Tracking the Adaptation and Development of Non-Chinese Speaking Children (NCS) in Mainstream Schools

Professor Kit-Tai Hau
The Chinese University of Hong Kong

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Executive Summary

Overall Conclusion

To facilitate the early integration of ethnic minority students into the local education system, the arrangement for allocation of non-Chinese speaking (NCS) children under the Primary One Admission (POA) system was revised starting from the 2004 POA cycle (for admission to Primary 1 in September 2004) . NCS children may choose mainstream schools or the 7 schools that traditionally admit a larger number of ethnic minority students. Through in-depth interviews and questionnaire surveys with principals, teachers, school counselors, students and parents, as well as by collecting students' examination results, the present 3-year longitudinal research assessed the potential integration problems, tracked students' development, provided evidence-based assessment of the appropriate stage to pursue integration, and identified noteworthy aspects in this integration process.

1. **Assessment of Possible Integration Problems of the NCS Children**

Understandably NCS students tended to face various possible difficulties when admitted to mainstream Chinese schools, which included:

a. Most schools had limited experience in teaching NCS students (half of the schools admitted their first NCS student in the last 5 years).
b. Most NCS (77%) students were in schools with less than 10 other NCS students in the same schools.
c. Only a minority (5%) of NCS students used Cantonese at home (15% spoke English). Their parents had limited spoken Cantonese (1/3 fathers & 1/2 mothers had none) and reading Chinese (75% fathers & 82% mothers had none).
d. In comparison to the Chinese-speaking (CS) counterparts, the NCS parents were slightly less educated (e.g., 65% fathers and 60% mothers of CS had secondary education versus 41% and 26% in NCS), more unemployed (4% CS versus 15% NCS), and had lower income (e.g., CS 46% in $10000-29999 categories versus NCS 28% only).
e. NCS students were very much weaker in Chinese and slightly weaker in Mathematics than their CS counterparts at the point of P.1 admission.

Nevertheless, there were similar or sometimes conducive factors that possibly helped the integration of NCS in mainstream Chinese schools, such as:

a. Most NCS (92%) were born in Hong Kong, lived with their fathers (83% in both NCS and CS groups) and mothers (98% NCS versus 92% CS) at home, with parents here in Hong Kong for over 10 years (fathers mean = 13 years, mothers mean = 11 years).
b. Most NCS students (88%) had a kindergarten education, mainly through English (73%), for an average of 2.59 years (versus 85% with kindergarten education, 20% in English, and 2.78 years among CS).
c. Only a minority of NCS students (4% in NCS versus 5% in CS) had been diagnosed with special learning difficulties.
d. A sizable number of NCS parents were fluent in spoken and written English (50%-60% among NCS; 25%-30% among CS).
e. NCS students had better English competence at the point of P.1 admission.
f. The NCS and CS students did not differ substantially in terms of the availability of other helpers at home to advise on academic matters.

2. <u>Tracking NCS Students' Development and Providing Evidence-based Assessment of Whether POA is the Appropriate Stage to Pursue Integration</u>

As evidenced from findings in this research, despite some challenges, the revised POA arrangements for NCS students were generally quite successful in that:

a. The revised POA arrangements succeeded in raising the popularity of mainstream schools to NCS children. More and more NCS students were admitted to their schools when the targeted NCS students were promoted to P.2 and P.3 (at P.1, 77% of targeted NCS students had less than 10 other NCS students in their school → 50% in P.2 → 39% in P.3).
b. The revised arrangements had been strongly endorsed by various parties, including principals, teachers, and NCS parents. All of them believed: NCS students had not been discriminated against, NCS students had no problems in making friends with others, and NCS parents had the right to send their children to the mainstream Chinese schools.
c. Chinese, English, Mathematics, and class teachers all consistently felt that NCS and CS students very much enjoyed going to schools, though their interest in Mathematics declined slightly in progressing to P.3. NCS and CS students' interest in Chinese and English was not substantially different; while Mathematics and class teachers rated CS students enjoyed going to schools more than NCS students. Chinese and Mathematics (but not English) teachers perceived NCS students being fallen behind the class as compared to CS counterparts.
d. NCS students often did not hand in their Chinese, English and Mathematics homework on time and were absent more often than their CS counterparts. Differences were smaller but trends were similar in that NCS students were more "inattentive in class", "avoid learning", and "very shy". However, NCS students were better behaved (less: "disruptive in class", "impolite to teachers", "aggressive, argumentative with classmates", and "bully others").
e. The school (principals, teachers) and the parents also believed an early integration was desirable for the NCS students to adapt to the Chinese community in Hong Kong.
f. According to teachers' judgement, most of the NCS students started at a level lower than the class average in Chinese and Mathematics in P.1. They were particularly weak in Chinese reading and writing and were slightly better in listening and oral skills. After one year, NCS students were close to fluent in listening and speaking, and were able to read and write simple Chinese sentences. NCS students started and continued to have substantially higher English proficiency than their CS counterparts.
g. Students' academic performance from P.1 to P.3 were traced and compared.
    i. NCS students were definitely improving much faster than CS classmates and control group in their total, Chinese, English, and Mathematics examination results.
    ii. NCS students started with a slightly higher level of English and a lower level of Mathematics and progressed a bit faster in both subjects than their CS classmates. The differences in NCS and CS students' English and Mathematics were much smaller than those in the Chinese and the total scores.
    iii. About 19% of the NCS students considered Chinese language a challenge and they needed help because they were still at a level very much below the class average or progressed more slowly than their classmates. Correspondingly, there were 30% and 11% of NCS students whose Mathematics and English examination performance respectively needed help, though the differences between NCS and CS students might not be as large.
    iv. All in all, despite some cases still needed attention and help, most NCS students who studied in mainstream schools benefited from mainstream schooling: 78% of cases in terms of total scores, 81% in terms of Chinese scores, 89% in terms of English scores, and 70% in terms of Mathematics scores. These students either made improvements similar to their classmates, stayed around the class average, or improved faster than their classmates.
h. There were no strong evidence to support that NCS students' improvement was related to

their ethnic background, general intelligence, and language used at home.

i. NCS students would perform better if they initially had higher Chinese, English or Mathematics competency, or if their parents had better Chinese competence.
j. Also interviews with teachers and analyses of NCS students' backgrounds strongly suggested that Chinese kindergarten education was extremely important in preparing NCS students for mainstream Chinese school education.
k. Undoubtedly, a lot of the tailored remedial activities (before /during/after class teaching or other activities) and adapted curricula for the NCS students were effective. The quality teaching and the accommodating school culture were also important. Relevant teacher training, sharing among schools, and support from EDB on curriculum adaptation should be continued or even increased.

3. <u>Identifying Noteworthy Aspects in the Pursuit of Integration of NCS Students</u>

a. Principals and teachers agreed unanimously and strongly that providing extra Chinese tutorials should be the main focus to help NCS students. However, in going from P.1 to P.3, there was a slight decrease in the proportion of NCS students receiving after-school tutorials (85% P.1, 79% P.2, 72% P.3 versus 32%, 43%, 35% among CS). Among those attending tutorial classes, only 31% of NCS students had five or more sessions per week (versus 77% among CS). Proportionally more NCS students (versus CS students) attended after-school tutorials. However, they spent relatively less time each day on after-school tutorials than their CS counterparts. Thus, the importance of the after-school tutorials has to be emphasized more and that if possible, more sessions per week and longer tutorial sessions have to be arranged.
b. NCS parents were not enthusiastic in sending their children to summer preparation classes. Only about 1/3 (32%) of NCS students attended the pre-P.1 summer program, few (less than a few percents) attended summer programs in going to P.2 and P.3. Furthermore, interviews with principals, teachers, students as well as solid evidence from examination results all suggested summer programs and Chinese kindergarten preparation were crucial for the success of primary, and subsequent education. More publicity work to encourage NCS students in taking these summer programs and Chinese kindergarten education is definitely useful.
c. A lot of the common remediation measures (e.g., hiring extra TAs, after-school tutorials) were emerging. A few of these measures perceived to be effective by the schools included:
    i. the hiring of NCS TAs to help out in classroom teaching (e.g., interpretation) particularly at the beginning of the term (P.1) and to liaise with NCS parents (e.g., explaining school circulars);
    ii. before/after school remedial tutorials; and
    iii. peer-tutoring schemes by involving more capable CS classmates or senior level big brothers/sisters to assist NCS students in morning, recess, lunch time, or after school reading or learning activities.
d. It is almost certain that NCS students needed extra remedial help (e.g., after-school tutorials) in Chinese and Mathematics. As regards who should provide the tutorials, most principals, teachers, and parents believed the schools should be the best agencies because the teachers knew the needs of their students, and their own schools would be physically more convenient for the students.
e. For schools with a few NCS students, it is perhaps more cost effective to run remedial Chinese classes centrally on a regional basis.

Undoubtedly, there were challenges for NCS students studying in these mainstream schools. The present research showed that mainstream Chinese schools provided the best Chinese immersion programs for NCS students and that most NCS students allocated to mainstream schools under the revised POA arrangements were progressing satisfactorily.

A. Background and Purpose of Research

1. Purposes

To facilitate the early integration of ethnic minority students into the local education system, the arrangement for allocation of non-Chinese speaking (NCS) children under the Primary One Admission (POA) system was revised starting from the 2004 POA cycle (for admission to Primary 1 in September 2004). NCS children may choose mainstream schools or the 7 schools that traditionally admit a larger number of ethnic minority students. The present research attempted to (i) assess the possible integration problems of the NCS children, (ii) track their development and thereby provide an evidence-based assessment of whether the POA at Key Stage I is the appropriate stage at which to pursue integration, and (iii) identify noteworthy aspects in the pursuit of integration of NCS students.

2. Participants

Our participants were NCS students admitted to Chinese primary schools through POA in September 2004 [N = 41 traceable in this study, from 27 schools at the beginning of study in Primary 1 (P.1); N = 31 from 20 schools at the end of study in P.3, August 2007]. For each of the NCS students, three other Chinese speaking (CS) students in the same class of matching gender, family support and learning aptitude were chosen by the teachers and used as a possible reference (control) frame in the analyses.

3. Methodology

a. At the end of each academic year in the present three-year study (P.1 to P.3), questionnaires were administered to the principals and teachers (Chinese, English, Mathematics teachers; class teachers/school social workers/guidance officers) to assess (i) their attitudes towards various issues related to social integration and (ii) their observations of the NCS (and CS) students' classroom and social behavior. School examination results (Chinese, English, Mathematics, and total scores) for the NCS, CS, and other students in the same educational level in the same school were also obtained. NCS students' examination results and classroom behavior were examined (i) across the three years (P.1 to P.3) and (ii) against the CS control group and the class average.
b. In-depth interviews were carried out with principals, teachers, NCS parents, and NCS students in 12 schools, three of which were conducted at the beginning of the research to help inform the construction of items used in the questionnaires.
c. NCS students' academic performance, classroom behavior (from questionnaires), and other information collected from interviews (with principals, teachers, parents, students) were used to track the development of these students and to identify the possible benefits or problems of the integration.

B. Background of the NCS and CS Control Groups

1. The Schools (including mainstream schools and designated schools)

a. The NCS students were admitted to schools with limited experience in teaching NCS students. Only about 5% (2) of our targeted NCS students were from schools that had more than 5 years of experience in teaching NCS students, and half of the targeted schools (20) admitted their first NCS student in the last 5 years (since 2000).
b. In P.1, most (77%) of the NCS students had less than 10 other NCS students in their schools. The situation changed in that more and more NCS students were admitted to their schools when the targeted NCS students were promoted to P.2 and P.3 (the 77% above dropped to 50% and 39% when the students were in P.2 and P.3, respectively). This trend reconfirmed that the new policy actually increased substantially the number of NCS students in the mainstream schools.

c. Increasing numbers of NCS students were admitted in each cohort. Schools admitting only 1 NCS student at P.1 dropped from 25% in 2004-05 to 12% and 7% in 2005-06 and 2006-07, respectively. As evidenced from the responses in the questionnaires, this would suggest that (i) NCS parents were more receptive to the education provided by these mainstream schools and (ii) NCS students had positive evaluation of their learning environment and thus recommended mainstream schools to other NCS students. In general, through our interviews, we have not observed any decline in the popularity of these schools (to Chinese students), which took in a relatively small number of NCS student into their schools.
d. When a school admitted more than 1 NCS student, there was a slight increasing trend of putting all NCS students in the same class. In 2004-05, 33% of the schools preferred to put all P.1 NCS in the same class; this percentage increased to 40% in 2005-06 and 57% in 2006-07. However, due to the small number of schools in the study and the nonuniform practice, it is difficult to conclude whether putting all NCS in the same class is more preferable.

2. <u>Students: Nationality, Place of Birth, Parents</u>

a. Among the 41 targeted NCS children, about 1/3 (37%) were boys and 2/3 (63%) were girls. In contrast, there were slightly more boys (56%) than girls (44%) in the comparison CS group. The NCS and the CS control groups were similar in age and were around 6 years old in P.1.
b. Among the NCS students, 92% were born in Hong Kong, while among the CS students, only 61% were born in Hong Kong.
c. Regarding students' nationality, there were more NCS students from Pakistan and Nepal than from other places (39% Pakistan, 37% Nepal, 15% India, 10% Philippines); understandably, only a minority (5%) of them used Cantonese at home. Instead they spoke English (15%) and other languages. For the control CS group, it was noted that almost all of them (98%) were Chinese born in Hong Kong or mainland China. The majority (88%) of them only spoke Cantonese at home.
d. Most of the NCS and CS students lived with their fathers (83% of both the NCS and CS groups) and mothers (98% and 92%, respectively) at home.
e. A great number of the NCS students' parents were from Nepal and Pakistan (30% from each country for both mothers and fathers). Generally, they were not born in Hong Kong (father: 85%, mothers: 71%), but had been there for over 10 years.
f. The CS parents were slightly more educated, with more parents having a secondary school education (fathers: 65% in CS versus 41% in NCS; mothers: 60% in CS versus 26% in NCS), while more NCS parents had only a primary school education (fathers: 31% in NCS versus 19% in CS, mothers: 48% in NCS versus 23% in CS).
g. In terms of parental occupation, there were approximately equal proportions of manual workers (construction, security, transport, delivery) in the NCS and CS groups. However, as compared to the CS group with more parents being semi-skilled (civil cook, salesperson), there were slightly more unemployed NCS parents (15%; CS: 4%).
h. It is thus easy to see that the CS families had substantially higher income with more families being in the higher income categories (CS: a total of 46% in 10000-29999 categories, NCS: 28% only).

3. <u>Kindergarten, Tutorials</u>

a. Most of the NCS students (88%) had a kindergarten education, studying mainly in English schools (73%) for an average of 2.59 years. In the CS comparison group, 85% of the students had a kindergarten education, studying mainly in Chinese schools (80%) for an average of 2.78 years.
b. Only a minority (4% in NCS, 5% in CS) of the NCS and CS students had been diagnosed

with special learning difficulties.

c. In P.1, most (85%) NCS students attended after-school tutorials, while only 32% of CS students attended after-school tutorials.
d. Going from P.1 to P.3, there was a slight decrease in the proportion of NCS students receiving after-school tutorials, from 85% in P.1 to 79% in P.2 and 72% in P.3. In contrast, there were similar proportions of CS students receiving after-school tutorials from P.1 to P.3; ranging from 32% in P.1 to 43% in P.2 and 35% in P.3.
e. In P.1, for those attending tutorial classes, the NCS students usually had two (47%) or five or more sessions (31%) of tutorials per week, while most (77%) CS students had five or more sessions per week.
f. NCS students receiving after-school tutorials had more frequent tutorials as they progressed from P.1 to P.3. In contrast, the CS students consistently had four or more tutorials per week throughout P.1 to P.3.
g. From P.1 to P.3, though proportionally less CS students (control group, as compared to NCS students) attended after-school tutorials, among those that attended these tutorials, the CS students spent relatively more time each day on after-school tutorials than their NCS counterparts (average 1.5 to 2 hours each day for both groups). As reflected in interviews, in contrast to CS parents who believed tutorials were generally effective, some NCS parents believed that tutorials would add extra work rather than help their children and thus prefer shorter after-school tutorials.
h. During the tutorials, from P.1 to P.3, the majority of both the NCS and CS students studied all subjects (varying from 52% to 76% in NCS, 73% to 80% in CS).
i. From P.1 to P.3, there was a steady increase from 52% to 76% of NCS students studying all subjects in the tutorials. In comparison, approximately the same proportion (70% to 80%) of CS students studied all subjects in tutorials. Our understanding is that it was generally the teachers' recommendation on which academic subjects to be included in the tutorials.
j. There was a substantial drop (36%, 27%, 19% from P.1 to P.3) in the proportion of NCS students concentrated on Chinese only in after-school tutorials.
k. Less than 10% of the NCS students (versus 10% to 20% of CS students) receiving tutorials concentrated on English only.
l. About 10% of NCS students (versus half of CS students) receiving tutorials concentrated on Mathematics alone.
m. In terms of the availability of other helpers at home who could advise the students on academic matters, the NCS and CS students did not differ substantially (10% to 30%, approximately).
n. About 1/3 (32%) of the NCS and 16% of CS students attended the pre-P.1 summer program. Very few students (a few percents only) attended summer programs for P.2 and P.3.

4. <u>Parents: Language</u>

a. NCS parents had limited spoken Cantonese (father & mother: 1/3, 1/2 - none; 1/2, 1/4 - simple words; 1/5, 1/10 - fluent).
b. On reading Chinese, 75% of NCS fathers and 82% of mothers could not read any Chinese, while 25% of NCS fathers and 18% of mothers could at least read simple words.
c. The majority of the CS parents were at least fluent in spoken and reading Chinese.
d. The above differences between the NCS and CS parents' Chinese competence were reversed for parents' English competence. A sizable number of the NCS parents were fluent in spoken and written English (50%-60% among NCS, only half of that among CS).

5. <u>Students' Initial Language and Mathematics Competence at the Beginning of P.1</u>

a. Teachers were asked to rate students' initial Chinese competence at the point of P.1 admission using a 17-item scale. Without exception, CS students outperformed NCS

students in all items.

b. The situation was slightly reversed, with a much smaller difference, with regard to students' English competence.
c. With regard to Mathematics which was taught through Chinese, teachers felt that the CS students were generally slightly better than the NCS students.

C. Principals' and Teachers' Beliefs

Principals and teachers (Chinese, English, Mathematics, and class teachers) were asked to rate their perceptions of students' academic problems and social behavior.

1. <u>Strong unanimous endorsement by all teachers</u>

Principals and teachers agreed unanimously and strongly that:

i. "in this academic year, the NCS students had not been discriminated against because of their race or appearance",
ii. "the NCS students had no problem in making friends with others",
iii. "the NCS parents had the right to send their children to the mainstream Chinese schools", and
iv. "providing extra Chinese tutorials should be the main focus to help NCS students in Chinese mainstream schools".

2. <u>More mixed opinions</u>

a. Principals and teachers tended to have more mixed opinions on:
   i. "poor family background and socioeconomic status was the main cause of NCS students' learning problems", and
   ii. "NCS students' parents had lower aspirations for their children's education and career".
b. There were also slightly more teachers endorsing (versus those not endorsing) that "NCS students studying in mainstream Chinese schools provided more benefits than disadvantages from a life-long perspective".

3. <u>Differences among teachers</u>

a. In P.1, the principals, class teachers, English teachers, and Mathematics teachers (mean > 4.00) were more inclined than the Chinese teachers (mean = 3.83) to believe that "other than the language barrier, NCS students did not have learning difficulties due to their race".
b. As students progressed to P.3, the trend seemed to reverse; Chinese teachers believed more that Chinese language was the problem, while principals believed more that there could be other problems.
c. In P.1, principals, class teachers, and Chinese teachers believed slightly more that "providing extra Chinese tutorials should be the main focus to help NCS students in Chinese mainstream schools".
d. In going to P.3, while principals and teachers still agreed on the importance of providing more Chinese tutorials, principals believed more than class teachers and Chinese teachers in the importance of Chinese tutorials. Interestingly, in going to P.3, English and Mathematics teachers believed more (as compared to their attitude in P.1) that Chinese tutorials should be the main focus.
e. Particularly at P.3, the Chinese teachers, as compared to the principals and other teachers, were less likely to name socioeconomic status and family background as the main causes of NCS students' learning difficulties. It is noted that though Chinese teachers believed more that NCS students' incompetence in Chinese was the main cause of all learning problems and that providing Chinese tutorials was important, in P.3 principals believed more than Chinese teachers on the effectiveness of Chinese tutorials.

D. Teachers' and principals' observations of classroom performance and other social behavior

Chinese, English, Mathematics, and class teachers were asked to rate students' classroom performance and other social behavior.

1. <u>Differences across items</u>

a. All teachers consistently felt that both the NCS and CS students very much enjoyed going to school. NCS and CS students' interest, particularly in Mathematics, slightly declined when they progressed to P.3.
b. Across P.1 to P.3, while there was no substantial difference in NCS and CS students' interest in Chinese and English class; as rated by the Mathematics and class teachers, CS students tended to enjoy going to school more than the NCS students.
c. Across all years, Chinese and Mathematics (but not English) teachers perceived that NCS students were seen to "fall behind the class" compared to their CS counterparts.
d. Across all years and all teachers, including the English ones, NCS students were more often found to be "not handing in homework on time" than their CS counterparts. Interestingly, despite NCS students having similar or better English competence than their CS counterparts, NCS students did not hand in their English homework on time, either. That is, falling behind the class in progress could partially (for their Chinese and Mathematics), but not totally (e.g., English) explain NCS students' failure to hand in their homework on time.
e. The trends in "inattentive in class", "avoid learning", and "very shy" were similar to that of "not handing in homework in time", except that the differences between NCS and CS were generally smaller in "inattentive in class", "avoid learning" and "very shy" and that there was not much difference in "inattentive in class", "avoid learning", and "very shy" in English lessons.
f. Although still at a low rate, across all three years, NCS students were found to be absent from school more often than their CS counterparts.
g. As compared to the CS counterparts, NCS students were found to be better behaved; they were less likely to be "disruptive in class" (particularly in P.3 and in English and Mathematics class), "impolite to teachers" (particularly in P.3), "aggressive, argumentative with classmates" (particularly in P.3), and "likely to bully others".
h. Although NCS students slightly "preferred to be alone" and "had no good friends", they were similar to or even less likely to prefer these things than their CS counterparts in P.3.
i. The NCS students were not much different from the CS students in "being bullied by other students", "unwilling to participate in extra-curricular activities", "being nervous and anxious", "wearing untidy clothes", and "being sad and agitated".

2. <u>Language competence as perceived by teachers</u>

The Chinese and English teachers were asked to rate subjectively students' language competence at: (i) the beginning of P.1, (ii) the end of P.1, (iii) the end of P.2, and (iv) the end of P.3.

a. The NCS students started at a relatively low level in Chinese reading and writing and were slightly better in listening and oral skills.
b. The improvement in NCS students' Chinese competence in all four domains was substantial in the first year. After 1 year, NCS students were close to "fluent" in listening and speaking Chinese, and were able to read and write "simple Chinese sentences".
c. While the improvement for NCS students' Chinese competence was substantial in Year 1, on this 5-point scale (not at all, simple words, simple sentences, fluent, very fluent), both Chinese and NCS students did not make substantial progress beyond their expected

standard in Chinese from the end of P.1 to the end of P.3.

d. Similar comparisons were conducted on students' English skills. Results showed that NCS students started at a substantially higher level than their CS counterparts, and such differences carried on to the end of P.2 and P.3.
e. In the first year (beginning of P.1 to end of P.1), the NCS students improved slightly more in English speaking, but slightly less in English listening, reading, and writing skills than the CS students.
f. The improvements in English competence from the end of P.1 to P.3 were small and similar between the NCS and CS groups.

E. Students' intelligence

Students' intelligence was assessed by the Raven's Progressive Matrices (RPM) Test (Subscales A, B, C). Results showed that NCS students' intelligence had a much larger variation (large SD) than those of the CS students.

F. Examination Performance

1. Analytical framework

a. Students' term examination results at various points from P.1 to P.3 were obtained. All examination marks were first standardized with respective to the average of the class. That is, a student obtaining "0.00" would be at the average level of the class. As the scores are standardized, scores of -1.00, -2.00 (assuming a normal distribution) would be below 84% and 97.5% of the students in the whole class, respectively.
b. Understandably, in a lot of subjects, NCS students started at a relatively low level in P.1. If their progress was faster than that made by CS students in the same grade level, then the negative scores would become progressively less negative (e.g., from -2.00 to -1.00).
c. The examination results of 27 students whose examination results were available for more than one point in time were examined.
d. It is worth noting that the CS control students generally have examination results close to the class averages. Any comparison to the CS control group is therefore identical to the comparison to all other CS students at the same grade level in the same school as well.

2. How were the NCS students doing in their school examinations in P.1 to P.3?

a. Total Scores

In terms of total scores, 48% of the 27 NCS students started at a level lower than the class average, and they improved faster than their classmates. Another 30% of NCS students made improvements similar to their classmates and stayed around the class average (less than 1.5 SD below the average). For the remaining students, 15% stayed far below the class average, while 7% improved more slowly than their classmates. In sum, 78% (48% + 30%) of the cases progressed satisfactorily (faster improvement or stayed at the class average), while the remaining 22% needed help because they either stayed far below the class average or progressed more slowly than their classmates.

b. Chinese

In terms of Chinese examination scores, 59% of the 27 NCS students started at a level lower than the class average, but had improved faster than their CS classmates. Another 22% made an improvement similar to their classmates and stayed around the class average. For the remaining students, 15% stayed far below the class average, while 4% improved more slowly than their CS classmates. In sum, 81% of the cases progressed satisfactorily (faster improvement or stayed at the class average), while the remaining 19% needed help because they either stayed quite below the class average or progressed more slowly than their classmates.

c. English
In terms of English scores in examinations, 26% of the NCS students started at a level above the class average, and they either stayed at a high level of performance or improved faster than their classmates. Another 26% started at a level lower than the class average, but improved faster than their classmates, while 37% made an improvement similar to their classmates and stayed around the class average. For the remaining students, 4% stayed at a level far below the class average, while another 7% improved more slowly than their classmates. In sum, 89% of the cases progressed satisfactorily (faster improvement or stayed at the class average), while the remaining 11% needed help because they were either at a level far below the class average or they progressed more slowly than their classmates.

d. Mathematics
In terms of the Mathematics scores in examinations, 37% of the 27 NCS students started at a level below the class average and improved faster than their classmates. Another 33% made an improvement similar to their classmates and stayed around the class average. For the remaining students, 15% stayed very much below the class average, while 15% improved more slowly than their classmates. In sum, 70% of the cases progressed satisfactorily (faster improvement or stayed at the class average), while the remaining 30% needed help because they either stayed below the class average or progressed more slowly than their classmates.

3. Major interpretation of examination results

One simple approach to interpreting the above findings is to ask whether the mainstream school system is doing more harm than good to the NCS students. If we assume that the mainstream school system has the same effect on the NCS and CS students, then there will be similar percentages of NCS students improving faster and improving slower than the CS students (classmates).

From the above figures, in progressing from P.1 to P.3,

a. NCS students were definitely improving much faster than CS classmates as reflected in their total (48% faster versus 7% slower; note: these two percentages should be identical if mainstream schools had identical effects on NCS and CS students), Chinese (59% faster versus 4% slower), English (52% faster or stayed high versus 7% slower), and Mathematics examination results (37% faster versus 15% slower).
b. Understandably, NCS students started at a low level of competence in Chinese and total scores, but they improved quickly, faster than their classmates in Chinese and the total scores.
c. NCS students started at a low level of competence in Mathematics, but they improved faster than their classmates. This difference in improvement between the NCS and CS students, however, was not as large as that in the Chinese and the total scores.
d. NCS students started with a slightly higher level of English and progressed a bit faster than their CS classmates. This difference in improvement between the NCS and CS students was similar to that in Mathematics, but was not as large as that in the Chinese and the total scores.
e. Chinese language was a challenge for NCS students, and 19% of the cases needed help because they were still at a level quite below the class average or progressed more slowly than their classmates. Correspondingly, 30% and 11% of NCS needed help for their Mathematics and English, though the differences between them and the CS students might not be as large.
f. All in all, despite the fact that some cases still need attention and help, most NCS students who study in mainstream schools benefited from mainstream schooling; 78% of cases in terms of total scores, 81% in terms of Chinese scores, 89% in terms of English scores, and

70% in terms of Mathematics scores.

G. Students' Backgrounds and Examination Performance/Improvement

1. **Was students' examination improvement related to their ethnic background?**
   Though Filipino and Nepalese students performed slightly better than the other ethnic groups, it is premature to draw any definite conclusion based on such a small sample.

2. **Was the examination improvement related to their general intelligence?**
   Students' intelligence was estimated by the Raven's Progressive Matrices Test. High intelligence students tended to improve or stay around the class average more than the low intelligence ones, but the differences were not large.

3. **Was NCS parents' Chinese (Cantonese) speaking competence related to their students' examination improvement?**
   There was a slight tendency that NCS students would perform better if their parents had higher Chinese competence.

4. **Was the language being used at home related to students' examination performance?**
   We divided the students into three language groups by the language used at home. For the two students who used Chinese at home, one improved steadily in both the total and Chinese examination scores, while the other improved in Chinese only with the total still fluctuating below the class average. The four students who used English at home either improved substantially (three cases) or stayed around the class average (one case) in P.1 to P.3. For the 21 students using other languages at home, about 2/3 of the students either improved more than their classmates or stayed around the class average. There was no clear and definite trend on the advantage of one language over the other.

5. **Was students' initial Chinese competency related to their examination performance?**
   Approximately 80% of the NCS students with high initial Chinese competence were either around the class average or improved faster than their CS classmates. In comparison, only 50% of the low initial Chinese competence students had the same positive performance. The results strongly suggested that students' initial Chinese competence was crucial for their academic study in mainstream schools.

6. **Was students' initial English competency related to their examination performance ?**
   Approximately 90% of the high initial English competence group were either around the class average or improved more than their CS classmates, while only 60% of the low initial English competence students had the same positive performance. The results strongly suggested that students' initial English competence was crucial for their academic study in mainstream schools.

7. **Was students' initial Mathematics competency related to their examination performance ?**
   Approximately 90% of the high initial Mathematics competence group were either around the class average or improved more than their CS classmates, while only 70% of the low initial Mathematics competence students had the same positive performance. The results strongly suggested that students' initial Mathematics competence was crucial for their academic study in mainstream schools.

8. **How important was the kindergarten preparation?**
   Good preparation at the kindergarten level was extremely important in enhancing students'

primary school examination performance. This includes the strengthening of their Chinese, English and Mathematics competence before entering P.1. The high initial competence in Chinese, English, or Mathematics enhanced their chances of staying at the class average or improving more than their CS classmates.

H. Interviews with Principals, Teachers, Parents, and NCS Students

1. <u>Training/Services needed</u>

a. As evidenced from the students' examination results, undoubtedly, a lot of the tailored remedial activities (before /during / after class teaching or activities) and adapted curricula for the NCS students were effective. The quality teaching and the accommodating school culture were also important. The implication is that relevant teacher training, sharing among schools, and support from EDB on curriculum adaptation should be continued or even increased.

b. School circular to parents: Schools had to translate or interpret the circulars for parents, a task which was usually carried out by teachers, teaching assistants (TA), or NCS helpers. NCS helpers were particularly helpful in making telephone calls or other informal contacts with NCS parents.

c. Summer bridging course, intensive Chinese lessons: Extra Chinese lessons in the summer and after school were almost the standard remedial help all schools with NCS students would provide. They could be provided by NGOs or the schools themselves and were taught by school certificate level young people (hired and provided with minimal training by NGOs), TAs, or formally trained teachers from their own schools.

d. Teachers usually asked for more (i) teaching packages or materials/resources (e.g., special Chinese textbooks) suitable for use with NCS students, (ii) sharing seminars to understand specific techniques on teaching NCS students, and (iii) sample English school circulars for them to adopt, in order to save time in translating their own Chinese circulars (note: some of these services have already been provided by EDB).

2. <u>Racial discrimination within the school</u>

a. In general, principals, teachers, parents and students were not aware of any racial discrimination within the school. All of them agreed that NCS and CS students could get along very well and the NCS parents were particularly happy that their children had a lot of good CS friends.

b. Many principals and teachers explicitly stated that the presence of NCS students in their school would promote social integration in their school and in society. All of them believed this social integration was a good learning opportunity for their CS students.

c. All NCS students were very happy about their schools, teachers and classmates.

3. <u>On the Revised Primary One Admission (POA) Arrangements</u>

a. Principals, teachers and parents agreed unanimously that NCS students should have the right to choose mainstream schools.

b. Both school personnel (principals, teachers, etc.) and parents also concurred that it was desirable to integrate NCS with CS students at the early stages of education.

4. <u>Cultural Problems/Issues</u>

a. Teachers pointed out the potential cultural differences in parental attitude towards schooling/education.

b. Understandably a lot of NCS parents were not able to help their children with their school work. However, as reflected by quite a number of teachers, some NCS parents were (i) relatively less concerned about their children finishing their homework or preparing for tests, (ii) more casual in their children taking leaves, and (iii) less enthusiastic about

sending their children to summer preparation classes or after-school tutorials. Some NCS parents further believed that girls did not have to get as much education as the boys did.

c. All NCS parents we met expressed high aspirations, hoping that their children could receive tertiary education. The majority of them also considered Hong Kong as their permanent home. Perhaps in contrast to most CS parents, it was not uncommon that NCS parents did not perceive afterschool extra tutorials as useful because the children had a long day of study already, and the extra remedial lessons might add even more work for them. This was in contradiction to most CS parents, who believed the more after school tutorial for their children, the better. In general, the extra remedial lessons or activities before or after school were effective. We would encourage schools to continue providing NCS students with these remedial lessons or activities. But more effort has to be spent on explaining the purposes and benefits of these activities to the NCS parents.

5. <u>Academic Issues</u>

a. NCS students were relatively more active and willing to answer teachers' questions in class. As some NCS students had much better English competence, they also provided good opportunities for CS students to practice their English.

b. Though learning Chinese and using it to learn other academic subjects was a challenge to NCS students, some teachers noted that Mathematics was also an area that needed extra help over and above the language difficulties. Some Mathematics teachers commented that NCS students might have learned a different counting system in their own culture. This might be an area that needs further attention.

c. Teachers generally found the summer preparation programs very useful for the NCS students, yet we estimated that a quarter to half of the NCS students were not enthusiastic or were unable to attend (e.g., due to going back to their own country). We recommend that more publicity work to be done with these NCS parents to help them understand the importance and benefits of these summer programs for their children.

d. From the teachers and the NCS students we interviewed, we were strongly convinced that kindergarten preparation was deterministic of NCS students' primary school academic success. From our interviews, we were certain that Chinese kindergarten education was a necessary, though not a sufficient condition for NCS students to cope with their primary school learning. Those NCS students who had attended Chinese kindergartens usually had a much better head start in both the mastery of languages and the familiarity with local classroom learning, and thus they could easily cope with the different academic subjects from the very first day in P.1.

e. If a school admitted more than one NCS student in P.1, there was no unanimous view on whether the school should put these NCS students in the same class or not. Some principals thought that it would be easier for the teachers to tailor their teaching and curriculum to suit the need of the NCS students if all NCS students were put in the same class, while other principals believed putting NCS students in different classes would enable more individual attention to these students.

f. On NCS students' learning their own language (e.g., Urdu, Hindi), some parents were concerned that their children might not have the chance to learn their languages. Given the very few NCS students in each school, it is difficult to run interest group types of language classes.

I. Summary of open-ended responses in questionnaires

a. Teachers and social workers (or guidance officers) had to spend a lot of time communicating with NCS parents and providing remedial lessons to NCS students.

b. About half of the principals specifically assigned English teachers and those with greater patience to be the class teachers for the NCS students.

c. At the time of the study (2004-2007), many teachers had attended some training on the teaching of NCS students.
d. About half of the schools explicitly stated that that they had extra tutorials for NCS students, and about 1/3 had some forms of peer-assisting scheme (e.g., big brother/sister). They also found these programs to be useful.
e. Almost all principals explicitly stated that there was no racial discrimination in their school.
f. As perceived by principals and teachers, the main challenges to NCS students were: (i) low Chinese competence, (ii) parents' inability to help with students' school work, and (iii) NCS students' low motivation (e.g., laziness) in study.
g. Principals would like to (i) have financial assistance to provide more services for NCS students, (ii) conduct more remedial activities to help NCS students learn Chinese, and (iii) enhance NCS parents' understanding of mainstream schools.
h. Teachers would like to (i) give extra help in class or within school, (ii) tailor the curriculum, (iii) adapt their teaching style (e.g., using another set of teaching materials), and (iv) allocate some resources (e.g., financial) to help NCS parents (e.g., to pay for private after-school tutorials).
i. With regard to how to allocate resources (money), teachers had a slightly higher preference for allocating the resource to the school directly than to parents or students.