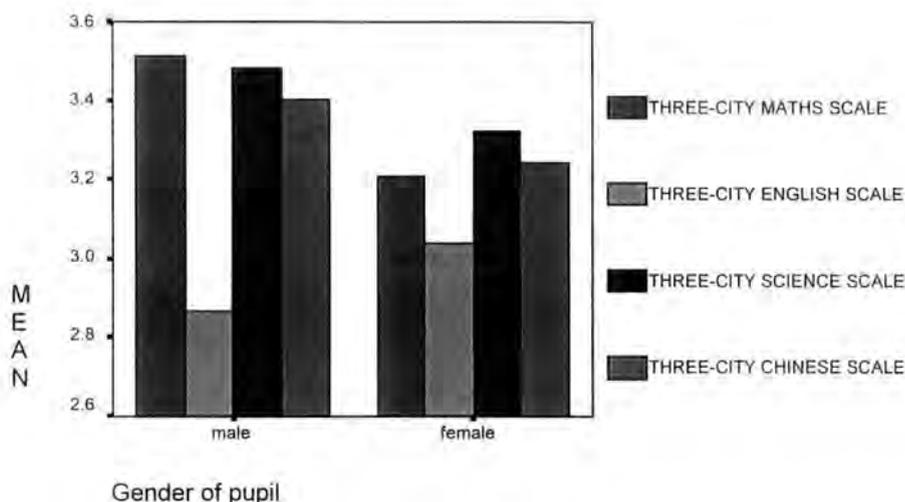
The unstable results of gender difference on educational performance could be attributed to a fact that there were gender variations in relation to different performance, such as reading, or cultural knowledge. Adopting a cultural capital perspective in investigating educational attainment in secondary students of different social class in UK, Sullivan found girls had slightly more cultural capital than boys in terms of both reading and other activity, and hence scored more highly on language

test. Boys, however, slightly outperformed girls on the test of cultural knowledge (Sullivan, 2001, p. 906). Based on the findings in her regression models, Sullivan further stressed that cultural capital is transmitted from parents to their children and social class had a direct effect on educational attainment even cultural capital had been controlled for. (Sullivan, 2001, p. 909)

Bourdieu's cultural capital theory stated that children from middle-class families were advantageous in educational achievement because of their possession of relative greater cultural capital from parents. The present study of immigrant pupils in three cities had rendered an inconsistent result on gender and school educational performance. Sullivan's project might provide some illuminations. First, the variation of school educational performance between male or female pupils could be a result of non-standard operational definitions of the criterion variable. There could be a different result if reading, language test, or general knowledge was used in this study as in the case of Sullivan's measures of educational attainment. The present study of male pupils outperformed female pupils only demonstrated that boys were better than girls in the four subjects of measures, besides reading, language or other test. A correlation of gender and the four subjects showed similar results. As shown in Figure 6.1, male pupils in three of the four subjects, besides English, outperformed females and reported better school educational performance. Mathematics had a correlation of  $-0.21$  with gender ( $n = 138$ ,  $p < 0.05$ ), English had  $0.15$  ( $n = 162$ , ns), Science had  $-0.16$  ( $n = 142$ , ns), and Chinese had  $-0.18$  ( $n = 139$ ,  $p < 0.05$ ).

Figure 6.1

Mean subject scores of male and female pupils in three cities



Secondly, parental influence to immigrant pupils could be very limited due to a fact that many of the immigrant pupils lived in a single-parent family setting. According to findings in the first survey, only 39 per cent of the 167 respondents in the study lived with their parents or guardians. Such disheartening story of parental separation with children in the receiving country because of immigration or economic reason could affect parental influence or transmission of cultural capital to the children. The lack of cultural capital influence could distort the result of gender and school educational performance among immigrant pupils.

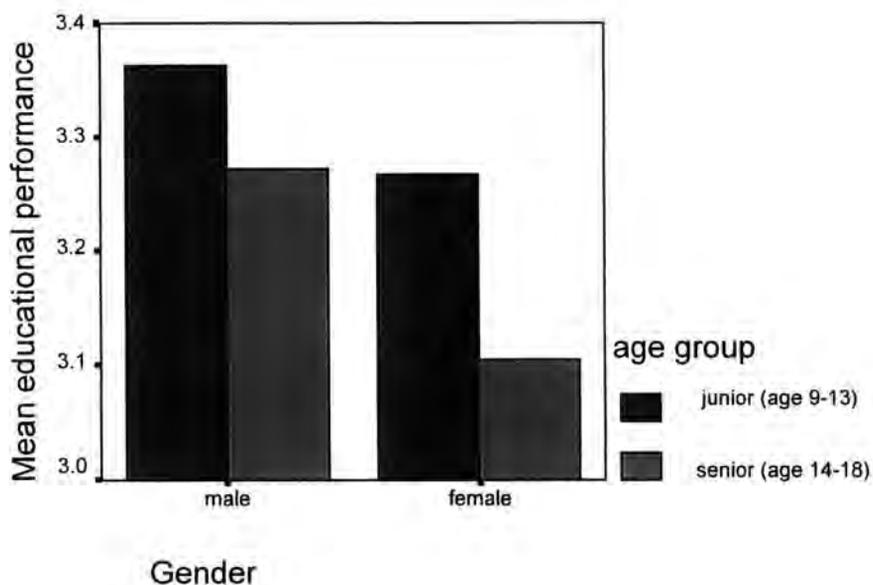
Thirdly, it was true to point out that pupils in a higher socio-economic status might had greater access to academic resources and thus might result in better educational performance (Chow, 2000, p.107). In other word, pupils from higher social class enjoyed greater cultural capital (Sullivan, 2001, p. 893). Nevertheless, it was also a sheer fact to point out that upward social mobility of new immigrants was always under a threat because of previous educational qualification and work experience not accepted by the receiving country. (Wilkinson, 2002, p. 187) Consequently, the class effect on educational attainment was not as strong for

immigrant pupils as it was for other children. The deflated education credential and work experience of the parents could have an effect on the transmission of cultural capital to immigrant children.

Fourthly, there could also be a gender difference in school educational performance to young or older pupils. Specifically, pupils of different sex in junior or senior class could show variations in school educational performance. As shown in Figure 6.2, male pupils in the sample achieved a higher mean school educational performance score than females in both junior and senior class. Male immigrant pupils in junior classes (aged 9 –13) obtained an average school educational performance score of about 3.4 out of a total of 5 while females had a score below 3.3. Male pupils again outperformed females in senior classes (aged 14 – 18) when males obtain a score of about 3.3 and females a score of 3.1.

Figure 6.2

Mean educational performance score of young & elder pupils



Immigrant pupils who demonstrated a higher future aspiration were more likely to report better school educational performance (Beta = 0.19,  $p < .01$ ). The

present study asked if the pupils would stay on at school or join workforce after junior secondary education as a measure of future aspiration. Those who preferred to continue education tended to have better performance in the four school subjects. For example, there were pupils who wrote down answers like “(we) hope there are at least two classes of Mandarin a week”, or “(we) look forward to seeing classes with better learning approaches”. These new immigrant pupils who demonstrated positive learning-related attitude, undoubtedly, could be more likely to excel themselves than those who showed lower aspiration. One Macao respondent also responded “he/she would work harder in order to get better results (academically)”. The finding was in line with a study of African American students in the U.S., where higher achievement ideology was positively associated with academic achievement. (Sanders, 1998, p. 400-401) Children’s high future aspiration could be a result of parental expectation, especially among immigrant families. A Vancouver study had pointed out that immigrant parents adopted a family strategy of looking to the next generation for greater success in the receiving country. The children’s locally attained education and potential to speak English fluently counted. The strategy was to emphasize on scholastic achievement and the necessity to excel and work hard at school. Education was viewed as a factor to help the children to get jobs and to be socially mobile. (Hiebert, et al, 1998, p. 18-20) Another study of 229 primary and junior secondary immigrant pupils in Hong Kong, for instance, found that as high as 64 per cent of respondents expected to complete university education. About 80 per cent of the 229 respondents addressed education as a “very important” factor to their future. (Hong Kong Boys and Girls Association, 1996, p.14-15) Besides parental influence, high future aspiration could also be explained psychologically.

Motivation theories stipulated that individuals who had higher motivation to learn would normally show better performance in academic results or other tasks. Motivation theory categorised human behaviour in four groups of factors. They were biological factors, such as the need of food and water; cognitive factors, such as people acted or reacted based on what they thought of or anticipated from the environment; emotional factors, such as the effect of certain emotions on one’s behaviour; and social factors, such as the influence of parents, teachers, peers on

different aspects of human behaviour. (Bernstein, et al., 1991, p. 433-434) Academic aspiration was acquired mainly through social influence. (Turner, 1991)

Immigrant pupils in this study who demonstrated higher future aspiration could be environmentally aroused. In other words, the external stimulation from peers, parents, or mass media could push the pupils to behave in such a way to seek for academic success. Some respondents answered that they were happy because they had social support. One respondent, for example, said, "Schoolmates are easy to mingle with!" A different respondent referred his/her "schoolmates helpful and friendly, and people in the school do not discriminate (new immigrant pupils)." Teachers were another significant source of social support to pupils' success in school. One respondent regarded the teachers as "good (teachers) and they teach me lots of useful knowledge." On the contrary, some respondents were not happy at school because they did not have the needed social support when they answered, "Macao people are not all that friendly!" They heard of "gossips (pinpoint on new immigrant pupils) from schoolmates".

Incentive theory held that behaviour was goal-directed responses. (Bernstein, et al., 1991, p. 439) Immigrant pupils who wanted to stay in school would therefore be more likely to behave in a way toward their goal. The goal in this context was to achieve as much likely as possible a better school educational performance. An immigrant pupil who showed high aspiration in this study might also be in possession of a high achievement motivation. They felt happy about their study because they were satisfied with their learning, support from people around, and their school environment. Among the respondents, one said, "I can learn new knowledge (here), like Cantonese, complex (Chinese) characters which is unavailable from my rural school". Another respondent was happy because his/her "teachers and schoolmates are kind and helpful." A new immigrant respondent liked his/her school "with good facilities." Pupils with high achievement motive were more likely to have their performance or grades improved since they worked harder, and in this case, were more attentive in class and felt more pleasant in completing homework. The pupils tended to actively work towards success with careful plans and steps. They were also the kind of people who had desire of significant accomplishment, for mastering skills

or ideas, for control, and for rapidly attaining a high standard (Murray H, cited in Myers, 1992, p. 370; Santrock, 1995, p. 301). When achievement motivation increased, so did achievement, (Myers, 1992, p. 371) although the causality might be recursive.

In addition to psychological explanations, the work of Marx Weber might also shed light on explaining the relations between high aspiration and school educational performance. To Weber, people acted because they wanted to achieve certain goals. The goal, in other words, explained their means. Immigrant pupils who desired to have good school educational performance would therefore rationalize their action and make their goal achievable. In this study, good school educational performance was the goal, and high future aspiration could be one of the means in attaining the goal. Such as doing exercise to keep us healthy and fit, the ends justify the means. It is however too simplified to understand human behaviour in one simple test of causality or correlation. Marx Weber, therefore, suggested a need to have meaningful understanding or *Verstehen*. The hermeneutic tradition, which is the theory and practice of interpretation, may be useful to investigate how immigrant pupils understand future aspiration and school educational performance. (Jary & Jary, 1998, p. 737; Bauman, 1996, p.222; Hitchcock & Hughes, 1995, p. 227-228)

Immigrant pupils who had lower school or other trip participation tended to perform better in school (Beta = - 0.14, P < .05). Low school trip participation among immigrant pupils in the sample could be attributed to two speculations. One was the absence of trip run by the school during the survey, and the next was the decline of participation by the immigrant pupils because of parental pressure to study at home or because of family economic consideration. In fact, there was not a single comment from the respondents on request of more school co-curricula activity.

Immigrant pupils were under substantial pressure to spend more time to catch up with their classmates in school lesson, especially in language and other subjects that happened to be different from their home country. (Huang, 2000; West, et. al., 2000) English proficiency was an inhibiting factor among immigrant students of their study progress. (Lee, 1994, p. 27) The learning pressure stopped the pupils from trip participation on one way, and pushed them to study harder on the other. For example,

one respondent asked for “more computer rooms, a bigger library and classroom (to facilitate his/her learning).” Another one was “eager to find more ways to learn faster and easier.” Several suicide cases of young immigrants were reported in 1996 and 1997 in Hong Kong. The cases were suspected to relate to school learning pressure or adaptation problem. (Chan, 1999, p. 11) Had there been a balance between school activity participation and learning, those tragedies might be prevented.

School trip could be rather costly. Immigrant families were mostly from the lower socio-economic stratification. (Chan et al., 1996, p. 21-22; Sham Shui Po District Council, 1996, p. 21; Hong Kong Federation of Youth Groups, 1995, p. 104) As an illustration, the medium monthly income for immigrant family in 1996 in a Hong Kong survey was HK\$7,500.00. The figure was 57% below the Hong Kong average of HK\$17,500.00. (Hong Kong Federation of Youth Groups, 1999, p.11) In some cases, parents took two jobs, as janitors, maids and busboys so that the children could go to school and receive some education and “become somebody”. (Suarez-Orozco, 1991, p. 48) Family economic situation could be a factor affecting immigrant children’s school trip participation.

Immigrant pupils who did not frequently join school trip had more time either to study or do leisure activities. It was, however, quite common to find immigrant children, especially Asian pupils, working hard even after school. For example, over 60 per cent of respondents in a Hong Kong study of immigrant pupils joined tutorial classes after school. (Hong Kong Boys and Girls Association, 1996, Table 24, p. 22) One respondent in this study wrote, “to expect more English tutorial classes because Mainland Chinese pupils know little English”. Good education result was important to these immigrant pupils. A majority of respondents in another survey of 51 young new arrivals in Hong Kong praised highly the significance of education. The respondents referred a good school result to meanings of “future”, “self-esteem”, “social recognition”, “satisfying parents’ or family’s need”, or “a yardstick of personal progress”. (Hong Kong Federation of Youth Groups, 1995, Table 7K, p. 67)

After school activity participation was the third variable in the school effects dimension that showed significant positive effect on school educational performance (Beta = 0.13,  $p < 0.05$ ). Children who accepted the mainstream school life, example,

join school clubs or sport groups, were more likely to be successful in school and in subsequent employment. Two models within the cultural integration theories: the mainstream absorption models and the underclass absorption models helped explaining the educational performance and social integration of immigrant or refugee youth.

The essence of the mainstream absorption models suggested that immigrant children who actively participated in school, and adapted to the mainstream culture would be less likely to experience marginalization and the accompanying school failure. Under these models, the children were assimilated into the receiving country, including speaking the language, or following the tradition. Conversely, the underclass absorption models stipulated a different explanation. Children who rejected the mainstream culture or value tended more likely to perform poorly at school; they would quit school, got into trouble with the law and showed deviant behaviours. (Schissel, 1998; Wilkinson, 2002, p. 177-178; Rao & Yuen, 2001, p. 313)

Participating in after-school activity had a special meaning to immigrant children. Since school was the first place most immigrant children learned the new culture and life of the receiving country, participation in school activity reflected a certain degree of successful integration to the newcomers. Employing ANOVA to test five types of school support activities in a study of 1029 immigrant pupils, Chan et al (1996) found peer support and special activities denoted significant effects on adaptation and integration ( $F = 3.3081$ ,  $p < 0.05$  and  $F = 4.6406$ ,  $p < 0.01$ ) among the respondents. (Chan et al, 1996, p. 35) On the other hand, the coordinator and editor of an immigrant project on Hong Kong students in Canada, Janet Rubinoff, also remarked that:

“... Successful integration of (Hong Kong visa) students was linked to such factor as their participation in social activities with Canadians ..... those who associated with almost exclusively with (in groups) were less adaptive and less integrative within Canadian society.” (Lee, 1994, p.13)

Immigrant pupils who participated in after-school activity in this study were likely to have a channel to learn the mainstream culture through interaction with local pupils. The learning allowed them to integrate into school and society more successfully than those who did not participate. (Hong Kong Government, 1999) Immigrant pupils in Hong Kong, Macao and Vancouver received substantial support from the government in coping with challenges resulting from immigration. Taking Hong Kong as an example, there were a number of educational support programmes offered by the schools or non-government organizations to assist new immigrant children. Many of these programmes were operated in an after-school extra-curricular activity format. (Rao & Yuen, 2001, p. 315)

Immigrant pupils participating in school activity or support programmes showed stronger school attachment. The participation helped build stronger self-image. (Chan et al, 1996; Lee, 1994) All these contributed to a better school educational performance. Participation and performance could be a recursive process. By determining how well a pupil is doing in school, we were also partly prompting how active the pupil was in school activity. The two variables had a significant correlation of 0.21 ( $n = 121, p < 0.05$ )

Some immigrant pupils or their parents could regard school trip costly or a waste of study time. After-school activity was however perceived as a “positive” leisure or extra-curricular activity and was useful to learning and integration. This explained the different association results between the two variables and school educational performance.

Intention of stay was also found to express a significant positive effect on school educational performance (Beta = 0.13,  $p < 0.10$ ). Students who had a higher intention to stay in the receiving country, especially for political reasons, showed a better educational performance in a study of Hong Kong immigrant students in Canadian schools. (Chow, 2000, p. 107 and Table 1) Immigrant pupils who preferred to stay also show a sign of integration with the receiving society. Some respondents revealed that they were not happy in their new learning environment. One of them said, “(I feel) every primary school (here) is not good and many teachers discriminate

foreign pupils!” This pupil was likely to show weak intention of stay. He/she might have a social integration problem and subsequent poor academic result. Integration, in an Israel study of academic success of underprivileged Arabs, enhanced cognitive achievement. (Shavit, 1990, p. 818) Yet, why do some immigrant pupils who preferred to stay achieved better school results? Ogbu’s early work on minority schooling might shed some light on this issue.

Pupils who demonstrated a weaker intention to stay in the new country resembled the characteristics of Ogbu’s (1987) concept of involuntary immigrant. In an attempt to answer why some minority or immigrant groups were less successful than others in social adjustment and school educational performance, Ogbu classified three types of immigrants: autonomous, voluntary and involuntary minorities. Involuntary immigrants referred to those who were brought to the receiving country involuntarily through slavery, conquest, or colonization (Ogbu, 1987, p. 321). Immigrant pupils, especially the young ones, who were asked by parents to move to a new country, were, in a broad sense, one kind of involuntary immigrants.

Ogbu argued that involuntary immigrants, because of their folk theory in getting ahead, used to reject or attack the criteria by which academic achievement was measured, and also the use of educational qualifications or measures as a criterion for employment in some situation. (Ogbu, 1987, p. 324-325) Generally speaking, a folk theory in a society asserts that good education enables one to get a well pay job. Immigrants, however, may encounter barriers (e.g., discrimination, language barrier) to get ahead according to the prevailing folk theory of success, such as through education. As such, they may rationalize the situation by assuming that they are “guests” in the country and will not stay long. In short, involuntary immigrant pupils experience greater cultural/language difficulties because they adopt schooling strategies that impede academic success and promote social adjustment. According to Ogbu, the strategies included a negative attitude towards schools and as a consequence of persistent higher rate of school failure (Ogbu, 1987, p. 330). Those immigrant pupils who intended not to stay, following Ogbu, might encounter social pressure of accused of being disloyal to the minority group; and psychological pressure of “acting minority” or vice versa (Ogbu, 1987, p. 331). The oppositional

attitudes and behaviours of the involuntary immigrant pupils gave rise to school educational performance problems. Individual characteristics of perceived immigrant status among immigrant pupils, therefore, explained school educational performance.

Apart from the six independent variables discussed in the above paragraphs, all other remaining variables from the four dimensions were not statistically significant in explaining school educational performance. The following paragraphs are an attempt to provide viable suggestions to discern their insignificance in the model.

Age and Grade - Recent studies had documented age differences among immigrant pupils and their effect on educational attainment, occupational aspirations, and possible integration into the receiving country. (Geller, 1996; Looker & Lowe, 1996; Aheran & Athey, 1991) In general, overage for school grade was found to be a reliable risk index of early school leaving. (Fine, 1991; Roderick, 1993, p. 26) Nevertheless, both grade and age in this study had not obtained a statistical significant effect on school educational performance.

Grade had a standardized beta coefficient of 0.03 ( $T = 0.39, p > 0.05$ ) while age had 0.08 ( $T = 1.23, p > 0.05$ ). The reasons for a not significant effect of the two could be a result of a myriad of interplay of factors associated between the problem encountered by immigrant pupils when they were first assigned to school grades and the feeling towards such placement. Ogbu and his colleagues had once posited cultural – ecological models in explaining educational attainment of immigrant children. The models embraced a complex interplay of factors in affecting attainment, including perception of opportunity etc. (Ogbu, 1987, 1991) Some immigrant pupils or their parents accepted lower grade placement in Hong Kong, Macao or Vancouver because they perceived it as an opportunity to get better future education or rewards. An early study in Hong Kong suggested that over 70 per cent of the surveyed immigrant pupils accepted the situation of incongruence between age and school grade. Instead of feeling negatively, the pupils regarded the lower grade placement as an opportunity to reinforce their learning capability. (Boys and Girls Club Association, 1996, p.32) Some Hong Kong or Macao parents, on the other hand, perceived the

mismatch as a means for the children to get to a better secondary school because of the children's participation in subsequent public examination. (Hong Kong Federation of youth Groups, 1995, 1999) The transition experience in new country among immigrant pupils who were placed in lower school grade than his/her age was therefore central to explanations of such a small and not significant statistical effect.

Year in school and year in receiving country - Cultural discontinuity models predicted that educational attainment would increase when the immigrant children experienced longer stay in the receiving country and more acculturation to school and society. The models, however, assumed an explicit cultural difference, e.g., in language and life styles, between home and receiving country of the immigrant children. The likely conflicts arising from the difference would disadvantage immigrant children, especially recent immigrants. (Rong & Grant, 1992) In another study, length of stay in receiving country was also not significantly related to better adaptation ( $F = 1.2685, p > 0.05$ ). The authors explained this as a result of expectation deviation between life in pre- and post-migration. The daunting reality of the new environment, such as crowded living condition, parents' unstable employment, or learning difficulty in school, all had an adverse effect on the immigrant children's degree of adaptation. (Chan et al, 1996, p. 19) Similarly, the cultural difference theory accounted for differential school educational performance by focusing on the difference between school culture and children's home cultures. (Trueba, 1988; Delgado-Gaiton & Trueba, 1991) Accordingly, immigrant children from a different education system might have been disadvantaged because of their cultural background, such as language used and learning styles. However, except for the small group of Vancouver respondents, immigrant pupils in this study came from a cultural background comparable to the receiving country. These immigrant pupils in Hong Kong and Macao therefore did not necessarily experience the kind of cultural disparity as suggested in the discontinuity or difference models. Immigrant pupils from Mainland China to Hong Kong and Macao could have experienced a facilitation of the adjustment process because of their shared cultural background with the host country. The length of stay in school and in the country thus became less important as a factor in determining school educational performance.

Number of school did not account for a significant effect on school educational performance. Common sense suggested that frequent change of school or education environment could be influential to the pupil's learning because of the need to cope with the changing demand arising from teachers, schoolmates, school's learning or organization culture. The present findings, however, did not support this. With a Beta of 0.18, number of school had a positive but not significant statistical effect on school educational performance. Immigrant pupils in the study tended to report better school educational performance when they had been studying in more schools. Four reasons could possibly be useful to explain the result.

Firstly, the immigrant pupils or their parents were constantly seeking for a suitable school to cope with the educational needs. The 'last' school shall thus represent to them a better one compared to the previous one. Secondly, the change of school had a minimal adverse effect on immigrant pupils compared to local pupils because, after all, immigrant pupils came from a different education system. A change of school in the receiving country would enhance their knowing of the system, instead of detaching them from the context. In other words, change of school could have helped the immigrant pupils to better acquaint them with the new learning environment in the receiving country. Thirdly, all immigrant pupils already had the experience of changing from one education system to a totally new one when they moved to the receiving country. The first change, i.e. from China to Hong Kong or Macao, needless to say, caused the greatest fear and uncertainty. The subsequent change of school within the receiving country, therefore, might not be so overwhelming.

Lastly, the non-significant effect could be a result of confusion to respondents who had experienced a substantial number of support programmes provided by school or non-government organizations in schools. To some immigrant pupils, for instance, it could be a problem for them to distinguish if the six-month 'setting-off' programme (See p.16) by the Hong Kong government was formal school training or simply a preparatory course before their day school education.

Further study in technical school had been recorded. Higher score of the variable represented less chance to study in technical school. Technical schools in Hong Kong or Macao were generally viewed as an alternative option besides grammar education. In general, technical schools admitted pupils who were academically less capable. The variable and school educational performance in this study reflected the trend of association, though the two were not statistically significant at the 5% level (Beta = - 0.11,  $p > 0.05$ ). The insignificance could be a result of misunderstanding of technical school by the immigrant pupils, or a difference in technical education between Hong Kong and Macao.

The association of technical education and lower academic achievement could be understood again by the concept of folk theory. Specifically, pupils had their own perception of how to get ahead or where their position is academically. Pupils who were academic underachievers were more likely to choose education corresponding to their standard. Adopting the early concept by Clark, immigrant pupils might undergo a cooling-out effect on school educational performance. Cooling-out referred to a process of shaping students' ambitions to match their probable destination in social status. (Clark, 1960)

Job aspiration obtained a not statistically significant and weak effect on school educational performance (Beta = 0.03,  $p > 0.05$ ). The association of the two variables in fact reflected, to some degree, an idea from the corresponding principle. The principle referred to the location of an individual in the school hierarchy corresponds to their economic and social position outside the school. In the present case of immigrant pupils and their school educational performance, those who aspired to lower status jobs used to perform less satisfactory ( $r = 0.11$ ,  $p > 0.05$ ) In other words, jobs aspiration was corresponding to school result hierarchy. The statistically not significant result, however, might be related to insufficient knowledge of job nature/status in the receiving country, or parents' job preference among the immigrant pupils.

Stressful life event - Psychological studies used to reveal that more frequent, highly undesirable, unexpected, or first-time stressful life event were hazardous to an

individual's health, work or study. Individuals like immigrant pupils who had little coping experience, or lacked of social support can suffered greatly because of change of living or learning environment, such as moving or parental separation. (Folkman and Lazarus, 1991) The report of no significant statistical effect of stressful life events on school educational performance in this study could be a result of too little events reported/experienced by the immigrant pupils.

All ten family variables had no significant statistical effect on school educational performance. Such result in this study indicated a fading family influence on the children, and in particular, their school education. Many immigrant families in Hong Kong, Macao and Vancouver were incomplete families. While most parents were working couples, this could also leave them limited time to supervise or discipline, albeit participation in school activities, the young children. The couple would expect school to share the responsibility. The rise of nuclear family and the absence of elderly, e.g., in the home country, to help with caring of the children could also be a factor of the declining family influence. The congested living space in Hong Kong or Macao could also contribute to a weak family attachment and subsequently weakened the family effect on children's growth and school learning.

Much of the non-significant family effect in this study could be arguably attributed to the experience applicable to immigrant families. Family class, family composition, parental participation, family-learning culture, for example, might be twisted because of immigration.

Parents' educational credential and work experience unrecognized in the new society could cause them to work in overqualified employment with low wage and social status. (Basran & Zong, 1998; Krahn et al., 2000) Specifically, immigrant parents' education and skill was not valid indicators of social class in the new country. In another recent study, both education and income of parents were also found to have no significant statistical effect on the children's educational performance. The beta value of parents' education was 0.149 ( $p > 0.05$ ), and that of family income was 0.095 ( $p > 0.05$ ). (Wilkinson, 2002, p. 187)

Family composition had influence on educational performance of immigrant students. (West, et al. 2000) Family composition, nevertheless, was a complicated issue to Chinese immigrant family. Nearly 60 per cent of immigrant children in this study lived in an incomplete family situation. Immigrant families in Hong Kong, Macao or Vancouver experienced involuntary separation, as many mothers had not yet received the Right of Abode in Hong Kong or Macao, and therefore must remained in Mainland China. (Rao & Yuen, 2001, p. 317; Boys & Girls Club Association, p. 1996, p. 10.) For instance, a study found as high as 20 per cent of mothers of immigrant children in Hong Kong were still living in Mainland China (Chan et al, 1996, p. 20) Correspondingly, in the case of Vancouver, study raised the concern to students whose parents or guardians were not residing in Canada with them. The absent father family within Chinese community phenomenon, for example, had created a widely known “astronaut family” problem in Canada or elsewhere. An “astronaut family” was one in which one spouse, usually the husband, left the family behind in the receiving country and returned to their home country for employment or business. (Chow, 2000, p. 107) Considering the frequent return to Mainland China among immigrant children in Hong Kong and Macao, and the travel of the fathers to Vancouver to join the family there during holidays, family composition was thus a variable that needs further interpretation.

Parental participation - The present result of parental participation or involvement in school activity was inconsistent with some early studies (Epstein, 1986, 1988; Reynolds, et al. 1992; Comer & Hay, 1991; Christenson, Rounds & Gorney, 1992; Fehrmann, Keith, & Reimers, 1987). Griffith (1996), for instance, employed multiple regression analyses and found a substantial variance of students’ standard test performance explained by parental involvement and empowerment. (Griffith, 1996, p. 33) Parental support was also found to exert positive and significant effect on students’ academic achievement through its influence to the students’ self-concept and school behaviour. (Sanders, 1998, p.385) Epstein, who had conducted a myriad of research on parent and school cooperation since the eighties, once concluded that:

“There is consistent evidence that parents’ encouragement, activities, interest at home and their participation at school affect their children’s achievement, even after the students’ ability and family socioeconomic status is taken into account. Students gain in personal and academic development if their families emphasize schooling, let their children know they do, and do so continually over the year. (Epstein, 1988, Ch.1)

Further, Fullan suggested that a remarkably consistent message had emerged from research on parent and community involvement in school. As he states:

“The closer the parent is to the education of the child, the greater the impact on child development and educational achievement”.  
(Fullan, 1995, p. 227)

Nonetheless, some studies on parental participation or involvement had concluded a conflicting answer. White and his associates, as an illustration, found no convincing evidence that parental involvement resulted in a more effective student performance outcome. (White, Taylor & Moss, 1992)

The statistically not significant association between parent school participation and school educational performance among immigrant pupils in this study might be explained in four ostensibly reasons. First, parental involvement or participation could be a new experience to some of the immigrant parents and their children. To parents who had strong recognition toward school authority and rote learning styles, their participation might cause negative, rather than positive, effect to their children’s educational performance. This was especially so when parents generally viewed meeting teachers or visiting school as hearing complaints to their children. In other words, parental participation might not necessarily display desirable outcomes in

some groups of parents. The precise nature of parent participation had to take into account the cultural, ethnic, and class difference as well as variations related to the age and gender of pupils. (Fullan, 1995, p. 227)

Secondly, in school where upholding of traditional authority was still in practice, parents involvement could be seen as a meddling of teacher or school business. (Griffith, 1996, p. 3) All in all, the diversified meaning of parent school participation, as perceived by parents and school, could be central to the investigation of effect on students' educational performance. (Sanders, 1998, p.385)

Thirdly, there might be a need for a more concise definition of parent participation in order to investigate the effect on academic achievement. Fullan, for example, divided participation into instructional and non-instructional forms to elementary and middle grades. Non-instructional form of participation referred to participation in governance and advisory councils, and associations; and broader forms of community-school relations and collaborations. (Fullan, 1995, p. 229 & p.237) It was difficult to differentiate the present participation according to the two criteria.

Fourthly, the insignificance could also be resulting from too little cases of participation in the measure of various school activities. Among the five items in the questionnaire used to measure parents' involvement in class, in-school activity, etc, four out of five had a mode of 'no participation' from the 167 respondents.

Family learning culture was the fourth variable under the Family Characteristics domain. The variable had an unsubstantial and a statistically not significant effect on school educational performance (Beta = 0.06,  $p > 0.05$ ). Family learning culture in this study represented a measure of cultural capital. In simple term, cultural capital was a possession of knowledge and skills transmitted from parents to children. Moreover, family - learning culture could be understood in two aspects of cultural capital: active and passive capital. (Looker, 1994) Studies showed that cultural capital gained by children from family would benefit them to succeed in school because of teachers' favour of pupils who displayed 'cultured' traits (Farkas et

al., 1990), and because of knowledge and skills developed as a result of participation in cultural activity (Sullivan, 2001, p. 897 & p.908). According to Looker, it was more important to activate the active capital within the family, such as parental encouragement, interactions, help with children's homework etc than to rely on passive capital, such as providing money, books, facility, to facilitate the children to learn and excel academically. The present measure of family learning culture might thus be inadequate in measuring its effect on school educational performance because its focus primarily on appraisal of passive capital.

Both variables of father and mother's expectation of my job had a statistically not significant effect on school educational performance (Beta = - 0.01,  $p > 0.05$ ; Beta = - 0.08,  $p > 0.05$ ), though it was widely reported that higher parental expectation on children's academic achievement was found on Asian groups. (Young, 1993; Crystal, et. al. 1994) Nevertheless, a fear of not living up to parental expectations was a motivation as well as a stress to the children to work hard or to lie back academically. (Wong, 1990, p.370) A changing market situation of job income and status, especially after the Asian economic crisis beyond the new millennium, might have caused the present not significant effect of parents' expectation on school educational performance. Moreover, immigrant children could have made a wrong guess of their parents' preference of job, particularly in an unfamiliar social environment of the new country after the migration. The use of attitudinal measure of school educational performance in this study, rather than cognitive or behaviour measure (Fitz-Gibbon, 2000, p. 75), could also be a reason for the present result of insignificance. Use of class grades or public examination results may be able to provide better evidence than the present attitudinal items on school educational performance measure.

The number of siblings was statistically not significant at the 5% level on school educational performance (Beta = -0.07,  $p > 0.05$ ). Immigrant pupils in all three cities might have siblings not living together with them in the receiving cities because of various immigration reasons. In a case study of immigrant children in Hong Kong, for example, it was found 12 out of the 20 cases still had close family members in Mainland China. As shown in a study, one primary five girl who lived with her parents in Hong Kong had an elder brother and two elder sisters remaining in

the home country. (Hong Kong Federation of Youth Groups, 1997, p. 9-10) Separation of children with family members was one situation commonly found among immigrants. (Cox, 1990, p. 26) The question on number of siblings in this study had not addressed such separation issue. It therefore failed to reflect the genuine situation of siblings living together with the respondents. However, a correlation analysis of the variable on the four subjects of Mathematics, English, Science and Chinese revealed a finding that, except English ( $r = -0.17$ ,  $p < 0.05$ ), all other three had no significant association with number of siblings. Immigrant pupils who had fewer siblings report better English performance. It could be argued that fewer siblings decreased the opportunity of using home language and increased the learning of foreign language. There were common cases in Vancouver or other foreign language speaking countries where immigrant children spoke English or home language to siblings and achieved a different language development among them.

The two variables of first language and other language at home did not affect significantly the school educational performance. A prominent theorist on cultural reproduction, Bourdieu perceived linguistic competency as an important embodied state of cultural capital. (Bourdieu, 1997) Testing Bourdieu's theory on school achievement, Sullivan concludes that cultural capital was transmitted within home and did have a significant effect on performance in the General Certificate of Secondary Education examinations in UK. (Sullivan, 2001) Moreover, Bernstein viewed language in a social class perspective and suggested two concepts of 'restricted code' and 'elaborated code' in an attempt to explain educational attainment. (Bernstein, 1961, 1971, 1975) To Bernstein, some families, particularly of lower social class, tended to employ 'restricted code' to communicate with their children, which resulted in a less favourable learning environment and education attainment to the children. Accordingly, restricted code language paid less attention to use of complicated syntax, expressive and analytical phrases. Families adopting the 'elaborated code', on the other hand, used enriched sentences that benefited the children in the areas of discussion, logical thinking, or analytical argument. All in all, different cognitive development of immigrant pupils affected educational achievement.

An intricate situation of language used at home and school among the immigrant group in this study might have caused the statistically non-significant effect of language variables on school educational performance. First, the use of Cantonese and English in schools in Hong Kong and Macao had long been recognized in various studies to pose great difficulty to Mainland immigrant pupils. In the case of Vancouver, new immigrant pupils also had learning problems because of use of mother tongue other than English. (Sham Shui Po District Council, 1996; Chan, 1996; Chan, et al, 1996; Huang, 2000; West, et al., 2000; Lee, 1994) Linguistically, many immigrant pupils experienced hardship in classroom learning because of 'language' incompetence. In essence, the incongruence of language used at home (i.e., Cantonese, Mandarin or other Chinese dialects) and at school (i.e., Cantonese or English) had caused substantial difficulty in learning among immigrant pupils, especially during their early time in the receiving country.

Secondly, it was hard to measure the family social class because of social status change resulting from migration. Subsequently, it was difficult to evaluate the kind of language code employed by family members, let alone to take into account of the incomplete family composition found in immigrant families. The multifarious forms of language used in immigrant families had therefore epitomised a volatile effect on education achievement. A further test in this study using a dichotomised language variable (Cantonese and non-Cantonese) and school educational performance variable (high performance and low performance) also resulted in a non-significant statistical association of the two.

Except for the three variables mentioned in above paragraphs, the remaining seven variables in school effects domain were not significant to explain the school educational performance variable. The seven were: grade placement upon arrival, school day activity participation, school days missed, school days missed unauthorised, frequency of skipping school lesson, school problem frequency, and school problem occurrence place.

Grade upon arrival - Immigrant pupils normally experienced difficulty in attending the appropriate school grade. In a qualitative survey of 43 immigrant pupils

in Hong Kong in 1995, only 3 out of the total were assigned to a correct grade that fitted between age and grade level. (Hong Kong Federation of Youth Groups, 1995, Table 7f, p. 62) Grade placement had been found to affect school educational performance. In a study of refugee youth in Canada, respondents who felt their grade placement upon arrival was corresponding to their previous educational experience when they began school were more likely to be 'on-track', i.e., working continuously in high school or post-secondary school. (Wilkinson, 2001, p.185) The way the immigrant pupils perceived the grade placement upon arrival could substantially affect academic results.

Similar to the present study, lower school grade upon arrival was found to have no significant effect on adaptation in another study of immigrant pupils in Hong Kong. The authors of the study attributed this to the fact that immigrant pupils were willing to accept the lower school grade because they thought it was helpful to them; and the parents were also willing to have their children placed in a lower grade so that they could "catch-up" with local curriculum, especially English. (Chan et al, 1996, p. 27; Rao & Yuen, 2001, p. 314) In other words, the effect of grade placement on school educational performance was subject to the influence of parental consideration or willingness to accept the placement by the immigrant pupils. Further check of grade placement on arrival with all four subject-indices also showed a significant correlation of the variable only with English ( $r = 0.21$ ,  $p < 0.01$ ). The result might, to certain degree, reflect an effect of English on school grade placement to immigrant pupils in this study.

Participation in school clubs, sports or other activities during the school day had no significant effect on school educational performance in this study (Beta = 0.02,  $p > 0.05$ ). A test of correlation between the participation variable and the four subjects also revealed non-significant statistical associations. The insignificance could be attributed to a number of generic reasons. The participation in school activities could be useful for immigrant pupils to integrate into the receiving society, instead of helping them directly with academic achievement. Specifically, joining school clubs etc did not have a manifested effect on subject learning. Participation in school activity did not help immigrant pupils to exhibit a positive perception on their subject

performance. Rather, it helped to establish a useful social support network to the immigrant pupils, which in turn might enhance their adaptation in the new environment. (Boys and Girls Club Association, 1996, p. 34; Hong Kong Federation of Youth Groups, 1997, p. 32)

School days missed, school days missed unauthorised, and frequency of skipping school lesson all had non-significant statistical effect on school educational performance (Beta = - 0.04,  $p > 0.05$ ; Beta = - 0.01,  $p > 0.05$ ; Beta = - 0.02,  $p > 0.05$ ). Since only a limit number of respondents were absent from school, or skipped lesson in the study, a possible reason on the trivial effect between the variables could be caused by the unbalanced distribution of cases. For example, over 90 per cent of the 167 respondents reported to have never skipped class.

Neither school problem frequency nor school problem occurrence place accounted significant variance of the school educational performance variable in the linear regression model. Both variables obtained a Beta of - 0.08 ( $p > 0.05$ ) on school educational performance. Although school problems such as bullying, racist insults were present in the group of respondents, the frequency or place of occurrence were nevertheless not up to an alarming situation. The incidents were mostly reported to have happened in less than once in a fortnight.

School problems were found to have significant associations with a number of school items. For instance, the school problem frequency obtained a Pearson correlation of - 0.20 ( $P < 0.01$ ) with the item 'I am normally happy when I am in school', and - 0.19 ( $p < 0.05$ ) with 'my school is a friendly place' in section B of the questionnaire. Correspondingly, the school problem occurrence place had a correlation of - 0.21 ( $p < 0.01$ ) with 'I am normally happy when I am in school', and -0.18 ( $p < .05$ ) with 'my school is a friendly place'. The two school problem measures were also found to have a significant association ( $r = 0.22$ ,  $p < 0.01$ ;  $r = 0.32$ ,  $p < 0.01$ ) with the stressful life events scale. Immigrant pupils in this study who reported more school problems tend to be under greater stressful influence.

School problems like bullying or insulting that upset immigrant pupils appeared to shape one's perception of the school in general. The change of perception, however, seemed to have little influence on the pupils' learning or educational performance.

All three variables in the peer influences domain did not affect school educational performance in this study of immigrant pupils. The number of friends and number of Mandarin-speaking friends had accounted for a very limited and not significant variance (Beta = 0.01,  $p > 0.05$ ; Beta = 0.01,  $p > 0.05$ ) of school educational performance. There was an underlying linear assimilation assumption in immigrant study (Rumbaut, 1995, p. 48) that the more the close local friends an immigrant had, the more he/she was likely to gain successfully integration into the new society. A successfully adapted immigrant child would have better school educational performance. As Lee states:

'For those who spoke (the language) well were more apt to participate with Canadians and to adapt more successfully. Those who associated almost exclusively with other Hong Kong students were less adaptive and less integrated within Canadian society'  
(Lee, 1994, p. 13)

One conceivable reason for the influence of peers on school educational performance could be related to regular travel of immigrant pupils back to Mainland during holidays. Immigrant pupils might have included good friends living in Mainland as their close friends or friends speaking Mandarin. Immigrant children in Hong Kong, Macao, and even Vancouver, who adopted a strategy of structural assimilation, rather than cultural assimilation, could have caused a different acculturation effect. This could affect school educational performance. (Diller, 1999, p. 96) There was a need to investigate the deeper meaning of close friends or the proximity of these friends to the immigrant pupils, such as the availability of friends in Mainland China, Hong Kong or Macao to the Vancouver group.

Peer influence had a positive and significant association ( $r = 0.19$ ,  $p < 0.05$ ) with school educational performance. The association showed better school educational performance among immigrant pupils whose best friends were 'conforming' individuals. These best friends would agree with 'stay in for an evening to do homework', or refrain from being 'rude to teachers or parents'. Peer influences variable also had significant effect ( $\text{Beta} = 0.19$ ,  $P < 0.05$ ) on school educational performance when an independent regression model of only three peers variables was used. The peer influences variable accounted for four per cent of the total variance ( $p > 0.05$ ) in school educational performance (See Table 7.5). Peer influences, again, did not have significant effect ( $\text{Beta} = - 0.02$ ,  $p > 0.05$ ) on the dependent variable when all variables in the four dimensions were entered into the regression model. (See Table 7.6)

Variables in the school dimension might have mediated some of the effect of peer influences variables on school educational performance. Regression test on school educational performance using the four dimensions showed some results to support such claim. The test ascribed a coefficient of determination of 0.03 ( $p = 0.21$ ) when only variables from peer influence dimension were entered. The coefficient of determination changed to 0.14 ( $p = 0.51$ ) when variables from both peer influence and individual factor dimensions were used. When variables of all three dimensions – the peer influence, the individual factor and family characteristics - were adopted, the coefficient changed to 0.18 ( $p = 0.17$ ). A full model with all four dimensions achieved a coefficient of 0.40 ( $p < 0.01$ ).

An additional administration of regression model on school educational performance with variables from peer influence and school effects dimension gave rise to a significant result. The two dimensions explained a total of 26 per cent of variance ( $P < 0.001$ ) of school educational performance. The results suggested that peer influences on immigrant pupils' school educational performance could have been mediated through school influence, such as attachment to school.

Presumably, most immigrant pupils made their friends in school. The ways these friends thought or behaved could have a substantial influence on immigrant

pupils. The present study, however, drew a result showing a non-significant statistical effect of peer influence on school educational performance when school variables were included in the model of analysis. Immigrants' length of study and cultural factors could be one of the reasons behind such insignificance.

It had been well argued that immigrants' integration to the new country would be increased as time intensifies because of increased social contacts. (Isajiw, 1999; Murphy-Kilbride, 2001) The relationship with friends, however, might be different among individuals and might not necessarily be a linear one. As argued in previous paragraphs, the influence of friends was contentious when many of the immigrant pupils in Hong Kong, Macao, or Vancouver made frequent travel to Mainland during holidays. In other word, peer effects, might not be as influential as it was to immigrant pupils in especially the early years. Arguments drawn from cultural system approach might be useful to discern such contentious influence from peers.

Most if not all immigrant pupils would regard educational achievement as a powerful tool to help them to successfully integrate into the new society. Such regard might come from parents who wanted the child to do well at school. (Young, 1998, p. 67-68) The hope placed a special meaning to schooling to the immigrant pupils. As meanings and values associated with school learning and achievement played a significant role in determining effort towards learning and performance, (Ogbu, 1992, p.7) it was not unusual to see an adoption of different strategy by immigrant pupils to cope with peer association and learning. Specifically, immigrant pupils could report close friends showing deviant thoughts or exhibiting deviant behaviours, they might not necessarily recognize or even copy such deviancy. In other words, the immigrant group was featured by cultural inversion. The immigrant group did not accept certain forms of norms or behaviour from the mainstream population because they were not appropriate to the own frame of reference toward academic achievement. (Ogbu, 1987, p.323) An overwhelming indication of school attachment shown by immigrant pupils in this study suggested school conformity was one of the important frames of reference used by the immigrant pupils.

There was also a strategy of differentiated assimilation by the immigrant pupils. They structurally but not culturally assimilated themselves to the new society. Immigrant pupils might actively identify with structure of the new society but passively with the culture. Structural assimilation, for instance, referred to the entry into the institutions of a society, such as school or work place. On the other hand, cultural assimilation involved adopting the cultural ways of another groups, such as the mainstream culture. (Diller, 1999, p.96) Immigrant pupils were practising 'double consciousness' to assimilate themselves into the mainstream while simultaneously maintaining his/her 'plan' to integrate successfully through education. (Young, 1998, p. 61)

All in all, immigrant pupils in this study adopted a cultural frame of reference to deal with the friends and learning. They had a folk theory of how to behave appropriately in school in order to meet the parents' expectation to excel academically, to integrate successfully into society, and to cope with pressure arising from discrimination, if any. Immigrant pupils believed in hard work and showed a strong commitment to schooling, they became acculturated without assimilation (Ogbu, 1992) In essence, they participated in two different cultures for different purpose. One culture was to seek for academic achievement for their future; one was to affirm group affiliation or identity by having friends who showed signs of deviancy.

## 6.2 Comparing Educational Performance of Young immigrants

After exploring potential factors that influenced school performance of young immigrants from the three cities, this study also investigated group difference in performance. An ANOVA test was used to compare the means of the three cities in the first survey. As shown in Table 6.7a (see appendix A), Hong Kong had the lowest mean among the three in the measure of school educational performance, Macao obtained a mean of 3.25 while Vancouver had the highest of 3.41. The test found a mean difference not statistically significant at 5% level ( $F = 1.696$ ,  $P = 0.187$ ) among the three cities. Hypothesis 38 was thus rejected.

There were questions prompting (i) if the respondents were admitted to the new school via entrance examination, (ii) if the respondents were placed in a school

grade that they preferred, or (iii) if their grade was just-right in relation to the previous one in their home country.

This study employed two separate surveys to draw information from the three cities. Group performance difference in the two surveys will also be evaluated in this section.

#### 6.2.1 Contrasting Educational Performance of Different Young Immigrant Groups

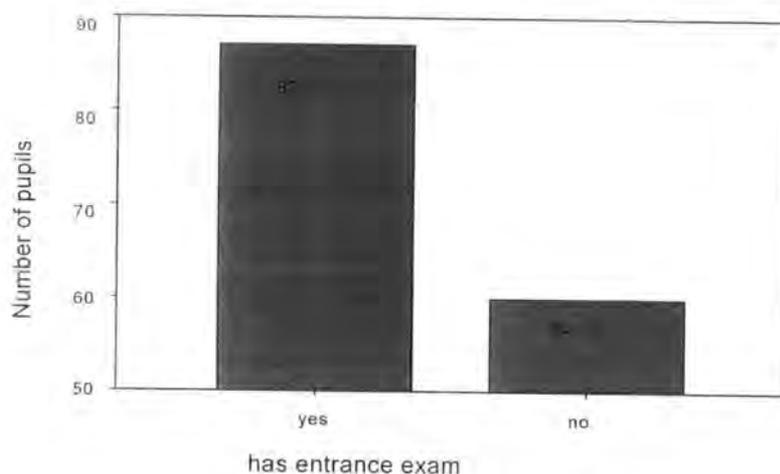
Three hypotheses were employed to test the group differences in school performance. The first hypothesis (hypothesis 39) was on entrance examination. It was hypothesized that groups with entrance examination would perform better than groups without entrance examination. The second (hypothesis 40) was on preferred school grade. It was hypothesized that groups placed in a preferred grade would perform better than groups that were not. The third (hypothesis 41) was on grade comparable to their previous one in home country. It was hypothesized that groups with just-right grade performed better than groups in lower or higher grade. Data for the three hypotheses testing were drawn from the first survey.

Only 147 respondents from the Hong Kong and Macao sample were included in the first two hypothesis tests. The 20 Vancouver pupils did not respond to the related questions because of different education placement system adopted in Canada. The Vancouver group, for example, did not have any placement examination such as those taken by the Hong Kong and Macao groups before their admission to the new school.

An independent sample t-test was used to investigate the difference of school performance between groups with or without entrance examination. Figure 6.3 showed the number of young immigrant pupils in the two categories. Of the 147 pupils, 87 or 59 per cent of them had sat for the examination. On the other hand, 60 or 41 per cent had not sat for any entrance examination before their admission.

Figure 6.3

Number of pupils taking entrance examinations



The examination group obtained a mean of 3.20 and a standard deviation of 0.36, while the non-examination group a mean of 3.23 and a standard deviation of 0.40. (See Table 6.8) As one of the assumptions for a valid t-test is homogeneity of variance, the Levene test for homogeneity of variance was employed to conduct the test. (Kinnear and Gray, 1997, p.93) The variance of the two groups was found to be homogeneous as shown by the statistically not significant F value ( $p = 0.153$ ). The Equal Variance line of values for the t-test was therefore used. In this examination of the two groups, the difference between means was not significant with a two-tail p-value of 0.051 ( $t = -1.97$ ,  $df = 145$ ). (See Table 6.8) In other words, there was no mean difference of school performance between group with or without an entrance examination.

Table 6.8

Summary statistics for two groups with/without examination on school performance

Group	N	Mean	SD	df	t-value	p
With examination	87	3.20	0.36	145	-1.97	0.051
Without examination	60	3.23	0.40			

The content of the entrance examinations could be one of the reasons behind a not significant statistical difference in school performance between the two groups. Viewing a gap in English standard between immigrant and local pupils, it was believed that most schools in Hong Kong and Macao used entrance examinations that were heavily loaded with English substance to assess the young immigrant applicants. The examinations helped to differentiate applicants' English capability instead of general school standard. Moreover, schools might not use the results of the entrance examinations to place immigrant pupils into respective classes. The immigrant pupils could still be grouped into a 'special class' for remedial teaching purposes. In essence, the entrance examinations were meant for admitting 'qualified' immigrant pupils, instead of 'screening' them into classes of different levels. Consequently, school performance of immigrant pupils did not show significant difference based on placement after the entrance examination. To further substantiate this idea, an examination of groups with an entrance examination in English subject was conducted. It was hypothesised that school performance of groups with or without entrance examination in English subject did not have significant difference statistically.

Of the 86 respondents in the first survey who took entrance examinations, 32 or 37 per cent of the total had a test of English. An independent sample t-test revealed that there was no significant mean different in school performance between groups with or without English subject entrance examination ( $t = -0.64$ ,  $p = 0.53$ ) As shown in the Table 6.9, the two groups shared very similar mean value. The English-tested group obtained a mean of 3.18 and a standard deviation of 0.35. The English-non-tested group had 3.23 and 0.39.

Table 6.9

Summary statistics for two groups with/without examination on English

Group	N	Mean	SD	df	t-value	p
With examination	54	3.18	0.35	84	-0.64	0.53
Without examination	32	3.23	0.39			

Another reason for the statistically not significant group difference could be an inherited deviation between the entrance examination and the performance measure adopted in this study. While the entrance examinations were meant to differentiate immigrant pupils with different academic capability, the performance scale in the present study was meant to provide a general evaluation of self-perceived school performance. Fundamentally, there could be a gap between the two evaluations in terms of their contents, such as subject competency in the entrance examination and subjective self-evaluation in the survey. A crosstabulation test of the two variables with the school performance variable dichotomised into a high and a low scale using the mean as a cut-off point also showed a not significant statistical association between examination and performance (two-tailed Chi-square  $p = 0.74$ ,  $df = 1$ ). (See Table 6.10)

Table 6.10

High & low school performance from pupils with or without examination

has entrance exam \* Dichotomised sch performance Crosstabulation

			Dichotomised sch performance		Total
			low performance	high performance	
has entrance exam	yes	Count	48	39	87
		Expected Count	46.8	40.2	87.0
	no	Count	31	29	60
		Expected Count	32.2	27.8	60.0
Total		Count	79	68	147
		Expected Count	79.0	68.0	147.0

Obtained Chi-square = 0.74

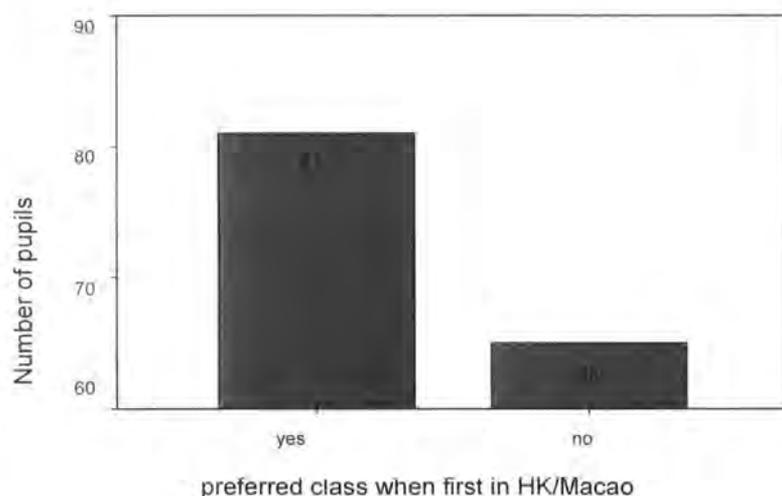
Tabled Chi-square = 2.71 for significance at the 0.01 level.

By referring to the statistical analyses of groups with or without entrance examination, hypothesis 39 was therefore rejected.

Immigrant pupils were commonly assigned to grades against their preference. Hypothesis 40 was therefore designed to investigate if there was significant difference between the two groups in terms of their preferred school grade. An independent sample t-test was again conducted on the 147 respondents. 81 of the 147, or 55 per cent indicated that they were placed in their preferred class when first in Hong Kong or Macao. 65 of them were assigned to a class they did not want to. Figure 6.4 showed numbers of the two groups.

Figure 6.4

Number of pupils admitted to their preferred class



The preferred group of 81 respondents obtained a mean school performance of 3.27 and a standard deviation of 0.37. The not-preferred group, on the other hand, had 3.23 and 0.40. Under the Equal Variance assumption, the variables had a two-tail p-value of 0.55 ( $t = 0.59$ ,  $df = 144$ ). (See Table 6.11) The test indicated that there was no statistical significance between the two groups in school performance. Hypothesis 40 was thus rejected.

Table 6.11

Summary statistics for two groups of preferred/not-preferred class on school performance

Group	N	Mean	SD	df	t-value	p
With examination	81	3.27	0.37	144	0.59	0.55
Without examination	65	3.23	0.40			

It might be argued that the statistically not significant group difference in preferred and not-preferred classes on school performance had something to do with mixed feelings upon class placement among the immigrant pupils. On one hand, the pupils could feel comfortably and possibly show higher self-esteem when they were placed on a preferred class than on a not-preferred class. The pupils, on the other hand, might also understand it was to their advantage if they could catch up with the local curriculum in a not-preferred class, such as in lower grade. As discussed in the regression analysis section, the parents or the immigrant pupils might view sitting in a not-preferred class as a necessary mean to obtain future advantage. (Ogbu, 1987, 1991; Boys and Girls Club Association, 1996, p.32; Hong Kong Federation of youth Groups, 1995, 1999) Essentially, the immigrant groups adopted a strategy of deferred gratification for future satisfaction. As such, groups in not-preferred classes might not necessarily perform poorer academically than groups in preferred classes. The group differences in preferred or not-preferred class were somewhat related to grade placement upon arrival. This will be discussed further in the following section.

Some immigrant pupils were assigned to school grade not comparable to their previous one in their home country due to curriculum difference or language standard consideration. After the entrance examination or subject tests, some immigrant pupils were placed in lower school grade while some in higher grade. Hypothesis 41 was to test the difference in groups placed in 'lower grade' 'just right grade' or 'higher grade'. A total of 166 valid cases from the three cities of Hong Kong, Macao and Vancouver were entered into this analysis. Of the 166 respondents, 85 or 51 per cent replied to have been assigned to a 'lower grade', 51 or 31 per cent to the 'just right grade', and 30 or 18 per cent to the 'higher grade'. Figure 6.5 showed the distributions. Means and standard deviations of the three groups on school performance were 3.24 and 0.41, 3.30 and 0.37, and 3.33 and 0.31 respectively. (See Table 6.12)

Figure 6.5

Arrival grade of pupils in the three cities

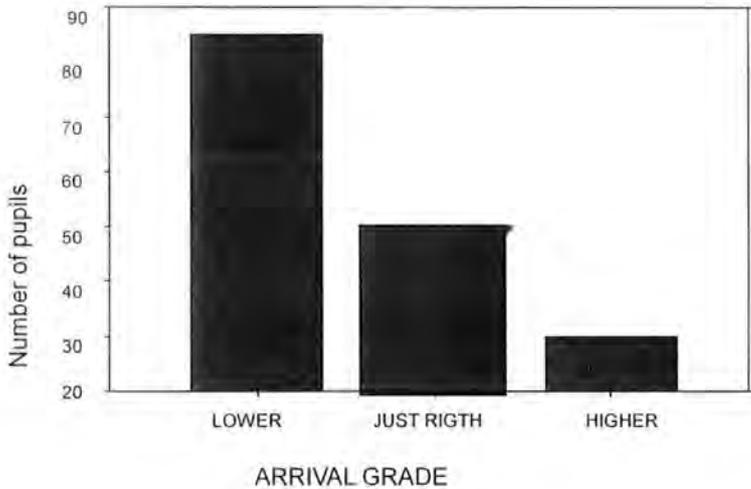


Table 6.12

Summary statistics for three groups of different grades upon arrival on school performance

Group	N	Mean	SD	F-value	p
Lower grade	85	3.24	0.41	0.85	0.43
Just-right grade	51	3.30	0.37		
Higher grade	30	3.33	0.31		

Although the 'high grade' group obtained the highest mean of 3.33, followed by the 'just right grade' group of 3.29, and the 'lower grade' group of 3.24, their difference was trivial. A one-way ANOVA test of the three groups revealed a statistically not significant mean difference among the three in school performance. ( $F = 0.85$ ,  $p = 0.43$ ) (See Table 6.12) In other words, groups assigned to either 'lower grade' or 'just right grade', or 'higher grade' did not have significant mean difference in school performance statistically. Hypothesis 41 was thus rejected.

As shown in the regression analysis of grade upon arrival on adaptation and school performance, effect of the grade upon arrival to school performance might be

related to how the grade change was perceived by the parents or pupils. For example, it had been suggested in previous studies that the negative effect of 'lower grade' be minimized if either the parents or the pupil accepted the lowering of school grade as a means to 'catch-up' with the local curriculum, especially English. (Chan et al, 1996, p. 27; Rao & Yuen, 2001, p. 314) Provided that immigrant pupils regarded schooling as an important agent to facilitate their integration to the new society and they were willing to be placed in different school grade, and provided that parents too regarded the school grade change upon arrival helpful to their children's future educational opportunity, it was quite reasonable to see a not significant mean difference among the three groups on school performance.

Moreover, the subjective self-evaluation of school performance by the young immigrant pupils could also attribute to the statistically not significant result. When immigrant pupils examined their school performance during the survey, they might not necessarily base their evaluations upon their current grade level but rather on their previous school experience. As such, the effect of the grade change could be minimised to a statistically not significant level. In addition, the effect of the grade change might have been attenuated through time as some of the pupils have already been migrated to the new country for some time.

#### 6.2.2 The Different Educational Performance of Young Immigrants from Hong Kong, Macao and Vancouver

Young immigrant pupils in this study had been surveyed twice and two sets of data were therefore available for comparisons. Four hypotheses from 42 to 45 were designed to test the differences of the three cities between the first and second survey. This section focused on discussions of the four hypothesis tests.

According to Fitz-Gibbon, groups are "independent" unless the cases in the groups have been deliberately matched or paired in the design or the "two" groups are in fact the same groups measured on two occasions. (Fitz-Gibbon, 1987, p. 39) All three groups in this study were not matched deliberately in the design. The cases were strictly non-randomly selected in the two tests. Consequently, the two tests in the Hong Kong, Macao and Vancouver group (Table 6.14 to 6.16) adopted independent t-

tests, rather than paired t-tests. But surely the data were collected twice on the same school of pupils.

Hypothesis 42 was designed to examine the difference of school educational performance in Hong Kong respondents in the two stages of survey.

As shown in Table 6.13, 60 respondents in the first Hong Kong survey obtained a mean of 3.25 and a standard deviation of 0.39. The group had a mean of 3.33 and a standard deviation of 0.42 in the second survey. As shown in Table 6.13, an independent samples t-test of the respondents indicated a statistically not significant difference on school performance between the first and the second survey ( $t = -1.12$ ,  $df = 111$ ,  $p = 0.27$ ). The hypothesis 42 was thus rejected. Figures 6.6 and 6.7 showed the distributions of the two surveys.

Table 6.13

Summary statistics for the two Hong Kong tests on school performance

Test	N	Mean	SD	df	t-value	p
Pretest	60	3.25	0.39	111	-1.12	0.27
Post-test	43	3.33	0.42			

Figure 6.6

Pretest distribution of school performance of Hong Kong group

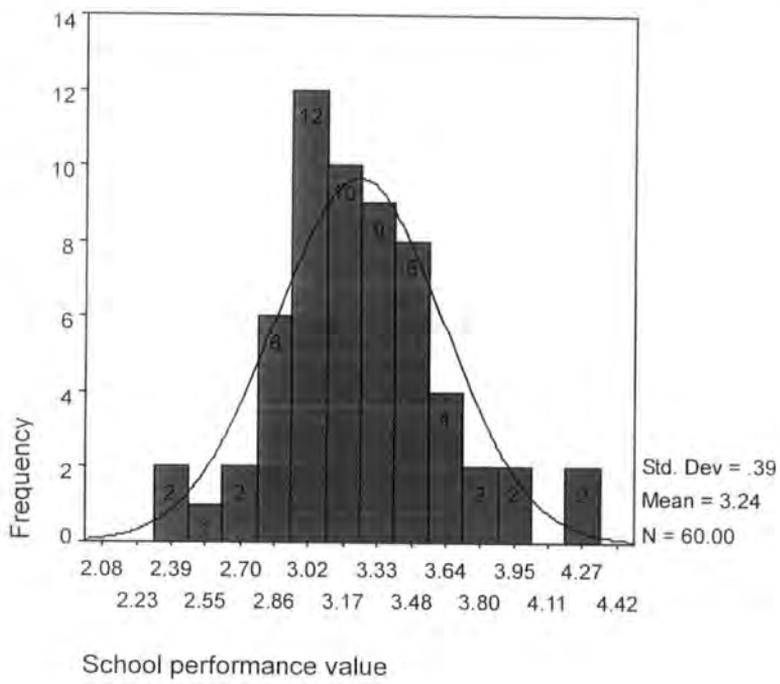
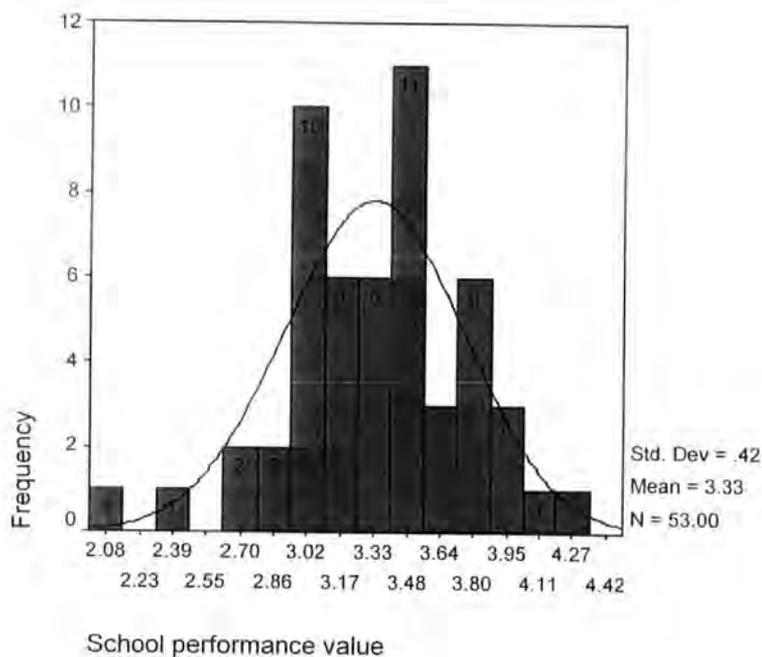


Figure 6.7

Posttest distribution of school performance of Hong Kong group



Hypothesis 43 was about testing difference of school performance in the Macao respondents. All 87 respondents in Macao attempted both stages of survey. Shown in Table 6.14, the group in stage 1 survey obtained a mean value of 3.26 and a standard deviation of 0.38 in school performance. It had a mean of 3.45 and a standard deviation of 0.53 in the second survey. Figures 6.8 and 6.9 showed the distributions respectively.

An independent samples t-test was again conducted to examine the mean difference of school performance in the two Macao surveys. School performance of the two Macao surveys was found to have a significant correlation with a coefficient of 0.32 ( $p < 0.01$ ). The two also ascribed a significant mean difference in the t-test ( $t = -2.80$ ,  $df = 172$ ,  $p = 0.006$ ). The results indicated a significant increase of school performance of the Macao group in the second survey. The hypothesis 43 was accepted.

Table 6.14

Summary statistics for the two Macao tests on school performance

Test	N	Mean	SD	df	t-value	p
Pretest	87	3.26	0.38	172	2.80	0.06
Post-test	87	3.45	0.53			

Figure 6.8

Pretest distribution of school performance of Macao group

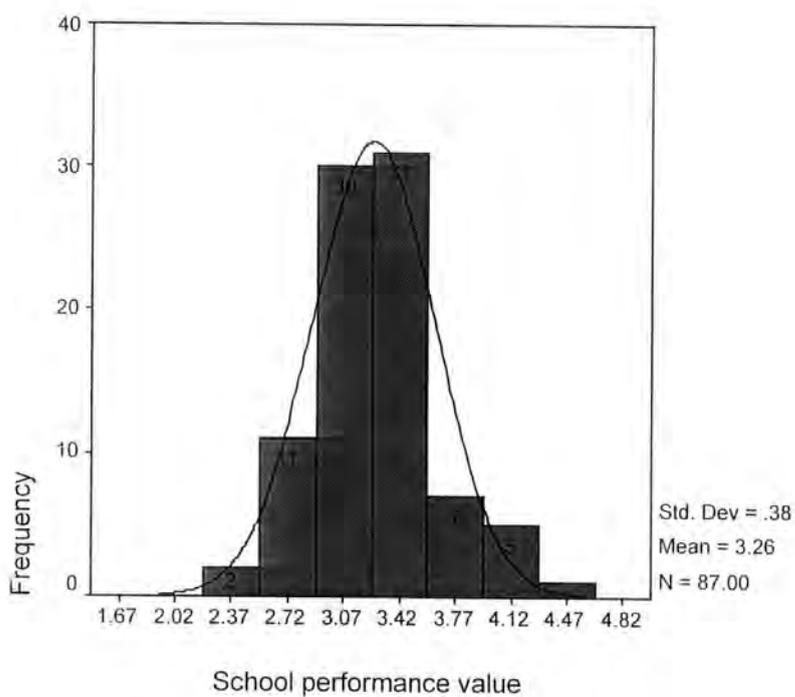
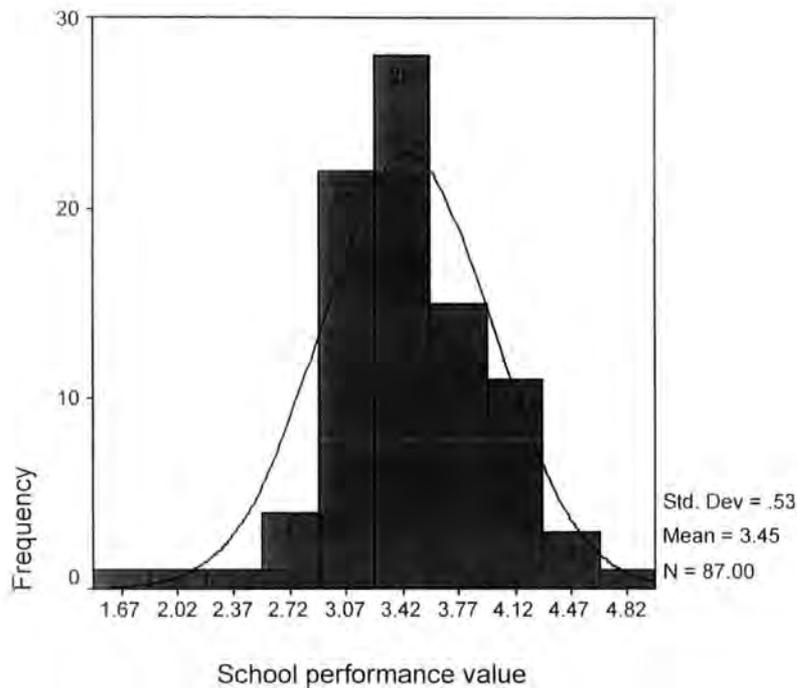


Figure 6.9

Posttest distribution of school performance of Macao group



Hypothesis 44 tested different school performance within the third group of respondents. It was hypothesized a significant difference of educational performance in the Vancouver group in the two surveys. Figures 6.10 and 6.11 showed the school performance of distributions of the group. Mean school performance of the 20 respondents in the first survey was 3.50 with a standard deviation of 0.43. The second survey of the eight respondents had a mean of 3.51 and a standard deviation of 0.76.

Figure 6.10

Pretest distribution of school performance of Vancouver group

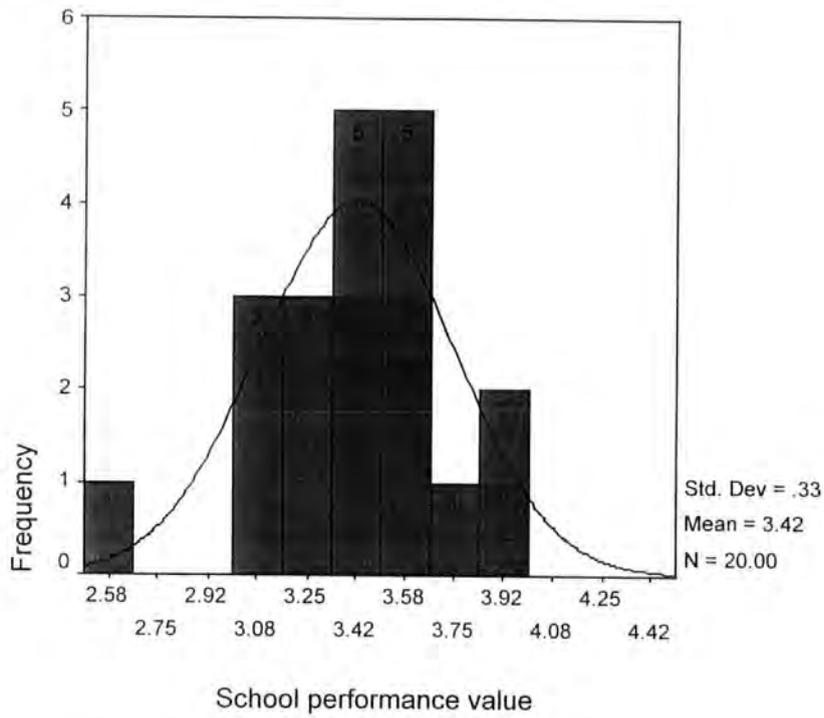


Figure 6.11

Post-test distribution of school performance of Vancouver group

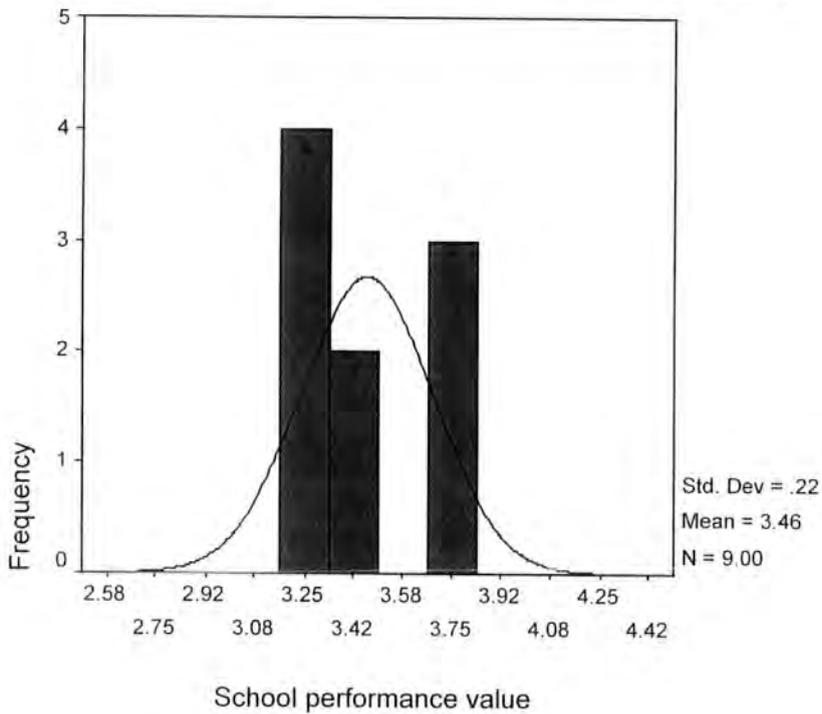


Table 6.15 showed the result of an independent samples t-test of the two Vancouver surveys. (See Table 6.15a in Appendix) A statistically not significant mean difference ( $t = -0.02$ ,  $df = 26$ ,  $p = 0.98$ ) was found in the group in the two surveys. Hypothesis 44 was thus rejected.

Table 6.15

Summary statistics for the two Vancouver tests on school performance

Test	N	Mean	SD	df	t-value	p
Pretest	20	3.50	0.43	26	- 0.02	0.98
Post-test	8	3.51	0.76			

All in all, the t-tests found a mean difference not statistically significant at the 5% level in the Hong Kong and Vancouver groups but a significant mean difference in the Macao group.

Time was likely to play a role in the performance change in the Macao but not the other two groups. In essence, there was a significant change of school performance among the Macao new immigrant pupils in a period of time as short as three to six months. The other two groups, however, did not make significant change given the short period of time. Time could be an important element for change to happen. As it was stated, "outcomes may be unobservable at a given point in time if they involve some slow change, such as character development, attitude change, or development of complex problem-solving competencies. Such outcomes cannot be expected to reach a measurable magnitude in a year or two. They are outcomes that are intangible or so remote in future time that their effects may not be observable within a short time span." (Fitz-Gibbon & Morris, 1987, p. 151)

Besides the time factor, teachers' attitudes could also affect pupils' performance in the three cities. Teachers in the Macao schools might be more influential to the pupils' learning, and hence helped to achieve a significant change of school performance in the group. Macao teachers were more helpful and keen to participate in the two surveys, as shown by the exact numbers of immigrant pupils taking the two surveys. Both Hong Kong and Vancouver sample, on the other hand,

experienced case loss in the post-test. The teacher attitude, such as their willingness in helping with completing the surveys with all respondents might reflect, in one way or the other, their influence on pupils' learning.

Furthermore, the scale used to measure school performance could favour one but not the other group. For instance, the Macao group might like to answer questions that were more on attitudinal types, such as those used in the present study. Other groups of respondents might perform differently if questions on school performance include cognitive or factual and behavioural elements. The focus of measure on academic or non-academic achievement could also cause the group difference on school performance. Macao immigrant pupils could be a group that was more likely to show good performance in academic aspects, such as the school subjects in the present study. The Hong Kong and Vancouver group might tend to show significant change of performance characterized by non-academic measure. In general, Macao schools were likely to adopt more traditional pedagogy such as rote learning than Hong Kong or Vancouver schools. (Fong, et. al, 2002, p. 69)

The measure of satisfaction with school performance (item B.18) among the groups might also provide an insight to the difference. A test of mean score of the three groups on the question revealed that Macao group scored the lowest satisfaction with the overall school performance. The Vancouver group had the highest among the three. Table 6.16 showed the details. There could be an association between satisfaction with school performance and change of performance, as in the post-test in this case. A one-way ANOVA was also used to compare the means. As shown in Table 6.16a (see Appendix A), there was no statistical significant mean difference among the respondents in the three cities in terms of their satisfaction with school performance ( $F = 0.766, p = 0.466$ ).

Table 6.16

Means and standard deviation of satisfaction with school performance

Group	N	mean	sd
Hong Kong	60	3.48	1.00
Macao	87	3.36	1.09
Vancouver	20	3.65	0.75

The last hypothesis, hypothesis 45, was about testing difference of school performance of all respondents in the two stages. It was hypothesized a significant difference of school performance between the two stages. As shown in Figure 6.12 and 6.13, 167 respondents from the three cities in the pretest obtained a mean of 3.27 and a standard deviation of 0.38 in the measure of school performance. The group of 149 respondents in the post-test had a mean of 3.41 and standard deviation of 0.48. Table 6.17 showed the summary statistics of the independent samples t-test of the two groups. The two groups were found to be significantly different from one another, ( $t = -2.55$ ,  $df = 313$ ,  $p = 0.011$ ) As demonstrated by the two means, the group showed a slightly better school performance in the post-test. The hypothesis was thus accepted.

Figure 6.12

Pretest distribution of school performance of the three cities

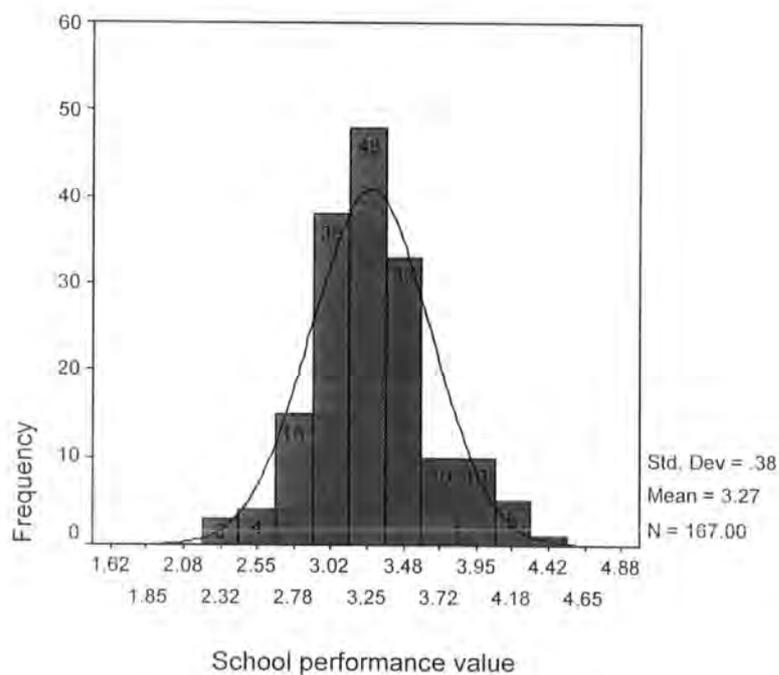


Figure 6.13

Post-test distribution of school performance of the three cities

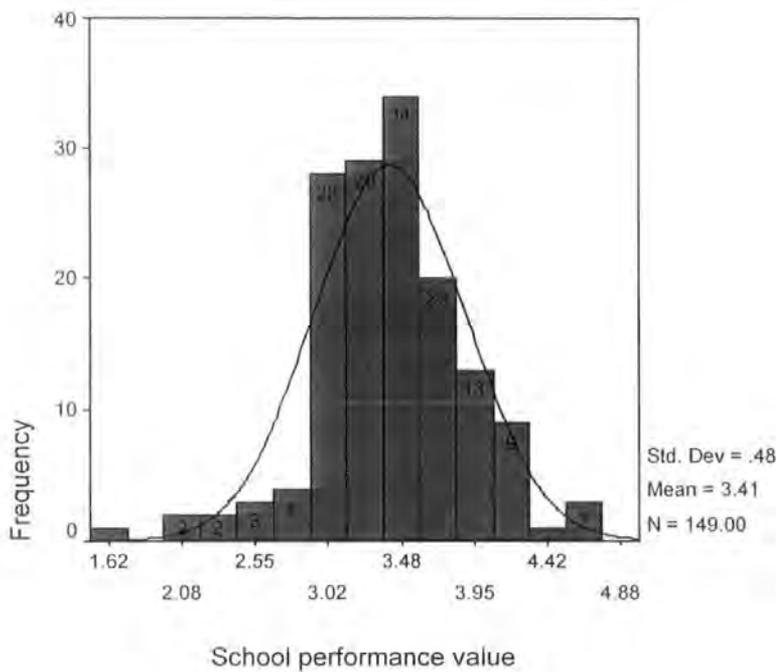


Table 6.17

Summary statistics for tests on school performance of all three cities in the two surveys

Test	N	Mean	SD	df	t-value	p
Pretest	167	3.27	0.38	313	- 2.55	0.011
Post-test	149	3.41	0.48			

As shown in the individual mean tests of the three cities, only Macao sample obtained a significant mean difference in the two tests. The present significant mean difference between the pretest and post-test of all three cities might therefore be affected by the Macao result. In other words, the different city sample size of the survey could be a factor in arriving such result.

### 6.2.3 Significant variables pertaining to educational performance in the three cities

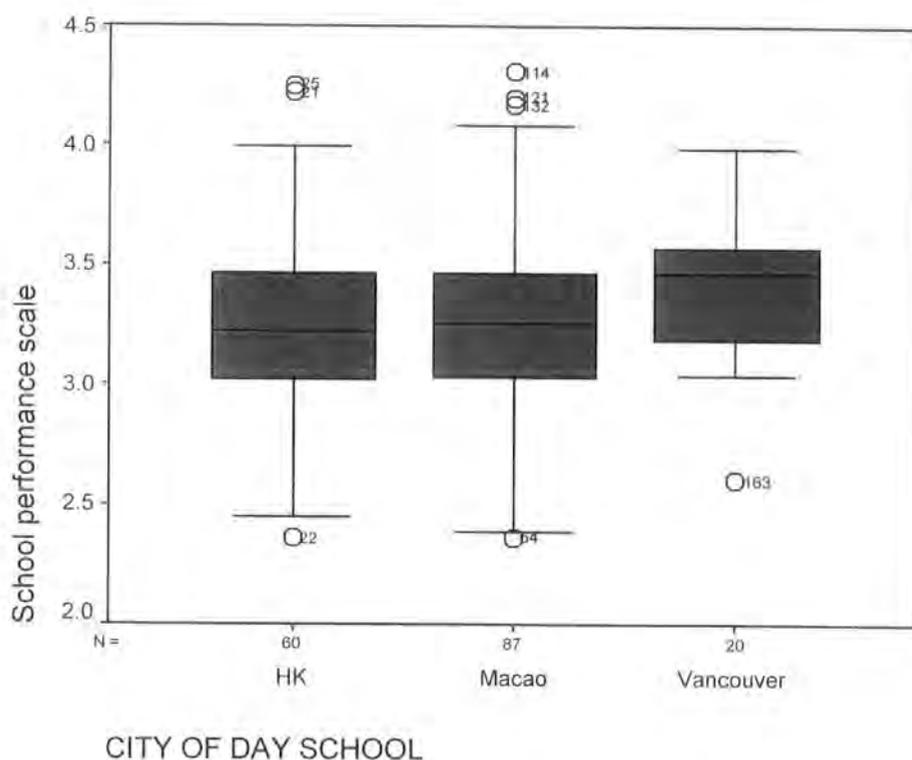
A number of variables were found to show significant relations with educational performance of pupils in the three cities. It was useful to further explore their comparisons across the cities. For example, how was the educational performance of city A in comparing to city B, and what was the difference of a significant variable between two cities? It was hoped that such comparisons could substantiate our understanding of the subject matter of school educational performance in this exploratory academic endeavour on Chinese immigrant pupils in three cities.

The following discussions in this section were first devoted to comparisons of educational performance of the three cities in the two surveys. This would be followed by selected variables from Table 6.2 and 6.7 on correlation and regression analysis. Variables chosen for further investigation across the cities included: gender, school attachment, future aspiration, after school activity participation, intention of stay, school trip participation, and peer influence. All these selected variables correlated or regressed significantly with educational performance.

The box-and whiskers plot in Figure 6.14 showed educational performance across the city of Hong Kong, Macao and Vancouver in their first phase of survey.

Figure 6.14

A box and whiskers plot of school educational performance by cities in phase 1 survey



As shown in Figure 6.14, pupils of the Vancouver sample obtained the highest median (3.47) of educational performance. This was followed by Macao, which had a median of 3.26. The Hong Kong group had a slightly lower median (3.22) than the Macao pupils.

All three cities had an identical interquartile range of around 0.5. The Hong Kong and Macao pupils had an interquartile range from 3.0 to 3.5. The Vancouver pupils, on the other hand, had a higher 25<sup>th</sup> and 75<sup>th</sup> percentile, as well as a higher median score than the two Asian cities.

Judging from the length of the box and the tail, and the median, it was useful to tell the distribution of the values. To the two cities of Hong Kong and Macao, it could be concluded that their distributions of values were fairly symmetrical (skewness = 0.377 and 0.479), with the median closed to the centre of the box. The

long whiskers of both cities indicated outlying points of either “good” or “poor” pupils. Comparatively, Vancouver had a negatively skewed distribution (skewness = -0.388) with the median closer to the larger values. The skewness found in the Vancouver group indicated a cluster of scores to the higher quartile. Specifically, pupils in Vancouver in the first phase of survey were more likely to report they had a “better” educational performance than the other two groups. The mean score of the three cities, in the order of Vancouver, Macao to Hong Kong, was 3.50, 3.26 and 3.25 respectively.

Vancouver pupils who reported better educational performance in the survey showed two interesting scenarios. The Vancouver pupils showed more interest or were more motivated to learn the four subjects of Mathematics, English, Science and Foreign Language under the new school environment. The higher learning interest might be related to the teaching and learning styles in Vancouver schools. One suspected reason of the difference could be a relatively relax learning atmosphere and the number of assessment in Canada. The Vancouver group therefore would be more willing to answer that they “look forward to the lessons”, or “like doing work in the subject”. Comparatively, more newly arrived pupils in Hong Kong or Macao reported in the survey to “find it hard to get down to work in the subject of English or Mathematics”. This could be a result of pressure generated from heavy load of assessments and tense competition for academic perfection. It was a fact that the significance of education had long been perceived by many Chinese as important not only for personal development but also for family benefits. (Lee, 1999, p. 26) This could cause learning anxiety and make learning among the other groups not as interest as that found in the Vancouver group.

The second possible reason of difference among the cities could be related to the questions employed to measure the variable. The school educational performance variable was constructed by a composite scale of questions drawn from four subjects asking mainly for attitudinal answers. It was commonly known that western educational system promoted pupils’ self-esteem or self-confidence. As such, this might cause the Vancouver group to choose higher scores among the questions. For instance, two pupils with different confidence could provide a rather contrasting

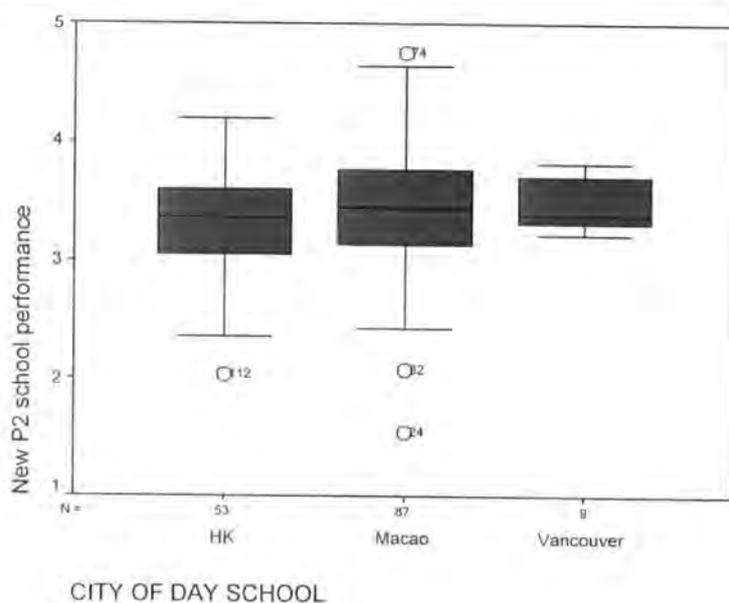
answer to the question on “I generally find the subject rather easy”. In general, pupils in Hong Kong or Macao, especially those from Mainland China, were reported to show rather low self-esteem and confidence because of their anxiety caused by being a new immigrant. The more liberal teaching and learning atmosphere inside the school system in Vancouver, together with an adoption of a multi-cultural national policy, on the other hand, might benefit the immigrant pupils and help boosting their self-image. This could lead to a higher concentration of respondents in Vancouver to report that they “like schooling”. In the boxplot in Figure 6.14, the plot of Vancouver is skewed. More respondents were found in the higher value tail. The Vancouver group had shorter tails in the boxplot, indicating that respondents in the city were more clustered than the two cities of Hong Kong and Macao.

If the measures were on achievement, rather than on aptitude as suggested in Carver’s critique (Carver, 1975) to the Coleman’s report, the result might have reflected a different face of answers.

In Figure 6.15, comparison among the three cities in the second phase of survey was shown.

Figure 6.15

A box and whiskers plot of school educational performance by cities in phase 2 survey



Disregarding at this point the concerns of internal validity such as factors of selection, testing effect, maturation, history, or statistical regression (Baker, 1988, p. 211-214; Campbell & Stanley, 1963; Thomas & Campbell, 1979), a re-survey of the same groups of respondents in the three cities revealed quite a different result in terms of self-reported educational performance on the four subjects under investigation. Campbell and his associates had advocated the problems of internal validity in their influential work in experimental errors. They grouped the problems in the following ways: obstacles stemming from who was in the experiment, what happened during the experimental procedures, and what problems arose due to time changes or statistical law. (Thomas & Campbell, 1979, p. 51-55)

The Vancouver group ranked the first in the measure of educational performance variable in the first phase, the ranking dropped to the last place in the second survey. It had a median of 3.27, compared to the second place of Hong Kong, which was at the last of the three cities. Macao was the number one in Phase 1 survey and it again dropped one place to the second rank. Table 6.18 below summarized the changed ranking based on median values. Both Hong Kong and Macao showed a sign of "improvement" in terms of performance in the four school subjects. The greatest gain was from Macao, which showed an increase of median value of 0.17 points. Hong Kong pupils followed the trend and reported a gain of 0.15 points in the second survey. The Vancouver group, on the other hand, had a loss of 0.20 points. The change of median values of the three groups illustrated the change of their reported self-evaluation of the four subjects. The Vancouver group appeared to find learning no longer interesting, dislike doing some of the subject work, or have lost their motivation to attend class in the second survey. Contrary to this, the Hong Kong and Macao immigrant pupils were more interested in their learning, despite only a slight increase of median values, and different sample size among the three cities and a relative small Vancouver sample in the second survey.

Table 6.18

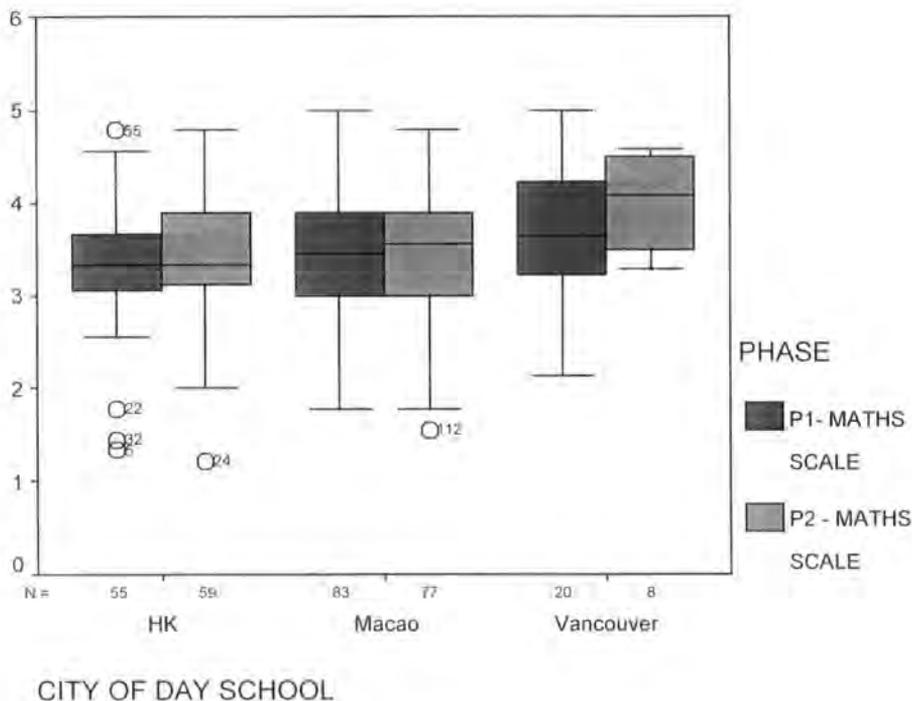
Summary statistics for different median of educational performance among the three cities in Phase 1 and Phase 2

	Hong Kong	Macao	Vancouver
Phase 1 (rank)	3.22 (Third)	3.26 (Second)	3.47 (First)
Phase 2 (rank)	3.37 (Second)	3.43 (First)	3.27 (Third)

The scale of educational performance was based on a composite score obtained from measures of four subjects in this study. The different results between each of these four school subjects in the two phases of survey can shed light on further understanding of changes in time and differences among the cities. Below are illustrations of the four subjects in the two phases of study.

Figure 6.16

A box and whiskers plot of Mathematics score by cities in phase 1& 2

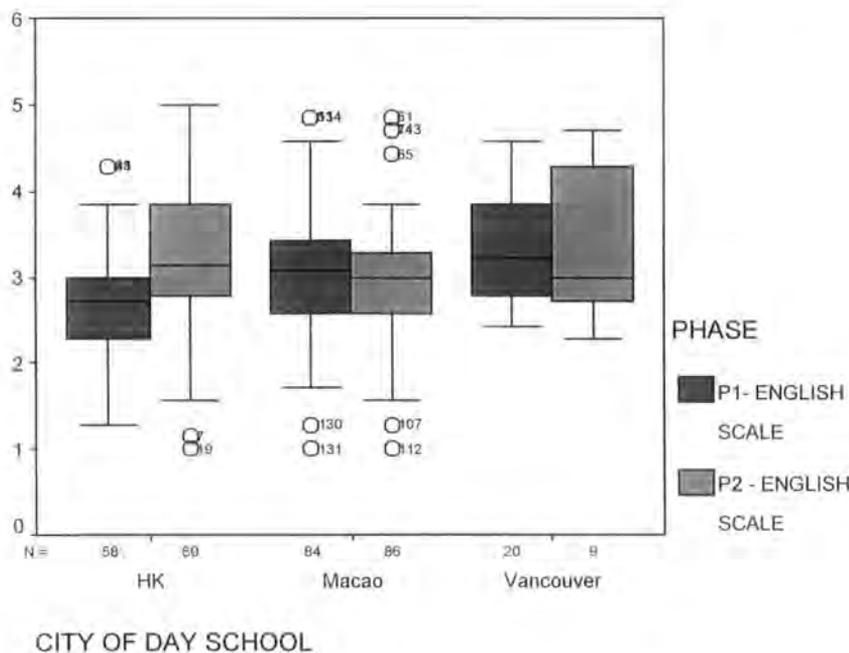


The Hong Kong respondents displayed an identical median (3.33) in the two surveys of Mathematics performance, though in the second survey it had a higher upper quartile. The first Hong Kong survey had a shorter lower- and upper-whiskers

than its second one, indicating a lower minimum and maximum score in the first survey. In other words, Hong Kong respondents in the second survey obtained a higher maximum and a lower minimum score in relation to the first survey. The Macao group had an identical quartile range in the two surveys. The group had a slightly higher median (3.55) in the second survey than the first one (3.44). Comparatively, immigrant pupils in Vancouver showed not only the highest median (3.65) in Mathematics performance in the first survey among the three groups, but it also displayed the biggest increase in median between its two surveys. The median increased to 4.07 in the Vancouver group in the second survey. When the three cities were taken into account, pupils in both Macao and Vancouver groups reported a better Mathematics performance in their second survey. It would be a meaningful attempt to find out why Hong Kong had an unchanged median and Vancouver had a substantial increase among her small group of respondents.

Figure 6.17

A box and whiskers plot of English score by cities in phase 1& 2



In the first survey of immigrant pupils' perceived English performance, Vancouver respondents slightly outperformed the Macao group and became the best of the three. The Vancouver group had a median of 3.21, while the Macao one had a

value of 3.07 and the Hong Kong group a median value of 3.2. When data of the second survey were considered, however, Hong Kong made a return and became the first among the three in terms of median value. It had a value of 3.14 while both Vancouver and Macao shared the same value of 3.00. Data from the second survey showed an interesting result. There was a drop of perceived English performance in Vancouver and Macao. After a period of learning, immigrant pupils of the two cities reported an experience of a poorer performance in English. The Vancouver group, in particular, dropped from a median of 3.21 in her first survey to 3.00 in the second. A trivial drop was also found in the Macao group when the medians changed from 3.07 to 3.00. However, as presented in the Figure 6.17, the Vancouver group showed the widest interquartile range in English than the Hong Kong and Macao group in the phase 2 survey. The Vancouver group obtained the highest upper quartile among the three cities. Twenty-five per cent of the Vancouver pupils had a score of over 4.0 in the phase 2 survey of English performance. This was followed by Hong Kong, which had an upper quartile score of near to 4.0. Macao, on the other hand, showed the lowest upper quartile in the phase 2 survey.

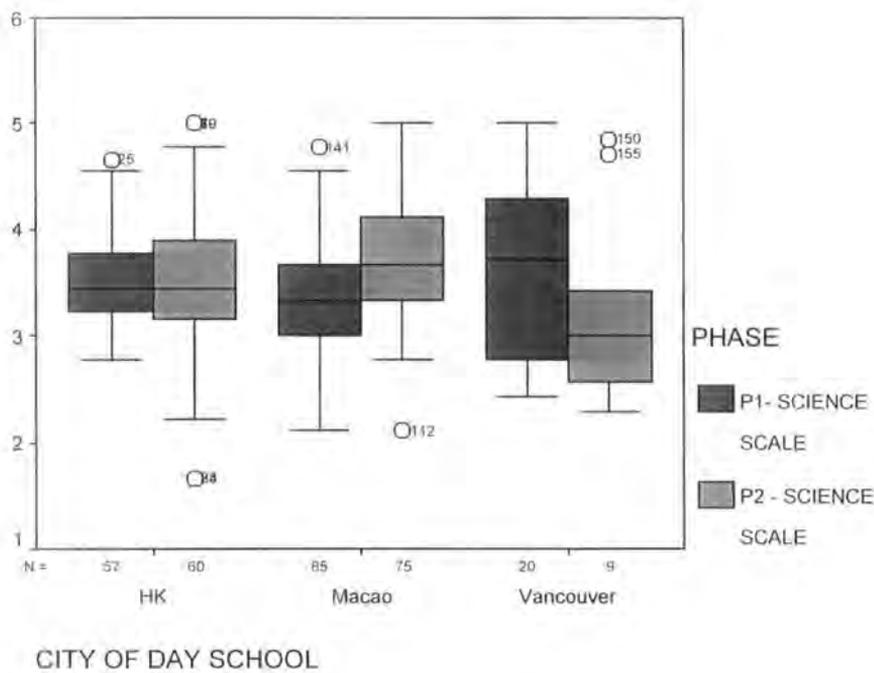
Among the three, Hong Kong group showed the greatest improvement in English performance. The result could attribute to the English learning environment adopted in most of the schools and to the support programmes provided by the government to immigrant pupils. While the drop of result in Macao, on the other hand, could be resulted from a fact that half of the sample cases were drawn from government schools that used mainly Chinese and Portuguese as medium of teaching. English was not an official language in government schools in Macao. The absence of the language practice might therefore give the Macao government school respondents a sense of inefficacy of the language.

As far as the Vancouver group was concerned, the drop of median value in second survey was suspected to be a result of comparison made by the immigrant pupils between them and the native speakers, or between their personal thought before the immigration and the post-immigration reality. Since the subject performance in this study was measured in attitudinal type of questions, the drop in Vancouver group could reflect a feeling of under-standard among the immigrant respondents after their

first-hand language experience in the new country. In essence, they no longer felt they possessed a good standard of English after their class learning and personal contact experience with native speakers, albeit they could be among the best in their home country.

Figure 6.18

A box and whiskers plot of Science score by cities in phase 1 & 2

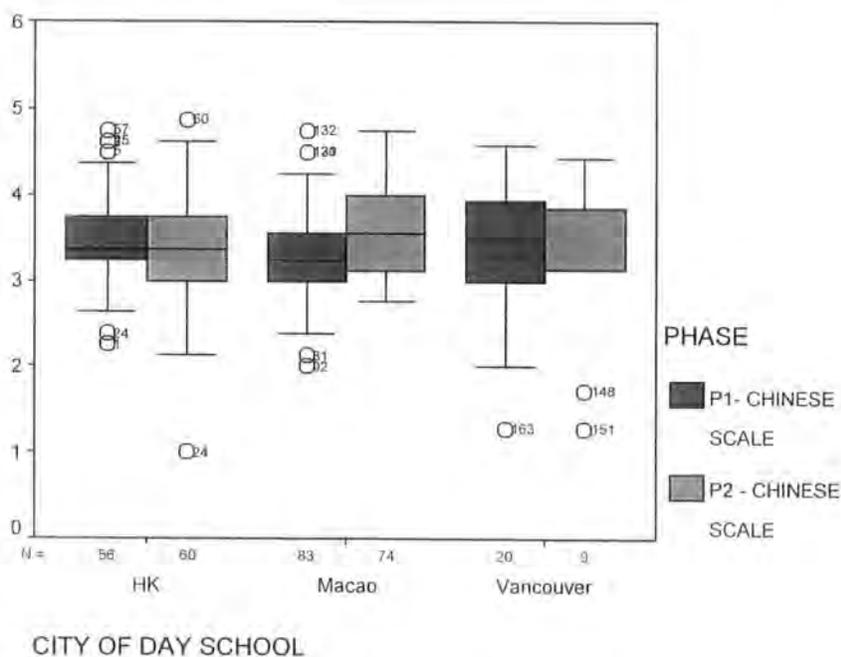


Similar to the Mathematics performance, the medians of Science in the Hong Kong surveys were identical (3.44). The second Hong Kong survey, nevertheless, had a bigger spread in the quartile range. The change of performance in the Macao group in the subject was fairly substantial in relation to the lower quartile and the median. As shown in Figure 6.18, it was suggested as much as half of the group population experienced an increase of performance between the two surveys. The median (3.33) of the first Macao survey was close to the lower quartile of its second one, while the median of the second survey was in proximity to the upper quartile of the first one. Comparing to the two Asian cities, Vancouver group reported a rather obvious drop of Mathematics performance in the second survey. The first median of Vancouver was 3.71 and its second came to 3.00.

The Vancouver group had the highest median in Science performance measure in the first survey. The group, nonetheless, obtained the lowest median of the three in the second phase. The reason behind such drastic change among Vancouver pupils from the “best” to the “worst” could be an interesting topic for another scientific investigation. Was this difference pertaining to school effect, or non-teaching and non-learning factors? Was it a result of the immigrants' cultural background? All these justify deeper deliberations. As far as methodology was concerned, the small sample size of the second Vancouver survey could be one of the reasons that caused the unusual change from the “best” to the “worst” when compared to results in Hong Kong and Macao. Specifically, the question of internal validity might play a role in the result of the drop of performance. Either the reason of selection, statistical regression or experiment mortality (Neuman, 1997) could give rise to a biased finding.

Figure 6.19

A box and whiskers plot of Chinese score by cities in phase 1 & 2



The relatively small inter-quartile range on the subject of Chinese between surveys in the three cities was one of the features of the box and whiskers plot in Figure 6.19. In other words, half of the surveyed populations in all three cities in their

first and second survey, except for Vancouver, which had a larger spread in its first survey of the subject, clustered rather close to its upper and lower quartile.

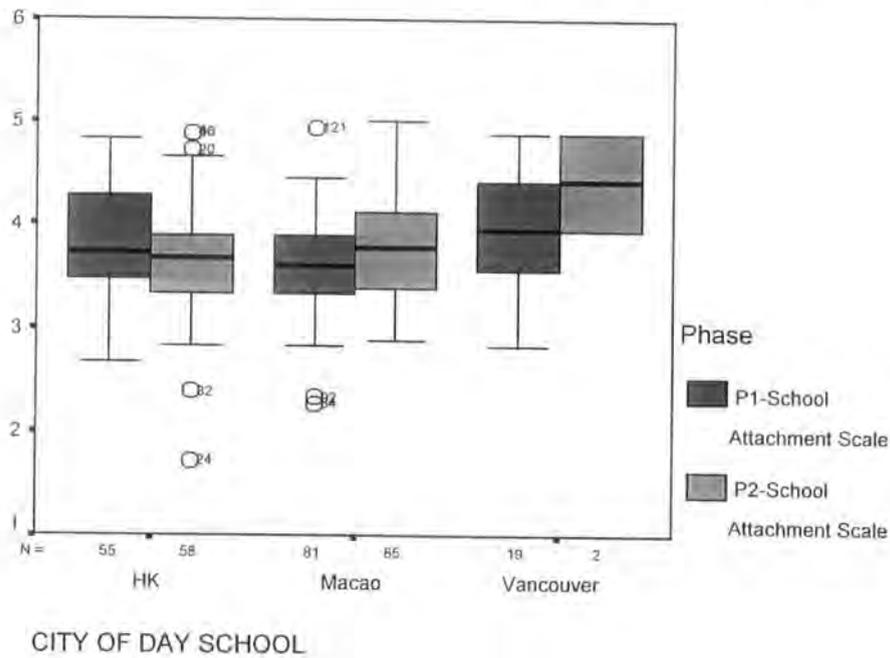
The Hong Kong sample shared a same median (3.38) and upper quartile in the two surveys. Comparing to the first survey, the group had a lower value in its lower quartile in the second survey. The Macao group obtained a median of 3.25 in the first survey, and 3.56 in its second survey. The group also had a relatively higher upper quartile in her second survey. In general, the Macao group showed a positive change of performance evaluation in the second survey. More Macao respondents in the second survey reported a “better” Chinese performance. The Vancouver group scored a median of 3.50 in the first survey of Chinese and 3.86 in the second one. Interestingly, the median of the second survey of the group nearly overlapped with its upper quartile. The upper quartile of the group had a value of 4.07. The graph was a rather negatively skewed distribution, with scores clustered close to the upper quartile.

The city of Vancouver slightly outperformed Macao when the Chinese median was considered. The difference was but a sheer value of 0.05. The former city was also 0.07 in median value higher than Macao when the upper quartiles were compared.

A number of variables were found to correlate significantly with the variable of educational performance. School attachment was one of the variables. The variable was also measured in the second survey. A comparison of the three cities in the two surveys was presented in Figure 6.20.

Figure 6.20

A box and whiskers plot of School Attachment by cities in phase 1 & 2



The median difference between Hong Kong and Macao on school attachment in the first survey was small. As shown in Figure 6.20, Vancouver group showed the greatest extent of school attachment among the three in the first survey. Contrasting change was found in the second survey in the city of Hong Kong and Macao. The Hong Kong group showed a slight decrease of their attachment to school, while Macao group reported an increase in her median value. The Vancouver group, on the other hand, had the greatest median change between the two surveys. The fact that only two cases in the second survey might, however, affect the result in the Vancouver situation.

The following graphs showed a comparison of three cities on other selected variables from the first survey. No measure was conducted in the second one on those variables. Figures 6.21 to 6.26 included plots of gender difference on education performance, future aspiration, intention of stay, after-school activity participation, school or other trip participation, and peer influence.

Figure 6.21

A box and whiskers plot of school educational performance by cities and gender in phase 1 survey

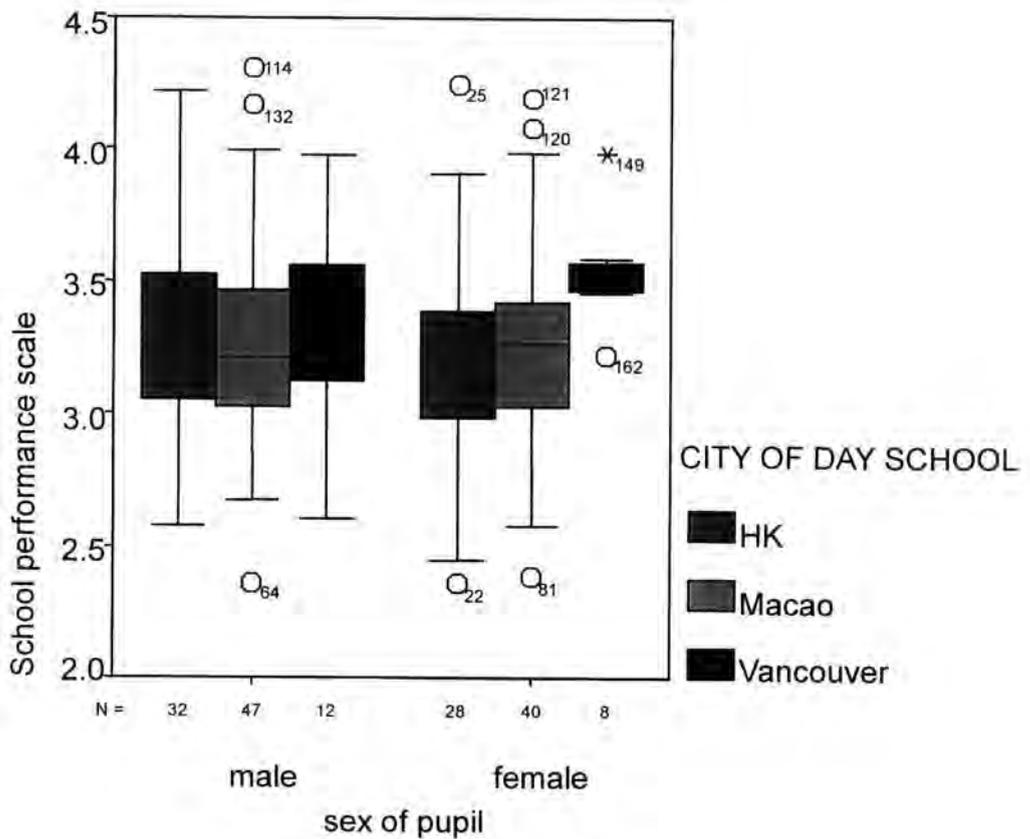


Figure 6.21 illustrated gender difference in the first survey on the three cities. Viewing from the boxplot, both male and female respondents from Vancouver reported that they had the “best” educational performance than the other two cities.

When gender difference and city were taken into consideration, some interesting findings surfaced. For instance, Female groups in the second survey ranked, in order of their upper quartile value measuring educational performance, from Vancouver to Macao and Hong Kong. In the male group, Vancouver still ranked the highest in upper quartile value but Macao became the lowest of the three. When individual city was compared, Macao females obtained a relative higher median score than their male counterparts; whereas in Hong Kong, medians of the male and female groups were close to each other. There was also a substantial median score difference

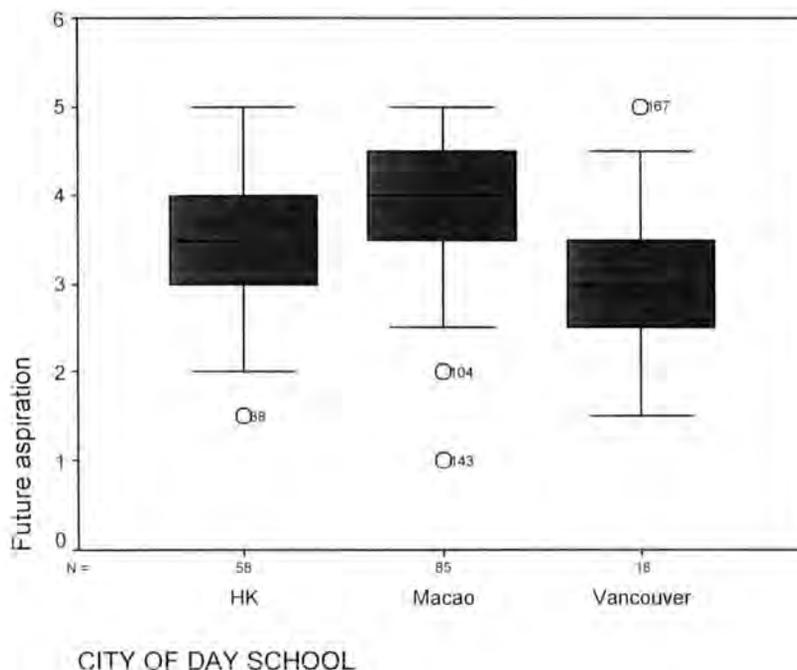
between male and female groups in Vancouver. Female Vancouver group had much higher score than the males. In fact, the Vancouver females achieved the highest median among all three groups in the first and second surveys.

Except for Hong Kong, females reported better educational performance than males. What caused this would be another meaningful topic for further investigation. For example, was this related to cultural background between the male and female immigrants? Was there anything to do with the education system pertaining to the Hong Kong social environment?

Besides the gender variable, another variable found to have significant association with educational performance was future aspiration. The variable measured whether the respondents planned to stay on school or to get a job after their basic education. Figure 6.22 showed the results of the three cities on future aspiration.

Figure 6.22

A box and whiskers plot of future aspiration by city in phase 1 survey

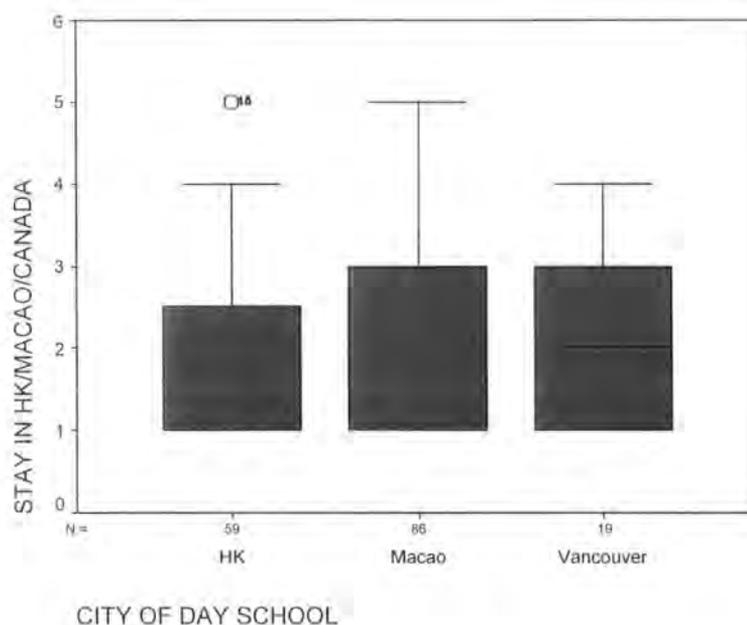


The Macao group showed the strongest future aspiration in the first survey. The group had a median of about 4. The Hong Kong group ranked second. Vancouver was the last among the three with a median of about 3. The boxplot of Figure 6.22 also showed that the bottom 25<sup>th</sup> quartile of the Hong Kong group obtained a score of about 3, whereas the Macao group had a score of about 3.5. The Vancouver one, nevertheless, had about 25 per cent of the respondents that obtained a score of about 2.5. All three cities, on the other hand, showed a normal distributed spread of scores among their respondents.

An intention of stay in the receiving country had also been found to be an important effect on educational performance. The following graph showed the difference of intention among the three cities.

Figure 6.23

A box and whiskers plot of intention of stay by city in phase I survey



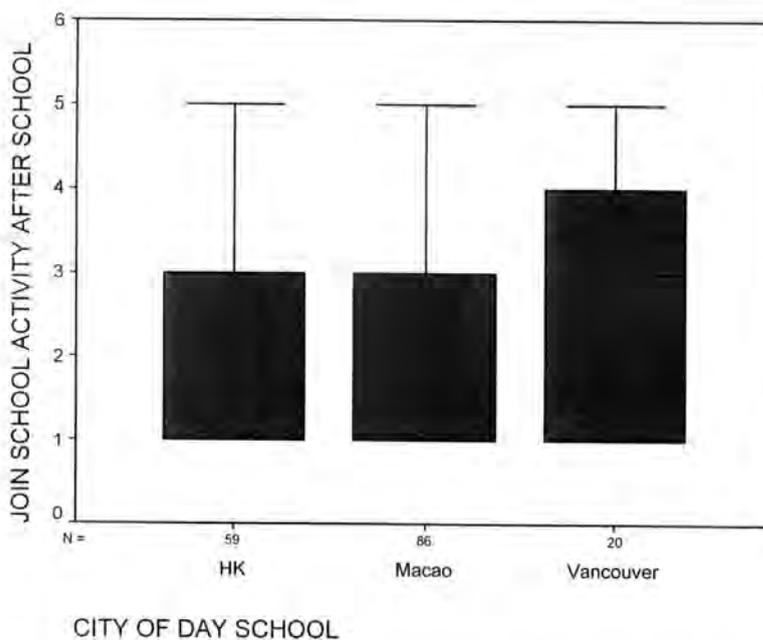
All three cities in the first survey on intention of stay acquired an equal interquartile range of 2.00, though they showed a rather different face of median and upper and lower quartile value. The Hong Kong group shared a same median and lower quartile of 1.00, which represented half of the surveyed 59 respondents with a score of above the value of 1.00. The Macao group of 86 respondents in this variable

showed just the opposite of what was found in Hong Kong. It had a median of 3.00, a score that was also found in the upper quartile. While the Hong Kong and Macao groups showed interesting interquartile range, the Vancouver respondents had an equally spread distribution. It obtained a median of 2.00, a lower quartile of 1.00 and an upper quartile of 3.00. When the value of mean was considered, more Macao respondents showed interest to stay than both Hong Kong and Vancouver. The three mean values were 2.70, 1.75 and 2.00 respectively.

Apart from the variable of intention of stay, after school activity participation also had a significant zero order correlation (0.21,  $p < 0.05$ ) with school educational performance in the first survey. A comparison of the variable in the three cities was depicted in Figure 6.24.

Figure 6.24

A box and whiskers plot of after school activity participation by city in phase 1 survey



The group of Vancouver pupils acquired the highest median in the measure of “after school activity participation” among the three cities. The result of such high participation could be deal to the fact that schools in Vancouver offered more after-school activities to pupils than the other two. Schools in Hong Kong and Macao,

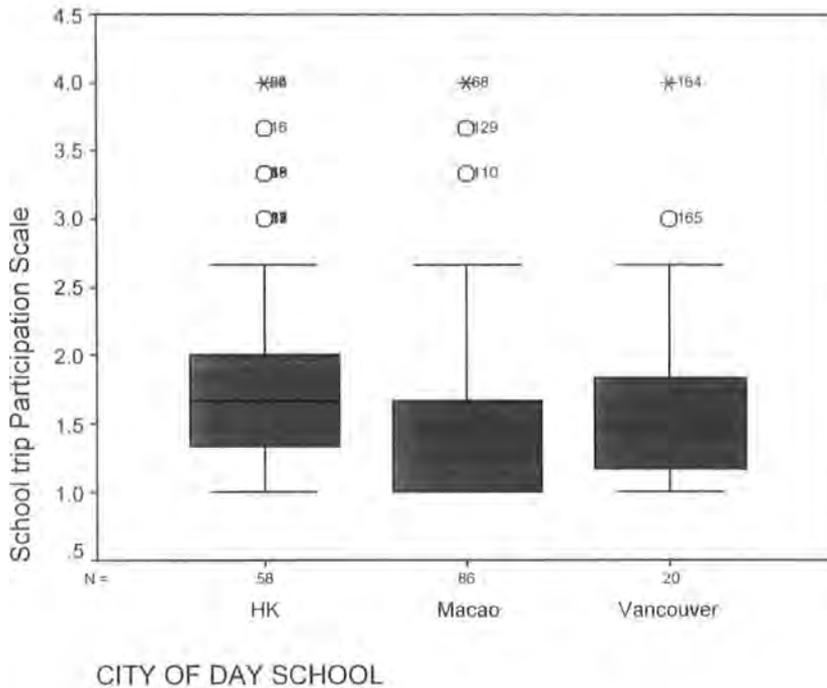
when considering their curriculum and examination pressure, were likely to encourage pupils to attend tutorial classes after school instead of leisure activity. This was particularly true to new immigrant pupils who joined the tutorial classes as a remedial work to cope with their learning problem in the new environment. Hong Kong had a systematic support programme for new immigrant pupils (Choi, 2002, p. 13-14) and the programmes were primarily operated after school. This might help to explain why so many of the Hong Kong respondents did not join after-school activity. As shown in Figure, 6.24, the Hong Kong group shared a same median and lower quartile of 1.00. Nearly 30 out of the 59 respondents in Hong Kong never joined or joined only once any school activity after their class.

Comparatively, the Macao new immigrant pupils reported to participate more activities than the Hong Kong group, though the two shared an identical interquartile range. The Macao group had a median in the middle of its interquartile range. Macao new immigrant pupils who appeared to enjoy more after-school activity than the Hong Kong counterpart might partly deal to the unavailability of well-organized support programmes in the territory. Pupils in Macao were therefore left more freedom to participate in after-school activities. (Chan, 1998, p. 94) According to an unofficial talk with government officials who were responsible for services to new immigrant pupils in Macao. They pointed out that there was little adaptation problem among the new arrivals because they were well received by the local school as a result of their good academic performance and learning behaviour. The new immigrant pupils, in many occasions, were taken as a role model to the local pupils in the school because of their persistence in hard learning and good classroom behaviour. In essence, the officers stressed that new arrivals in Macao needed only assistance on their spoken and written Chinese and English. Accordingly, their adaptation problem was trivial. As a result, the demand of support programmes to the Macao group was different from and smaller than Hong Kong.

Vancouver pupils had a median of 3.00, a score that was equivalent to the upper quartile of the Hong Kong and Macao group. The group had a long tail toward the small value, which indicated a negatively skewed distribution.

Figure 6.25

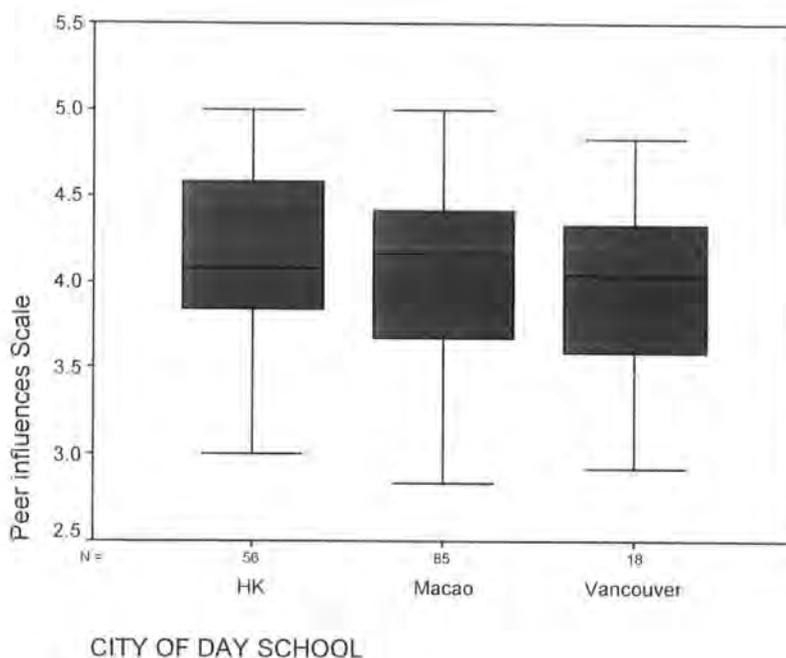
A box and whiskers plot of school or other trip participation by city in phase I survey



Of the three cities, Hong Kong obtained the highest median of 1.67, followed by 1.50 from Vancouver. Macao had a median of 1.00, which was the same as its lower quartile value. Both Hong Kong and Vancouver groups had a higher upper quartile than the group from Macao. The relatively lower school trip participation rate in Macao could be attributed to the size of the small city, which provided few venues for school trip activity. Schools in Macao, in some cases, relied on public playgrounds for their physical education classes. It could take some schools to cross several blocks to the playground specifically for the physical education class. Another possible reason for the lower participation rate might also be a result of occupation of time by after-school tutorial classes, either in private business agency or inside the school.

Figure 6.26

A box and whiskers plot of peer influence by city in phase I survey



Peer influences in the three cities were more or less the same when the median value was considered. Macao group had a median value of 4.17, compared to 4.08 of the Hong Kong group and 4.04 of Vancouver. Ranked according to the value of upper quartile, Hong Kong was the highest, followed by Macao and Vancouver. The result showed that greater peer influence was reported in Hong Kong. Macao and Vancouver follow it. Based on the interquartile range of the three cities, most respondents reported to have “good” peer influence. Their friends were likely not the kind of person who used illegal drug, or got in trouble with the police. As shown by the box and whiskers, all three cities got a lowest score around 3 out of 5. A higher score in the scale indicated a positive peer influence. More, Vancouver group had the greatest interquartile range of 0.81, followed by 0.79 of Macao and 0.75 of Hong Kong.

### 6.3 Theorizing a Culturally-based Explanation of School Educational Performance for Newly Arrived Children

School attachment has been found to express the most significant relations with school performance in this study of three groups of immigrant pupils. Pupils attaching to school could be attributed to a considerable array of reasons, including family influences. Lau, for example, characterized the success of an individual in Chinese society a result of his provocative concept of utilitarianistic familism. Specifically, the concept referred to the normative and behavioural tendency of an individual to place his familial interest above the interest of society and of other individuals and groups. (Lau, 1991, p. 72-74) The manifestation of such ethos among Chinese families, among other things, was a strong achievement expectation from parents to the children. As a consequence of the utilitarianistic familism, most Chinese parents would expect their children to behave well at school and obtain good result in order to honour the family and to gain the greatest interest, such as climbing to a higher social status and thus receiving financial returns to benefit the family.

Although variables in the family characteristics domain in this study did not significantly explained school performance, it was argued that such primacy of family interest did exert influence to the children, especially immigrant children whose parents viewed school success as mean of pursuit of familial interest in the new environment. As such, the family variables could be antecedent test variables to the causal link of school attachment and school performance. Under the notion of elaboration paradigm, it was therefore useful to apply an explanation model with a logical time sequence of family, school attachment and performance as a further test of the relationship. (Rosengberg, 1968; Baker, 1988, p. 357-358; Rose & Sullivan, 1996, p. 23-33) This could be done by applying a control of the family variable in the model of school attachment and school performance. More, the family variable could also be a suppressor. A test of the three using trivariate analysis such as partial correlation tables might help to reveal the original relationship. (Baker, 1988, p. 364-366) Specifically, the effect of school attachment on school performance is only the beginning of a series of further investigations. This study once more helped to

validate the argument of bonding to school and the subsequent school performance. The reasons behind a strong or weak school attachment, however, deserves another scientific exploration. For instance, whether the cultural or social capital with which an immigrant pupil enjoys, such as the time spent in library, number of visits to museum, or number of friends, relates to family attachment warrants further examination. Nevertheless, the limited qualitative data drawn from the Macao group in this study helped to illuminate certain aspects of the present enquiry on school attachment.

For example, a happy pupil was more likely to attach to the school than one who reported dislike his/her school life. In other words, feeling happy or not at school could be a significant reason behind school attachment. According to the qualitative data, a pupil was happy at school under three notions. The three were related to learning, social support (at school) and school. Specifically, it was more likely to report a strong school attachment if a pupil answered,

“I leaned new knowledge and new things at school”, or “I’m happy because teachers and classmates are friendly and helpful”. (Learning-related & Social support factor)

A satisfied pupil was also more likely to attach to the school if he/she said,

“My school is well-equipped, with good facilities”, “I like this school”, or “School teaches me lots of useful knowledge and skills”. (School-related factor)

On the contrary, an immigrant pupil was unlikely to attach to his/her school if he/she reported negative comments on his/her schooling in the new country. It was fair to say the pupil felt unhappy at school when he/she said,

“Chinese is boring, and classes are uninteresting!” or “The (Chinese or English) subjects are difficult to follow”. (Learning-related factor)

It was also reasonable to point out, for instance, that an immigrant pupil would probably “reject” the school if he/she answered,

“I feel that every primary school is uninviting and many teachers discriminate immigrant pupils”, or “(My life) in Macao is generally monotonous because there is too much homework”. (Teacher-related factor and Learning-related factor)

In other words, immigrant pupils were more likely to report a strong school attachment provided that they “can learn” at school, with social support from teachers and the school, and they liked the school facilities. On the opposite, the immigrant pupils would feel unhappy at school if teachers were unfriendly or discriminative; subjects were difficult to follow while there was too much homework. Judging from the qualitative data, it was useful to focus on two aspects if a school wanted to help immigrant pupils to attach to school and learn happily. The two were related to learning and social support.

Moreover, immigrant pupils with a sense of future expectation might also attach to school and learn industriously. An immigrant pupil with future expectation might therefore participate more in school activities. He or she would not miss school days unauthorized regularly, or got in trouble at school frequently. In other words, the pupil attached to the school and was eager to learn. He/she will said, as an illustration,

“I (expect) to have more interesting classes/teachers to teach (me)”, “I (want) to work harder in order to get better result”, or “I like to see more English tutorial classes”.

Newly arrived children who demonstrated a strong school affinity reported better school performance than those who rejected school in this study. For example, school attachment had a Beta of 0.50 ( $p < 0.01$ ) on educational performance, followed by school or other trip participation (Beta = 0.14,  $p < 0.05$ ) and after-school activity participation (Beta = 0.13,  $p < 0.05$ ). (See Table 6.7) Based upon the findings, it was not necessarily the argument put forward by cultural deprivation theorists that students failed because they lacked the kind of skills school treasured. Nor was it sound to say that students performed weakly as a result of their different cultural background from the mainstream society. Cultural reproduction theory, on the other hand, also lacked the essence in explaining the difference in school educational performance among immigrant groups from different social class. The family social class variable in this study, for example, regressed with a trivial and statistically not significant effect on performance. (Beta = -0.04,  $p > 0.05$ ) (See Table 6.7) Rather, the findings suggested a cultural-control perspective in explaining the difference of school educational performance among the immigrant groups.

A cultural-control perspective was an attempt in this study to theorizing differences in school performance by borrowing a number of concepts and arguments from precedent theories. It was argued that newly arrived children performed well in school because they affiliated to the school culture. In other words, it was the kind of culture or propensity found in the children that mattered. It was important that the children were bonded to the school culture and accepted the organization that socialized them. Following the argument of Hirschi's control theory, the newly arrived pupils in this study were under the school “control”. It was, however, necessary to be cautious when perceiving the term “control”. The term “control” might refer to a control of the children by the school, or it might also mean a “control” of the performance by the immigrant children. The term might not be so appropriate as it tended to denote a hierarchical situation, that was, a powerlessness controlled by

a powerful one. A control here, however, following the control theory, referred mainly to the element of bonding.

The cultural-control perspective on school educational performance of immigrant children could also be viewed as a theory of school attachment culture. In other word, immigrant children who liked school, or fond of joining school activities were more likely to succeed in their schooling by reporting a better educational performance in the four school subjects under investigation. This applied to all three cities in this study. School attachment, or bond to school, was therefore an important measure in making assumption on how well or how poor educationally an immigrant child would be.

It is suggested that an attachment cultural model can be used to on future school performance or related studies. The model shall consist of variables that measure the acceptance of school life. On the other hand, how can school or family promotes the attachment culture or makes pupils happy to learn can also be another evidence-based study.

## Chapter 7 The Limitations of the Study

Social science research is not free from limitations given the inherent nature of complexity. One important task of social research is therefore error elimination and unearthing of the truth. Taking this into consideration, it is an aim in this chapter before the conclusion to reflectively examine limitations in this study. Major limitations in the study are grouped into two areas for examinations. The two are related to conceptual and methodological dimensions.

This chapter consists of three main parts to address the two issues of limitations. The first part is a reflective commentary on scientific investigations with special reference to discussions in social science. This is followed by a thorough examination of limitations in the study. The discussion is then coupled with a discourse on methodological triangulation to improve the quality of future study on similar areas. Ethical dilemmas in human research can pose limitations to findings. The last part of this chapter is thereby devoted to a brief discussion of ethical issues in this study, with special reference to the Code of Conduct outlined in the American Association for Public Opinion Research.

This first part can be viewed as a prelude of the discourse. Education is a social system characterized by complex and changeable elements. Likewise, educational investigation is an enquiry of complex issues. In order to deal with the complexity, it is necessary to turn to science for work aims at “piecemeal social engineering or answering part of the questions.” (Fitz-Gibbon, 1996, p. 43 and 47) Karl Popper has once made an influential contribution to science investigations – the concept of falsifiability. (Fitz-Gibbon, 1996, p. 45) According to Popper, an investigation is scientific only if one can falsify its results. Falsifiability forces investigators to seriously consider the validity of any scientific evidence. It is especially manifested when changeable and complex social engineering is concerned. Without much doubt, validity is a prime issue in virtually all kinds of social investigation. This has become more the case when the world is gradually gearing towards a norm of evidence-based research. However, it is still a disappointment that

an absence of robust uncontested evidence regularly leaves space for political intrusion into professional practice. (Fitz-Gibbon, 2000a, p.83)

This study is aimed at providing evidence on school performance of Chinese immigrant pupils. Both quantitative and qualitative data bring us evidence of how well or how poorly an immigrant pupil does in his/her school. Quantitative data can provide a wealth of information of a large population under study. Nevertheless, it would be more methodological valid if in-depth answers are used to supplement the quantitative answers in questionnaire surveys. These are other significant areas to attempt. For example, how do immigrant pupils perceive their school educational performance, how do they perceive the success or failure in school, or what are the social or educational effects of new school environment on educational outcomes. In other words, how the respondents “understand” the subject matter are important areas of investigation. Such in-depth investigation requires answers from qualitative type of study. Quantitative surveys can only provide answers from variables generated from a paradigm characterized by a re-constructed social reality.

In the early years, Peter Berger (1966) put forward an unprecedented idea of “common sense knowledge” in helping us to understand social reality. The ethnomethodological approach thereafter developed with the further work of Alfred Schutz shed lights on the subject of social sciences and the issue of social investigation. To the group of methodologists, an individual’s social ability is an important subject matter to be studied. Ethnomethodologists regard social reality like educational outcomes as a kind of rational accomplishment. Under such connotation, the researcher will analyze the accounts given by the subjects under a prescribed situation. This collection of data shall compensate the deficit of “measurement by fiat” occurred in hypotheses testing method. In essence, it is significant and methodologically necessary to adopt triangulation methods in studying evidence-based subject matters. Triangulation is also vital to internal validity, especially in studies that seek explanatory outcomes (Hitchcock & Hughes, 1995, p.324).

Social reality is complex because it is “holistic, multi-dimensional and ever changing; it is not a single, fixed, objective phenomenon waiting to be discovered,

observed and measured” (Merriam 1988, p.167 cited in Hitchcock & Hughes, 1995, p.324). As a result of this changing reality, social facts, including educational matters such as pupils’ performance, are simply too complicated to be understood in one single measure, observation or study. Hitchcock & Hughes (1995) stress a further point by saying that we are dealing with people’s construction of the world and it is important to understand how different people construct their own reality. What seems to be important to one person may not necessarily appear to be true to other parties. Different parties can hold or construct a different kind of “common sense” or a rather different frame of reference to a similar notion of enquiry. The study of educational performance and its underlying explanatory factors is one of these social investigations that carry the same characteristics of “social construction of reality”. In order to cope with this difficulty, it is essential and necessary to incessantly enhance methodological approaches adopted in studies. Triangulation or use of diversity of methods is one of the good practices. (Hitchcock & Hughes, 1995, p. 180) More examples of this aspect on diversity of methods or mixed method approach will be addressed in the second part of this chapter when conceptual and methodological limitations are discussed.

Any piecemeal social engineering work has limitations because of the changeable nature of social facts. It can be a conceptual or a methodological limitation that confines the “explanatory power” of the findings. This piece of exploratory work on immigrants’ school performance has indeed a number of limitations that worth spelling out before the final conclusion. This second part of Chapter Seven is intended to critically examining the limitations in this study.

Conceptually, this piece of work is about school educational performance. Britannica defines performance as the ability to perform or something accomplished. It is also about a fulfillment of a claim, promise, or request. School educational performance, in this term, shall be referred to as a kind of ability to perform or accomplish a certain kind of school learning or activity. Such performance can be generally reflected in scores obtained by a pupil in various school subjects, or in the overall assessment by teachers on a pupil’s accomplishment in difference areas, such as physical, moral or social aspects of learning. School educational performance thus

refers to as a pupils' ability, for example, to use a language, to swim, to behave appropriately, to be able to make good judgement, or to be able to learn. Such ability or accomplishment can generally be subdivided into three aspects of educational concerns. Following Bloom's taxonomy, they are the cognitive aspects which focus on objectives related to knowledge and thinking, the affective aspects on feeling or attitudes, and the psychomotor or behavioural aspects on practical skills. (Bloom, 1956, cited in Morris, 1996, p. 18-19; Pang, 1992, p. 25-26) Besides educational categorization, performance is a high level construct in sociological terminology. The performance construct can be grouped into lower level variables such as achievement, attitudes or cognition. Performance measure therefore should not limit itself to only one aspect or dimension.

Although subject to argument, we generally look at pupils' educational achievement, but not his/her attitude to the school subjects, as an indicator of performance. One reason for this is the availability of data from tests of various school subjects during the academic years. Another reason would be the nature of the subjects under studied. Intelligence or achievement scores are easier to obtain. On the contrary, the other aspects of learning: such as attitude, motivation, belief, or values are relatively difficult to measure. (Morris, 1996, p. 19) Even with measures, the results of the attitudes are rarely used for reference to represent a pupil's academic accomplishment. This may attribute to their questions on reliability and validity.

Nevertheless, the educational arena has begun to shift the imbalance among the measures in recent years. For example, Fitz-Gibbon's early consultative work in Hong Kong on performance indicators in the affective and social domains is a good example of this paradigm change. (Moore, 2002a & 2002b; Chan & Lai, 2002; Education Department, 2002a, p. 44-45) Howard Gardner's multiple intelligence is another advocate of a "holistic" development of an individual. All in all, performance should be a multi-faceted, multi-dimensional aspect of measures of an individual's ability. In addition to the Bloom's taxonomy and sociological terminology of high level construct stipulated in previous paragraph, the ancient Chinese doctrine of learning also classifies an individual's education into six important domains. They are the moral, intellectual, physical, social, aesthetic, and spiritual domains. A holistic

education shall encompass a balanced view of all six. Beliefs on controversial issues, such as pre-marital sex, free education to asylum-seeking children or adults, and elite or equality education, are not strictly ability-related measures. They are a way of thinking about something. A sense of competency, a stable value and belief system are useful to help understand what lies behind one's ability. Any measures of a pupil's performance shall therefore take into account as many perspectives as possible.

Strictly speaking, this study has concentrated on the attitudinal part of the conceptual framework of school educational performance. In Bloom's term, this study disregards the other two aspects on cognition and behaviour. This is conceptually problematic. This study measures only a fraction of the conceptual meaning of performance, or in Fitz-Gibbon's term, only one out of the three goals in education. (Fitz-Gibbon, 2000a, p. 70) A limitation of this study is an investigation of only the covert side of performance.

This study has examined primarily how the immigrant pupils perceived their four school subjects. It does not measure the scores of the four subjects. Strictly speaking, this study shall be referred to a measure of perception on school performance among immigrant pupils. It is about educational attitudes on four selected subjects of Mathematics, English, Science and Chinese. Consequently, this study has a conceptual limitation of over-relying on respondents' own judgement of the subjects as a reflection of their school educational performance. It has missed the essence of the achievement as an indicator of performance. This study has repeated what Carver has commented on James Coleman's early work. Coleman is criticized for using inappropriate design of measure of students' aptitude to reflect achievement. (Carver, 1975) It is not an intention whatsoever to compare this small piece of work to that of Coleman's Report. It is merely a reflective examination of the "inappropriate" use of concept to represent school educational performance. In social science, conceptual definition is important as it guides readers to a world of exploration drawn up by the writer. Defining appropriately an abstract term like school educational performance is useful in illuminating the path leading to an evidence-based conclusion. The use of attitudinal data to reflect school educational performance in this study has drawn a conclusion limited to how the immigrant pupils feel about their

performance, it does not represent their “achievement” as it should be. One step to improve this study shall therefore include a measure of scores obtained by the pupils in their school subjects or extra-curricular activities. The Performance Indicators in Primary Schools (PIPS) Project of the Curriculum, Evaluation and Management (CEM) centre of the University of Durham, United Kingdom, can be an example of this measure. (Tymms & Albone, 2002; Tymms & Wylde, 2003) This study should include the cognitive and behavioural aspect in education to represent so that a more complete picture of performance.

Methodological limitations in this study, which are subdivided into two parts: sampling or non-sampling for discussion. Sampling problems are viewed in three areas. They are the representativeness of the sample, the size of the sample and the definition of the population.

Representativeness surrounds the extent to which the situation, individuals, or groups investigated are typical or representative of the situations, individuals, or groups as a whole. (Hitchcock & Hughes, 1996, p. 108) Where sample representativeness is concerned, this exploratory study on immigrant pupils in three cities is not drawn from a random sample. A non-random sampling is more likely to have sampling bias. This raises a concern on representativeness of the findings.

The present study has adopted a convenience sampling method to draw the cases. The findings therefore apply only to the three cities under investigation. Strictly speaking, no generalization to the general population can be made. In addition, the Vancouver sample is different from Hong Kong and Macao in school types. The Vancouver sample was drawn from an evening Chinese school while the Hong Kong and Macao samples were from daytime schools. This presents difficulties in making comparisons. The three school samples, strictly speaking, are not wholly comparable because of their difference in school types and the numbers of respondents in each of the cities. Science aims at generalization; findings in this study jeopardize this pre-assumption as a result of questionable sampling.

A second sampling limitation of the present study is found in the sample size. The sample size of both the Hong Kong and Macao groups is larger than that of the Vancouver group. The Vancouver group has a mere sample size of 20 cases in the Phase 1 survey. Only nine are re-surveyed in the phase 2. This poses a substantial difficulty in making comparisons among cities and between surveys because of limited cases from Vancouver. On the other hand, the high attrition rate (from 20 to 9 cases – a drop of 55 per cent) of the Vancouver group in the Phase 2 survey may illustrate a further methodically limitation. The decrease of cases in the Phase 2 survey can be a separate topic for investigation. Qualitative data restricted to the Macao group is another weakness in this study. The limited data reveal a small part of the newly arrived pupils' experience. If science is a fact-finding process (Giddens, 2003, p. 640-646), the absence of qualitative data from Hong Kong and Vancouver limits the process. In essence, a small sample size is one of the typical factors that cause larger sampling bias.

A third limitation on sampling part relates to the definition of the population. Each city defines newly arrived pupils differently; this raises a concern on who to be included in the sample. The absence of a clear idea of what constitutes an "immigrant" group leads to a questionable conceptual definition of the term. Consequently, sampling frame becomes a problem.

All in all, nonprobability sampling is generally not recommended as a basis for statistical testing. The present study, therefore, has a limitation of drawing any conclusion from the statistical testing. Nonprobability sampling, however, has an advantage in studies that seek to explore ideas still undeveloped.

Non-sampling limitations in this study will be discussed in five areas. The first is on causality.

Correlation is not causation. (Babbie, 1989, p. 63-65) Unlike stringent experimental designs, it is often unclear in survey data whether a variable has necessary and sufficient causes to others. Paul Lazarsfeld and Arthur Stinchcombe in their earlier work on the logic of scientific inference once suggest three significant

criteria for causality. The first requirement in causal relationship between two variables is of temporal priority, or the cause precedes the effect in time. The second requirement is a statistical association between the two variables. The third is a non-spurious correlation. (Baker, 1988, p. 202-203)

There are questions in this study on causation of some variables. For example, whether low school attachment causes low educational performance or vice versa? Besides illustrating potential variables for future study, this study is unable to provide a necessary and sufficient explanation of causes on the dependent variable of school educational performance. Experiments will be needed to explain the causal relationship between school attachment and school educational performance. A less controversial and evident-based conclusion of causality to educational performance requires a “necessary and sufficient” explanation. The present study does not provide such explanation. This question on causality also relates to validity question discussed in Point (2) below.

The second limitation was related to validity. They are illustrated below in seven points.

(1) As discussed in previous paragraphs, the measure of school educational performance is conceptually inconclusive. The use of attitudes on school subjects as a reflection of performance has content invalidity problem.

(2) There are also problems in internal invalidity in this study, as suggested by Donald Campbell and Julian Stanley (1963) in their work on “Experiment and Quasi-Experiment”.

Answers on school performance in the phase 2 may show problems pertaining to weaknesses of classical experimental designs. These include history, maturation, testing, instrumentation, experimental mortality, or causal time-order factor. The changes on school performance in phase 2, for example, can be a result of individual maturation on intelligence or mental development, rather than the influence of the school or peer factors under studied. The changes can also be resulted from the testing

effect. This weakness can be dealt with by adopting an experimental design to eliminate the threats to internal validity. (Kidder & Judd, 1986, p.104-5)

Another validity concern can also be found in the scales. Although high or acceptable reliability coefficients are obtained in virtually all constructed scales, they still have validity questions.

As an illustration, a high school attachment correlates positively with better school performance in the study. It can be a validity concern when pupils with high scores in the attachment scale always report good school performance, view school positively, or see teachers and classmates helpful or friendly. Specifically, there could be an overlapping of measures among the scales. High correlation between two scales could be a result of scales sharing or measuring similar constructs.

To further validate the scales, it may be useful to conduct a trivariate analysis. Partial correlation analysis to test the relationship of school attachment and school educational performance can be helpful in this regard. Specifically, the elaboration paradigm, such as the explanation model where antecedent variable is used, or the interpretation model where intervening variable is applied, can be an answer to the questions of scale invalidity. (Baker, 1988, p.355-358)

Besides the school attachment scale, the composite school educational performance scale is also a concern.

The reliability coefficient of the composite scale is 0.57 (see Table 5.56), which is relatively lower than the reliability coefficient of any of the four individual school subjects. The lowest of the four, for example, is the social science/science subject which has an alpha of 0.70 (see Table 5.24). Separate correlation and regression analyses using individual school subjects, instead of the composite school educational performance scale may yield rather different answers.

(3) A close time interval between the two phases can be a weakness in this study. A brief interval between the two surveys may not allow adequate time to

measure possible change, or changed effects on the dependent variable. The re-interviewing of the respondents in different intervals in the three cities adds another variation to the measures. This causes the three sets of data less comparable as a result of different time intervals and short interval between the two phases of investigation.

(4) The present study was an exploratory attempt looking into some causal factors in four domains on school educational performance. The unexplained variance obtained from the regression analysis is a limitation. The residuals represent a need to include additional variables into the analysis model. This limitation also reflects a limitation of the variable approach in social investigation. For example, the approach is commonly criticized as bearing a tendency of having prior assumptions of social facts like measurability and observability, and construction of social reality. Qualitative data obtained from case study or other research methodologies such as ethnography can supplement this deficit. However, this study is constrained by limited qualitative data.

In reality, variables are inter-correlated with one another. Specifically, the present study is limited by a fact that it does not investigate the relationship of the variables and their inter-related effect on school performance. The interaction effect of school attachment and family cultural background, as an illustration, has not been attempted. Interaction effects of variables on school performance can therefore be a direction for future endeavour. Moreover, while school attachment is significantly correlated with school performance, factors related to school attachment are not investigated. The family or school effect on school attachment is another meaningful exploration on this subject of study on immigrant pupils' school experience.

(5) The present study borrows Bronfenbrenner's ecological system theory in devising the four-domain model. The study, however, has examined settings such as family and school factors in the microsystem and lacks further exploration of other systems. Specifically, the study fails to give adequate attention to other systems except the microsystem in the ecological theory.

(6) Another limitation is related to a lack of contextual analysis of the cities. Society with different social or educational characteristics is a factor which affects school performance or other background variables, like participation in after-school activity. A deeper understanding of the city's contextual characteristics can inspire a new insight to the present investigation of performance. As an illustration, this can include a study of the language policy or individual school curriculum. Both classroom language and school curriculum are found to have some adverse affects on most new immigrant pupils when they enter a first new school. The availability of support programmes to new immigrants mentioned in this study, on the other hand, also generates substantial effects to social and educational adaptation of the immigrant groups, and subsequent school performance. The school characteristics, such as a presence of supportive atmosphere to new immigrants or positive teacher-pupil interactions, are one type of significant factors that can bring about different school performance.

(7) The present study is also limited in investigating the possible effects of the cultural, social or human capital on individual's educational achievement. Although the present findings reveal a comparatively important school effect on school performance, the results are controversial because of sampling bias and limitations mentioned in this chapter. It is premature to conclude which capital is more important in determining school performance of immigrant children. Consequently, the findings are subject to further scientific verifications.

The third area of non-sampling limitation is about triangulation. This study can be improved with a consideration of adopting a multimeasure, multisource, multicontext approach. (Santrock, 1995, p. 50-54) Every social research method has limitations, using mixed method approaches to provide a more comprehensive understanding of social reality is thus necessary and essential.

Denzin (1970) once recommends four types of triangulation methods in research. These include data triangulation, investigator triangulation, theory triangulation, and methodological triangulation. Data triangulation refers to data collected over different period of time, from more than one location and from, or

about, more than one person. Investigator triangulation, on the other hand, involves the use of more than one investigator or observer on the same subject for the purpose of information verification or additional data collection. The third type of triangulation is theory triangulation which uses more than one kind of approach to generate frame of analysis. Early work on integrating different theories in explaining juvenile delinquency is one of the examples. (Cheung, 1984; Segrave & Hastad, 1985; Elliott, Huizinga & Ageton, 1985) Elliott and his colleagues have proposed an integrated theory on strain, control and social learning perspective to explain juvenile delinquency. This integrated approach can also be adopted to develop theoretical models on educational research. The last type of the four is methodological triangulation. It refers to a use of more than one method of information collection. Information on educational performance, for example, can be drawn from immigrant pupils, their parents, and schoolteachers. The three parties can provide supplementary “common sense” answers to increase the internal validity of a study. Collecting both quantitative and qualitative data is another example of methodological triangulation. The forth limitation will further elaborate this point.

The forth non-sampling limitation is related to different views on education. Besides the views collected from the immigrant pupils on factors linked to their performance, other views also merit continuous examination. For example, most immigrant pupils and their parents, or teachers would regard the pupil’s academic success as a reflection of a successful social adaptation or integration. However, it is true to point out that different parties have different views on effects on academic success or failure. If social adaptation or integration has an effect on educational performance, the views perceived by different groups and how it is related to school performance warrant further thinking.

The fifth non-sampling limitation goes back to the discussion on nature of social science. This can also seen as a short remark of all the limitations in this study on immigrant pupils. Generally, it is inadequate to describe just educational performance and its underlying factors without going deeper into the extraction of relevant indicators. For example, simple attempts to describe “good school” or “effective school” are misjudged. (Fitz-Gibbon, 1996, p. Vii) There calls for needs to conceive a

scientific, evidence-based approach in studying a highly complex system like education. The study is a continuous process because initial educational problem like immigrant pupils' educational performance will lead to a trial solution. The solution is imperfect and loaded with potential errors because of the complexity of social realities. Such complexity brings us eventually to an incessant process of error elimination. The process of error elimination will then lead us to a frontier of new problem. (Fitz-Gibbon, 1996, p. 46-47) These continuous processes of endeavour add one more piece of explanations of school performance of immigrant pupils under different social contexts. Only by then we can use robust evidences to narrow down the gap between political intrusion into professional practice in policy formulation and explanation of human problems. All in all, and with the aid of multimeasure, multisource, multicontext approach, the scientific endeavour is a continuous process with a clear aim of finding the "true" answer.

Lastly, ethical issues in social research are important, although it is sometimes controversial about what is right and what is wrong in conducting a certain study. Babbie once pointed out, "The problem in social research is that ethical considerations are not always apparent to us" since all of us generally consider ourselves ethical (Babbie, 1989, p. 471). This exploratory work on school educational performance of immigrant children is a social research. It therefore also carries ethical considerations or controversies. Kidder and Judd adopt a checklist of ten areas on questionable practices involving research participants. There are: (1) involving people in research without their knowledge or consent; (2) coercing people to participate; (3) withholding from the participant the true nature of the research; (4) deceiving the participants; (5) leading the participants to commit acts that diminish their self-respect; (6) violating the right to self-determination: research on behaviour control and character change; (7) exposing the respondents to physical or mental stress; (8) invading the privacy of the participant; (9) withholding benefits from participants in control groups; (10) failing or treat participants fairly to show them consideration and respect. (Kidder and Judd, 1986, p. 461)

The Webster New World Dictionary defines ethical as "conforming to the standard of conduct of a given profession or group". (Babbie, 1989, p. 472) Making

use of the Code of Conduct of the American Association for Public Opinion Research (hereafter cited as Code of Conduct) cited in Babbie's research book (Babbie, 1989, p.480-481), ethical issues in this study are addressed in the following paragraphs.

Following the Code of Conduct, there are "four principles of professional responsibility in our dealing with people". The first principle is about the public, which states "we shall cooperate with the legally authorized representatives of the public by describing the methods used in the studies" and "we shall maintain the right to approve the release of our findings, whether or not ascribe to us. When misinterpretation appears, we shall publicly disclose what is required to correct it, notwithstanding our obligation for client confidentiality in all other respects."

This study has taken seriously steps in addressing this first consideration in the all surveys. The principle researcher had personally met with the Board members of the Vancouver school and explained to the members, for example, the methods being used in the forthcoming surveys and its subsequent release of the findings. An explanatory note was also used to explain to the parents about the survey, and a prior consent form was sent to seek their approval of their children's participation in the surveys. Similar careful steps were adopted in Hong Kong and Macao surveys, such as voluntary participation of the selected pupils, and a letter to the school heads explaining the methods used in the surveys. In theory, this study cooperated with the authorized representatives and the right to approve the release of the findings, as stated in the notes and the letter to the schools.

However, a limitation pertaining to the first principle might be found in the Hong Kong and Macao groups. Although the research assistants in the two cities were instructed to inform the pupils about their rights in the surveys, they might not follow the instructions completely because of time constraints or other reasons. Technically, there could be a violation of this principle. Future investigations should be cautious of this technical problem.

The second principle is on clients or sponsors. It states that "we shall hold confidential all information obtained about the client's general business affairs and

about the findings of research conducted for the client, except when the dissemination of such information is expressly authorized.” and “we shall be mindful of the limitation of our techniques and facilities and shall accept only those research assignments which can accomplished within these limitations”.

Every possible step was adopted to ensure the confidentiality of the information obtained in the surveys. The raw data, for example, were under the custody of the principle researcher after the surveys. The data were kept in two boxes accessible only to the principle researcher. All in all, the confidentiality of the respondents has always been a matter of concern in the whole process of study to avoid any breach of the code of ethics in social science research. Confidentiality was a promise to all respondents in this survey. (Babbie, 1989, p. 475-476) The limitations of the techniques and facilities used in the survey were always a major concern before the fieldwork. For example, one limitation in the Vancouver surveys was the accessibility to the pupil population. Without an institute support or any official representation, it was difficult, if not impossible, to contact the schools for any surveys on immigrant pupils. The surveys on the Vancouver group were therefore limited in a sense that it was not administered in day schools. The sampling limitation on samples can bias the findings. The acceptance of the findings, as argued in previous paragraphs with reference to Popper’s falsifiability on scientific investigations and the question on validity, can be open to further debates. Findings in this study are limited only to the samples.

The third principle is on the profession. It states: “we shall not cite our membership in the Association as evidence of professional competency, since the Association does not so certify any persons or organizations.” and “we recognize our responsibility to contribute to the science of public opinion research and to disseminate as freely as possible the ideas and findings which emerge from our research.”

The first part of the third principle is sustained since the surveys were conducted without the use of the University as evidence of professional competency. The surveys were only administered under the name of a student project. For

knowledge building purpose, this can be seen in previous paragraphs in this chapter when the work on piece-meal engineering and provision of evidence for problem solving is discussed. It is believed that sharing of ideas enhance the advancement of human knowledge, especially in the field of social science which treasures the values of different perspectives on a single issue like school educational performance.

The forth principle is about the respondents. It stipulates that “we shall not lie to survey respondents or use practices and methods which abuse, coerce, or humiliate them.” and “we shall protect the anonymity of every respondent, unless the respondent waives such anonymity for specific uses. In addition, we shall hold as privileged and confidential all information which tends to identify the respondent.” No respondents were deceived or forced to participate in the surveys. The possible act of abusing or humiliating any respondents in this study has always been carefully and consciously avoided. Rather, any possible steps have been taken to protect the respondents from any harm as a result of participation in the surveys. The steps include, for example, a substantial explanation to the school Board members and some parents on the aims and procedures of the surveys in the Vancouver sample. The rights of the respondents, such as refusal to answer any questions, were clearly stipulated to the parents and the pupils before the surveys. The research assistants for the other two groups were informed to follow the steps. They were told, for instance, to inform the respondents their rights of refusing in taking part in the study. (Hitchcock and Hughes, 1995, p. 52) As far as the second part of the principle is concerned, no individual respondents were identifiable to the assistants and the researcher after the surveys since it was not the aim of this study to relate data to a particular respondent for identification purpose. Information obtained in the surveys, as discussed in the second principle, is treated in a confidential mode in order to protect the individuals from potential harm because of their participation.

All research concerned with human beings can pose ethical dilemmas. (Giddens, 2003, p. 755) This study is no exception. This researcher is, however, well aware of the significance of ethical considerations and the dilemmas presented to the investigator in conducting survey. As illustrated in previous paragraphs, pre-survey

steps have been taken to follow the code of conduct in social science research. These steps are to be an invaluable experience in future social investigations.

This chapter before the conclusion aims at addressing the issues of scientific investigations, Major limitations in the study and ethical code in social science study. Within the limitations part, both conceptual and methodological areas are addressed. Strictly speaking, this study is conceptually about perception of school educational performance. Two facets of sampling and non-sampling related methodological limitations are attempted. Three areas of sampling problems and five areas of non-sampling problems are respectively discussed. This is followed by an examination of ethnical practices in the course of the study. Social science is to find social facts and solutions to human problems. Limitations found in this study, nevertheless, help to illuminate new directions of future social investigations on comparable areas.

## Chapter 8 Conclusion

This study was an exploratory investigation on school performance of three Chinese groups of young immigrants in the cities of Hong Kong, Macao and Vancouver. The young immigrants in Hong Kong and Macao were mainly from the Mainland China, while the Vancouver group consisted of young immigrants from Hong Kong, China or Taiwan. The three groups shared a considerable extent of common background such as their immigrant features and Chinese characteristics. The three were nevertheless different from one another as a result of the contextual influences both from the host country and from the change resulting from the migration. The influence affected the school performance of the young immigrant pupils.

This study aimed at exploring the contextual factors that affected the school performance of young immigrants. The factors were drawn from four main domains for investigation: individual characteristics, family factors, school influence, and peer effect.

Adopting a cultural theoretical perspective, a model that consisted of various variables under the four domains was designed. The model and the various variables were then used as a direction of investigation in the study of the three immigrant groups. The difference between the variables among the groups and the group difference on school performance were attempted first. Besides differences of school performance among the groups, another important subject matter under exploration was the association of the four domains of individual factor, family characteristics, school influence, and peer effect with school performance. In essence, the study attempted to explore the effects of the characteristics of immigrant group such as grade upon arrival and school examination before admission on school performance. Making use of the data collected in the field- work, the present study tried to evaluate the between group difference in terms of their background feature such as the four domains and the school performance. In addition, a limited set of qualitative information drawn from respondents of one of the groups was used to supplement the discussion of the differences and the effect of the domains on school performance.

Analysis of the data from the three cities began with an examination of effects of the individual variables on the school educational performance. A simple zero-order correlation analysis revealed that four out of all the variables from the four dimensions were significantly associated with the school performance dependent variable. School attachment was the variable that obtained the strongest correlation ( $r = 0.59, p < 0.1$ ). While all other three domains had one or more significant variables on school performance, all variables from the family characteristics in this study showed no significant statistical association with the dependent variable. The influence of family on school performance of the target groups seemed to be retreating.

Following the correlation examination, this study made use of a regression analysis to explain the effects of the variables on school performance. Variables from the School Influence domain were found to exercise the largest effect on one's school performance. Within the domain, school attachment again came out as the most significant indicator on school performance of the immigrant groups. Two other variables on joining school activities also showed significant effect on the school performance variable.

Besides examining the 'effect' of various variables on school performance, the present study also compared data collected from the three cities. The first comparison was on group difference in school performance. Different groups were compared, such as with or without entrance examination, being placed in a preferred school grade, or being placed in a school grade corresponding to one's age. All three tests were found to show no significant difference between the groups. In other words, groups with entrance examinations did not significantly differ from the groups without entrance examinations in terms of their mean score in school performance.

Furthermore, the study investigated the difference of school performance in the two phases of data collection, and among the cities. Both Hong Kong and Vancouver showed a not significant statistical mean difference in school performance in the two phases of surveys. Macao, however, achieved a significant mean difference

in the two tests. It was argued that time, teachers and the scale factors could all play a role in the significant result found in the Macao group.

After the scrutiny of the two phases, a handful of selected variables were used to make comparisons of the differences between cities. It was hoped that an exploration of school performance among immigrant pupils in different cities could shed light on further understanding of the subject matter, and provided an evidence-seeking ground on learning related matter of the target group. All selected variables were those that correlated significantly with the school performance variable. These included school attachment, gender, future aspiration, after school activity participation, intention of staying in education, school trip participation, and peer influence.

As far as school performance was concerned, ranking of the three cities in terms of their median score of the variable revealed a fact that both Hong Kong and Macao achieved a gain when comparing their score in phase two with the first phase of survey. Vancouver, on the other hand, dropped from the first rank in the first survey to the third rank in the second survey. Albeit it was a slight drop of median score of 0.2 (3.47 verse 3.27), the result showed a fall of interest of the Vancouver group towards the four subjects under investigation. For example, the group found it less interesting to attend some of the lessons; or less motivating to do some of the subject work than in the first survey. Furthermore, the measure of school performance using the four subjects also illustrated different results. For instance, Vancouver obtained the highest median score in mathematics in both surveys, while the group reported the greatest drop among the three cities in measures of the subjects English and Science in the second survey. Macao, meanwhile, witnessed the greatest median score increase in the subject Chinese in the second survey among the three cities. The results could be a new direction of scientific work.

Concerning the school attachment variable, the Vancouver group showed the highest and greatest increase of the median score among the three cities in the two surveys. Interestingly, the Vancouver group liked their school but disliked their learning when results in the two surveys on school attachment and school

performance were compared. Again, why is that and any effect of immigration factors on this can be a point of concern for further exploration.

There was a gender difference in the measure of school performance too. As indicated in the ranking of first place in the first survey, both male and female Vancouver respondents showed the highest median (see Figure 6.21) in school performance among the three cities. The female group of the city obtained a much higher score than the two cities of Hong Kong and Vancouver.

Future aspiration was another variable significantly correlated with school performance. As shown in the first survey, the Macao group showed the strongest future aspiration among the three cities. Vancouver group ranked the last in the three in terms of median score.

Besides future aspiration, the measure of an intention of stay in the receiving country also associated significantly with school performance in the first survey. The Macao group was more willing to stay than the other two. The means of Macao, Hong Kong and Vancouver in the variable were 2.70, 1.75 and 2.00 respectively.

Participation in school activity was one of the indicators for measuring the extent to which a pupil possessed either cultural or social capital. The possession of cultural or social capital increased the likelihood of success, including academic success. After-school activity participation, for example, correlated significantly with school performance. Among the three cities, the Vancouver group acquired the highest median score in the measure of the variable. This could result from the fact that the Vancouver group experienced less examination pressure, and the schools' stress on the importance of extra-curricular activities. On the other hand, the Macao group had the lowest median when school or other trip participation was measured. The size of the territory could be a reason for the low participation rate. A mere area of only about 30 square kilometers of the territory could substantially limit the activity opportunity. Moreover, the after-school tutorials might have also occupied much time of the immigrant pupils in Macao. Some tutorial schools, for example, run after-school tutorials to primary pupils as late as 10 o'clock in the evening.

All three cities obtained similar median scores in the measure of peer influence. The results also showed a positive peer influence reported by the groups, which indicated peer groups were likely to be non-delinquent friends who did not use illicit drug or get into trouble with the police. According to the control theory by Hirschi, positive peer influence indicated a commitment to socially acceptable norms and beliefs, thereby facilitated the individuals to develop potentiality to pursue conventional activities such as good academic performance.

Besides using quantitative data, the analysis also made use of available qualitative data to enhance the understanding of school performance of the immigrant pupils. Qualitative data drawn from the Macao group showed that three key elements were associated with school performance. The three were whether the pupils felt happy at school, whether they felt unhappy at school, and their future educational expectation.

The immigrant pupils feeling happy or unhappy at school could be further categorized under three subordinate reasons. They were happy because they could learn something new (Happy: learning-related factor), have friendly teachers or classmates (social support factor), or have a well-equipped school (school-related factor). The pupils who liked their school could be attributed to these “happy” reasons. On the other hand, they felt unhappy because of difficult lessons and lots of homework (Unhappy: learning-related factor), difficult Chinese (subject-related factor), or unfriendly teachers (teacher-related factor). Furthermore, future educational expectation could also act as a facilitator for good school performance. For example, a pupil would will harder if he/she hopes to gain a good school result. A concern for academic results is therefore another important indicator for measuring school performance.

As shown in both the quantitative and qualitative data, an immigrant pupil was likely to report good school performance if he/she demonstrated a certain degree of attachment to school. It is therefore argued that an attachment cultural model may be useful in explaining school performance of pupils. The model is to include “bonding” variables to school and family. Pupils who show strong sign of attachment to school

or family are more likely to perform well in school. In other word, the pupils share a common “attachment culture” and accept the “control” from the school and family. The attachment cultural model can include the factors drawn from the qualitative data to facilitate investigations. For instance, the learning-related factor or teacher-related factor is the key element to explore why pupils are bonded successfully to school.

Besides looking into the effect of attachment culture of immigrant pupils on their school performance, other methodological applications may also be helpful in further uncovering the myth of school performance of these Chinese immigrant pupils. The elaboration modelling and partial correlation tests, for example, can strengthen the construction of our piecemeal engineering work on social fact. The construction, with good wish, can then provide evidence that is less controversial. Social scientific study is rarely without limitations. This piece of work is no exception. Chapter Seven thus provides a discussion of limitations on this study.

All in all, this study provided a glimpse of school performance of Chinese new immigrant pupils in Hong Kong, Macao and Vancouver. With the available data from the three cities, it was found that pupils who were attached to school or in possession of a “school culture” tended to report better school performance. Without doubt, future investigation on, for example, factors that affect the attachment and the educational or non-educational means to enhance the attachment culture will provide further evidence. Such evidence will become an added value to school and educational improvement.

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## Appendix A

Appendix A

Table 4.5

A cross tabulation of school grade, school and sex in the three cities in the first survey

**DAY SCHOOL GRADE NOW \* NAME OF DAY SCHOOL \* sex of pupil Crosstabulation in first interview**

Count

sex of pupil			NAME OF DAY SCHOOL				Total
			CTS	HKS1	LCS	VSCH	
male	DAY	GRADE 3		3		1	4
	SCHOOL	GRADE 4	14	12		2	28
	GRADE	GRADE 5	8	5	9		22
	NOW	GRADE 6	6	12	10	4	32
		GRADE 7				1	1
		GRADE 8				1	1
		GRADE 9				2	2
		GRADE 11				1	1
	Total		28	32	19	12	91
female	DAY	GRADE 3		4			4
	SCHOOL	GRADE 4	9	1		3	13
	GRADE	GRADE 5	6	9	8	1	24
	NOW	GRADE 6	1	14	16		31
		GRADE 7				1	1
		GRADE 8				1	1
		GRADE 11				2	2
		Total		16	28	24	8

Note:

CTS - private school in Macao

HKS1 - Hong Kong school

LCS - Luso-Chinese government school in Macao

VSCH - Vancouver school

Table 4.6

A cross tabulation of school grade, school and sex in the three cities in the second survey

**DAY SCHOOL GRADE NOW \* NAME OF DAY SCHOOL \* sex of pupil Crosstabulation in second interview**

Count

sex of pupil			NAME OF DAY SCHOOL				Total
			CTS	HKS	LCS	VSCH	
male	DAY	GRADE 3		3			3
	SCHOOL	GRADE 4	14	9			23
	GRADE	GRADE 5	8	1	9		18
	NOW	GRADE 6	6	12	10		28
		GRADE 7				2	2
		GRADE 8				2	2
		GRADE 9				2	2
	Total		28	25	19	6	78
female	DAY	GRADE 3		4			4
	SCHOOL	GRADE 4	9	1			10
	GRADE	GRADE 5	6	9	8	1	24
	NOW	GRADE 6	1	14	16		31
		GRADE 9				1	1
		GRADE 12				1	1
	Total		16	28	24	3	71

Note:

CTS - private school in Macao

HKS – Hong Kong school

LCS – Luso-Chinese government school in Macao

VSCH – Vancouver school

Table 5.4

Age Groups of All Respondents in the First Survey

**AGE OF PUPIL**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	9	1	.6	.6	.6
	10	9	5.4	5.4	6.0
	11	11	6.6	6.6	12.7
	12	30	18.0	18.1	30.7
	13	45	26.9	27.1	57.8
	14	47	28.1	28.3	86.1
	15	15	9.0	9.0	95.2
	16	6	3.6	3.6	98.8
	17	1	.6	.6	99.4
	18	1	.6	.6	100.0
	Total	166	99.4	100.0	
Missing	99	1	.6		
Total		167	100.0		

Table 5.5

Mean and standard deviations of the four subject indices in Hong Kong sample

---

Scale	n	mean	s.d
Mathematics	55	3.33	0.67
English	58	2.74	0.68
Social Studies	57	3.51	0.47
Chinese	56	3.49	0.54

---

Table 5.6

Cronbach's Alpha coefficients of the four subject indices in Hong Kong sample

---

Scale	Alpha
Mathematics	0.81
English	0.76
Social studies	0.55
Chinese	0.61

---

Table 5.7

Correlation matrix of the items in the Mathematics scale in Hong Kong sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
HK Maths Scale	.54**	.46**	.71**	.81**	.75**	.75**	.74**	.50**	.44**
<b>Q1</b>	1.00	.29*	.16	.24	.46**	.17	.38**	.24	-.04
<b>Q2</b>		1.00	.08	.26	.25	.09	.12	.32*	.22
Q3			1.00	.58**	.38**	.49**	.37**	.08	.31*
Q4				1.00	.65**	.65**	.53**	.37**	.28*
Q5					1.00	.60**	.59**	.17	.11
Q6						1.00	.63**	.33*	.23
<b>Q7</b>							1.00	.32*	.12
<b>Q8</b>								1.00	.17
Q9									1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.8

Correlation matrix of the items in the English scale in Hong Kong sample

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
HK English Scale	.50**	.65**	.84**	.64**	.82**	.43**	.68**
<b>Q1</b>	1.00	.02	.28*	.07	.27*	.37*	.14
Q2		1.00	.63**	.53**	.61**	-.10	.33*
Q3			1.00	.73**	.59**	.06	.52**
Q4				1.00	.52**	-.10	.29*
Q5					1.00	.28*	.49**
<b>Q6</b>						1.00	.35**
Q7							1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.9

Correlation matrix of the items in the Social Studies scale in Hong Kong sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
HK SS Scale	.51**	.41**	.60**	.50**	.44**	.40**	.45**	.54**	.34**
<b>Q1</b>	1.00	.37**	.31*	.09	-.02	.05	.29*	.27*	-.12
<b>Q2</b>		1.00	-.09	-.18	-.19	-.28*	.41**	.56**	.17
Q3			1.00	.57**	.49**	.34**	.07	.05	-.07
Q4				1.00	.48**	.70**	-.22	-.17	.07
Q5					1.00	.32*	-.13	-.03	.19
Q6						1.00	-.14	-.08	.03
<b>Q7</b>							1.00	.72**	.06
<b>Q8</b>								1.00	.17
Q9									1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.10

Correlation matrix of the items in the Chinese scale in Hong Kong sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	Q8
HK Chin Scale	.51**	.50**	.67**	.53**	.40**	.71**	.58**	.26
<b>Q1</b>	1.00	.42**	.15	.04	-.21	.27*	.36*	-.09
<b>Q2</b>		1.00	.04	-.17	-.10	.08	.63**	.04
Q3			1.00	.37**	.48**	.43**	.17	.17
Q4				1.00	.43**	.55**	-.09	-.03
Q5					1.00	.23	-.08	-.08
Q6						1.00	.25	.17
<b>Q7</b>							1.00	.07
Q8								1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.11

Mean and standard deviations of the four subject indices in Macao sample

---

Scale	n	mean	s.d
Mathematics	83	3.43	.63
English	84	3.10	.72
Social Studies	85	3.40	.53
Chinese	83	3.27	.54

---

Table 5.12

Cronbach's Alpha coefficients of the four subject indices in Macao sample

---

Scale	Alpha
Mathematics	.77
English	.84
Social studies	.78
Chinese	.77

---

Table 5.13

Correlation matrix of the items in the Mathematics scale in Macao sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
Macao Maths Scale	.64**	.35**	.61**	.67**	.64**	.79**	.52**	.34**	.66**
<b>Q1</b>	1.00	.29**	.12	.28**	.28**	.30**	.46**	.27**	.39**
<b>Q2</b>		1.00	-.08	-.04	.18	.21	.12	.24*	.19
Q3			1.00	.75**	.54**	.48**	.08	-.01	.26*
Q4				1.00	.59**	.54**	.08	.05	.40**
Q5					1.00	.54**	.10	-.01	.29**
Q6						1.00	.36**	.16	.59**
<b>Q7</b>							1.00	.39**	.29**
<b>Q8</b>								1.00	.08
Q9									1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.14

Correlation matrix of the items in the English scale in Macao sample

Items	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Macao Eng Scale	.66**	.79**	.73**	.69**	.74**	.68**	.69**
Q1	1.00	.41**	.42**	.27**	.33**	.43**	.46**
Q2		1.00	.70**	.66**	.49**	.35**	.46**
Q3			1.00	.62**	.39**	.32**	.35**
Q4				1.00	.39**	.33**	.38**
Q5					1.00	.56**	.49**
Q6						1.00	.36**
Q7							1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.15

Correlation matrix of the items in the Social Studies scale in Macao sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
Macao SS Scale	.50**	.65**	.68**	.67**	.46**	.75**	.50**	.61**	.58**
<b>Q1</b>	1.00	.38**	.20	.08	.23	.15	.13	.10	.19
<b>Q2</b>		1.00	.39**	.38**	.17	.27	.40**	.43**	.22*
Q3			1.00	.65**	.54**	.48**	.09	.19	.34**
Q4				1.00	.53**	.52**	.17	.22*	.27*
Q5					1.00	.37**	-.02	.03	.03
Q6						1.00	.16	.36**	.46**
<b>Q7</b>							1.00	.54**	.15
<b>Q8</b>								1.00	.22*
Q9									1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.16

Correlation matrix of the items in the Chinese scale in Macao sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	Q8
Macao Chin Scale	.62**	.63**	.53**	.80**	.61**	.59**	.42**	.74**
<b>Q1</b>	1.00	.38**	.20	.33**	.25*	.11	.16	.45**
<b>Q2</b>		1.00	.14	.38**	.23*	.22*	.45**	.23*
Q3			1.00	.38**	.16	.14	.18	.26*
Q4				1.00	.53**	.48**	.08	.44**
Q5					1.00	.43**	.07	.42**
Q6						1.00	.01	.51**
<b>Q7</b>							1.00	.18
Q8								1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.17

Mean and standard deviations of the four subject indices in Vancouver sample

---

Scale	n	mean	s.d
Mathematics	20	3.69	.70
English	20	3.58	.82
Science	20	3.36	.67
Chinese	20	3.37	.80

---

Table 5.18

Cronbach's Alpha coefficients of the four subject indices in Vancouver sample

---

Scale	Alpha
Mathematics	.71
English	.82
Science	.62 (question 6 deleted)
Chinese	.85

---

Table 5.19

Correlation matrix of the items in the Mathematics scale in Vancouver sample

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
Van Maths Scale	.69**	.46*	.67**	.65**	.70**	.65**	.51*
<b>Q1</b>	1.00	-.01	.10	.27	.73**	.84**	.24
Q2		1.00	.73*	.07	-.07	.00	.01
Q3			1.00	.48*	.14	.04	.23
Q4				1.00	.42	.22	.37
Q5					1.00	.60**	.24
<b>Q6</b>						1.00	.32
Q7							1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.20

Correlation matrix of the items in the English scale in Vancouver sample

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
Van Eng Scale	.87**	.66**	.76**	.58**	.73**	.81**	.52*
<b>Q1</b>	1.00	.39	.54*	.38	.66**	.66**	.55*
Q2		1.00	.53*	.37	.19	.41	.30
Q3			1.00	.69**	.44	.66**	.05
Q4				1.00	.47*	.32	-.20
Q5					1.00	.63**	.29
<b>Q6</b>						1.00	.33
Q7							1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.21

Correlation matrix of the items in the Science scale in Vancouver sample

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	Q7
Van Science Scale	.49*	.69**	.73**	.50*	.57**	.58**
<b>Q1</b>	1.00	.00	.03	.07	.06	.27
Q2		1.00	.90**	.26	.21	.18
Q3			1.00	.16	.39	.37
Q4				1.00	.23	.16
Q5					1.00	.40
Q7						1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.22

Correlation matrix of the items in the Chinese scale in Vancouver sample

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
Van Chin Scale	.75**	.87**	.82**	.37	.82**	.67**	.73**
<b>Q1</b>	1.00	.48*	.44	-.11	.48*	.86**	.38
Q2		1.00	.84**	.46*	.69**	.34	.65**
Q3			1.00	.44	.63**	.31	.56*
Q4				1.00	.24	-.18	.33
Q5					1.00	.48*	.58**
<b>Q6</b>						1.00	.27
Q7							1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.23

Mean and standard deviations of the four subject indices in all three cities

---

Scale	n	mean	s.d
Mathematics	138	3.40	.64
English	162	3.03	.76
Science	142	3.44	.51
Chinese	139	3.36	.55

---

Table 5.24

Cronbach's Alpha coefficients of the four subject indices in all three cities

---

Scale	n	Alpha
Mathematics	138	.78
English	162	.83
Social Science/Science	142	.70
Chinese	139	.71

---

Table 5.25

Correlation matrix of the items in the Mathematics scale in the three-city sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
Maths Scale	.60**	.39**	.65**	.72**	.67**	.77**	.61**	.42**	.57**
<b>Q1</b>	1.00	.28**	.12	.25**	.29**	.29**	.49**	.27**	.29**
<b>Q2</b>		1.00	-.02	.08	.22**	.16	.10	.27**	.19**
Q3			1.00	.68**	.40**	.38**	.17**	.03	.24**
Q4				1.00	.59**	.51**	.22**	.18*	.34**
Q5					1.00	.54**	.27**	.06	.21**
Q6						1.00	.48**	.23**	.42**
<b>Q7</b>							1.00	.37**	.28**
<b>Q8</b>								1.00	.13
Q9									1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.26

Correlation matrix of the items in the English scale in the three-city sample

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
Eng Scale	.66**	.70**	.79**	.68**	.79**	.63**	.69**
<b>Q1</b>	1.00	.26**	.41**	.23**	.41**	.45**	.41**
Q2		1.00	.63**	.56**	.47**	.21**	.39**
Q3			1.00	.69**	.51**	.30**	.43**
Q4				1.00	.47**	.23**	.30**
Q5					1.00	.50**	.51**
<b>Q6</b>						1.00	.38**
Q7							1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.27

Correlation matrix of the items in the Social Science/Science scale in the three-city sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
SS Scale	.49**	.54**	.63**	.61**	.45**	.63**	.47**	.57**	.49**
<b>Q1</b>	1.00	.34**	.19*	.07	-.01	.15*	.26**	.23**	.12
<b>Q2</b>		1.00	.09	.08	-.08	.03	.47**	.59**	.22**
Q3			1.00	.66**	.55**	.36**	.02	.12	.15
Q4				1.00	.53**	.54**	-.05	.04	.23**
Q5					1.00	.32**	-.17	.01	.12
Q6						1.00	.06	.17*	.29*
<b>Q7</b>							1.00	.63**	.08
<b>Q8</b>								1.00	.20*
Q9									1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.28

Correlation matrix of the items in the Chinese scale in the three-city sample

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	Q8
Chin Scale	.56**	.55**	.60**	.68**	.53**	.65**	.45**	.56**
<b>Q1</b>	1.00	.40**	.22**	.22**	.01	.24**	.37**	.22**
<b>Q2</b>		1.00	.09	.09	.06	.14	.54**	.14
Q3			1.00	.46**	.36**	.37**	.18*	.30**
Q4				1.00	.49**	.55**	.04	.29**
Q5					1.00	.36**	-.05	.26**
Q6						1.00	.15	.40**
<b>Q7</b>							1.00	.14
Q8								1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.32

Mean and standard deviations of the four subject indices in Hong Kong sample in second survey

---

Scale	n	mean	s.d
Mathematics	52	3.25	.71
English	52	2.83	.69
Social Studies	48	3.62	.46
Chinese	47	3.60	.47

---

Table 5.33

Cronbach's Alpha coefficients of the four subject indices in Hong Kong sample in second survey

---

Scale	Alpha
Mathematics	.85
English	.81
Social studies	.64
Chinese	.62

---

Table 5.34

Correlation matrix of the items in the Mathematics scale in Hong Kong sample in second survey

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
HK P2 Math Scale	.87**	.47**	.84**	.83**	.60**	.74**	.77**	.37**	.67**
<b>Q1</b>	1.00	.28*	.59**	.55**	.25	.25	.49**	.37*	.38**
<b>Q2</b>		1.00	.24	.28*	.03	.25	.43**	.45**	-.06
Q3			1.00	.80**	.58**	.59**	.53**	.11	.58*
Q4				1.00	.55**	.61**	.52**	.10	.55*
Q5					1.00	.52**	.41**	-.18	.40**
Q6						1.00	.54**	.07	.59**
<b>Q7</b>							1.00	.34*	.34*
<b>Q8</b>								1.00	.16
Q9									1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.35

Correlation matrix of the items in the English scale in Hong Kong sample in second survey

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
HK P2E Scale	.56**	.80**	.77**	.69**	.76**	.62**	.68**
<b>Q1</b>	1.00	.37**	.35*	.19	.16*	.51*	.04
Q2		1.00	.59**	.47**	.52**	.40	.49*
Q3			1.00	.71**	.55**	.20	.41**
Q4				1.00	.58**	.09	.42*
Q5					1.00	.35*	.57**
<b>Q6</b>						1.00	.32*
Q7							1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.36

Correlation matrix of the items in the Social Studies scale in Hong Kong sample in second survey

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
HK P2 SS Scale	.46**	.51**	.51**	.66**	.45**	.43**	.55**	.57**	.44**
<b>Q1</b>	1.00	.28*	-.13	.15	-.16	-.01	.39*	.25	.39**
<b>Q2</b>		1.00	.09	.04	-.02	-.06	.42**	.77**	.01
Q3			1.00	.45**	.59**	.12	-.02	.27	.09
Q4				1.00	.53**	.23	.25	.23	.33*
Q5					1.00	.19	-.03	.02	.06
Q6						1.00	.23	-.14	.30*
<b>Q7</b>							1.00	.37**	.08
<b>Q8</b>								1.00	-.07
Q9									1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.37

Correlation matrix of the items in the Chinese scale in Hong Kong sample in second survey

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	Q8
HK P2C Scale	.67**	.56**	.20	.62**	.38**	.64**	.48**	.61**
<b>Q1</b>	1.00	.48**	-.04	.26	-.06	.49**	.70*	.50
<b>Q2</b>		1.00	.01	.15	-.24	.14	.33*	.08
Q3			1.00	.15	.11	.01	-.16	-.11
Q4				1.00	.61**	.50**	.15	.60**
Q5					1.00	.25	-.02	.34*
Q6						1.00	.31*	.58**
<b>Q7</b>							1.00	.46**
Q8								1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.38

Mean and standard deviations of the four subject indices in Macao sample in second survey

---

Scale	n	mean	s.d
Mathematics	84	3.55	.61B
English	87	3.21	.81
Social Studies	87	3.66	.72
Chinese	87	3.40	.64

---

Table 5.39

Cronbach's Alpha coefficients of the four subject indices in Macao sample in second survey

---

Scale	Alpha
Mathematics	.84
English	.89
Social studies	.92
Chinese	.85

---

Table 5.40

Correlation matrix of the items in the Mathematics scale in Macao sample in second survey

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
Macao Maths Scale	.66**	.62**	.69**	.76**	.51**	.75**	.65**	.55**	.80**
<b>Q1</b>	1.00	.47**	.34	.42**	.21	.36**	.39**	.31**	.48**
<b>Q2</b>		1.00	.21	.29	.12	.28**	.32**	.51*	.47**
Q3			1.00	.61**	.65**	.40**	.30**	.20	.47**
Q4				1.00	.51**	.55**	.28**	.26**	.56**
Q5					1.00	.28**	.16	-.01	.21
Q6						1.00	.48**	.31	.71**
<b>Q7</b>							1.00	.41**	.48**
<b>Q8</b>								1.00	.27**
Q9									1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.41

Correlation matrix of the items in the English scale in Macao sample in second survey

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
Macao Eng Scale	.76**	.83**	.66**	.78**	.83**	.76**	.81**
<b>Q1</b>	1.00	.58**	.35**	.51**	.59**	.58**	.54**
Q2		1.00	.66**	.64**	.56**	.49**	.60**
Q3			1.00	.55**	.36**	.38**	.38**
Q4				1.00	.60**	.43**	.57**
Q5					1.00	.62**	.72**
<b>Q6</b>						1.00	.56**
Q7							1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.42

Correlation matrix of the items in the Social Studies scale in Macao sample in second survey

Items	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Macao P2 SS Scale	.84**	.67**	.74**	.85**	.77**	.83**	.77**	.69**	.81**
<b>Q1</b>	1.00	.54**	.57**	.64**	.56**	.59**	.71**	.57**	.69**
<b>Q2</b>		1.00	.42**	.51**	.46**	.44**	.34**	.53**	.43*
Q3			1.00	.67**	.62**	.54**	.41**	.35**	.57**
Q4				1.00	.73**	.75**	.54**	.46*	.61**
Q5					1.00	.62**	.50**	.37**	.51**
Q6						1.00	.68**	.48**	.69**
<b>Q7</b>							1.00	.57**	.70**
<b>Q8</b>								1.00	.47**
Q9									1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.43

Correlation matrix of the items in the Chinese scale in Macao sample in second survey

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	Q8
Macao Chin Scale	.69**	.63**	.62**	.79**	.68**	.78**	.71**	.66**
<b>Q1</b>	1.00	.28**	.34**	.47**	.44**	.48**	.38**	.49**
<b>Q2</b>		1.00	.37**	.41**	.23*	.33**	.68**	.19
Q3			1.00	.56**	.34**	.31**	.36**	.18
Q4				1.00	.53**	.58**	.51**	.40**
Q5					1.00	.58**	.24*	.50**
Q6						1.00	.50**	.58**
<b>Q7</b>							1.00	.31**
Q8								1.00

note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.44

Mean and standard deviations of the four subject scales in Vancouver sample in second survey

Scale	n	mean	s.d
Mathematics	8	4.00	.52
English	9	3.29	.89
Science	9	3.29	.94
Chinese	9	3.30	1.11

Table 5.45

Cronbach's Alpha coefficients of the four subject scales in Vancouver sample in second survey

Scale	Alpha
Mathematics	.68 (item 4 deleted, .56 if included)
English	.93
Science	.94
Chinese	.96

Table 5.46

Correlation matrix of the items in the Mathematics scale in Vancouver sample in second survey (item 4 deleted)

Items	<b>Q1</b>	Q2	Q3	Q5	<b>Q6</b>	Q7
Van Maths Scale	.81*	.81*	.31	.43	.43	.57
<b>Q1</b>	1.00	.59	.23	.06	.36	.56
Q2		1.00	.08	.01	.44	.34
Q3			1.00	-.54	-.36	.77*
Q5				1.00	.36	-.33
<b>Q6</b>					1.00	-.41
Q7						1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

Table 5.47

Correlation matrix of the items in the English scale in Vancouver sample in second survey

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
Van Eng Scale	.96**	.72*	.93**	.87**	.86**	.88**	.69*
<b>Q1</b>	1.00	.53	.91**	.74*	.78*	.88**	.83**
Q2		1.00	.67*	.82**	.58	.53	.12
Q3			1.00	.81**	.78*	.72*	.62
Q4				1.00	.89**	.64	.37
Q5					1.00	.66	.40
<b>Q6</b>						1.00	.77*
Q7							1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.48

Correlation matrix of the items in the Science scale in Vancouver sample in second survey

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q 6</b>	Q7
Van Science Scale	.79*	.75*	.96**	.89**	.90**	.93**	.85**
<b>Q1</b>	1.00	.39	.74*	.52	.66	.74*	.74*
Q2		1.00	.63	.83**	.66	.54	.52
Q3			1.00	.82**	.81**	.96**	.82**
Q4				1.00	.88**	.74*	.59
Q5					1.00	.83**	.65
<b>Q6</b>						1.00	.82**
Q7							1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.49

Correlation matrix of the items in the Chinese scale in Vancouver sample in second survey

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
Van Chin Scale	.98**	.88**	.91**	.96**	.89**	.91**	.83**
<b>Q1</b>	1.00	.87**	.93**	.93**	.78*	.91**	.78*
Q2		1.00	.95**	.89**	.73*	.68*	.48
Q3			1.00	.90**	.73*	.68*	.48
Q4				1.00	.84**	.79*	.76*
Q5					1.00	.79*	.79*
<b>Q6</b>						1.00	.88*
Q7							1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.50

Mean and standard deviations of the four subject scales in the three cities in second survey

Scale	n	mean	s.d
Mathematics	136	3.44	.66
English	148	3.08	.79
Science	135	3.65	.64
Chinese	134	3.47	.59

Table 5.51

Cronbach's Alpha coefficients of the four subject indices in the three cities in second survey

Scale	items	n	Alpha
Mathematics	9	136	.85 (.78)
English	7	148	.88 (.83)
Social Science/Science	9	135	.86 (.70)
Chinese	8	134	.80 (.71)

( ) represents Alpha in first survey

Table 5.52

Correlation matrix of the items in the Mathematics scale in the three-city sample in second survey

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
Maths Scale	.69**	.56**	.75**	.78**	.53**	.76**	.72**	.50**	.75**
<b>Q1</b>	1.00	.40**	.48**	.46**	.23**	.36**	.48**	.36**	.47**
<b>Q2</b>		1.00	.22**	.29**	.07	.28**	.37**	.49**	.24**
Q3			1.00	.65**	.61**	.45**	.41**	.17*	.53**
Q4				1.00	.47**	.50**	.36**	.19*	.57**
Q5					1.00	.36**	.28**	-.09	.30**
Q6						1.00	.55**	.25**	.64**
<b>Q7</b>							1.00	.41**	.44**
<b>Q8</b>								1.00	.25**
Q9									1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.53

Correlation matrix of the items in the English scale in the three-city sample in second survey

Items	<b>Q1</b>	Q2	Q3	Q4	Q5	<b>Q6</b>	Q7
Eng Scale	.73**	.81**	.72**	.75**	.81**	.73**	.77**
<b>Q1</b>	1.00	.51**	.43**	.41**	.48**	.58**	.39**
Q2		1.00	.63**	.60**	.55**	.47**	.54**
Q3			1.00	.60**	.47**	.35**	.41**
Q4				1.00	.60**	.34**	.52**
Q5					1.00	.54**	.67**
<b>Q6</b>						1.00	.51**
Q7							1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.54

Correlation matrix of the items in the Social Science/Science scale in the three-city sample in second survey

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	<b>Q8</b>	Q9
SS Scale	.70**	.62**	.67**	.78**	.67**	.72**	.70**	.66**	.71**
<b>Q1</b>	1.00	.44**	.29**	.45**	.29**	.36**	.59**	.46**	.58**
<b>Q2</b>		1.00	.30**	.34**	.28**	.26**	.37**	.60**	.28**
Q3			1.00	.59**	.62**	.39**	.26**	.32**	.40**
Q4				1.00	.67**	.57**	.47**	.38**	.53**
Q5					1.00	.49**	.34**	.26**	.36**
Q6						1.00	.54**	.29**	.53**
<b>Q7</b>							1.00	.51**	.50**
<b>Q8</b>								1.00	.31**
Q9									1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.55

Correlation matrix of the items in the Chinese scale in the three-city sample in second survey

Items	<b>Q1</b>	<b>Q2</b>	Q3	Q4	Q5	Q6	<b>Q7</b>	Q8
Chin Scale	.68**	.60**	.52**	.76**	.59**	.75**	.63**	.66**
<b>Q1</b>	1.00	.36**	.26**	.44**	.31**	.50**	.47**	.50**
<b>Q2</b>		1.00	.25**	.32**	.04	.24**	.70**	.14
Q3			1.00	.48**	.32**	.26**	.25*	.12
Q4				1.00	.59**	.57**	.40**	.46**
Q5					1.00	.52**	.12	.48**
Q6						1.00	.37**	.59**
<b>Q7</b>							1.00	.26**
Q8								1.00

Note: bolded letter represents questions recoded

\* Correlation significant at 0.05 level (2-tailed)

\*\* Correlation significant at 0.01 level (2-tailed)

Table 5.57

Ranking of job groups by respondents

	First (6 mark)	Second (5 marks)	Third (4 marks)	Fourth (3 marks)	Fifth (2 marks)	Sixth (1 marks)
Q. 6 Respondents' choice	F	B	E	A	C	D
Q. 9 Father's choice	B	F	E	A	D	C
Q. 10 Mother's choice	F	B	E	D	C	A

Note:

Job group F obtained two first places and one second place =  $6+6+5 = 17$  marks

Job group B obtained two second places and one first place =  $5+5+6 = 16$  marks

Job group E obtained three third places =  $4+4+4 = 12$  marks

Job group A obtained two fourth places and one sixth place =  $3+3+1 = 7$  marks

Job group D obtained one fourth place, one fifth and one sixth place =  $3+2+1 = 6$  marks

Job group C obtained two fifth places and one sixth place =  $2+2+1 = 5$  marks

Table 5.58

Correlation matrix of items in Family Social Class variable

---

	V1	V2	V3	V4	Item-Var
V1	1.00	.58	.31	.06	.67
V2		1.00	.25	.25	.73
V3			1.00	.20	.67
V4				1.00	.63

---

- V1 Father's education level
- V2 Mother's education level
- V3 Father's job
- V4 Mother's job

All are significant at 0.01 level except V1 and V4

NO TABLE

Table 6.7a

ANOVA on school performance of the three cities in phase 1 Survey

**Descriptives**

School performance scale

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
HK	60	3.2415	.3865	4.990E-02	3.1417	3.3414	2.35	4.25
Macao	87	3.2585	.3813	4.088E-02	3.1772	3.3397	2.36	4.30
Vancouver	20	3.4155	.3294	7.366E-02	3.2614	3.5697	2.60	3.99
Total	167	3.2712	.3791	2.934E-02	3.2133	3.3291	2.35	4.30

**Test of Homogeneity of Variances**

School performance scale

Levene Statistic	df1	df2	Sig.
.289	2	164	.749

**ANOVA**

School performance scale

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.484	2	.242	1.696	.187
Within Groups	23.379	164	.143		
Total	23.862	166			

Table 6.8a

An independent sample t-test on school performance and entrance examination

**Group Statistics**

	has entrance exam	N	Mean	Std. Deviation	Std. Error Mean
new school	yes	87	3.2006	.3607	3.867E-02
performance scale	no	60	3.3255	.4031	5.204E-02

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
new school performance scale	Equal variances assumed	2.061	.153	-1.967	145	.051	-.1249	6.352E-02	-.2504	6.287E-04
	Equal variances not assumed			-1.927	117.550	.056	-.1249	6.483E-02	-.2533	3.480E-03

Table 6.9a

An independent sample t-test on school performance and entrance examination in English subject

**Group Statistics**

entrance exam-english		N	Mean	Std. Deviation	Std. Error Mean
new school	no	54	3.1793	.3497	4.759E-02
performance scale	yes	32	3.2310	.3861	6.825E-02

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
new school performance scale	Equal variances assumed	.069	.794	-.637	84	.526	-5.168E-02	8.110E-02	-.2130	.1096
	Equal variances not assumed			-.621	60.159	.537	-5.168E-02	8.320E-02	-.2181	.1147

Table 6.10a

A crosstabulation of school performance and entrance examination

has entrance exam \* Dichotomised sch performance Crosstabulation

			Dichotomised sch performance		Total
			low performance	high performance	
has entrance exam	yes	Count	48	39	87
		Expected Count	46.8	40.2	87.0
	no	Count	31	29	60
		Expected Count	32.2	27.8	60.0
Total		Count	79	68	147
		Expected Count	79.0	68.0	147.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.176 <sup>b</sup>	1	.675		
Continuity Correction <sup>a</sup>	.063	1	.802		
Likelihood Ratio	.175	1	.675		
Fisher's Exact Test				.737	.401
Linear-by-Linear Association	.174	1	.676		
N of Valid Cases	147				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 27.76.

Table 6.11a

An independent sample t-test on school performance and preferred class

**Group Statistics**

	desired class when first in HK/Macao	N	Mean	Std. Deviation	Std. Error Mean
new school performance scale	yes	81	3.2679	.3688	4.098E-02
	no	65	3.2300	.4029	4.997E-02

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
new school performance scale	Equal variances assumed	1.135	.289	.593	144	.554	3.797E-02	6.400E-02	-8.85E-02	.1645
	Equal variances not assumed			.588	131.452	.558	3.797E-02	6.462E-02	-8.99E-02	.1658

Table 6.12a

ANOVA on school performance and grade upon arrival

**Descriptives**

new school performance scale

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
LOWER GRADE	85	3.2367	.4097	4.444E-02	3.1483	3.3251	2.35	4.30
JUST RIGTH GRADE	51	3.2939	.3669	5.137E-02	3.1907	3.3971	2.44	4.09
HIGHER GRADE	30	3.3340	.3092	5.645E-02	3.2186	3.4495	2.67	3.98
Total	166	3.2718	.3802	2.951E-02	3.2136	3.3301	2.35	4.30

**Test of Homogeneity of Variances**

new school performance scale

Levene Statistic	df1	df2	Sig.
.541	2	163	.583

**ANOVA**

new school performance scale

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.246	2	.123	.848	.430
Within Groups	23.605	163	.145		
Total	23.850	165			

Table 6.13a

An independent samples t-test of Hong Kong group

**Group Statistics**

PHASE OF TEST		N	Mean	Std. Deviation	Std. Error Mean
HK school performance scale	PRETEST	60	3.2415	.3865	4.990E-02
	POSTTEST	53	3.3265	.4220	5.796E-02

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
HK school performance scale	Equal variances assumed	.461	.498	-1.117	111	.266	-8.500E-02	7.607E-02	-.2357	6.573E-02
	Equal variances not assumed			-1.111	106.218	.269	-8.500E-02	7.648E-02	-.2366	6.664E-02

Table 6.14a

An independent samples t-test of Macao group

**Group Statistics**

	Phase of test	N	Mean	Std. Deviation	Std. Error Mean
Macao school performance scale	pretest	87	3.2585	.3813	4.088E-02
	posttest	87	3.4545	.5307	5.690E-02

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Macao school performance scale	Equal variances assumed	6.178	.014	-2.797	172	.006	-.1960	7.006E-02	-.3343	-5.77E-02
	Equal variances not assumed			-2.797	156.099	.006	-.1960	7.006E-02	-.3344	-5.76E-02

Table 6.15a

An independent samples t-test of Vancouver group

**Group Statistics**

phase of test	N	Mean	Std. Deviation	Std. Error Mean
Vancouver school pretest	20	3.5000	.4334	9.691E-02
performance scale posttest	8	3.5045	.7596	.2686

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Vancouver school performance scale	Equal variances assumed	7.406	.011	-.020	26	.984	-4.464E-03	.2263	-.4696	.4607
	Equal variances not assumed			-.016	8.886	.988	-4.464E-03	.2855	-.6516	.6427

Table 6.16a

ANOVA on satisfaction with school performance among the three cities

Descriptives

SATISFY WITH SCHOOL PERFORMANCE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
HK	60	3.48	1.00	.13	3.23	3.74	1	5
Macao	87	3.36	1.09	.12	3.12	3.59	1	5
Vancouver	20	3.65	.75	.17	3.30	4.00	2	5
Total	167	3.44	1.02	7.90E-02	3.28	3.59	1	5

Test of Homogeneity of Variances

SATISFY WITH SCHOOL PERFORMANCE

Levene Statistic	df1	df2	Sig.
2.503	2	164	.085

ANOVA

SATISFY WITH SCHOOL PERFORMANCE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.602	2	.801	.766	.466
Within Groups	171.487	164	1.046		
Total	173.090	166			

Table 6.17a

An independent samples t-test of all three groups in the two surveys

**Group Statistics**

PHASE OF TEST		N	Mean	Std. Deviation	Std. Error Mean
School performance scale	PRETEST	167	3.2813	.3956	3.061E-02
	POSTTEST	148	3.4114	.5093	4.187E-02

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
School performance scale	Equal variances assumed	6.462	.012	-2.545	313	.011	-.1300	5.110E-02	-.2306	-2.95E-02
	Equal variances not assumed			-2.507	276.281	.013	-.1300	5.187E-02	-.2321	-2.79E-02

## Appendix B

## Appendix B

### The Eleven Variables of the Individual Factor Dimension in the First Survey

#### Gender

Gender (1 = male, 2 = female) is the first individual factor included in the model of analysis. The effect of the variable has been well documented in previous studies (Geller, 1996; Statistics Canada and Canadian Council of Ministries of Education, 2000, p. 174). Geller, in a longitudinal study of women on educational attainment and occupational aspirations, reveals a fact that women tend to be more than men to do well in school (Geller, 1996). Females are also found to be more than males to stay “on-track” or stay in school after high school in a study of youth in Canada (Wilkinson, 2002, p. 184). 167 respondents participate in the first survey. The mean and standard deviation of the variable are 1.46 and 0.50 respectively. Male respondents (54.5%) are nine per cent more than the females.

#### Grade

School year group (e.g., 7 = grade 7, 8 = grade 8) is the second variable. The variable measures the school level currently attended by the respondents. The respondents in the study have mean 5.25 (range 3 to 11) and standard deviation 1.33 in the “Grade” variable. A majority or over 37 per cent of the 167 respondents are in grade 6.

#### Years in school

The third variable in the model, “Years in school”, refers to the number of years spent in the present school. The variable obtains a mean of 2.13 years and a standard deviation of 0.81. A total of 164 respondents attempted the questions.

#### Number of schools

The fourth variable under the individual factors is the “Number of Schools” studied by the respondents. The variable, which asks the number of school(s) that the respondents have been to, obtains mean 1.23 (range 0-4) and standard deviation 0.82. A majority (62.6%) of the 163 respondents has been to one school only.

#### Age

The average "Age" of the 166 respondents is 13.13 years (range 9-18) with a standard deviation of 1.50. Age has been an important developmental factor to consider in the process of integration among immigrant children, since a successfully integrated child shows academic achievement in his/her school performance. (Ahearn et. al., 1999) Age is the fifth independent variable under the individual factors category.

#### Years in receiving country

Respondents arrive their receiving country in different time. Time in the new country has been well documented by integration literature to exert a positive influence on adaptation and educational performance. (Gullahorn & Gullahorn, 1963) Wilkinson, for instance, finds time spent in a new country a positive and significant determinant in academic success. The author suggested that the longer newcomers are in the receiving country, the more likely they are to succeed in the education institution and in other aspects of social life. (Wilkinson, 2002, p. 185-186) The variable "*years in receiving country*" is another independent variable under the individual factors category. Conceptually, the variable is defined as the number of years that the respondents have spent in the receiving country. 165 respondents have attempted the question. The variable has mean 2.67 (range 0-4) and standard deviation 1.01. On average, a respondent has been in the receiving country for more than 2 years. About 40 per cent of them have been in the new country for two years or less. Most, or 34.5 per cent, has been in the receiving country for 3 years.

#### Future aspiration

As a test of future planning, respondents in the study are prompted to indicate their future aspiration in terms of their plan to stay on at school or to get a job after their foundation education. It is argued that pupils with a higher aspiration would tend to be more achievement motivated and should therefore perform harder in school. A variable "Future Aspiration" is constructed based on questions 1 "stay on at school" and 4 "try to get a job" of sections C. Conceptually, the variable is defined as the future plan of the respondents in relation to study or to work after their basic schooling. Responses to the two questions are in a five-point Likert scale (1 = very

likely, 2 = fairly likely, 3 = possible, 4 = unlikely, 5 = not a chance). Question C1 was reversely recoded. Higher score in the variable therefore represents a greater tendency to stay on at school and not getting a job after basic schooling. The variable has mean 3.70 and standard deviation of 0.87.

About 51 per cent of the 161 respondents say they are unlikely or very unlikely to get a job after the schooling. Comparatively, higher percentage of respondents or about 63 per cent reply that they are fairly or very likely to stay in school. Considering the future, as high as 69 per cent of the 161 respondents answer that they are fairly or very likely to continue study and not to get a job. The variable has a Cronbach's alpha coefficient of 0.44. The alpha coefficient is a reliability test of the new variable. A reliability of indicators relates to the context to which any measuring procedure yields the same results on repeated trials. Specifically it refers to the degree of precision in measurement, or the extent to which a measure is consistent. (Babbie, 1989, p. 121; Fitz-Gibbon & Morris, 1987, p. 106) The alpha is low but the variable is kept for use in subsequent analysis.

A test of internal consistency of the variable shows a good representation of the items to the variable. Both items are significantly associated with the Future Aspiration variable. The "stay on at school" has a coefficient of 0.46 ( $n=161$ ,  $p < 0.001$ ) with the variable, while the "try to get a job" item has a coefficient of  $-0.72$  ( $n=161$ ,  $p < 0.001$ ). The correlation shows that the more a respondent looks to future, the less likely he/she will try to get a job. As a further validity check, the School Performance variable is correlated with the Future Aspiration variable. Theoretically, it is plausible to assume that an individual with a higher future aspiration should possibly have a satisfactory school performance, or vice versa. The two variables have a significant and positive correlation ( $r = 0.27$ ,  $p < 0.001$ ). It can therefore be claimed that the Future Aspiration variable has construct validity. Construct validity refers to the way a measure relates to other variables within a system of theoretical assumptions. (Babbie, 1989, p. 125, Fitz-Gibbon & Morris, 1987, p. 115)

#### Further study in technical school

An intention to go to technical school or skill training school denotes a mentality of not preparing to go for further academic study in Hong Kong and Macao. Both the technical or skill training schools admit pupils of poorer academic

performance. A respondent who plans to go to non-academic type of institute therefore reflects to certain extent his/her academic standard. A variable "Further Study in Technical School" is constructed from questions C2 "When you finish F.3, how likely is it that you will go to technical or practical school?" Five options are provided (1 = very likely, 2 = fairly likely, 3 = possible, 4 = unlikely, 5 = not a chance). A higher score in the question stands for a less likely chance to study in technical or practical school. Conceptually, the variable refers to the intension of a respondent to further study in technical or practical school after basic education. Only answers from the Hong Kong and Macao sample are used in this variable because of unclear wording used in the question of the Vancouver questionnaire.

The variable has mean 2.87 and standard deviation 0.97. About 34 per cent of the 142 respondents indicate that it is very or fairly likely to them to go to technical school, comparing to 24 per cent who answer unlikely or not a chance.

Question C3 "taking the provincial examination" is dropped from analysis because of misleading wordings used in the samples.

#### Intention of stay

An intention to stay in the receiving country after completing foundation education is also an important factor to determine adaptation and success in social life. Question five of section C is used to enquire the "Intention of Stay" of the respondents. The variable is conceptually defined as the intention of stay in the receiving country after the completion of basic education. The variable obtains mean 2.27 (1 = very likely, 2 = fairly likely, 3 = possible, 4 = unlikely, 5 = not a chance) and standard deviation 1.27. About 41 per cent of the 164 respondents answer that they are very likely to stay in the new country. On the other hand, as high as 33 per cent of them indicate that the stay is possible.

Questions 6 to 10 of section C are related to job aspiration and parents' job status. Respondents are provided with six job groups to choose from. The job groups include: group A – bus driver and others, group B – architect and others, group C – farm worker and others, group D – kitchen worker and others, group E – sales representative and others, and group F – aircraft pilot and others.

Based on the answers on question C6 (which group contains jobs which are most likely the one you are aiming at in the end?), C9 (which group contains jobs

which are most likely the one your father wants you to take?) and C10 (which group contains jobs which are most likely the one your mother wants you to take?), a score is assigned to each group to facilitate a ranking of the six job groups. The group selected by the greatest number of respondents will obtain six marks, the second highest five marks, and so on. The group with the highest mark is the first among the six groups, and the second highest the second. The ranking and the scores are then used for the five questions (C6 to C10) to measure the social prestige and status of the job groups among the respondents and their parents. Table 5.57 shows the choices of the job groups among the respondents and their parents.

As shown in Table 5.57, job group F has obtained 17 marks (two first places and one second place) and therefore ranks the first among the six groups. Job group B obtains the second highest mark. It has 16 marks (two second places and one first place). The other four places in order are: group E (12 marks), group A (7 marks), group D (6 marks), and group C (5 marks).

The ranked six groups are assigned a Likert-type scale for subsequent analysis. Following the ranking, group F is scored = 6, group B = 5, group E = 4, group A = 3, group D = 2 and group C = 1. Higher score represents jobs in the groups enjoying a higher social prestige and ranking.

#### Job aspiration

The variable "Job Aspiration" is computed from question 6 of section C. It refers to the type of job to which the respondent is seeking for in future. The question asks the respondents to indicate their preference of job among the six job groups. Making use of the ranking of the job groups, the variable has mean 5.24 (range 1-6) and standard deviation 0.94. A majority (51.2%) of the 164 respondents prefers to select a job within group F.

#### Stressful life events

Seventeen questions in section I are on stressful life events experienced by the respondents last year. Stressful life events are defined as environmental events that place demand on an individual to cognitively interpret and appraise them if the events are harmful, threatening, or challenging, and to determine if he/she has the resources to effectively cope with the events. Stress from a life event can be positive or negative.

(Santrock, 1995, p.277; Lazarus and Folkman, 1984; Lazarus, 1966; Atkinson, et al. 1993, p. 578-583) A stressful life event can produce certain amount of stress and can cause considerable distress to the individual and affect one's study or work. (Holmes and Rahe, 1967)

Respondents in the study are invited to indicate if they have the event or if the event has any effect on their work. Answers to the questions are rated in a five-point scale (1 = no such event, 2 = no effect, 3 = moderate effect, 4 = bad effect, 5 = very bad effect) and summated and computed into a composite score. The "Stressful Life Events" variable has mean 1.31 and standard deviation 0.35. Over 78 per cent of the 155 respondents have experienced no event in the last year. The variable of the 17 questions achieve an alpha of 0.76. To check construct validity, the variable is correlated with first item of section K (e.g. I find it hard to get down to work in Maths). It is hypothesized that pupils who experience greater stress would be more likely to find it hard to get down to work. The result shows all four items are positively associated with the variable, although only the mathematics item is significant at 0.05 level. The variable is therefore reasonably valid.

Two individual questions in section I, questions 18 and 19, are used to explore the contacts with teachers and someone else about the stressful life events. Teachers in this survey seem to have little contacts by the respondents when they are under stress. About 9 per cent of the 164 respondents in the survey will discuss the events with their teachers, while about 40 per cent of the respondents will discuss the events with someone other than their teachers. The two questions are used when the stressful life events variable is analysed in the model.

### The Nine Variables of the Family Characteristic Dimension in the First Survey

#### Family social class

The first variable under the family characteristics dimension is a composite variable of "Family Social Class". The concept here refers to a category in which a family is placed according to the possession or non-possession of wealth, power or social status. The ownership or non-ownership of the wealth, power, or social status in a family with young children is generally characterized by the parents' education level and employment status. Following this conceptual definition, the Family Social Class

variable is thus operationalized using questions measuring education and employment status of both parents in the questionnaire.

Four questions on father's and mother's education level and job in G4 (When did your mother complete her full time education?), G5 (when did your father complete his full time education?), C7 (which group contains jobs which are most likely the one your father does (or did)?) and C8 (which group contains jobs which are most likely the one your mother does (or did)?) are employed to construct the variable. A high score on the variable represents a high parents' educational level and job status.

Both fathers and mothers in the study have an educational level just below 'O' level. Fathers have a slightly higher mean education level than the mothers. The fathers have mean 2.49 (1 = little or no formal education, 2 = at the minimum school leaving age, 3 = after "O" level or similar, 4 = after college, 5 = after university of polytechnic) and standard deviation 1.02. The mothers have mean 2.28 (range 1-5) and standard deviation 1.01.

Most fathers of the 151 respondents in the study are employed on jobs from group A. The group contains manual jobs such as bus driver, bricklayer, or carpenter. The variable "*father's job*" has mean 3.83 (group F = 6, group B = 5, group E = 4, group A = 3, group D = 2, group C = 1) and standard deviation 1.14. Most mothers of the 136 respondents have job found in job group D. The variable "*mother's job*" has mean 3.91 (range 0-5, 0= housewife) and standard deviation 1.63.

The scores of C7 and C8 (parent's education level) are summated and averaged with answers from questions G4 and G5 (parents' job). Both the father and mother's education level and job variable have a positive and significant correlation. Father's education level and job are associated with a correlation coefficient of 0.31 (n= 148, p<. 001). Mother's variables have a coefficient of 0.25 (n=163, p<. 001). Result of the correlations constitutes evidence of construct validity to the two measures (Babbie, 1989, p.125)

The "Family Social Class" variable has mean 2.61 (range 1-5) and standard deviation 0.74. The variable has obtained an alpha of 0.58. A test of internal consistency among the items is performed. A high correlation coefficient generally means that the items are representative of the variable. Table 5.58 details the validity evaluation of the variable.

The four items making up the Family Social Class variable have a relative high degree of internal consistency, except between the father's education level and mother's job. The Pearson's correlation coefficients among the four range from 0.06 to 0.58. There are also a high correlation between the variable and the four individual items, with values ranging from 0.63 to 0.73, showing that the variable is a good representation of the four items involved. All except the father's education and mother's job are significant beyond the 0.01 level.

It is assumed that family with higher social class is more likely to have more books at home. A correlation of the two shows that the Family variable seems to possess construct validity. The Family Social Class variable obtains a significant and positive association with the Number of Books at Home variable. The two have a coefficient of 0.25 ( $n=147$ ,  $p < 0.01$ ).

The second and third variables in the family characteristics dimension are "Father's expectation of my job" and "Mother's expectation of my job". The first variable refers to the types or groups of job to which the respondents assume his/her father will expect him/her to take in the future. The second variable refers to the jobs that the mother will expect the respondents to take in the future. Two questions, C9 and C10, in the questionnaire are related to the variables. The two questions on parents' expectation of respondent's job are calculated using the computed scores assigned to the six job groups. (See Table 5.57)

#### Father's expectation of my job

A majority of the 153 respondents are expected by their father to become an architect or a doctor. Over 40 per cent of the respondents answers that their father would most likely want them to choose a job from group B. The variable "Father's Expectation of My Job" has mean 4.94 (group F = 6, group B = 5, group E = 4, group A = 3, group D = 2, group C = 1) and standard deviation 1.05. Over 40 per cent of the fathers prefer their children to get a job from group B (e.g., architect or accountant group), and 34 per cent prefer group F (e.g., manager or teacher group).

#### Mother's expectation of my job

Mother's expectation of job is slightly different from the father's. Most mothers would like their child to seek job from group F. About 35 per cent of the 154

mothers prefer their child to become an aircraft pilot or a manager. The variable "Mother's Expectation of My Job" has mean 4.77 (group F = 6, group B = 5, group E = 4, group A = 3, group D = 2, group C = 1) and standard deviation 1.28. A majority of the mothers prefers their children to get a job from group F (e.g., manager or teacher group).

#### Family learning culture

While parents' expectation is substantial to a child's educational attainment, there is another important concept that embodied the influence of family upon the child. The concept of family learning culture addresses the question of the kind of family atmosphere experienced by the children. Two aspects are related here. First, how interest the immigrant child is in his/her leisure reading. And second, how supportive his/her family is in providing a culturally rich environment to the child. The two aspects can have implication to the academic performance of the immigrant children and the concept formed under the basis of the two is thus named "Family Learning Culture". Specifically, the variable refers to the general atmosphere inside the family regarding reading, visits to library or museum, and parental concern of the respondents. The content of the two aspects and the construction of the variable are described in the next paragraph.

The variable draws from questions one to nine in section E. All questions except seven are included. The first two questions in the section ask, "How often do you borrow books from the school/other library?" Answers to the two are in a five-point scale (1 = never, 2 = less than once a week, 3 = once every 2 to 3 week, 4 = about once a week, 5 = more than once a week). Question three is devoted to measure if anyone in the respondent's house ever looks things up in books. Three answer options are provided to the question (1 = no, 2 = yes, sometimes, 3 = yes, often). Question four prompted the respondents if someone asks them what they have been learning at school. Again a five-point scale is used (1 = never, 2 = sometimes, 3 = most weeks, 4 = at least once a week, 5 = everyday). Question five is on number of books at home. Three options are available to respondents to indicate their choices (1 = less than 50, 2 = 50-200, 3 = more than 200). Answers in both question three and five are recoded. The new codes are (1 = 1, 2 = 3, and 3 = 5) to make them compatible with the other answers. Question six to eight are to assess the respondent's leisure

activities. The questions ask about time spent on pleasure reading, TV watching or doing homework during weekday evenings. Options to the three range from (1 = most days none, 2 = less than 1 hour, 3 = 1 to 2 hours, 4 = 2 to 4 hours, 5 = more than 4 hours). Question nine draws information on how often (1 = never, 2 = less than once a year, 3 = less than once a month, 4 = about once a month, 5 = more than once a month) the respondents visit museums or galleries. A higher score in the questions showing a fact that respondent spends more time in library, or have more books at home.

Question seven “about how many hours do you spend watching TV each weekday evening?” of the section is dropped because of its low correlation with other items. The variable has mean 2.37 and standard deviation 0.48, and an alpha of 0.49. All constituent items of the variable have a significant and positive correlation with the variable, ranging from 0.33 to 0.57. This indicates items making up the variable have a relatively high degree of internal consistency. A further validity check of the variable using the composite scores of the four subjects in section K shows a positive correlation between the variable and the subject. It is therefore reasonable to conclude that the variable has construct validity.

#### Parent school participation

Parental involvement in school activity is evident to empower the pupils and enhance their school performance (Griffith, 1996; Fehrmann, Keith & Reimers, 1989). In a longitudinal study over two consecutive years, perception of parental involvement in school is found to substantially predict student achievement in both years. (Reynolds, 1992) “Parental School Participation” is the fifth independent variable under the family characteristics dimension. Conceptually, the variable refers to the intensity of school activity participation by the parents in a particular period of time. The variable is constructed from five questions (E10 to E14) in the questionnaire. Valid answers are drawn from 163 respondents. The variable has mean 1.90 (1 = yes, 2 = no, 3 = don't know) and standard deviation 0.39.

The variable has an alpha of 0.65. A test of internal consistency and representation of the constituent items shows that all items are significantly associated with the variable. Their correlation coefficients range from 0.57 to 0.74. To perform a check of validity, the variable is correlated with question E4 “how often does

someone at home ask you what you've been learning at school?" It is assumed that parents who concern more of their children's schoolwork will have a higher participation in school activities. Result shows that the more frequent the parents ask about the learning from school, the more they will participate in school activities. The two have a correlation of  $-0.34$  ( $p < 0.01$ ). The variable is therefore likely in possession of construct validity.

#### Number of siblings

The "Number of Siblings" in a family affects both the quantity and quality of parental care and education to the child. The variable here refers to the number of siblings a respondent has in the family. On average, the 165 respondents in the study have about two siblings. "Number of Siblings" is the fifth variable used in the model.

#### First language

The effect of language on adaptation and academic performance among immigrant children is explicit. Question G1 in the questionnaire is used to construct the variable "First Language". Conceptually, the variable means the language first spoken or mostly used by respondent at home. The 166 respondents ascribe mean 1.65 (1 = Cantonese, 2 = Mandarin, 3 = English) and standard deviation 0.77 in the variable. A majority or 53 per cent of the respondents speak Cantonese at home. About 29 per cent answer that they use Mandarin in their daily conversation.

#### Other language used at home

Question G2 in the questionnaire is used to measure other language spoken regularly at home. The variable "Other Language Used at Home" obtains mean 1.46 (1 = yes, 2 = no) and standard deviation 0.50. Over 53 per cent of the 156 respondents in the question reply that they speak other language besides Cantonese at home.

#### Family Composition

Family structure has profound influence on a child's development. (Cheng, 1999, p. 48; Chow, 2000) West and his associates find that academic performance of students in reading, arithmetic, and general knowledge is greater for children living

with two-parent homes than for children living in single-parent homes. (West, et al. 2000) The present study asks the respondents to indicate their "Family Composition". The variable refers to the kind of people living with the respondents. It is measured by asking the respondents if they live with their parents or other persons. With mean 1.66 (1 = both parents or guardians, 2 = one parent or guardian, 3 = some other arrangement) and standard deviation 0.56, the result shows that most respondents do not live with both parents.

### The Ten Variables of the School Influence Dimension in the First Survey

#### School grade upon arrival

The "School Grade upon Arrival" variable refers to the school grade in which the respondents are placed in their receiving country, taking into account of the school grade difference prior to and after their immigration. Two questions are used in the measure of this variable. Question 10 is about school grade in home country before coming to the receiving country, and question 11 is on school grade when the respondents first come to the receiving country. Previous literature has shown that students' perception of appropriateness of grade placement on arrival is an important indicator of educational performance. Wilkinson (2002), for example, finds the variable of grade placement a significant and important determinant of academic success for refugee youth in Canada. (Wilkinson, 2002, p. 185) The current study employs the two questions to assess the grade difference before and after their change of schooling because of migration.

To obtain a score to measure the grade difference upon arrival, answers in question 10 are subtracted by question 11. The subtracted answers are then recoded into a scale of 1 to 7 (1 = three grade lower, 2 = two grade lower, 3 = one grade lower, 4 = just right grade, 5 = one grade higher, 6 = two grade higher, and 7 = three grade higher). A high score represents a grade assignment higher than their previous one.

Over 51 per cent of respondents in this study show that they experience lower school grade placement upon arrival. Forty-four per cent of the 166 respondents have one grade lower than their previous school grade and as much as four per cent has three grade lower. About 31 per cent of the respondents reply they were assigned to the just right school grade upon arrival. Around 19 per cent of the respondents

experience a grade higher than their previous one. The variable, "Grade Placement upon Arrival", has mean 3.62 (range 1–7) and standard deviation 1.10.

#### School attachment

Conceptually, School attachment refers to the extent an individual identifies himself/herself with the school, the subjects of study and the teachers. Specifically, it measures if the individual, in general, likes or dislike the school. The "School Attachment" variable is computed from 18 questions of section B. The variable has mean 3.73 (1 = strongly disagree, 2 = tend to disagree, 3 = neither agree nor disagree, 4 = tend to agree, 5 = strongly agree) and standard deviation 0.52, and a reliability alpha of 0.86. All eighteen items of the school attachment are found to be significantly and positively associated with the variable. The correlation coefficients range from 0.37 to 0.68. The variable is therefore a good representation of the items. It is assumed that respondents with a stronger school attachment tend to express a strong desire to stay on at school. A correlation check shows a positive association ( $r = 0.16$ ,  $p < 0.05$ ) between the two variables of School Attachment and Stay on at School. The School Attachment variable thus has construct validity.

There were five questions in section D prompting the respondents on their school activities during the school year. The five questions are grouped into three variables for analysis. The three variables are named as: "School Day Activity Participation" of question D1, "After School Activity Participation" of question D2, and "School Trip Participation" of questions D3 to D5. Answers to the five questions are in a 5-point Likert scale (1 = once or never, 2 = twice, 3 = several times, 4 = most weeks, 5 = every week).

#### School day activity participation

162 respondents answer the question D1 on activity participation during school days. The variable "School Day Activity Participation" refers to the participation of school activities during free time in school days. The variable ascribes mean 2.72 (range 1-5) and standard deviation 1.51.

### After school activity participation

Question D2 of the questionnaire measures activity participation after school. The variable "After School Activity Participation" is attempted by 165 respondents. The variable has mean 2.23 (range 1-5) and standard deviation 1.43.

### School or other trip participation

The variable on "School or Other Trip Participation" is constructed from answers of questions D3 to D5. It refers to the frequency of school or other trip participation by a respondent since last September. A majority of the respondents never join any trip. The variable has mean 1.59 and standard deviation 0.74.

The "School or Other Trip Participation" variable has a Cronbach's alpha of 0.63. All items are found significantly correlated (range from 0.71 to 0.84,  $p < 0.01$ ) with the variable, indicating a good representation of the items to the variable. Theoretically an active participant in school trips shall also have a positive orientation or be more attaching to the school. The variable is therefore correlated with the School Attachment variable to further check its validity. The two variables obtained a correlation coefficient of 0.16 ( $p < 0.05$ ). The School Trip Participation variable therefore seems to have construct validity.

Section F of the questionnaire employs three questions to enquire school days missed in last school term.

### School days missed

Of the 167 respondents surveyed, an average of 1.28 school days (range 0-21) are missed. The variable "School Days Missed" has a standard deviation of 2.69.

### "Missed school days unauthorized"

A second question in the section investigates the number of school days missed without permission. The variable "Missed School Days Unauthorized" has mean 0.76 (range 0-21) and standard deviation 2.46. 167 respondents answer the question and about 20 per cent of the school days missed are without permission.

### Frequency of skipping school lesson

Another variable “Frequency of Skipping School Lesson” is used to study the school absenteeism phenomenon. Respondents are asked to indicate their answers in a five-point scale (1 = never, 2 = occasionally, 3 = once or twice a week, 4 = once a day, 5 = more). The variable obtains mean 1.10 and standard deviation 0.32. Over 90 per cent of the 167 respondents have never skipped lessons.

### School problem frequency

The variable “School Problem Frequency” is computed from the first five questions of section H of the questionnaire. The variable is defined as the frequency of school problems experienced by respondent. The variable obtains mean 1.96 (1 = never, 2 = less than once a fortnight, 3 = about once a fortnight, 4 = once or twice a week, 5 = almost everyday) and standard deviation 0.88. In general, respondents experience school problems, such as threat or bullying, or racist insults, in less than once a fortnight. The variable has a Cronbach’s alpha 0.69.

The variable is well represented by the five items. All items are significantly and positively correlated with the variable. The coefficients range from 0.55 to 0.70 ( $p < 0.01$ ). For a validity check, the variable is correlated with an item asking if the respondent is happy at school. It is assumed that a higher frequency of school problem will lead to a higher dissatisfaction of school life. The result shows a negative correlation ( $-0.20$ ,  $p < 0.01$ ), indicating that school problem does have a negative association with satisfaction with school life. The School Problem Frequency variable thus has construct validity.

### School problem occurrence place

Seven questions from section H are used to construct the tenth variable “School Problem Occurrence Place” under the school effects dimension. The variable refers to the frequency of school problems in different places at the school. The variable has mean 2.00 (1 = never, 2 = less than once a fortnight, 3 = about once a fortnight, 4 = once or twice a week, 5 = almost everyday) and standard deviation 1.11. It has an alpha of 0.89.

All constituent items of the variable are significantly correlated with the variable. The correlations range from 0.48 to 0.86 ( $p < 0.01$ ). The variable is therefore a good

representation of the items involved. A validity check of the variable follows the same item used in the School Problem Frequency variable. It is assumed that the more the problem in different school places, the more the respondents will report an unhappy school life. Again a negative correlation ( $r = -0.21$ ,  $p < 0.01$ ) is found between the variable and question B5. The School Problem Occurrence Place variable is thus reasonably valid.

### The Three Variables of the Peer Effect Dimension in the First Survey

#### Number of friends

The first variable, “Number of Friends” comes from question one of the section. On average, the 167 respondents have over three friends. The variable has standard deviation 0.88.

#### Number of Mandarin speaking friends

A second variable in the dimension investigates the “Number of Mandarin Speaking Friends”. On average, the 167 respondents have one or more friends who speak Mandarin. The variable has standard deviation 1.48.

#### Peer influences

The rest 12 questions in the section are used to construct a “Peer Influences” variable. The variable is conceptually defined as the influences from friends by referring to the friends’ evaluations and thoughts of some hypothetical situations. The variable is operationalized by asking the respondents how their best friends would think of someone in situations include “stayed in for an evening to do homework”, “got in trouble with the police”, or “stole something from a shop”. The respondents are to choose from five options (1 = it was very good, 2 = it was good, 3 = no opinion, 4 = it should not happen, 5 = it was very bad). 159 respondents answered the questions. The variable has mean 4.07 (range 2.83-5) and standard deviation 0.54. In general, friends of the respondents in the survey tend to think that “rude to teachers” or “rude to parents” should not happen. The variable has an alpha of 0.87.

The variable is well representing all 12 items. A check of the item-variable correlations shows a significant and positive association between the variable and the

items. The correlation coefficients range from 0.48 to 0.77 ( $p < 0.001$ ). Theoretically, it can be assumed that someone who has friends mostly agree with smoking or getting drunk will have weak school attachment. The Peer Influences variable is correlated with the School Attachment scale for a validity check. The result shows the more a respondent's friends agree with good behaviours, the more he/she will attach to school. The two have a correlation of 0.28 ( $p < 0.001$ ). The variable thus has construct validity.

## The Variables and Scales used in the Individual Factor Dimension in the Second Survey

### Gender

There are 149 pupils, compared to 167 in the first survey, participate in the second survey. A total of 78 out of 91 male pupils are re-surveyed in the second investigation, accounting for 52.3 per cent of the total surveyed population in the three cities. Seventy-one, instead of the original 76, female respondents participate in the second survey. The female group accounts for 47.7 per cent of the total surveyed population. There are 25 males (or 47.2 per cent) and 28 females (52.8 per cent) in the Hong Kong school sample, and the same number of 47 males (54 per cent) and 40 females (46 per cent) in the two Macao schools. In Vancouver, six male and three female pupils are re-surveyed.

The Gender variable has mean 1.48 (1 = male, 2 = female) and a standard deviation 0.50.

### Grade

All, except three from primary four and four pupils from primary five in the Hong Kong school and 11 from the Vancouver school, re-participate in the second survey. A majority of the pupils are in grade 5 and 6. The two levels constitute over 67 per cent of the 149 participants in the second survey. The variable has mean 5.28 and standard deviation 1.25. The pupils are from grade 3 to grade 12.

### Future aspiration

The variable is made up of questions from C1 and C4. A total of 146 pupils answer the questions. The variable has mean 3.64 and standard deviation 0.88, showing that respondents are fairly likely to stay on at school and unlikely to try to get a job after their junior secondary education. The variable has a Cronbach's alpha of 0.50.

### Further study in technical school

Question C2 is used to prompt respondents on their intention to go to technical school after junior secondary education. Only answers in the Hong Kong and Macao

sample are included in this question. The Vancouver sample is dropped because of misled wordings used in the question. A slightly higher percentage of respondents show their intention to technical education in the first survey. Over 38 percent of respondents in the first survey answer that they are “very likely” or “fairly likely” to go to the technical school, compared to about 27 per cent in the second survey. More respondents are uncertain if they will choose to go to technical school in the second survey. Forty-six per cent, compared to 40 per cent in the first survey, answer that it is possible for them to go to technical education. The variable has mean 3.04 and standard deviation 0.92.

#### Intention of stay

Question C5 asks if the respondents will stay in their receiving country after their junior secondary education. Over 56 per cent of them reply “very likely” or “fairly likely” in the second survey, comparing to 53 per cent in the first. The variable has mean 2.13 and standard deviation 1.14.

#### Job aspiration

Sixty-six out of the 147 respondents in the second survey will consider jobs in the group F (e.g., aircraft pilot, manager, teacher) in the future. This accounts for over 44 per cent of the total number of respondents. The group has a score of 6. The second group mostly preferred by the respondents is group B (e.g., architect, accountant, doctor). Over 28 per cent of respondents make it as their career choice. The group has a score of 5. The variable has mean 5.10 and standard deviation 1.01.

#### The Scale used in the Family Characteristic Dimension in the Second Survey

##### Family learning culture

Five questions (E1, E2, E4, E6 and E8) are used in the construction of Family Learning Culture variable in the second survey. Again, the question on time watching TV each weekday evening is dropped from the scale because of its weak correlation with the other items.

Following the steps in the first survey, the five items are summed and averaged to obtain a score for the Family Learning Culture variable. The variable has

mean 2.60 and standard deviation 0.62. A reliability test of the variable resulted in an alpha of 0.38, a low and unacceptable coefficient. However, the variable is found to correlate significantly with English scale ( $r = 0.18, p < 0.05$ ), Science scale ( $r = 0.34, p > 0.001$ ), and the item on “I like my school” ( $r = 0.26, p < 0.001$ ). The variable will be kept for further analysis of models.

### The Scale used in the School Influence Dimension in the Second Survey

#### School attachment

Eighteen questions are again used to compute the School Attachment variable in the second survey. Question eight “Most of the times I wish I wasn’t in school at all” and question 11 “Most lessons in the school are dull” are reversibly coded. The variable has mean 3.75 (3.73 in first survey) and standard deviation 0.52 (0.53 in first survey). Respondents again show a favourable evaluation toward their school in the re-test. The above average answer of 3.75 indicates a fact that teachers listen to the respondents, or respondents feel they belong to the school. The School Attachment variable achieves a reliability coefficient of 0.89.

A correlation with two of the subjects shows a positive and significant relation. The Attachment has a coefficient of 0.51 ( $n=132, p < 0.001$ ) with the mathematics and 0.49 ( $n=144, p < 0.001$ ) with the English subject. Assuming that pupils attach to school will have better educational performance, the variable has shown reasonably construct validity.

### The Measure of the School Educational Performance in the Second Survey

The composite school educational performance variable in the second survey has mean 3.41 and standard deviation 0.49. The variable, again, shows a good representation of the four constituent items. It correlates significantly and positively with all four subjects. For example, the variable has a correlation coefficient of 0.28 ( $n=135, p < 0.01$ ) with the English scale. School performance, when correlated with Future aspiration, shows a positive and significant association ( $r = 0.28, p < 0.001$ ). Provided that a motivated pupil performs better at school, the School Performance variable thus shows construct validity. The variable has an alpha of 0.73

## Appendix C

# Questionnaire

## About this questionnaire:

### What is it?

This questionnaire is part of a project called SATIS, the Student Attitudes Information System, from the University of Durham. Your school has joined the project to help it to find out more about the attitudes and background of its pupils.

### Why should you fill it in?

It will help your school to know more about its pupils, and how it compares with other schools. The information may also be valuable for research. However, if there are any parts you do not wish to answer, then leave them blank.

### Is it confidential?

Yes. No-one in the school will know what you have written. You should fill it in without anyone seeing what you write, and without talking to anyone. When it is finished you should seal it in an envelope, which will be sent to the University of Durham. When the school gets the information back, they will not know what any individual said, only the overall results.

### Is it a test?

No. There are no right or wrong answers, so you should not worry about it. Please just answer as honestly as you can.

PLEASE PRINT

TICK BOX (3)

## About yourself:

A

1. First Name:
2. Last Name:  3. Sex: Male  Female
4. School:
5. Year group:..... 7 ..... 8  ..... 9  ..... 10 ..... 11
6. How many years have you been at this school (including this year)? ... 1 ..... 2  ... 3 ..... 4  .... 5+
7. How many other ELEMENTARY/secondary schools have you been to? 0  . 1  ... 2 ..... 3  .... 4+
8. Your date of birth: Day :  Month :  Year :
9. Year in Canada/Hong Kong/Macao : ..... Less than 1 year... 2 years... 3 years... 4 years +
9. School grade in home country before coming to Canada/Hong Kong/Macao..... Kindergarten ... P.1... P.2... P.3... P.4... P.5... P.6
10. School grade when first came to Canada/Hong Kong/Macao..... P.1... P.2... P.3... P.4... P.5... P.6

**About your school:**

**B**

	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree
1. I really like school .....	O1.....	O2.....	O3 .....	O4 .....	O5
2. I feel that I can go to teachers if I don't understand the work...	O1.....	O2.....	O3 .....	O4 .....	O5
3. I feel that I belong in this school .....	O1.....	O2.....	O3 .....	O4 .....	O5
4. School is the best part of the week .....	O1.....	O2.....	O3 .....	O4 .....	O5
5. Most of my teachers listen to me .....	O1.....	O2.....	O3 .....	O4 .....	O5
6. I am normally happy when I am in school .....	O1.....	O2.....	O3 .....	O4 .....	O5
7. This school is a friendly place.....	O1.....	O2.....	O3 .....	O4 .....	O5
8. Most of the time I wish I wasn't in school at all .....	O1.....	O2.....	O3 .....	O4 .....	O5
9. I feel that I can go to a teacher if I have a personal problem ....	O1.....	O2.....	O3 .....	O4 .....	O5
10. I feel that I can go to a teacher if I have a problem with work .	O1.....	O2.....	O3 .....	O4 .....	O5
11. Most lessons are dull .....	O1.....	O2.....	O3 .....	O4 .....	O5
12. I feel that teachers know when I have worked hard .....	O1.....	O2.....	O3 .....	O4 .....	O5
13. I get on well with most of my teachers .....	O1.....	O2.....	O3 .....	O4 .....	O5
14. My teachers are fair to me.....	O1.....	O2.....	O3 .....	O4 .....	O5
15. Most of the time, I am fair to my teachers .....	O1.....	O2.....	O3 .....	O4 .....	O5
16. I would recommend this school to others.....	O1.....	O2.....	O3 .....	O4 .....	O5

**About your future:**

**C**

When you finish GRADE 12/F.5, how likely is it that you will:	Very likely	Fairly likely	Possible	Unlikely	Not a chance
1. Stay on at school .....	O1	O2	O3	O4	O5
2. Go to college/UNIVERSITY? .....	O1	O2	O3	O4	O5
3. Take THE PROVINCIAL EXAMINATION/F.5 EXAM?.....	O1	O2	O3	O4	O5
4. Try to get a job? .....	O1	O2	O3	O4	O5
5. STAY IN CANADA/HK/MACAO? .....	O1	O2	O3	O4	O5

**A**  
 Bus Driver,  
 Bricklayer,  
 Carpenter,  
 Cook,  
 Plumber,  
 Electrician

**D**  
 Kitchen worker,  
 Labourer,  
 Office Cleaner,  
 Window Cleaner

**E**  
 Sales Rep., Secretary,  
 Nurse, Shop Assistant,  
 Telephone Supervisor,  
 Computer Operator

**B**  
 Architect,  
 Accountant,  
 Doctor,  
 Lawyer,  
 Director,  
 Vet

**F**  
 Aircraft Pilot,  
 Manager, Teacher,  
 Police Officer,  
 Engineer

**C**  
 Farm worker,  
 Postal Delivery Worker,  
 Telephone Operator,  
 Bus Conductor,  
 Care Assistant

(Leave blank if they have never had a job)

letter: \_\_\_\_\_

- Which group contains jobs which are *most like* the one you are aiming at in the end? ....|\_\_\_\_\_|
- Which group contains jobs which are *most like* the one your father does (or did)?|\_\_\_\_\_|
- Which group contains jobs which are *most like* the one your mother does (or did)? .....
- WHICH GROUP CONTAINS JOBS WHICH ARE MOST LIKELY THE ONE YOUR FATHER WANTS YOU TO TAKE? .....
- WHICH GROUP CONTAINS JOBS WHICH ARE MOST LIKELY THE ONE YOUR MOTHE WANTS YOU TO TAKE? .....

**Activities during this school year:**

**D**

Have you taken part in <i>school</i> clubs, sports or other activities	Never	Once or twice	Several times	Most weeks	Every week
1. In free time during the school day? .....	O1	O2	O3	O4	O5
2. After school? .....	O1	O2	O3	O4	O5

This year, have you been on any:

	Never	Once	Twice	3 times	4 or more
3. School trips for a day or less? .....	O1	O2	O3	O4	O5
4. Trips for several days at a time?.....	O1	O2	O3	O4	O5
5. Trips abroad?.....	O1	O2	O3	O4	O5

**About you and your family:**

**E**

- |  |       |                              |                               |                         |                             |
|--|-------|------------------------------|-------------------------------|-------------------------|-----------------------------|
|  | Never | Less than<br>once a<br>month | Once<br>every 2 to<br>3 weeks | About<br>once a<br>week | More<br>than once<br>a week |
|--|-------|------------------------------|-------------------------------|-------------------------|-----------------------------|
1. How often do you borrow books from the school library? ..... O1..... O2..... O3 .....O4 ..... O5
  2. How often do you borrow books from some other library? ..... O1..... O2..... O3 .....O4 ..... O5
  3. Does anyone in your house ever look things up in books? ..... No O1..... Yes, sometimes O2..... Yes, often O3
- |  |       |           |               |                         |              |
|--|-------|-----------|---------------|-------------------------|--------------|
|  | Never | Sometimes | Most<br>weeks | At least<br>once a week | Every<br>day |
|--|-------|-----------|---------------|-------------------------|--------------|
4. How often does someone at home ask you what you've been learning at school? ..... O1..... O2..... O3 .....O4 ..... O5
- |  |              |           |               |
|--|--------------|-----------|---------------|
|  | Less than 50 | 50 to 200 | More than 200 |
|--|--------------|-----------|---------------|
5. How many books are there in your home? ..... O1..... O2 ..... O3
- |  |                   |                     |                 |                 |                      |
|--|-------------------|---------------------|-----------------|-----------------|----------------------|
|  | Most days<br>none | Less than<br>1 hour | 1 to 2<br>hours | 2 to 4<br>hours | More than<br>4 hours |
|--|-------------------|---------------------|-----------------|-----------------|----------------------|
6. About how many hours do you spend reading for pleasure each *weekday* evening? ..... O1..... O2..... O3 .....O4 ..... O5
  7. About how many hours do you spend watching TV each *weekday* evening? ..... O1..... O2..... O3 .....O4 ..... O5
  8. About how many hours do you spend doing homework each *weekday* evening? ..... O1..... O2..... O3 .....O4 ..... O5
- |  |       |                             |                              |                          |                              |
|--|-------|-----------------------------|------------------------------|--------------------------|------------------------------|
|  | Never | Less than<br>once<br>a year | Less than<br>once<br>a month | About<br>once<br>a month | More than<br>once<br>a month |
|--|-------|-----------------------------|------------------------------|--------------------------|------------------------------|
9. How often do you go to museums and galleries?..... O1..... O2..... O3 .....O4 ..... O5

Has either of your parents visited school *this year* for the following reasons?

- |  |     |    |            |
|--|-----|----|------------|
|  | Yes | No | Don't know |
|--|-----|----|------------|
10. To help in the classroom ..... O1..... O2..... O3
  11. Parents' Evening ..... O1..... O2..... O3
  12. Social event at school ..... O1..... O2..... O3
  13. School play or concert ..... O1..... O2..... O3
  14. Sports event ..... O1..... O2..... O3
  15. Because you were in trouble with teachers ..... O1..... O2..... O3
  16. Any other reason ..... O1..... O2..... O3
17. HOW MANY BROTHERS AND SISTERS DO YOU HAVE?..... I HAVE \_\_\_\_\_ ELDER BROTHER(S),  
\_\_\_\_\_ ELDER SISTER(S), \_\_\_\_\_ YOUNGER BROTHER(S) AND \_\_\_\_\_ YOUNGER SISTER(S)

**About you:**

**F**

In this school year:

1. Roughly how many school days did you miss? ..... | \_\_\_\_\_ |
  2. How many of these days were you absent *without permission*? ..... | \_\_\_\_\_ |
- |  |       |              |                         |              |      |
|--|-------|--------------|-------------------------|--------------|------|
|  | Never | Occasionally | Once or twice<br>a week | One<br>a day | More |
|--|-------|--------------|-------------------------|--------------|------|
3. When you were in school, how often did you skip lessons? ..... O1..... O2..... O3 .....O4 ..... O5

**About your family:**

**G**

1. What language did you first speak? ..... English O1 ..... Other O2
  2. Is any language apart from English *regularly* spoken at home? . ..... Yes O1 ..... No O2
  3. Do you live with: ..... Both parents or guardians O1 ..... One parent or guardian O2 ..... Some other arrangement O3
- |  |                                     |  |                                   |                  |  |
|--|-------------------------------------|--|-----------------------------------|------------------|--|
|  | Little or<br>no formal<br>education | At the<br>minimum<br>school<br>leaving age | After 'O'<br>levels or<br>similar | After<br>college | After<br>university<br>or<br>polytechnic |
|--|-------------------------------------|--|-----------------------------------|------------------|--|
4. When did your mother complete her full time education? ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  5. When did your father complete his full time education? ..... O1 ..... O2 ..... O3 ..... O4 ..... O5

**Problems at school:**

**H**

- How often would you say:
- |  |       |                                  |                              |                            |                        |
|--|-------|----------------------------------|------------------------------|----------------------------|------------------------|
|  | Never | Less than<br>once<br>a fortnight | About<br>once<br>a fortnight | Once or<br>twice<br>a week | Almost<br>every<br>day |
|--|-------|----------------------------------|------------------------------|----------------------------|------------------------|
1. I feel threatened or bullied by other pupils ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  2. I see other pupils being threatened or bullied ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  3. I hear racist insults used around school ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  4. I am upset by racist insults ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  5. I am upset by name calling ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
- How often do these problems happen?
6. On the bus to school ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  7. Walking to school ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  8. In the playground or open space in the school grounds ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  9. In classroom lessons ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  10. In outdoor lessons ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  11. In corridors ..... O1 ..... O2 ..... O3 ..... O4 ..... O5
  12. In toilets ..... O1 ..... O2 ..... O3 ..... O4 ..... O5

**Personal events:**

If any of the following have happened to you *in the last year*, how much effect do you think it had on your school work?

	<i>EITHER</i>	<i>OR:</i>			
	No such event has happened	----- <i>Effect on my work:</i> -----			
		None	Moderate	Bad	Very bad
1. Moved home, but same school and friends .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
2. Moved home, and changed school and friends .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
3. Involved in a minor road accident.....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
4. Involved in a serious road accident .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
5. In hospital after an accident (road, home or any other) .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
6. Illness needing more than three visits to the doctor .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
7. Several illnesses and more than five visits to the doctor.....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
8. Parents divorced, split up or separated.....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
9. A parent ill or disabled (needing constant help) .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
10. Difficult relationships at home.....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
11. Nightmares .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
12. Sleepwalking .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
13. Death of a family member who lived with you.....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
14. Death of another member of the family .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
15. Death of a friend.....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
16. Death of someone important to you, not known personally	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
17. Death of a pet .....	O <sub>1</sub>	O <sub>2</sub> .....	O <sub>3</sub> .....	O <sub>4</sub> .....	O <sub>5</sub>
18. Have you discussed these events with a teacher at school? .....	Yes O <sub>1</sub> .....	No O <sub>2</sub>			
19. Have you discussed these events with anyone else? .....	Yes O <sub>1</sub> .....	No O <sub>2</sub>			

## About your friends:

K

	None	1	2	3	4 or more
1. How many really close friends do you have? .....	O0.....	O1.....	O2.....	O3.....	O4.....
(How many of your close friends speak Cantonese/mandarin/English regularly?) .....	O0.....	O1.....	O2.....	O3.....	O4.....
What would your best friend(s) think of someone who:	----- They would think: -----				
	It was very good	It was good	No opinion	It should not happen	It was very bad
2. Stayed in for an evening to do homework.....	O1.....	O2.....	O3.....	O4.....	O5.....
3. Got a good mark in a school test.....	O1.....	O2.....	O3.....	O4.....	O5.....
4. Played for a school sports team.....	O1.....	O2.....	O3.....	O4.....	O5.....
5. Was praised by a teacher for doing good work.....	O1.....	O2.....	O3.....	O4.....	O5.....
6. Was praised by a teacher for good behaviour .....	O1.....	O2.....	O3.....	O4.....	O5.....
7. Was rude to a teacher .....	O1.....	O2.....	O3.....	O4.....	O5.....
8. Was rude to their parents.....	O1.....	O2.....	O3.....	O4.....	O5.....
9. Got in trouble with the police.....	O1.....	O2.....	O3.....	O4.....	O5.....
10. Stole something from a shop.....	O1.....	O2.....	O3.....	O4.....	O5.....
11. Smoked cigarettes .....	O1.....	O2.....	O3.....	O4.....	O5.....
12. Got drunk.....	O1.....	O2.....	O3.....	O4.....	O5.....
13. Used illegal drugs.....	O1.....	O2.....	O3.....	O4.....	O5.....

## About lessons:

J

Maths	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree
	1. I find it hard to get down to work in Maths .....	O1.....	O2.....	O3.....	O4.....
2. I look forward to Maths lessons .....	O1.....	O2.....	O3.....	O4.....	O5.....
3. I like doing work in Maths .....	O1.....	O2.....	O3.....	O4.....	O5.....
4. I think a lot about Maths, even in my spare time .....	O1.....	O2.....	O3.....	O4.....	O5.....
5. I generally find Maths lessons rather easy .....	O1.....	O2.....	O3.....	O4.....	O5.....
6. I am often lost and confused in Maths .....	O1.....	O2.....	O3.....	O4.....	O5.....
7. My school result of maths is generally good. ....	O1.....	O2.....	O3.....	O4.....	O5.....

English	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree
	1. I find it hard to get down to work in English .....	O1.....	O2.....	O3.....	O4.....
2. I look forward to English lessons.....	O1.....	O2.....	O3.....	O4.....	O5.....
3. I like doing work in English.....	O1.....	O2.....	O3.....	O4.....	O5.....
4. I think a lot about English, even in my spare time .....	O1.....	O2.....	O3.....	O4.....	O5.....
5. I generally find English lessons rather easy .....	O1.....	O2.....	O3.....	O4.....	O5.....
6. I am often lost and confused in English .....	O1.....	O2.....	O3.....	O4.....	O5.....
7. My school result of English is generally good. ....	O1.....	O2.....	O3.....	O4.....	O5.....

**Social Studies**

	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree
1. I find it hard to get down to work in Science .....	O1.....	O2.....	O3 .....	O4 .....	O5
2. I look forward to Science lessons.....	O1.....	O2.....	O3 .....	O4 .....	O5
3. I like doing work in Science.....	O1.....	O2.....	O3 .....	O4 .....	O5
4. I think a lot about Science, even in my spare time.....	O1.....	O2.....	O3 .....	O4 .....	O5
5. I generally find Science lessons rather easy.....	O1.....	O2.....	O3 .....	O4 .....	O5
6. I am often lost and confused in Science.....	O1.....	O2.....	O3 .....	O4 .....	O5
7. My school result of Social Studies is generally good. ....	O1.....	O2.....	O3 .....	O4 .....	O5

**Foreign Language (eg. Chinese-for Vancouver sample)**

	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree
1. I find it hard to get down to work in this subject .....	O1.....	O2.....	O3 .....	O4 .....	O5
2. I look forward to this lesson .....	O1.....	O2.....	O3 .....	O4 .....	O5
3. I like doing work in this lesson .....	O1.....	O2.....	O3 .....	O4 .....	O5
4. I think a lot about this subject, even in my spare time .....	O1.....	O2.....	O3 .....	O4 .....	O5
5. I generally find this subject rather easy.....	O1.....	O2.....	O3 .....	O4 .....	O5
6. I am often lost and confused in this lesson.....	O1.....	O2.....	O3 .....	O4 .....	O5
7. My school result of Chinese is generally good. ....	O1.....	O2.....	O3 .....	O4 .....	O5

**Foreign Language (eg. Chinese-for HK and Macao sample)**

	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree
1. I find it hard to get down to work in subjects using Cantonese and complicated Chinese characters.....	O1.....	O2.....	O3 .....	O4 .....	O5
2. I look forward to this lessons .....	O1.....	O2.....	O3 .....	O4 .....	O5
3. I like doing work in this lessons.....	O1.....	O2.....	O3 .....	O4 .....	O5
4. I think a lot about subjects using Cantonese and complicated Chinese characters, even in my spare time ....	O1.....	O2.....	O3 .....	O4 .....	O5
5. I generally find subjects using Cantonese and complicated Chinese characters rather easy .....	O1.....	O2.....	O3 .....	O4 .....	O5
6. I am often lost and confused in lessons using Cantonese and complicated Chinese characters .....	O1.....	O2.....	O3 .....	O4 .....	O5
7. My school result of subjects taught in Cantonese is generally good. ....	O1.....	O2.....	O3 .....	O4 .....	O5

Finally:

L

1. Do you have any other comments to make?

.....

.....

.....

.....

.....

.....

Completely happy	Fairly happy	Partly happy	Not at all happy
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1. How did you feel about answering these questions?..... O1..... O2 .....O3 ..... O4

Completely honest	Fairly honest	Partly honest	Not at all honest
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2. How honest have you been in answering these questions?..... O1..... O2 .....O3 ..... O4

Completely sure	Fairly sure	Partly sure	Not at all sure
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3. How sure are you that what you have written will not be used against you? ..... O1..... O2 .....O3 ..... O4

**THANK-YOU VERY MUCH FOR COMPLETING THIS QUESTIONNAIRE**

