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**Context and Impact of Medium of Instruction
on Attitudes, Motivation and Academic Performance:
Secondary School Children in Hong Kong**

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Rita Lai-ying CHAN

*A Thesis submitted in Partial Fulfilment
of the Requirements for the*

Degree of Doctor of Education

School of Education

University of Durham

2007



- 2 JAN 2008

Context and impact of medium of instruction on attitudes, motivation and academic performance: secondary school children in Hong Kong

Author: Rita Lai-ying CHAN

**Thesis submitted for the Degree of Doctor of Education, University of Durham
November 2007**

Abstract

The thesis is an investigation of how medium of instruction (MOI) as a factor interacts with relevant socio-cultural contextual factors to create impacts on the attitudes, motivation and academic performance of secondary school children studying in two branches of the same school, one with Chinese as MOI and one with English as MOI, called MOI bifurcation. It attempts to use both quantitative and qualitative data collection techniques to investigate the impacts of the streaming of students to learn either in their first language or the second language on the attitudinal, motivational as well as behavioural development of students of the two respective MOI streams. The setting for the thesis was the secondary sector of Hong Kong, a city of People's Republic of China with the unique presence of two dominant languages, namely, Chinese, the first language of the majority of the population, and English, the socially and economically powerful second language. Subjects were 213 male and 188 female students from three secondary schools with Chinese as the medium of instruction (CMI), who were allocated to either the Chinese stream or the English stream (EMI) upon transition to Secondary 4 being the

penultimate year of the 5 year secondary system. The subjects shared similar cultural and educational backgrounds, all with at least 12 years of education learning through the Chinese medium. Results revealed that differences were consistently identified between the students of the two MOI groups, both immediately upon and some time after the transition to the bifurcation settings, in their attitudinal as well as behavioural development, and in their self-reported academic performance. It was also found that the differences identified were found to either continue or grow in strength in the course of time, though some of the differences only emerged at a later stage. Findings also indicated that in a context where the differences between the two learning media are substantial in terms of status and educational values, the MOI streaming had a unique and more positive impact on students studying through the high power second language (i.e. English), e.g. more favourable attitudes towards English, higher level of L2 motivation, better self-concept and an inclination to a higher level of internality. On the other hand, those studying in their native but low status mother-tongue were found to be more susceptible to less favourable development in the above aspects, in comparison with their EMI counterparts.

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Chapter One: Introduction

1. Overview

This study utilized both quantitative and qualitative data collection and analysis techniques to investigate and describe the attitudinal and behavioural developments, and their subsequent changes, of students in Hong Kong studying under the respective MOI bifurcation settings. The thesis comprises five chapters, viz. Introduction, Literature Review, Methodology, Results and Findings, and Conclusion and Implications.

Chapter One, Introduction, begins with the overall organization of the thesis. The section on the background of the study provides a brief history of the language-in-education policies, past and present, adopted in Hong Kong. A brief depiction of the local linguistic environment and the language learning landscape is included to provide the socio-cultural backdrop to the investigation. The latter part of the Chapter goes into details about the significance and purpose of the study, and the research questions addressed.

Chapter Two, Literature Review, delineates a review of the relevant literature to the theoretical and practical assumptions of this study. The literature on language attitudes in second language learning, motivation, self-concepts, and locus of control are reviewed.

Chapter Three, Methodology, outlines the methodological framework of this study. It describes both the quantitative and qualitative techniques used in the data collection and analyses.

Chapter Four, Results and Findings, presents the findings and discussion of this study.



The findings from both the quantitative surveys and the qualitative interviews are reported to supplement each other.

Finally, Chapter Five, Conclusions and Implications, provides the conclusions and deliberates on the implications of this study. It also highlights the direction for further research to advance the argument on the effects of the interaction of the MOI and the contextual factors on the attitudinal and behavioural developments of the students. Prospective lines of further investigations are also suggested.

2. Background to the Study

2.1 Language Education in the Post-Colonial Era

The medium of instruction (MOI) in secondary schools has been an age-old issue in Hong Kong, arising from the lack of an educational language policy that is scrupulously planned and meticulously implemented. Before the handover, Hong Kong had largely de facto policies that had emphasized the high-status English language to the comparative neglect of the development of the mother tongue (Cantonese, a local variant of the Chinese language) and the national language (Putonghua/Chinese). The language to communicate relating to scientific, technological and academic information was English. It would be difficult to imagine a challenge to the dominance of English, which was well established and entrenched by its extensive use in the law, the press, the liturgy, the bureaucracy and the classroom. Although there was no restriction on the language for school instruction (schools were allowed to choose either Chinese or English as their medium of instruction), English, being the dominant high power language, was the then 'medium of instruction' in most secondary schools. However, without sufficient teachers who were fully bilingual (So, 2002) and with a student population of predominantly

Chinese¹, English had more been taught as a subject than used as a medium of classroom instructions and school activities². In actuality, except for a few elite schools, Cantonese had been the de facto medium of instruction.

To address a growing concern about the lowering of language standards in the community as a whole, and among the student population in particular (e.g. So, 2002), the government of the Hong Kong Special Administrative Region (HKSAR) implemented the mother-tongue (MT) language policy in 1998, immediately after the return of sovereignty from the British colonial power to the People's Republic of China in 1997. The HKSAR government gave its rationale for adopting Cantonese (the mother-tongue of the majority of the local population) as the medium of instruction in the policy document entitled *Medium of Instruction Guidance for Secondary Schools* (EMB³, 1997). It pronounced that (a) mother-tongue teaching has positive effects on students' cognitive and academic development; (b) most students prefer learning in the mother-tongue; (c) students learning in the mother-tongue generally perform better than their counterparts using English as medium of instruction; and (d) students of traditional Chinese-medium schools consistently achieve a higher pass percentage than the territory-wide average in both Chinese learning and English language in the Hong Kong Certificate of Education Examination (HKCEE)⁴. "We are implementing a comprehensive strategy to enhance language proficiency. Our language policy is to enable students to learn effectively, to be biliterate and trilingual"⁵. In short, the mother-tongue policy claims to serve at least two

¹ It has a population predominantly of Chinese descent, with about 2% Filipinos, less than 1% Indonesians and about 2% other smaller ethnic groups.

² For a detailed discussion of the problems in the past, see So (2002).

³ Education and Manpower Bureau, Hong Kong Special Administrative Region (HKSAR), PRC

⁴ See So (2002) for a discussion of the problems with the comparison: he pointed out that the claim was disingenuous and a 'twist of statistics' as the in-group variances of the two respective MOI groups were not effectively controlled for in the comparison.

⁵ Extracted from the Medium of Instruction Policy for Secondary Schools, Policy for Secondary Schools, Website of EMB, HKSAR.

objectives⁶: (i) enhancing the effectiveness of cognitive development and academic performance of the students and (ii) developing their language proficiency so that students will be biliterate in the two dominant languages, Chinese and English, and trilingual (i.e. able to speak fluent Cantonese, Putonghua and English).

These two objectives, however, bring out a paradox at the heart of the language-in-education policy in Hong Kong: the adoption of the mother-tongue (Cantonese) as MOI in the L1 dominant territory for better general cognitive development of school students will inflict an unavoidable concomitant reduction in the students' exposure to the L2 (English) at school, which is the major, if not the only, avenue for students' access to the language. Given the need for Hong Kong to survive and prosper as an "international" city in the region, the concerns of the various stakeholders of the local education system have been about whether or not it is producing sufficient bilingual talents to meet the demands of the market (So, 2002). This study therefore specifically assesses how the proclaimed educational outcomes in producing biliterate and trilingual graduates would be achieved by the implementation of the MOI policy, by delving deeply into how the MOI factor impacts on students' learning, with particular reference to their acquisition of the L2.

2.2 The bifurcation of schools on the basis of English competence

The mother-tongue language policy for schools stipulates that all schools must adopt Chinese-Cantonese as the medium of instruction (CMI). However, as if it is a hybrid compromise to balance the needs of the two paradoxically intertwining objectives, exceptions are allowed - about a quarter of the secondary schools with 'proven' capacity,

⁶ The establishment of new nationhood requires the cultivation of a new national identity (Kuo, 1980). The conversion in 1997 commanded a new language policy to consolidate and support the city's new identity. The timing of the implementation of the MOI policy suggests very strongly that, as is the case in all other countries, there was also a hidden agenda of creating a sense of national identity through the language of education, after the city's assumption of the new political status in 1997.

i.e. on the basis of demonstrated English competence of their teachers and students, are allowed to keep the high status English as their medium of instruction (EMI). This language policy, in effect, has broken up schools into the two language streams, one with the high power foreign English as the MOI while the other the local variant Cantonese.

(1) Sector-wide MOI Streaming at S1⁷

Before the launch of the policy of medium of instruction in 1998, 90.5% of 421 secondary schools in Hong Kong were English medium. After the change, only 114⁸ schools that take in the top 25% of students in Secondary 1 remained in the EMI category (So, 2002). These figures have more or less coincided with the findings of local studies (e.g. Brimer et al., 1985; Education Commission, 1990) that suggest that about 30% of students may be able to learn effectively through English. Since then, English has been reduced to the status of a core subject in the majority of secondary schools and is used across the curriculum as the medium of instruction only in EMI schools.

(2) Within-School MOI Streaming at S4

The restrictions on medium of instruction however are relaxed for grades at Secondary 4 (S4) and above (equivalent to GCSE and above): all schools have the freedom to resume the function of English as the medium of instruction for senior grades. As a natural consequence, many of the CMI schools, in order to enhance their competitiveness by boosting the English performance of their graduates, have adopted a two-stream policy in the senior grades, assigning the more English proficient students to EMI classes, while those with lower English standard remain to be taught in Chinese-Cantonese.

⁷ HK has adopted a 5-year (S1 to S5) secondary school education system.

⁸ As of September 1998. This number has changed and will continue to change over time, depending on the number of schools satisfying the prescribed standards.

Since September 2000, two-thirds of the CMI schools in Hong Kong have reverted part of their curriculum from Chinese to English for Secondary 4 and 5 (GCSE equivalent) and all subjects for Secondary 6 and 7 (A-level equivalent) (Ming Pao, 22/5/2001). To many of these EMI students (and their parents), the placement into an EMI class at this stage is an opportunity regained to recover lost grounds in their English learning and to secure access to a promising high-status future. To the many who have to remain in a CMI class, they will find themselves easily detoured from the highly regarded avenue to higher education⁹ and better career prospects, not sure of how well they can benefit from the monolingual education.

(3) The Corollary

Under such a MOI policy, a logical development is that EMI schools enjoy a higher status than those CMI schools and students' performance in English has become a key performance indicator of students as well as of schools. While government policy definitely plays a weighty role in the ebb and flow of the fortunes of the CMI and EMI sectors, the success of the MOI bifurcation rests in whether it will produce the proclaimed educational outcomes and meet the needs of the community and economy. Albeit various forms of additional resources have been provided¹⁰ to both types of schools for the promotion of English standards, the majority of the children are now given a principally monolingual vernacular education, making the pronounced objective of achieving "biliteracy and trilingualism" a real challenge, if not a far-fetched ambition, as one may seriously doubt if the language landscape within and outside the school context will facilitate such a development.

⁹ All universities in Hong Kong have set a certain level of English competence as a pre-requisite for admission.

¹⁰ E.g. the Native-speaking English Teachers Scheme (NETS).

Without doubt, the MOI streaming arrangements intervening at a critical stage of student development will have far-reaching impacts on the students' learning, particularly motivation, locus of control and second language learning¹¹, with particularly reference to language attitudes, perseverance in L2 learning, etc., and on students' self-concepts. It is in this light of examining the impacts of the streaming experience on students' affective and behavioural responses that this study has been framed to gauge the magnitude of the corollary. This study intends to, as a first step, assess the profound yet indelible imprints of the MOI experience on the students that may affect their present and future learning.

2.3 Mother-Tongue Education in Hong Kong

Despite the presence of a strong body of evidence in bilingual education that speaks axiomatically for the advantages of mother-tongue as the best medium for teaching a child (e.g. see Skutnabb-Kangas & Toukomaa, 1976; Cummins, 1981; Cummins & Swain, 1986), the mother-tongue language-in-education policy in Hong Kong has remained controversial since its inception. The controversy can be attributed to three main factors, namely, the colonial inheritance and the rapidly escalating importance of the English language as a world language; the dominance of a low status local lingua franca – the vernacular Cantonese; and the language planning policy, particularly the streaming policy and its implementation, in the education system.

¹¹ Oxford (1996) defines foreign language learning as that which occurs when the language is not commonly used in the community and there is little opportunity to experience the language outside of class, whereas second language learning occurs in contexts in which the language is readily available in the community and students have many opportunities to experience it. In the light of the above classification, English learning in the Hong Kong linguistic environment is clearly the learning of a foreign language. However, within the school context in Hong Kong, English is expected to be learned more as a second language than a foreign language. This study will take the view that students in Hong Kong are expected to learn English more as a second language than a foreign language.

Research worldwide and in Hong Kong has shown that mother-tongue teaching is generally the most effective learning tool for students (e.g. Downing, 1984; Verhoeven, 1987; Yiakoumetti, 2007; EMB, 1997). Using their mother tongue to learn, students are better able to understand what is taught, analyse problems, express views, develop an enquiring mind and cultivate critical thinking. Students can also have more time to concentrate on the learning of a second language. As remarked in a report on issues concerning the MOI in Hong Kong¹², “the mother tongue is, all other things being equal, the best medium of teaching and learning” (cited in Yau, 1989:280). In the Hong Kong scenario, time for the language is probably not a favourable factor and things are, however, not equal.

(1) The Mother-Tongue - Cantonese

First of all, the mother-tongue of the majority of the local students, Cantonese, is considered inferior to the standard of ‘educated’ speech as it is characterized by a lower degree of formality and the lack of a set of transaction-specific register acceptable to all other Chinese communities. Its speakers are disadvantaged academically as Cantonese deviates significantly from pronunciation and grammatical rules of both the Standard Chinese (Putonghua) and English. Fluency in their mother-tongue not only offers very little help to the learners in communicating in other Chinese communities, but also creates extra hurdles for them in the learning of another language, be it Putonghua or English. The criticism on the decline in both the Chinese (written) and English standards and academic performance of local students in general (e.g. Joseph, 1996; So, 2000 and 2002) lends further support to the speculation that the local Chinese students are worse

¹² *A Perspective on Education in Hong Kong*, a report by a Visiting Panel commissioned by the Hong Kong Government, 1982.

off when they speak the low variant Cantonese but are required to learn a high 'variant' (the written Chinese) and a second language (English) at the same time.

(2) The Second Language – English

On the other hand, Hong Kong, developing in the direction of being an international business centre, has always given high value to English. English proficiency is widely perceived as a measure of success. The elite which has administered Hong Kong since its early days under the British rule is generally bilingual, speaking English in addition to a regional Chinese language, while the less educated masses communicate mainly in Cantonese. The importance of English rather than on the low side, has risen to an unprecedented height when Hong Kong has recently aspired to be a financial centre and a service-oriented international city. Since English has a very high market value, it is generally considered by language learners (and their parents) as a commodity worth purchasing. More often than not, language learning is treated more as a potential for career advancement than purely a tool for study (Cheung, Mayes & Randall, 2000; So, 2002). As such, education in English medium schools has been more prestigious as it provides students with more opportunities in terms of both education and employment.

(3) The Preferred Medium and The Preferred Schools

The difference in status between English and Chinese-Cantonese in the wider community is also mirrored in the status allotted to EMI and CMI schools. English schools are often associated with the transition to higher education, good job opportunities, the elite class, and social mobility. On the other hand, people in Hong Kong tend to stereotype Chinese or CMI schools as "second class" and students attending Chinese schools are perceived as academically inferior to their counterparts in English schools. In a 1989 study, Yau

(1989) concluded that among the students then enrolled in Chinese middle schools, many would have preferred going to Anglo-Chinese schools if there had been a place for them. This widely held belief that Chinese schools are inferior to English is still deeply ingrained in the psyche of many citizens of Hong Kong¹³.

The policy of turning the majority of the schools into CMI schools is evidently an attempt to revert such a perception by ratifying the status of the Chinese schools in the education system. However, the policy run simultaneously that allows a minority of schools with proven English competence to continue to use English as medium of instruction has negated such efforts and fortified the long-held belief. As a result, the bifurcation of schools into EMI and CMI schools on the strengths of students' and teachers' ability, as well as the support strategy and measures of individual schools to promote English learning, has sent conflicting indications on the preferred medium of instruction in Hong Kong schools, and inevitably in turn, the preferred schools and students.

To most of the students, the policy has imposed a choice between having education in an economically powerful but minority foreign medium (English) at the risk of ineffective learning, or having education in one's own mother-tongue, the majority language, at the risk of insufficient exposure to the English language, the key to higher education and good career prospects. It is against such a background that the attitudes and responses of the children to the medium-of-instruction policy take on new significance. It is against this contextual background that this study takes on new significance as it supplements past findings on the relationship between medium of instruction and affective factors in

¹³ A report made by Ming Pao (25/4/2006), entitled "77,000 Students Competing for 16,000 EMI Places" in the current round of secondary school places allocation clearly underscored the unequivocal preference of local students (and their parents) for EMI schools.

contexts where the relative availability and status of the L1 and L2 are quite the reverse.

3. Significance and Purpose of the Study

3.1 Significance of the Study

Given the inequality in status between the two MOI media and among the EMI and CMI schools/classes, the researcher attempts to investigate the impact of the MOI policy, which groups schools into CMI and EMI streams on the basis of the schools' (i.e. the students') English capacity, on secondary school students in Hong Kong.

For a start and for instrumental and pragmatic reasons, the present study focused on identifying the possible impact of the MOI streaming policy within a CMI school on its Secondary 4 (S4) students. The grouping of S4 students into the EMI/CMI streams within a CMI school is done on the same basis, i.e. on students' proven ability in particular in their command of the English language¹⁴. This practice is in essence the sector-wide streaming of students into the EMI/CMI secondary schools in miniature. Given that the informants of the two streams were chosen from within the same CMI schools, it has the advantage that the two groups of students are basically from the same sample before the split into streams in S4. The disadvantages of comparing students directly from EMI and CMI schools, such as the differences in the linguistic environment at school and students' socio-economic background, have been minimized.

Also, as a result of the 'unfair' competition among EMI and CMI schools for the best students, it is very likely that the EMI schools will be able to attract the top 30% of the

¹⁴ According to the principals and teachers of the three sample schools, the English competence of individual students admitted to the EMI classes in S4 should be at an acceptable level for learning through the English medium.

students while the majority of the CMI schools are left to compete for the rest. Under this ‘natural selection’, the variances in academic competence among the subjects are usually much greater between EMI and CMI schools, but are smaller among students in the CMI sector and are substantially reduced within the same CMI school. In terms of socio-economic background, it is apparent that the differences among the subjects from the two streams of the same school will be much lower than those among students from different EMI and CMI schools¹⁵, though there is still a need to control for the comparison among the different CMI schools in the sample.

Given that the subjects are of similar level of academic competence and have studied in a CMI environment (a Chinese-Cantonese dominated linguistic environment) for three years at secondary level, it is very likely that the major difference that will account for any difference between the students of the two MOI streams upon commencement of S4 is the placement of the subjects into the respective classes. With this sample design, factors other than MOI have been more effectively controlled and it is not unreasonable to expect that the comparison of the EMI and CMI streams within the same school and among the sample schools in the CMI sector will generate reliable results to throw light on the repercussions of the new EMI/CMI language policy on the sector-wide secondary school students in Hong Kong.

3.2 Purpose of the Study

(1) MOI and Affective Dispositions

The role of affective characteristics of the learner, such as attitudes and motivation, has

¹⁵ Salili and Lai (2003) found in their study that “parents of students in EMI schools are predominantly from educated professional backgrounds and probably fluent in English” while those of the CMI students “are from a more heterogeneous socioeconomic background and many of the parents are not fluent in English”, (Salili & Lai, 2003: 66)

been emphasized strongly by many researchers (Gardner, 1979; Krashen & Terrell, 1983; Brown, 1987; Dornyei, 2000; Csizer & Dornyei, 2005). In second and foreign language acquisition, attitudes and motivation have been found to have direct bearing on the outcomes of language learning (e.g. Hammerly, 1986; Raphan & Gertner, 1990; Masgoret & Gardner 2003). In English-as-a-Foreign-Language situations, affective predispositions (e.g. the learner's beliefs, feelings, and intentions) towards the target language and its community are also likely to explain a proportion of language achievement (Olshtain, Shohamy, Kemp, & Chatow, 1990; Masgoret & Gardner 2003; Csizer & Dornyei, 2005). Student input pertaining to their self-assessed language needs, motivation and attitudes is therefore essential to educational planning (Fayer & Krasinski, 1984; Holec, 1988; Little, 1991 & 1996; Spratt, Humphreys & Chan, 2002; Chan, 2003).

In this study, students are given the opportunity to assess their affective responses to their MOI experience, reflecting on their attitudes, motivations, and behaviour in their academic pursuit. The feedback from the students as both the participants and stakeholders of the MOI system on its role on their attitudes and motivation will provide needed but previously under-researched evidence for both policy makers and teachers. The analysis will throw light on the relationship between MOI and affective dispositions of the learners towards learning in general and L2 acquisition in particular. In turn, the significance of these affective variables as a mediator to student achievement can be ascertained.

(2) The Relationships in Context

The acquisition of a language is as much an internal process as it is a socially and culturally embedded activity (e.g. McGroarty, 2001). The significance of this social-

cultural dimension in learning language is attested to by the dominance of a social psychological emphasis in research on L2 acquisition (e.g. Gardner, 1979, 1985, 2000; Williams, 1994; Dornyei, 2003). The social dimension of the construct conceptualizes the L2 learner as a socially situated individual, subject to broader social influences such as interaction with L2 speakers or language status. The weight of research evidence indicates that socio-cultural values affect multiple aspects of L2 learning (e.g. Grusky, 1994; Gardner, 1985, 2000, 2001 & 2002; Clement & Gardner, 2001; Dornyei, 2001b). To achieve a fuller understanding of L2 acquisition, there is therefore a compelling need to take into consideration, apart from concerns with the individual and the pedagogical environments, more contextually inclusive views of language learning.

This study, with a view to gauging the impacts of the MOI system on students' affective characteristics and behavioural dispositions, can therefore benefit from locating itself at the confluence of internal and contextual variables affecting student attitudes and behaviours in their L2 learning. Given the unique distinctions of the two MOI languages in terms of popularity and status (see section 2.3 above), this inquiry was led by the hypothesis that the acquisition and use of the L2 is perceived as a socially prestigious practice, which will in turn shape the students' affective and motivational dispositions when they learn through either the L1 or L2. As such, the socio-cultural dimensions of L2 motivation in the local setting will provide the backdrop to and the links among a host of closely-knit factors which predict the affective development as well as L2 achievement under the MOI-based bifurcation arrangement. The relationship between the learner and his/her social-cultural setting and the concomitant issues, however, have been largely overlooked by local policy makers who are assigned the responsibility to work out an apposite language policy for the students. There is therefore a compelling need for a systematic approach to identify the effects of the interplay of the individual

and socio-cultural variables on L2 learning under the MOI bifurcation arrangement.

4. Research Questions

The primary purpose of this investigation is to discern whether or not the streaming of students into different MOI streams will have a bearing on students' affective and behavioural development. As research and theories suggest (see, e.g. Eccles and Wigfield, 1985; Marsh, 1990b; Skaalvik and Hagtvet, 1990; Gardner, Tremblay & Masgoret, 1997; Dornyei, 1994), attitudes influence the efforts that students expend to learn another language, and efforts influence the learning outcomes directly. As such, this study will give local policy makers a clear understanding of affect-change implications of the MOI policy in order to assess its effectiveness.

In more specific terms, the investigation is about the evaluation of the relationships between MOI and language attitudes, motivation and self-concept, and between MOI and students behavioural development in L2 learning. This objective implies an approach that will also capture the interactive relationships among these affective and behavioural variables. It is also important for the approach to be able to track changes in these key measures as the subjects pass through the education system under the MOI-based bifurcation arrangement.

4.1 The First Research Question

On the above premises, two research focuses or questions were formulated:

Do students of the two streams exhibit or develop different attitudes, motivational patterns and self-concept upon transition to their respective MOI classes; and if so,

whether their affective responses change over time as they pass through the system under different MOI settings.

This is the question which examines specifically whether there is any significant difference in a broad net of attitudinal and motivational characteristics, including language attitudes, motivation patterns and orientations, locus of control and self concept, of the students of the two MOI streams. It will first identify if the differences as perceived by the researcher are real and second, if they are, whether such differences will be moderated or sustained or intensified in the course of time.

The fact that these two groups of students are all from CMI schools suggests that the students have taken a similar path through the education system. First of all, upon transition from primary to secondary schools, they all had not entered the more prestigious EMI schools. This implies that, probably except for very few exceptional cases, for the majority of the students, they had been given to understand that they had not met the higher standard required of EMI schools and that their language ability at that juncture could not support their learning in the English medium. As a result, they all had another three years of education in a CMI environment, with a full understanding on the one hand that Chinese-Cantonese is the mainstream medium of instruction, and on the other, that they would have less chance to learn and use the high-status English language at school. They, however, were all given another chance to join the EMI stream upon promotion to S4.

On the understanding that only those with 'proven' English proficiency would be allowed to join the EMI classes in S4, it is logical to assume that those in the EMI classes would have had more positive experience with English learning, which summated in their

successful transition to the English class. Do they, therefore, take on more favourable attitudes towards English, including the language itself, its people and its culture, and are they more motivated to learn English? Do they have a stronger sense of internal control, and are they able to develop a more positive self-concept?

On the other hand, as the CMI students have learned mainly through their mother-tongue, they normally have more pleasant experience in learning through Chinese but may have more hardship in upgrading their English proficiency to the standard. As a result, do they adopt more positive views towards the Chinese language, the Chinese people and their own culture? Are they less motivated to English learning? As the CMI students failed a second time to secure a place in the more promising EMI classes, will CMI students feel that they have less control over the outcomes and take on a less favourable self-concept?

Another research concern here is whether such attitudinal and motivational characteristics change as the subjects have gained more successful/failed experience with the languages and the learning through them, as they pass through the educational system in their respective MOI streams. Are the changes, if any, related to the exposure to the languages in question?

4.2 The Second Research Question

Do students of the two streams exhibit different behavioural dispositions (e.g. in their support seeking behaviour and the levels of perseverance in the learning of the L2 (i.e. the high-status English))? To what extent are the differences, if any, associated with the differences in attitudinal and motivational orientations? Do the students in the two classroom types register significantly different progresses in L2

proficiency development and academic performance, as evidenced in self-reported school assessments?

The focus of this research question is on the behavioural responses of the subjects. Are there any significant differences in the students' (i) support seeking behaviour, with particular reference to assistance given by and involvement of parents, and (ii) perseverance in L2 learning, with particular reference to time devoted to L2 learning, and the amount of efforts dedicated to L2 literacy development (e.g. preference for books, reading at home, watching or listening to L2 media, gaining more exposure to L2 outside schools, etc.) Are these differences, if any, associated with the students' attitudinal and/or motivational dispositions?

Another research concern here is about the relationship between perseverance and academic outcomes. In this connection, the amount of effort expended by the two MOI groups of the subjects will be measured to gauge the extent to which their efforts and students' self-reported achievement or gains in the two languages are related. The attempt here is to confirm the effects of medium of instruction on students' attitudinal and motivational characteristics, which in turn will determine or explain achievement.

Underlying the questions above is the assumption that the MOI setting created will modify students' attitudinal and motivational development. One primary objective of this study on the relationships between medium of instruction and affective factors is to provide the policy makers not only descriptive information on the differences, but also 'feedback' on the gravity of the effects on student learning and educational development. With knowledge of the differential effects, policy makers will then be in a better position to evaluate and review how effective the MOI streaming policy has been and the

inscription it will likely engrave on the young minds of this new and upcoming generation of the society.

Chapter Two: Literature Review

This chapter is a review of the research literature which bears directly on the role of affective and other relevant factors in L2 learning. It starts with a comprehensive review of recent advances in research on L2 motivation, with particular reference to the prominence of the social dimension in most comprehensive constructs of L2 motivation. This leads to a description of language attitudes and motivational orientations in L2 acquisition, which sets the stage for presenting the contextual factors as emerging from research by Dornyei and his colleagues of a more situated conception of L2 motivation. After fleshing out the arguments for the need to explore the impacts of the socio-cultural background on the effects of language learning, it goes on, on the basis of Dornyei's (1994a) model, to map out the relevant components of L2 learning motivation in relation to medium of instruction. By situating the L2 learner in the local socio-cultural context, the discussion ensues to explore the interactions of the factors at both the language level and the learner level to explain their relevance for understanding students' motivation in the MOI-based bifurcation settings in Hong Kong. Hence, the circumstances that frame the MOI bifurcation arrangements are, in the light of the above, analysed for their potential impacts on the affective and behavioural development of the local L2 students.

1. L2 Learning

As expounded in the previous chapter, this study set out to appraise the effect of MOI on L2 learning in Hong Kong. At the outset, it must be reiterated that language acquisition is not only a cognitive process, but also a socially and culturally embedded activity (McGroarty, 2001). In the case of L2 learning, the situational dependence appears to be

even more salient. The learning situations of L2 acquisition can be as varied as the L2s themselves: for example, the learning situations for the acquisition of a world language can be substantially different from those for the learning of a heritage language. Research on L2 learning is therefore characterized by a variety of theoretical approaches and research focuses.

In the repertoire of findings, a large body of literature has pointed to the importance of motivation¹⁶ as a key factor that determines the rate and success of L2 attainment (e.g. Dornyei, 1998, 2001, 2003; Gardner, 1985 & 2001; Gardner & Lambert, 1972; Gardner & MacIntyre, 1993a; MacIntyre, 2002). It is established as the source of the primary impetus to initiate the learning of the L2 and the driving force to sustain efforts needed for the long and often tedious process of L2 acquisition.

Until recently, most of the research on L2 motivation has taken a social psychological approach, in which the links between motivation and social attitudes are considered important. This approach is best exemplified by the seminal work of Gardner and his colleagues (e.g. Gardner & Lambert, 1972; Gardner, 1985 & 2000; Gardner & Clement, 1990). In particular, based on a meta-analysis of a number of studies conducted by Gardner and associates in the past, Masgoret and Gardner (2003) have convincingly demonstrated the positive relationships between the attitudinal and motivational variables and second language achievement. More recently, current research saw the need to draw on the findings from a wider range of L2 learning contexts and situations to account for the role of attitudinal, motivational and contextual factors in second-language learning (e.g. Clement et al., 1994; Dornyei, 1996a; Dornyei & Csizer, 1998; Dornyei, 1994,

¹⁶ The broad sense of the term was adopted for this part of the Chapter. A more elaborated discussion covering some selected aspects of the motivation construct is given in section 4.1 (2).

2001, 2003). Two main directions of change in focus were the attention to situations concerning instructed second language acquisition and the emphasis on a more pragmatic, education-centred approach to motivation research (Dornyei, 2003).

2. The Tripartite Construct of L2 Motivation

Dornyei (1994a), tapping into the large repertoire of research offered by the social-psychological approach and on the basis of the tripartite motivation construct proposed by Clement and his associates (Clement et al., 1994; Clement & Kruidenier, 1985; Labrie & Clement, 1986), has developed a three dimensional framework of L2 motivation, synthesizing the various motivational components identified into an eclectic, multifaceted, but coherent construct. The framework consists of three levels, namely the Language Level, the Learner Level and the Learning Situation Level (see Table 1 below). These three levels “coincide with the three basic constituents of the L2 learning process (the L2, the L2 learner, and the L2 learning environment)” and also “reflect the three different aspects of language”, viz. the social dimension, the personal dimension, and the educational subject matter dimension (Dornyei, 1994a: 279).

Table 1 A general framework of L2 Motivation

Level	Motivational components
Language Level	Integrative motivational subsystem Instrumental motivational subsystem
Learner Level	Need for achievement Self-confidence <ul style="list-style-type: none"> - language use anxiety - perceived L2 competence - causal attributions - self-efficacy

<p>Learning Situation Level</p> <ul style="list-style-type: none"> - Course-specific motivational components - Teacher-specific motivational components - Group-specific motivational components 	<ul style="list-style-type: none"> Interest Relevance Expectancy Satisfaction Affiliative motive Authority type Direct socialization of student motivation <ul style="list-style-type: none"> - modelling - task presentation - feedback Goal-orientedness Norm and reward system Group cohesion Classroom goal structure
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Source: Dornyei, 1994a: 280

The most general level of the construct, according to Dornyei (1994a), is the Language Level, which focuses on the L2 learning situation. This dimension concerns values and attitudes attached to the target language by the social milieu in which the learning takes place. The motivational processes at this level centre around context-dependent attitudes and motives, which can best be represented by two traditional motivational concepts, viz. the integrative and the instrumental motivation. The second level is the Learner Level, which involves a complex of “affects and cognitions that form fairly stable personality traits” (Dornyei, 1994a: 279). The motivational components identified at this level focus on the characteristics of the individual, which span various aspects of traditional motivation concepts such as need for achievement and self-confidence, the latter of which encompasses the concepts of attributions, self-perceptions of L2 competence, language anxiety, and self-efficacy. The last level, the Learning Situation Level, is associated with the various motives rooted in the classroom setting. Its concerns focus

on three main areas: the course, the teacher and the learning group involved.

Dornyei's model above has successfully converged a whole array of motivational concepts and put them all in perspective. In particular, the first two levels of the construct have underscored the intriguing relationships between the context-specific values of the language and the affective and motivational dispositions of the learner. Modelling on Dornyei's framework, this study aimed at gauging the MOI impacts on L2 learning in the local setting by specifically focusing on the motivational processes operating at *the Language Level* and *the Learner Level*¹⁷. More precisely, this study will examine the effect of the MOI bifurcation on L2 learning by anchoring L2 motivation of the individual learners to the local social and cultural environment, particularly to the values attached to the L2 and L2 learning.

3. The Language Level

3.1 The Language Level of L2 Motivation

Gardner's (2002) conceptualization of L2 motivation – and, ultimately, acquisition – brings together a triadic relationship between affect, the individual, and the social context.

Language is a defining behavioural feature of a cultural group, and thus acquiring the language involves taking on patterns of behaviour of that group. As a consequence, an individual's attitudes towards that group and towards other cultural groups in general will influence his or her motivation to learn the language, and thus the degree of proficiency attained (Gardner, 2002:160).

The basic major tenet underlying his motivational framework is therefore the concept of

¹⁷ The third level, the Learning Situation Level, was not dealt with in this study.

integrativeness (e.g. Gardner, 1985, 2000). However, it was found to be short of explanatory power in foreign language contexts, where there is typically no identifiable community of L2 speakers in the learner's environment with which the learner would identify or interact (Dornyei & Csizer, 2002; Csizer & Dornyei, 2005). Dornyei (1990) argued that, in the absence of a salient L2 group in the learners' environment, the identification can be generalized to the cultural and intellectual values attached to the L2. Later, Dornyei and Csizer (2002) further reformed the concept of integrativeness by relating it to the identification or enactment with the "possible and ideal selves", which, more specifically, refers to the individual's representation of desirable personal L2-related attributes. In other words, L2 motivation in contexts devoid of a salient L2 group originates not from a reason for cultural proximity, but more from the identification of a social image of the ideal self with L2- and L2-learning- related attributes bestowed on it by the social milieu. In their surveys on Hungarian L2 learners, Csizer and Dornyei (2005) confirmed that Integrativeness or the "Ideal L2 self" is a key determinant in learning effort and language choice, mediated by Instrumentality and Attitudes to L2 Speakers (Csizer and Dornyei, 2005:619).

The above findings throw light on the nature and origin of L2 motivation in the Hong Kong context, in which the learning of the prestigious L2 takes place primarily in language classrooms and without reference to an L2 group since English is a lingua franca as we shall see below. It is in this light that the present study had framed its approach and anchored its focus on the interplay of the values attached to the L2 and L2 learning, and thus those attached to the respective MOI, and of the attitudinal and motivational variables at the individual learner level.

3.2 L2 and L2 Learning in the Hong Kong Context

The linguistic environment of Hong Kong for L2 (English) learning resembles more the foreign language contexts described in Dornyei's (1990) analysis than the bilingual settings in Gardner's research. As such, the socio-cultural and instrumental values attached to the two MOI languages emerge as a powerful source of L2 motivation in both the education and business sectors. This study is therefore born out of a need to delve deeper into the students' experience of L2 learning under the MOI bifurcation in the light of the socio-cultural and instrumental values bestowed on the two MOI languages respectively.

As explained in the previous Chapter (see section 3, Chapter 1), the two MOI languages have all along enjoyed different status in the territory. The status and function of English in Hong Kong are most clearly delineated in relation to its colonial history and economic development. As Hong Kong continues, after the political handover, to develop in the direction of being an international city, the high value accorded to English and its status as the official language here will hardly be challenged by the mother-tongue, Chinese-Cantonese.

It is often pointed out that HK lives by trade and the language of that trade is English. It is also the language of modernization which provides access to the vast range of technical and organizational knowledge of the West. The development of local talents with high levels of English competence is thus greatly recognized as a prerequisite for economic progress for both society as a whole and its individual speakers here.

After the political transition, English is more perceived as the world language for the

international Hong Kong than as the language of colonialism. According to Dornyei and Csizer (2002), with respect to learners' attitudes towards Languages of Wider Communication (LWCs) or lingua francas, the level of instrumentality is markedly higher in comparison to non-LWCs. The above finding can best describe the L2 learning situation in the territory. English learning here is definitely socially- and economically-fuelled: after the departure of the British bureaucrats, it is more learned for pragmatic reasons than for cultural proximity. To the students in Hong Kong, L2 skills can be translated into practical benefits related to better employment and business opportunities, access to higher education, and the like. In short, proficiency in the prestigious L2 is a desirable personal attribute as it is widely taken by the local population as a measure of success.

Against such a background, the review of the variables at the Learner Level below will situate the learner in the local social landscape for L2 learning, zooming in and out of the individual and following the meanderings of the internal processes to cast a glance at the affective side of the interactions.

4. The Learner Level

4.1 The Affective Factors

Educational research has been paying increasing attention to the multi-perspective analysis of academic achievement. Many variables have been suggested as possible characteristics of the individual that will influence student achievement. Among them, some of the most frequently investigated appear to be attitudes, motivation and self-concept.

The place of attitudes, motivation and self-concept in discussions of educational achievement and of bilingualism is well-documented (see, e.g. Taylor & Hegarty, 1985; Baker, 1988; Dornyei, 1994 & 2003; Dornyei & Csizer, 2005; Csizer & Dornyei, 2005). Research has reported that attitudes to learning, motivation and self-concept may exert strong influences, individually or combined, and may determine academic performance (see, e.g. Eccles and Wigfield, 1985; Marsh, 1990b; Skaalvik and Hagtvet, 1990; Gardner, Tremblay & Masgoret, 1997; Dornyei, 1994). This study examines possible effects of medium of instruction, administered as a form of group placement on the basis of the demonstrated language competence of the students and teachers, on students' attitudinal and motivational factors (e.g. language attitudes and motivational intensity to learn the L2), and on students' self-concepts in the context of L2 learning.

(1) Attitudes

"Any policy for language, especially in the system of education, has to take account of the attitude of those likely to be affected" (Lewis, 1980:262). The concept of attitude is a complex one, and many definitions have been proposed to capture its essence. Allport (1954, cited in Purcell, 1955:403) defines "an attitude as a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related". Gardner delineates attitudes to an attitude object as an evaluative reaction inferred on the basis of one's beliefs or opinions about the object (Gardner, 1985:9). Along this line of the social psychological tradition, attitudes have three components: cognitive, affective, and conative (see Rajecki, 1990; Zimbardo & Leippe, 1991). The cognitive component refers to the individual's belief structure, the affective to emotional reactions, and the conative to the tendency to behave towards the attitude object. This triadic nexus of the three

components will change when there is a dissonance or disagreement within the components. In other words, a change in the affective component will initiate corresponding changes in the cognitive and conative components. Baker (1992) sums up that attitude is a hypothetical construct used to explain the direction and persistence of human behaviour. In an educational setting, it refers to the learner's evaluative reactions towards the learning activities, which in turn determine the level of perseverance in the learning.

(a) Language Attitudes

When learning a second or foreign language, students are not simply asked to learn about the language; in approaches taken hitherto i.e. before the emphasis on LWC, they have had to learn it together with its cultural characteristics, to take it on and make it part of their behavioural repertoire (Gardner, 1985). Since a second or foreign language does not represent an aspect of the individual's own cultural heritage, students' attitudes towards the specific language and its community are bound to play a role in determining the extent to which an individual will actively involve himself in such learning and, more importantly, in using the L2.

There is a compelling literature base indicating that learning a second or foreign language depends on a favourable attitude towards the target language. Attitudes towards the target language could involve aspects such as attitudes towards the L2 itself (examples include attitudes towards learning the language, attitudes towards speaking it, reactions to its sound or structure), and attitudes towards its speakers and culture. In England's (1983) study, students' attitudinal orientation is found to affect target language proficiency. The effect of a positive attitudes on L2 achievement has also been identified in studies

measuring the relationships between students' achievement in English as a second language and the related attitudinal factors (e.g. studies which involved Chinese (Oller, Hudson, and Liu, 1977), Japanese (Chihara and Oller, 1978), Spanish (Gilsan, 1987), Puerto Rican (Fayer et al, 1984), Malaysian and Indonesian (Rocha-Erkaya, 1989) students). The general conclusion in these studies is that positive attitudes (e.g. attitudes towards the self, the students' native language group, and the second language speech community) augment English proficiency. This accumulated evidence in the area of second language acquisition has premised on the fact that attitudes are, though not necessarily directly, related to learning behaviour (in the case of L2 learning, perseverance)(e.g. Mantle-Bromley, 1995; Slavin, 1994; Bloom, 1976). Students with positive attitudes and realistic, informed beliefs of the target language and its people will be more likely to behave in productive ways, e.g. adopting appropriate learning strategies and persisting in language study, than those with negative attitudes and mistaken beliefs. Affecting the effort students put into L2 learning, positive attitudes toward the target language are often regarded as a desirable outcome both for its impact on learning behaviour and its reputation as a significant predictor of success in language acquisition (e.g. Raymond & Robers, 1983; Gardner, 1985; Kuhlemeier, Van Den Bergh & Melse, 1996). Knuver and Brandsma (1993) went further to advance the understanding of the relationship between language attitudes and language achievements. In their study, as schooling progresses and material is presented, a mutual relationship of influence arises, in which attitudes influence achievements and achievements influence attitudes.

Research detailed above has accentuated favourable attitudes to predict proficiency in L2 learning because they initiate or reflect an active and positive involvement on the part of the learners. In the light of the above, a key success indicator of a language-in-education policy can be the measurement of how effectively it can foster positive language attitudes

among the students. In this study, one major target is to examine if and to what extent the MOI policy adopted in Hong Kong affects the language attitudes of the students in each of the two MOI streams.

(b) Medium of Instruction and Language Attitudes

The majority of language attitudes are normally developed and fostered in the home environment, supported by the atmosphere in the general community, and reinforced by an individual's peers (Gardner, 1985). Within the context of second language classrooms, the debate regarding the use of the mother-tongue often focuses on affective factors and effects on both L1 and L2 learning (Garrett, Griffiths, James & Scholfield, 1994). It however leads to a general understanding that a school's efforts in formal or hidden curriculum and through extra-curricular activities may affect or change students' attitudes (e.g. Baker, 1992).

In the Hong Kong situation, these latent attitudes are strongly shaped by the tenor in the classroom as students' contact with the target language (and its speakers of all kinds) takes place mainly in the classroom. In the post-colonial Hong Kong context, the MOI streaming arrangement and, as a result, the emphasis of the schools undoubtedly play an important role in shaping the students' attitudes to English and Chinese, as the learning experience of and through these two languages of the students of the two streams will probably be substantially different, thus modifying students' beliefs and perceptions of the two languages to different extents. It is therefore expected that the MOI bifurcation will effect changes in students' language attitudes towards the L1 and L2, particularly when students streamed into either EMI or CMI schools/classes have experienced differently in their English and Chinese learning and are immersed in a school environment with distinct commitment to the promotion of the two languages.

(c) Language Attitudes in Hong Kong

One should however note that the MOI as a factor in language attitudes is more specific to the context where the L1 and L2 are learned, and the strength of the relationship may be mediated by such contextual factors as the relative status of the two languages in the wider community, the presence and availability of the speakers and cultures, and parental biases/support. In the Hong Kong context, students' attitudes towards English and Chinese-Cantonese should be viewed in a context in which Cantonese is the statistically majority language with a much lower status than English, a statistically minority second language even though in status terms the roles are reversed. Under such circumstances, the segregation policy of streaming of students into EMI or CMI schools/classes has provided a special context for MOI to be a factor that may bear unique and significant relationships with students' language attitudes.

(i) Attitudes towards the English Language

Over the past few decades, business companies have demanded good English from the educational system since Hong Kong has aspired to transform itself from a small entrepot to an international financial and service centre. The strong need to learn the more economically powerful language has fuelled the drive towards some level of bilingualism and communicative competence, in the English language. Attitudes to English have obviously changed among Hong Kong students, from a situation when using English was felt to be a threat to Chinese identity (Pierson, Fu & Lee, 1980) to a new acceptance of and tolerance towards the use of English. (Pennington & Yue, 1994). English no longer carried the connotation of a colonizer, but an international language for wider communication. This process of transformation has been supported by the educational

policy, of which a major function is to supply the economy with a workforce with good English to sustain growth.

Studies of the early 1990s showed that Hong Kong young people were found to perceive themselves as a pragmatic bilingual group who would not feel their ethnolinguistic identity undermined when using English. In Pennington & Yue's (1993) study, it was confirmed that Hong Kong students were positive about English and most of them had the desire to speak fluent and accurate English. In Lai (1999), Hong Kong people are proud of their international links and the importance of English is found further developed from that of an international language into part of Hong Kong people's life, from an alien foreign language that threatened students' cultural identity to an element of Hong Kong identity. Its significance as a marker of Hong Kong identity has become even stronger in the post-colonial era as the increasingly substantial presence of the Mainland has reduced the importance of Cantonese in the international business and political arenas. In Lai's (2002) study on MOI and language attitudes, students considered English as an easier learning medium than their mother-tongue, especially for science subjects.

In sum, English is a familiar language to the students, part of their life, an easier learning medium for certain subjects and a prestigious language, though it does not necessarily suggest identification with the English-speaking people. It is therefore hypothesised that in general, students in both MOI groups will have a positive attitude towards English and its speakers of many kinds.

(ii) English learning and Language Attitudes

Hong Kong is largely monolingual and monocultural and Cantonese is the only variety that the majority of the population uses for all intra-group communication for daily-life purposes¹⁸. English is definitely not a street language and is both popular and prestigious only in certain sectors - in official administrative (ministry), financial (bank) and economic (business company) affairs or in the higher education sector. It is widely recognised that the English in Hong Kong is generally used more often in written than in spoken communication and more often in receptive than productive language behaviour.

Traditionally, students in Hong Kong achieved relatively low levels of proficiency in English at school and these poor results have been attributed to a number of factors, including general limited exposure to English in the social context, large class sizes, the use of out-dated or traditional instructional approaches, the lack of well-trained teachers with adequate proficiency in English, and the parents' limited knowledge of English (Cenoz, 1998 & 2004; So, 2002). For most of the students under the new MOI streaming policy, English learning is a relatively uncommon experience, engaged in for only a few hours each day with little immediate community support outside the classroom. English is primarily taught as a school subject, in a setting in which immediate access to the second language community is limited, if not virtually non-existent. It is quite possible that the language classroom is the only place where the students meet the language and that the teacher is the prime user of the language.

In addition, the fact that the English language system, not least the writing system, is totally different from the students' mother tongue also brings great difficulty in learning. It was reported in the press (Ming-Pao, 20 Feb 2001 a & b, cited in Lai, 2002) that some

¹⁸ Other dialects such as Hakka, Siyi (Toishanwa and nearby accents), Chaozhou/Minnan and Shanghaiese are spoken by a minority of people in Hong Kong (mainly senior citizens).

CMI students were resistant to English due to little exposure to the language and low achievement. This finding is confirmed in Lai's (2002) study, which reported that despite an overall strong affective inclination towards English among students, students with unsatisfactory learning experience with English expressed dislike of the language because they found it difficult to learn.

Achievement (or the lack of it) seems to be an important factor that induces positive (or negative) attitudes towards a language (Lai, 2002). In the language learning situation, if the students' attitudes are favourable, it is reasonable to predict, other things being equal, that the experience with the language will be pleasant. Favourable and pleasant/successful experience in learning tends to generate favourable and positive attitudes and the students will be encouraged to continue or put in extra effort. If, on the contrary, attitudes are negative, the experiences will tend to be perceived unfavourably, or vice versa.

It is therefore hypothesized that students from EMI schools/streams, with more positive experience in their English learning, will develop more favourable attitudes towards English, while the CMI informants, generally with a lower level of English proficiency, will show a less favourable attitude towards English than the EMI students. It is also expected that upon the transition to the two MOI streams, the attitudes towards English would not show much difference between the two MOI groups of students, who had just completed the nine years of education in the same CMI setting. It is the purpose of this study to ascertain whether any difference in attitudes between the two groups will emerge after they have been put in the two different MOI streams to experience the language in different settings for a period of time. The results of a longitudinal study to capture such changes will throw light on this.

(iii) The Chinese (Cantonese) Language

The significance of cultural identity as a factor associated with the development of language attitudes has long been established. Surveys done in Hong Kong also reflect a positive association between cultural identity and favourable attitudes towards Chinese-Cantonese. For example, Lau (1997) found that people who were born in Hong Kong tend to see themselves more as Hongkongers and those who identify themselves as Chinese are more willing to replace Cantonese with Putonghua as the official language of Hong Kong. As reported in Lai's (2002) study, the vast majority of the interviewees have shown the greatest affection for Cantonese as it is their mother tongue, a language they have already mastered, and a characteristic of the Hong Kong culture. With the status Chinese-Cantonese already enjoys in the wider local community and its institutionalized use in business and other public domains, designating the majority of schools as CMI schools could further confirm the status of Chinese-Cantonese and stimulate favourable attitudes in the students.

However, as English retains its hegemonic status as a language for upward and outward mobility after 1997, it is considered more prestigious to study in EMI schools. By reducing the number of EMI schools from more than 400 to only 114¹⁹, the Government further accelerated the elite status of the EMI schools and their students. Children who attend EMI schools are believed to be of a higher calibre and at an advantage of acquiring proficient English, which will enable them to open up a bright future (Johnson, 1998). As a result, the majority of the capable students with desirable language proficiency and general academic achievement will choose to study in EMI schools while

¹⁹ See Note 8 above.

the less capable ones are channelled to the CMI schools. Under such circumstances, it is expected that students in CMI schools, in an environment in which Cantonese and English are equally emphasized and with more successful experience in learning through Chinese-Cantonese, but less through English, will have better attitudes towards Chinese-Cantonese than those in EMI schools. In the within-school bifurcation settings, it is expected the students of CMI classes, who are further detoured from the EMI avenue which promises a higher level of English proficiency, may develop a more favourable attitude towards Chinese-Cantonese, and in cases where experience in English learning is far from satisfactory, a less favourable attitude towards learning English.

(2) Motivation

As pointed out earlier (see section 3 above), in the context of L2 learning, motivation in general is regarded to be another major affective individual-difference variable contributing to achievement in developing proficiency in the language. In this section, a more elaborated discussion covering the key aspects of the motivation construct is given below.

As early as 1975, Gardner and Smythe proposed that attitude variables support motivation to learn another language and that motivation promotes second language achievement. More specifically, Gardner delineated the relationship among attitudes, motivation and achievement, pinpointing that integrativeness and attitudes towards the learning situation are related to achievement in the second language, but that their effect is indirect, acting through motivation (Masgoret and Gardner, 2003).

Motivation in general is well recognized as an important source of individual differences with direct impact on achievement (e.g. Iso-Ahola, 1999; Duda, 1989; Vallerand, Deci, and Ryan, 1987; Martens and Webber, 2002). The motivated learner has goals and desires, is persistent and attentive to the task at hand, makes use of strategies to aid in achieving targets, expends effort and enjoys the activity. Motivation to learn a second language is therefore the extent to which the individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity. Only when the individual wants to learn the language and strives to do so – then it is truly motivation. In other words, the desire must be associated with a concomitant effort to achieve the goal. At the other end of the continuum, low motivated learners are found to suffer low self-esteem, see no purpose to their learning, have no control over what is learned, and in many cases, lack parental support. Deci and Ryan (1985) also describe an ‘amotivated’ state as one which individuals have no desire to act. In sum, motivation is related to achievement as it directly affects efforts expended and a lack of motivation is clearly detrimental to achievement-oriented or autonomous learning behaviour.

(a) Intrinsic and Extrinsic Motivation

A theoretical approach that has greatly influenced the study of motivation in general is Deci and Ryan's (1985,1991) self-determination and cognitive evaluation theory. It posits motivation as a non-unitary construct with two separate dimensions: one's motivation can be described as being internally or externally stimulated (e.g. Deci & Ryan, 1985; Deci et al., 1991; Vallerand et al. 1992; and Harter et al.1992).

Intrinsic motivation has its genesis within the individual and is congruent with his sense

of self and purpose. An intrinsically motivated student studies because of an interest in studying per se rather than for an instrumental reason. When internally regulated, a learner finds the task rewarding in itself, takes responsibility for learning, and follows his inner interests and engages in the learning activity naturally and spontaneously. As Kohn (1993) suggests, an intrinsically motivated learner exhibits enduring traits of self-satisfaction, self-determination, and self-recognition.

Conversely, motivation is external or extrinsic when the learning process is just a way of obtaining some desirable benefits, such as social success or other forms of rewards. When one's motivation is externally regulated, engagement in the learning is more controlled by specific external contingencies (like a pressure or a reward) (Deci & Ryan, 2000). A student with extrinsic motivation undertakes learning "to attain an outcome that is separable from the learning itself" (Vansteenkiste, Lens and Deci, 2006:19). He also expends efforts though not necessarily enjoys the activity, and perseveres with the task until he has attained a desired consequence or avoided a punishment. Research (Koestner, Ryan, Bernieri & Holt, 1984; Ryan, 1982; Ryan, Mims, & Koestner, 1983) has indicated that extrinsic motivation does not necessarily undermine intrinsic motivation and that it may even enhance it (Luyten & Lens, 1981).

Motivational orientation can also have a bearing on the level of task difficulty students select (Lepper, 1988). This resonates with what Nolen (1988) suggests, namely that students' motivation orientation influences the types of strategies they value and employ when studying or performing an activity. Students with an intrinsic orientation tend to prefer tasks that are moderately challenging, whereas extrinsically oriented students gravitate towards tasks that are low in degree of difficulty.

Comparisons between learners whose behaviour is internally regulated and those who are merely externally controlled reveal that the former have more interest, confidence, excitement, persistence, better performance, and show a better conceptual understanding of the material relative to the second group (Deci & Ryan, 2000; Grolnick, Ryan, & Deci, 1991; Hayamizu, 1997; Vallerand & Bissonnette, 1992; Yamauchi & Tanaka, 1998). All the above bears out that the learning activity is enacted with a full sense of volition and choice, and of the two types of motivation, intrinsic motivation, relatively speaking, makes for more effective learning.

From the above, it will be of interest to find out in this study whether MOI would have any bearing, directly or indirectly, on the intrinsic or extrinsic motivational orientation of the students of the two MOI streams, and whether such difference, if any, will remain over time. It can be expected that in a survey, taken at a time when the two groups had experienced marked difference in their academic pursuit, particularly in L2 learning, in their respective MOI settings, the two groups of subjects will exhibit greater difference in their motivational patterns or orientation in this respect.

(b) Integrative vs Instrumental Orientation in language learning

A substantial body of research in L2 learning suggests that one's motivation to learn an L2, apart from his orientation toward the learning task itself, is thought to be determined by his attitudes toward the other group, as well as towards foreign people in general (e.g. Gardner, 1985, 2000 & 2001). Gardner and Lambert (1972) distinguish an instrumental orientation from an integrative orientation to acquiring a language. An 'instrumental' orientation refers to a desire to gain social recognition or economic advantages through knowledge of an additional language while an 'integrative' orientation is a desire to learn

more about the other cultural community because the learner is interested in it in an open-minded way and “to the point of being like representative members of the other language community” (Gardner & Lambert, 1972:14). Dickinson (1995) suggests that Gardner's instrumental orientation can be aligned with extrinsic motivation and that integrative orientation can be aligned with intrinsic motivation. There are clear links between the instrumental, external and introjected regulatory processes, in which the studying itself is not of interest but in which the motivation stems from a desire to gain a degree/qualification or avoid failure. On the other hand, as the desire to join the language group drives the integratively motivated learner, he or she is more likely to seek social contact. The more the interaction, the more comprehensible input the acquirer is likely to be exposed to and to acquire. It is therefore no doubt that the bulk of the research evidence supports the proposition that second language acquisition is facilitated more by an integrative motive (e.g. Gardner, 1985; Krashen, 1981; Krashen, 1985).

According to Gardner, an integrative motivation is an important determinant, and perhaps more potent than an instrumental orientation. However, Clement, Noels, and Dörnyei (1994) argue that in some L2 situations, learners will never be exposed to a second language community. They contend that, in the absence of a salient L2 speaker group in a learning environment (e.g. as in the case of learning a LWC), integrative motivation is less appropriate; instead, it is the instrumental orientation that can be an important source of motivation and a predictor of success in L2 learning.

(c) Motivation for language learning in Hong Kong

The cultural context in Hong Kong is mainly a monolingual Cantonese-speaking community. English learning in Hong Kong resembles the foreign language situations

depicted by Dornyei (1990). For many individuals in Hong Kong, learning English is a relatively uncommon experience, engaged in for only a few years with little immediate contact with its native speakers. Local students learn English in the school setting only, often with an understanding that immediate access to the English language community is very limited. Given the importance of English in Hong Kong and the difficulty involved for students to pick up the linguistic aspects of English, a language from a totally different language family, it is very likely that the instrumental value of English has been the more powerful motivating factor. It will be of interest to confirm in this study whether students here are more aware of the instrumental goals for a good command of English than the need to integrate with English communities or its many kinds of speakers. In this light, it is hypothesized that Hong Kong students, i.e. both CMI and EMI students, would show a stronger instrumental orientation in L2 motivation.

If time on task is decisive in successful language learning, it is obvious that Chinese medium school students, in a setting with very limited support for English outside the English lessons, will be at a disadvantage as they will definitely have less exposure to English in school than the English medium school students. As a result, the motivation to learn English and the exposure to English, in general, tend to be both on the wane. It is therefore hypothesized that partly due to the relatively fewer successful learning experiences in English and partly due to amount of exposure to the language, students of CMI stream are less motivated to learn the English language. However, as the EMI students would have more exposure to the English language at school, it would be worthwhile to track whether after streaming, EMI students would report a higher motivation than their CMI counterparts.

(3) Locus of Control

Locus of Control is another motivational component that is considered to have an influence on students' support-seeking behaviour and performance. Locus of control has been generally defined as the degree to which individuals perceive themselves as having control over outcomes (Rotter 1966; DeCharms, 1968; Brown, 1990). In an academic environment, locus of control refers to the way a student accounts for successes and failures in school. These attributions, which may or may not be accurate perceptions, are believed to influence future behaviour profoundly.

There are two types of control beliefs, which are not necessarily mutually exclusive: internal and external. People described as having an internal locus of control recognize that the outcome of an activity is contingent upon their behaviour or efforts (Rotter, 1966; DeCharms, 1968; Brown, 1990) and therefore generally believe that they can influence the outcomes of future activities by maintaining or increasing their efforts. Within the framework of attribution theory, an internal locus of control aligns with intrinsic motivation and integrative orientation. Extensive research has supported that locus of control orientation is a significant predictor of academic achievement across cultures (e.g. Galeis & D'Silva, 1981; Lau & Chan, 2001). It has been confirmed that an internal locus of control, as an antecedent of student learning and academic performance (Nowicki and Strickland 1973; and Stipek and Weisz, 1981), has consistently shown higher relevance to persistence on learning tasks (Sandler et al. 1983; Bar-Tal, 1978; Luchow, et al., 1985), to greater use of self-regulated learning strategies (Salili 1994; Drew & Watkins 1998), to a higher level of adjustment in academic environments (Mooney et al. 1991), and to more optimistic outcome expectancies (Paris & Oka 1986).

At the other end of the continuum is an external locus of control, in which individuals perceive themselves to have little or no control over their achievement. For example, externally-controlled students will attribute their success or failure in an examination to capricious forces such as luck and fate, or to the action of powerful others such as teachers; and thus they tend to perceive that they have little personal control over the outcomes of future examination. An external locus of control aligns with extrinsic motivation and the instrumental orientation. Students who attribute their lack of achievement to factors that are seen as beyond their control will tend to give up and remain in a pattern of educational failure, which is frequently known as learned helplessness (Nowicki & Strickland, 1973; Galloway et al., 1995; Tyler & Vasu, 1995). Research on under- and low-achievers has identified external locus of control and maladaptive attributional pattern as a common characteristic among this group of learners (Whitmore, 1980; Butler-Por, 1987; van Boxtel & Monks, 1992; Vaidya, 1993; Tuss et al., 1995; Rimm, 1997; Galloway et al., 1995).

The present study is premised on the above findings and that students' self-regulated learning efforts mediate the relationship between internal control beliefs and performance (Salili 1994, Drew & Watkins 1998). Along this line of thinking, this study will focus on identifying whether EMI and CMI students will develop different perception of control after transition to the respective MOI streams in S4, and exhibit different inclination in their efforts to maintain their performance by availing themselves of facilities, such as actively seeking access to English-medium learning materials, to increase the probability of their success. The study will go on to track changes, if any, in their attribution after the students had experienced substantially different outcomes in their learning under the respective MOI settings.

(4) Self-Concepts

As suggested by Oxford and Shearin (1994), motivation is constantly changing throughout a student's lifetime. The actual underpinnings of an attitude to learning may be fluid; many factors, individually or combined, influence the initial constellation of attitudes children develop towards learning. Among them, self-concept is one of such key factors in the motivation equation (Harter & Connell, 1982; Marsh, 1990).

As Rosenberg (1979) noted in his classic book on self-concept, the individual's behaviour is more based on what the individual thinks he is like than on what he is actually like. Examining the relationship between self-concept and behaviour, Bandura (1989) and McCombs and Whisler (1989) spell out clearly that students' self-concepts mediate motivational predispositions to engage in achievement behaviour, affecting cognitive and selection processes (cited in Dean, 2001). This resonates with Zimmerman's (1989b) claim that self-perception of competence is a 'thermostat' that regulates a learner's strategic behaviour in learning through a feedback loop. Evidence also abounds in recent research that contends that a high evaluation of the self is often found to relate to a higher level of motivation to adopt various strategic behaviour to improve learning, such as expenditure of effort (Skaalvik & Rankin, 1995), help-seeking (Ames, 1983), and engagement and persistence in classroom activities (Skaalvik & Rankin, 1996b; Skinner, Wellborn & Connell, 1990); while low self-perceived competence often results in task avoidance (White, 1959; Harter, 1978, 1987; Bandura, 1989; Zimmerman, 1989b).

(a) Internal and External References

With a growing body of literature on the study of self-concept in the last two decades, the

construct is now better understood and measured as a multidimensional construct (e.g. Marsh, 1993; Marsh, Byrne & Shavelson, 1988; Marsh & Yeung, 1997; and Zanobini and Usai, 2002), instead of the traditional global composite (Shavelson, Hubner and Stanton, 1976). It is an aggregated judgement of past experiences typically assessed at domain-specific levels that entails both internal and external references (Marsh, 1986). In the educational setting, the internal frame of reference refers to the student's comparison of perceived ability in one subject domain with perceived ability in another subject domain. The external frame of reference refers to the comparison between the student's perceived academic ability and the abilities of other students in a given environment (e.g. the academic institution, peers). Hence, for example, a student with a comparatively lower L1 achievement among the peer group may have a significantly lower self-concept due to the external comparison, but may have a relatively higher L1 self-concept than L2 self-concept if L2 is the student's lower performance in school (e.g. Marsh, Byrne & Shavelson, 1988; Tay, Licht & Tate, 1995).

(b) Self-concept and Achievement

While acknowledging that an individual's self concept is related to school adjustment, satisfaction and achievement (e.g. Marsh, 1990, 1993; Marsh & Craven, 1997; see also Graham, 1994; Sanders, 1987), the research concern about self-concept and achievement is more an issue of whether self-concept affects achievement or achievement determines self-concept. Recent research has shown a causal relationship between self-concept and subsequent achievement and that this relationship is reciprocal in nature (Hay, 1997; Helmke & Aken, 1995; Marsh & Yeung, 1997a; Lau, Yeung & Jin, 1998; McInerney, 2001). The most consistent evidence of this reciprocated relationship is found in the poor self-concept or self-esteem of under-achievers, especially in the areas of academic and

intellectual self-concept (Kukla, 1972; Whitmore, 1980; Butler-Por, 1987; Carr et al., 1991; Van Boxtel & Monks, 1992; McCall et al., 1992; Rimm, 1997; Tuss et al., 1995). In general, as under-achievers do not believe that they have the ability to achieve, they will spend little effort on studying and will easily give up when facing difficulties. As a result, they have a higher chance of experiencing failures in academic achievement, which in turn will lower their self-confidence on learning and lead to a poor self-concept. This negative relationship between academic self-concept and achievement becomes a vicious cycle that makes the pattern of under-achievement difficult to reverse. According to the above, the positive self-concept is therefore both a desirable outcome and a constructive mediator of academic motivation and performance (e.g. Marsh, et al., 1991).

(c) Stability or Malleability of Self-Concept

Shavelson and colleagues (1976) identified stability as one of the most important characteristics in the definition of self-concept. In fact, several studies reported that general as well as subject matter specific self-concepts demonstrated high stability coefficients that were even stronger than the stability coefficients of corresponding achievements (Marsh & Yeung, 1998; Shavelson & Bolus, 1982). Attempts to bolster students' self-concept have produced only modest success, presumably due to its relatively unchanging nature (e.g. Craven, Marsh, & Debus, 1991). However, whether self-perceptions are resistant or amenable to change upon new experiences has important implications for educational practice. In this study, it is intended to study if the self-concepts of students from both groups, after a significant "intervention", i.e. the placement of students into the respective MOI settings in the unique local social context, will develop corresponding changes in their self-concepts over time.

(d) Self-concept of Students in Hong Kong

In schools in Hong Kong, relative academic performance is strongly emphasized, and students constantly compare their ability with others in their immediate environment (e.g. classmates/schoolmates in the same school or students of other schools) as one of the main bases of formulating their self-concept. In this respect, the language requirement in Hong Kong, in the light of the socio-cultural values attached to the two MOI media, presents many students, particularly those in the CMI schools/stream, with a particular conflicting situation. On the one hand, claims are often heard that mother-tongue use in the classroom leads to greater self-confidence and self-esteem, greater pride in one's culture, breaking barriers between home and school, between the minority linguistic community and the wider society (Edwards, 1983; Patel, 1984; Garrett, Griffiths, James & Scholfield, 1994). On the other, local students are all aware that it is a good command of the English language, not Chinese, that defines their academic performance. For the present generation of Hong Kong students, English is clearly the more influential verbal domain in an educational setting because English has been accorded higher status both at schools and in the wider community for over one hundred years. This is confirmed by Yeung & Lau's study (1998) which reports that a higher prior English achievement had a significant negative impact on the formation of the students' self-concept in Chinese. Students' achievement in English that was more significant in the colonial educational system is found to have a more negative impact on their Chinese self-concept whereas their achievement in Chinese did not exhibit a similar impact. As such, in the Hong Kong situation, English has always had a priority over other subjects and therefore, proficiency in English can enhance one's self-esteem whereas Chinese could not. On the other hand, a student's view of himself as "poor in English" (part of his self-concept) will have a detrimental effect on his overall self-esteem.

The cultural characteristics of Chinese have all along emphasized external comparison. In the Chinese culture where one's face – the reputation obtained through success in the accumulation of knowledge or wealth – is of great concern (e.g. Ho, 1976), the gain in status and face of attending a high-ability school may possibly overcompensate the loss in prestige due to comparison with high ability classmates/schoolmates there (Lau, Yeung & Jin, 1998). In Yeung & Lau's (1998) study examining the verbal (Chinese and English) self-concepts of 274 university students in Hong Kong three months after the end of the colonial era, their data, tested against Marsh's (1986) internal/external frame of reference model of self-concept development, attest the above. They have identified among the subjects a strong external comparison with other students in forming respective self-concept.

The above complexity of the internal and external comparisons of the students' Chinese and the colonial language, English, may be partly explained in terms of the importance the local social milieu accredited to the respective languages. Despite the fact that Chinese is their first language, when achievement in Chinese, a less salient "academic" domain as indicated by its values and status relative to those of the high power English, is considered, the students are less inclined to benefit from a positive internal reference by comparing their performance in English. At the same time, the development of students' self-concept is further complicated by the external comparison they could easily make in the presence of a readily identifiable group of peers/counterparts under the MOI bifurcation arrangement within and outside school. This unfolds in part the development of self-concept among the local students in the academic setting under the influence of the MOI streaming arrangement.

According to the above findings, it can be expected that high ability students accepted to EMI schools, or the EMI classes in this study, who have outperformed their peers in public examinations or internal school tests tend to have more positive self-concept than their CMI counterparts. The study will also ascertain whether students in the EMI groups would show more favourable development in their academic self-concept, self-esteem and social self-concept.

5. Summary

The literature relevant to the theoretical constructs both at the Language Level and Learners' Level within the scope of this study is very voluminous. This chapter gives a review of the literature on the key related constructs which are central to the understanding of L2 motivation and development in academic achievement. It involves research on language attitudes, motivation, locus of control and self-concept; and on the relevance of the socio-cultural factors on the development of these attitudinal and motivational variables. The significant findings in previous research attest that the development of positive aspects of these attitudinal and motivational characteristics is affected both by individual factors and those in the environment; and that individual differences in these characteristics will interact with learners' experiences of learning, which will, in turn, affect academic achievement.

Based on the issues identified in the above, this study aims to develop an understanding of the impacts of the MOI bifurcation, in the light of the socio-cultural values of the local context, on the ontogeny of students' attitudinal and motivational dispositions, self-concepts and perceived locus of control; and on students' engagement in learning related behaviour which are conducive to academic achievement.

For such a purpose, the research involved a longitudinal survey among students learning in either of the two MOI streams upon transition to S4 in Hong Kong. A small group of the informants were also interviewed to provide qualitative data to supplement and enrich the findings from the quantitative surveys. The following Chapter describes the methodology implemented to explore the relationships between the MOI bifurcation and the motivational and behavioral development of the students learning through the respective medium.

Chapter Three: Methodology

The principal concern of this investigation is to identify and evaluate the relationship between MOI and learners' socially-situated affective and behavioural responses. More specifically, it is to ascertain and assess, in the light of the broader social influences such as socio-cultural values and language status, whether the MOI streaming in the local context has an effect on students' development in terms of language attitudes, motivation, locus of control, self-concept, and their learning behaviour; and as a result, whether the MOI streaming has any direct bearing on students' academic achievement.

This chapter begins with a reiteration of the two research questions that underline the overall research design. In this light, the research instruments and the validity and reliability for the instruments are assessed. It then proceeds to give an account of the research procedures regarding sampling, data collection and processing adopted. Finally, the limitations that are inherent in the overall design, which have implications for subsequent discussions and conclusions to be drawn from the findings, are identified.

1. The Research Questions

The research questions address the relationship between MOI and students' affective and behavioural development. The two research focuses that provide the framework for the research design are:

- (1) *Do students of the two streams exhibit or develop any differences in language attitudes, motivational patterns, locus of control and self-concept upon transition to their respective MOI classes; and if so, whether their affective*

responses change over time as they pass through the system under different MOI settings.

- (2) *Do students of the two streams exhibit different behavioural dispositions (e.g. in their support seeking behaviour and the levels of perseverance in the learning of the L2 (i.e. the high-status English))? To what extent are the differences, if any, associated with the differences in attitudinal and motivational orientations? Do the students in the two classroom types register significantly different progress in L2 proficiency development and academic performance, as evidenced in self-reported school assessments and is this related to attitudes and motivations?*

2. The Research Design

The above research questions probe into the differential experiences of students of the two MOI streams upon the transition to the streamed settings in S.4. They also aim to detect changes, if any, in the perceptions and behaviour of the students after they have learned in a bifurcated setting for a period of time. This research therefore explores the relationship between MOI and the other variables, such as language attitudes, motivation, etc. It also mandates a longitudinal approach to use the student as the informant to provide information on his/her experiences in his/her MOI environment and the resultant affective and behavioural responses he/she has had over time. The unit of analysis is therefore individual students and the investigation is focused on whether differences in the MOI experiences lead to differences in attitudes, behaviour, and eventually, performance.

For the purpose of this study, the research design has two components to gather

information from a sample of students from each of the two MOI streams: (i) the quantitative survey, which is cross-sectional and descriptive; and (ii) the qualitative interviews, which “allow[s] us to put behaviour in context and provide[s] access to understanding [the students’] action” (Seidman, 1998:4). The quantitative part of the study utilizes a questionnaire using Likert-format scales specifically designed to elicit responses on students’ perceptions of the two languages and people associated with them, students’ feelings of control and motivation, self-concept, perseverance in L2 learning, and parental support, at two specific junctures of time²⁰ to capture any changes or development. While the quantitative surveys will generate a large amount of data, the second component, the qualitative inquiry, will address the beliefs and perceptions underlining the scores of the subjects. The former deals with numbers to provide the basis for making generalizations of the findings, while the latter deals with words and meanings (Dey, 1993; Lau, 2002) to provide richer details on the feelings and judgement behind the responses to reinforce the quantitative data and interpretations of results. As such, the quantitative and qualitative methods adopted in this study complement each other. Although the two research components adopted here may not be able to generate adequate evidence to establish causal relationships between MOI and the other variables, they will provide useful information on the associations and correlations among them.

3. Part One: The Questionnaire Survey

3.1 The Instrument

As this is a longitudinal study to gauge and detect changes, if any, in the students’ affective and behavioural responses to the MOI experience over time, to get to the heart

²⁰ Two surveys were conducted to gauge changes over time. For more details, please see section 3.3 (1) (c) and 3.3 (2) below.

of student development in these respects requires a specially designed instrument of measurement that is capable of gauging any changes in the students across the affective and behavioural domains identified for this study. On the one hand, the measure must be built around the theories supporting the specific domains, and on the other, it must be able to identify changes over time. Though there is a plethora of assessment instruments available for the measurement of students' development in each of the affective and behavioural domains identified, there is none that is capable of providing a comprehensive coverage of all the factors. This therefore mandates the design of an instrument that is a combination of more than one stand-alone measure, or sub-measure, designated for each of the domains. A more detailed discussion on the sub-measures chosen from among established instruments for adoption is given in Section 3.2.

Consequent upon the need for a composite instrument, the second concern in the design of the instrument is the compatibility among the formats and units of each of the sub-measures. Although a uniform format and unit of measure is not a necessary condition as effective comparison of the sub-measures can still be conducted and analyzed through various acceptable means of conversion and adjustment of data collected, it is particularly desirable to provide an instrument with a high level of unity and consistency in approach, units of measurement, and assessment standards to facilitate students to give more consistent and reliable responses. In view of the above and for the benefit of a simple questionnaire, a few questions selected from the chosen instruments in different formats, such as multiple-choice questions and fill-in-the-blank questions, etc. have been converted to the same format: statements in either the positive or negative sense to form the base of a questionnaire for the study. Students were required to indicate whether they agreed or disagreed to each of the statements in a 6-point scale, with 1 indicating "strongly disagree" and 6 "strongly agree". The rating scale is very similar to the Likert

scale but does not contain a neutral position. A 6-point Scale was used instead of a five- or seven-point one to avoid central tendency. Internal consistency and factorial validity evidences are reported at the latter part of this Chapter.

3.2 The Variables Measured

(I) Demographic and Background Information (12 variables)

- School (3 groups)
- class (4 groups)
- class number (for identifying the respondents for comparison purposes)
- sex (dichotomy)
- Hong Kong as birth place (dichotomy)
- years in Hong Kong (for those not born in HK)
- housing types (6 categories + others)
- languages spoken at home (6 groups + others)
- self-assessment of English (6 grades from 'excellent' to 'poor')
- self-assessment of Chinese (6 grades from 'excellent' to 'poor')
- parents' education (5 categories + 'don't know')
- parents' language proficiency in English (5 groups + 'don't know')
- parents' language proficiency in Chinese (5 groups + 'don't know')

The questions on School and Class will enable the researcher to classify the respondents into one of the two MOI streams and one of the Arts/Science/Commerce groups the students are enrolled in. The Class Number is needed for identifying the students for paired comparative analysis of the data collected from the two surveys. As students who were not born in Hong Kong are mainly from the Mainland who had initially received a

completely monolingual education in Chinese, it is highly likely that they may have a stronger sense of their Chinese identity and more positive attitudes towards Chinese than their counterparts who were born and educated in the colonial Hong Kong. It is therefore considered necessary to include birthplace and number of years in Hong Kong as variables so that the impact of this possible factor can be, if necessary, assessed and controlled for in the analysis.

The division of social classes in Hong Kong is usually based on household income and/or occupations [e.g. Yu & Bain (1985), Tsang (1992), and Wong & Lui (1992, 2000)]. However, as this is a self-reported survey by students, a very simple and easily comprehensible indicator should be provided, as the students may not know very well the details of their household income and the occupation(s) of their parent(s), and they may have difficulty in discriminating clearly the various categories of occupation commonly adopted in local surveys (e.g. Wong & Lui, 1992), such as the differences between higher-grade and lower-grade professionals and between higher-grade technicians and technicians. Also, in this survey, social class is needed more as a measure to determine whether there are any substantial differences in this respect among the students of the three schools and of the two MOI streams, than as a variable for relational analysis between socio-economic status and the attitudinal and behavioural factors. In consideration of all the above, it was decided that it would be sufficient to have information on housing types and parents' education as indicators, if necessary, to demarcate student families into different social groups.

Questions on languages spoken at home and parents' education and proficiency in the two target languages will assist in further ascertaining whether there are any significant differences in the linguistic environment at home among the students of the three schools

and the two MOI streams. Data collected will also facilitate the analysis of whether parental support is highly correlated with the parents' level of education and language competence.

As part of the self-reported measure on achievement, students were asked to rate their level of competence in both Chinese and English. More details of the scales are given in Section II (3) below. It however should be noted that this evaluation, far from being an objective evaluation of the students' achievement, is the students' self appraisal, which may be measured against different yardsticks (such as expectations), including both self-imposed and the teachers', and the students' relative standing in their own classes/schools. Given the above limitations, the evaluation only serves to assist in comparing the levels of achievement of the two groups of respondents and to supplement the analysis on the relationships between achievement and the other variables such as self-concept, motivation and language attitudes.

(II) The Sub-Measures

Part II of the questionnaire consists of 65 core questions²¹. The core questions are structured in seven parts, measuring variables of the following categories:

(1) The Attitudinal and Motivational Variables

(a) Language Attitudes (2 scales)

Language attitudes in this study, on the basis of the analysis delineated in Section 4.1 (1) in the previous chapter, refer only to the affect (Gardner 1985b, Mantle-Bromley, 1995), which is an evaluative, emotional reaction associated with the two MOI languages (L1 –

²¹ Please also see section 3.3 (1) (b) below.

Chinese and L2 - English), and is measured by a 23-item 6-point subscale adapted mainly from the questionnaire on language attitudes developed by Schmied (Schmied, 1990) and Gardner and Lambert's Attitudes and Motivation Test Battery (AMTB) (Gardner & Lambert, 1969). The Schmied's questionnaire was first developed in 1985 (Schmied, 1985), tested by Kembo Sure (1989) and used again by Schmied in his research on language use, attitudes, performance and sociolinguistic background in Kenya, Tanzania and Zambia in 1990 (Schmied, 1990), while the AMTB is a long established instrument used in a whole array of research in language attitudes. The questions in the subscale for English are basically arguments in favour of or against English while those in the Chinese subscale are arguments in favour of or against the Chinese language. Each of the items has a score ranging from 1 to 6. Students were to identify with one of the 6 positions ranging from 'strongly agree' to 'strongly disagree'. The scores for all negative arguments were reversely recoded on a scale of 1 to 6 and added to those of positive arguments of each of the subscales, giving a composite indicator of the strength of students' positive attitude toward either one of the two languages.

The attitude questions for each of the two languages include a combination of five components: effectiveness of the two languages for learning (e.g. It is easier for pupils to understand concepts when they are explained in Chinese); relative standing of the two languages (e.g. English is a more superior language system); the usefulness and instrumental values of the two languages (e.g. For a career in the civil service and the business sector, it is essential to know Chinese as well); preference of one language and its culture over the other (e.g. In order to preserve their cultural identity, it is important for Hong Kong people to be able to speak and read Chinese); and attitudes towards the speakers of the languages (e.g. Compared to English-speakers, Chinese are more sincere and honest). The questions of the first four clusters are directly adapted from Schmied's

(1990) questionnaire, with only one question from the AMTB included in each of them to supplement and strengthen the consistency of the questions in each cluster. All the four questions in the last cluster on attitudes towards the speakers of the two languages²² are from the AMTB. The two measures were tested for internal consistency, and the results are given in Section 6.

(b) Motivation

Although motivation is best explained as a complex and dynamic process with room for several intervening variables (Gardner and Tremblay, 1994), the measure for this construct will focus on the key aspects identified in the previous chapter. This study presupposes differences among students of the two MOI streams in their motivational intensity to learn the L2, the objectives in mind and the origin of the drive strength. The contention here is that the motivational characteristics of the students in L2 learning is dependent on the MOI experience. It is argued that students with an EMI experience tend to demonstrate more of certain behavioural patterns which are conducive to the acquisition of the L2 than their CMI counterparts do. The measure for this construct consequently includes a motivational intensity subscale to measure the students' desire to learn the L2, an orientation subscale to determine whether the aim in L2 study is to learn more about the language group or to reflect more the utilitarian values of language achievement in L2 learning, and an intrinsic-extrinsic motivation subscale to identify the source of the driving force for learning.

²² It should be noted that there was no distinction between English and English-speakers of other nationalities in the discussion. In Hong Kong, as conversation and interactions between the majority of the local people and foreigners (including tourists, visitors and the expatriate minority), irrespective of their nationalities, are mostly done in English, students tend to treat all foreigners as English speakers without further differentiation on the basis of their first language or nationality (e.g. whether they are native speakers of English or not).

This combination of subscales begins with the motivational intensity component which measures the students' desire to learn the L2. This cluster, extracted and modified from the AMTB test batteries of Gardner and Lambert (1972), consists of five items about English learning, and a high score indicates a favourable desire towards learning English. Secondly, the section on motivational orientation will determine whether the aim in L2 study is to learn more about the language group or to reflect a more utilitarian value of language achievement. This sub-measure, also from the test batteries of Gardner and Lambert (1972), is comprised of five items on reasons frequently given for studying a second language. The students were asked to indicate the extent to which they agreed that it was descriptive of their own reasons for studying English. Endorsement of statements which emphasize the importance of learning English for interaction and shared cultural experiences is interpreted as indicating a strong orientation of integrativeness, while endorsement of utilitarian reasons suggests a high degree of instrumentality. Thirdly, the intrinsic-extrinsic motivation sub-scale, adapted from the Student Multidimensional Motivation Measure (SMMM) (Lui-Lau, 2001) is to identify the source of the driving force for learning. It is made up of five items which emphasize either learning for its intrinsic values or learning for external rewards. A high score in items arguing for the former indicates a strong intrinsic motivation while a high score in those arguing for the latter endorses an extrinsic orientation. The formats of some of these questions were modified to fit the overall Likert format of the questionnaire. Two of the fifteen items, one indicating a lack of motivation to learn in general and the other a lack of interest in English learning, were reversely scored for the calculation of the composite scores. Internal consistency tests were conducted and the alpha values are reported in Section 6.

(c) Locus of Control

The measure for the construct chosen is built around the theory that there are two types of control beliefs: internal and external, which are not necessarily mutually exclusive (please see section 4.1 (3), Chapter 2 for details). On the basis of the analysis done in the previous chapter, this study hypothesises that EMI and CMI students, learning through the respective MOI streams in S4 in the local setting, will develop different perception of control, and thus exhibit different inclination in their efforts to maintain their performance or to increase the probability of their success.

The measure for locus of control, a 5-item abridged version of Rosenberg's (1979) Locus of Control Scale extracted from Pearlin et al. (1981), evaluates the student's feelings of control, or the degree to which individuals feel that outcomes are caused by their own inputs (internal) or outside forces (external). These factors may include luck, fate, or the behavior of other people. A sample item from the subscale is "Every time I try to get ahead, something or somebody stops me". All items were rated on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). The external items were reversely scored and added to the internal items, so that the composite measure is an index of internal locus of control, with higher scores indicating greater internality.

(d) Self-concept

The analysis in the previous chapter (please see Section 4.1 (4), Chapter 2) has unfolded the complexity of the development of self-concept among the local students in the academic setting under the influence of the MOI streaming arrangement. Given the disparity in status and values of the two MOI languages and the streaming criteria of the

MOI bifurcation arrangement, it is hypothesized that students accepted into EMI schools/classes, benefiting from both favourable internal and external references²³, would have more positive self-concept than their CMI counterparts. The study will also ascertain whether students in the EMI groups would show more favourable development in their academic self-concept, self-esteem and social self-concept some time after the MOI segregation.

In this study, the major foci of the study are to examine the effect that medium of instruction (MOI) has on students' self-concept and whether there are any changes in this measure. In order to examine the impacts of MOI on self-concept of students participating in this study, a self-concept scale, drawn from SMMM (Lui-Lau, 2001), Rosenberg (1980) and Marsh's SDQ II (Marsh, 1992) was compiled, measuring three key domains of the self-concept, viz. academic self-concept (from SMMM), self-esteem (from Rosenberg, 1980) and social self-concept (from SMMM and Marsh's SDQ II).

The sub-scale to assess academic self-concept is to assess students' confidence in academic ability and feelings about school performance. It gives an evaluation of one's self perception of being a capable, competent, and successful student (Johnson & Johnson, 1996). An example of the items is "I like school because I can do well in my school work". The second sub-scale pertains to gauging students' self-perception of competence in the social domain – it assesses the extent to which the participants feel accepted by significant others, such as peers. A sample item is "it is easy for me to make friends with other children in the school". Then it is followed by the third component, the measure on global self-esteem, which gives an overall assessment on the students' confidence in themselves. A typical positive statement in this sub-scale is "I feel I am a

²³ See Section 4.1 (4), Chapter Two.

person of worth, the equal of other people”.

Because of limitations on the length of the instrument, only 4 items were used to represent each domain of the self-concept. Nevertheless, the reliability for this scale was consistently reasonable across all the three domains measured²⁴, particularly given the brevity of the scale. The scores of all the three sub-measures were computed to provide a global measure of self-concept. The reported coefficient alpha reliability for the composite scores was .69 for subjects in the first survey.

(2) The Behavioural Measures

The focus of the second research question of this study is on the behavioural responses of the subjects. In particular, this study sets out to identify differences in the two MOI groups of students in the engagement in activities that are conducive to enhance their L2 learning and achievement. Specifically, it gauges the students' (i) support-seeking behaviour, with specific reference to assistance given by and involvement of parents, and (ii) perseverance in L2 learning, with particular reference to time devoted to L2 learning, and the amount of efforts dedicated to L2 literacy development (i.e. by availing themselves of facilities which support their L2 learning, e.g. preference for English books, L2 reading at home, watching or listening to L2 media, gaining more exposure to L2 outside schools, etc.) It will also measure the association between the behavioural differences, if any, and the students' attitudinal and/or motivational dispositions.

(a) Parental Support

Parental support is measured as the degree to which parents provide assistance to their

²⁴ See Table 2, Section 6 for details.

children and are involved in the subjects' English learning. This subscale, adapted from Ross and Broh (2000) and SMMM (Lui-Lau, 2001), contains four items. Two of them ask the participants directly whether they get encouragement and assistance directly from their parents (or through the employment of private tutors) in their English learning. The other two items measure how parents are involved in their learning by asking whether the subjects talk to their parents about school. The model hypothesized that MOI influences students' academic motivation and that this in turn affects their decisions to seek support from their parents, which subsequently influences their academic performance. The test for internal consistency was conducted and the alpha value is .64.

(b) Perseverance in L2 learning

This measure of students' perseverance in English learning is adapted from the learning strategies section in Gardner and Lambert (1969). There are a total of five items. The first four evaluate the quantity of work the participants reported that they put forth in the study of English, while the fifth extends to measure students self-regulatory learning practice in general. A high score on this six-point subscale indicates that the subject expends considerable effort in the study of English and adopts self-regulation in his study. The reliability analysis for perseverance in L2 learning in the present study showed an alpha value of .75 for the first survey.

In all the questions of this section under sections (1) and (2) above, the respondents were presented with both positive and negative statements/arguments and asked to give a rating for each question such that a high score of '6' represented that they strongly agreed and a low score of '1' disagreed. The sixty-five statements from all the above sub-scales were given in random order. Certain items are "negative", i.e. their content is opposite of

that reflected by the name of the subscale. For these questions with negative statements, the scores were computed in reverse to align with the other questions to give the same indication of preference. The reliability analysis for these sub-scales in the present study is given in Table 2, Section 6.1.

(3) Student Achievement

The quantitative part of this study is completed by a comparison of the performance of the students between the MOI groups and over time. Due to the lack of a set of performance indicators commonly adopted by all schools for students in S4 and the researcher's lack of access to students' actual performance at school, this part of the analysis and comparison could only be done on self-reported performance of the student participants.

First of all, two general classes of indices of achievement in the two languages were obtained. To gauge students' self-assessment in their language proficiency in the two languages, each student was asked to evaluate in both surveys his own competence in English and Chinese on a five-grade scale, ranging from 'excellent' to 'poor'. The students' reported "grades" serve as a measure of students' pre- and post-streaming scores of academic performance.

Moreover, in view of the fact that these self-reported performances in the form of five broad categories (from 'excellent' to 'poor') might not be, in contrast to numeric test scores, effective in capturing small between-subject differences or within-subject progress made in students' achievement over time, additional questions were included to

measure students' perceived improvement in the two languages in the second survey. To facilitate the informants to give a fair assessment on the improvement achieved after the transition, two questions were set for them to report their performance in the two languages in their S3 terminal examination and a recent test/examination in S4 respectively, on a seven-grade scale ranging from 'excellent' to 'poor'. These two questions were designed to ensure that student respondents, after being guided to make reference to "performance" in two actual examinations/tests, would be able to give a fairer evaluation of the improvement they had made over time in the second survey. After these two questions, they then had to indicate how they felt about their improvement in performance in the past eight months on a seven-grade scale, ranging from 7='a lot of improvement made' to 1='much worse than before'.

Finally, to measure the respondents' overall confidence in their academic achievement, they were asked first to give an estimate of their predicted grades in the two languages in the coming HKCEE on a seven-grade scale ranging from 'excellent' to 'poor'; and then to state if they were confidence that they would be able to get a place in a university on a six-category scale, ranging from 6='highly confident' to 1='no confidence at all', with 0='no idea'.

3.3 The Questionnaire

(1) The adaptation process

(a) Piloting the Questionnaire

The first draft of the questionnaire was first tested on a group of two local S4 students with a high level of English competence. The primary purpose of the pilot was to test the

clarity of the questions, i.e. to ensure that all questions were understood well by the participants. Feedback from respondents of the first pilot test indicated that some terminology from the selected questions were not easy for them to understand and required some explanation in Chinese by the administrator of the questionnaire before they could give their responses. Examples of such English terms include the notion of national identity, social class differences and language policy, which were found to be difficult for them to comprehend as they are less familiar with the concepts within the educational context in Hong Kong. It could also be that these concepts are a bit difficult for this age group. As a result, the wording of some of the questions were reworded and modified to relate the meaning more to the students' experience in the local context, and questions less relevant to the local students' experience were removed, to better reflect the relevance of the instrumentation to the local environment.

A Chinese version of the questionnaire was then developed by the researcher, who has a qualification in English-Chinese translation, to enable the respondents to get a good grip of the meaning in their own language. The translated version of the questionnaire was commented on by a professor in English-Chinese translation at a local university. Based on the feedback collected, further modifications were made to incorporate appropriate changes to the wording. The Chinese version was finally adopted after it was further tried out with another group of two local S4 students. Both had no problems in understanding the questions and were able to finish the task without seeking assistance from the administrator of the questionnaire.

(b) The length of the Questionnaire

During the pilot, it was found that the questionnaire was a bit too long, as it took more

than thirty minutes to complete. As remarked by two of the school principals, their students have frequently been invited to participate in a variety of questionnaire surveys and therefore may not welcome long questionnaires. Also the students may, in the case of a long questionnaire, be too tired to attempt each question with the attention it deserves, particularly when it is a long list of questions which focus more on attitudes and feelings than on facts and straightforward answers. They recommended that a questionnaire of not more than 30 minutes, according to their experience, would be the ideal as it matches well with the time span of concentration of their students. The number of questions had therefore to be kept at a minimum. After the removal of a few repetitious questions and subsequent modifications to the language, the main trunk of the questionnaire contained a total of 65 questions only, plus a separate section on background and factual information - the list of questions was trimmed down to ensure that the time needed would be around 20-25 minutes.

(c) The Two Versions of the questionnaire

Two versions of the multi-measure questionnaire were designed for the measurement of the identified dimensions, one for each of the two junctures which were about eight months apart. In the first version (Appendix B), Part I of the questionnaire includes questions to obtain information about the students and their language background. They provide information on language stream, gender, place of birth, languages spoken at home, competence in both Chinese and English, knowledge of other Chinese dialects, parents' educational attainment and their language competence. In Part II of the questionnaire, participants were asked to answer 65 core questions in relation to language attitudes, motivation, locus of control, self-concepts, and perseverance in learning and parental support. The focus on these concepts as possible dependent variables was

explained in the previous Chapter. Each of the items has a score ranging from 1 to 6, with 1 indicating 'strongly disagree' and 6 'strongly agree'. Data collected from the first survey formed the basis for comparison with those obtained in the second.

Version Two (Appendix C) of the questionnaire is for the second round of the survey administered to the same groups of students around eight months after the first round. It begins with the same 65 core questions, followed by an additional section for students to report performance in the two languages before and after the transition to S4 and their overall perception on progress made in the past eight months. As the second survey was done in the middle of the second term, the subjects would have been more aware of the imminence of the terminal public examination, i.e. the HKCEE, which would only be about a year later. Given the importance of the Examination to the students, two questions specifically dedicated to measure their level of confidence in doing well in the two language subjects in the HKCEE examination and in getting a place in a university eventually were included, so as to provide more information on their overall level of confidence and for cross-checking with their scores collected under the domains of self-concepts and self-reported achievement in school.

(2) The two surveys

The questionnaire was administered by the teachers of the sample schools at a date and time assigned by the individual school principal or teacher. Each time the questionnaire was distributed to students on the spot for immediate completion and return. There was a lapse of eight months (from September 2004 to April 2005) between the first and second administrations of the two versions of the questionnaire. The response rate was very

satisfactory, since a total of 389 and 401 students²⁵ (all who were present when the questionnaire surveys were conducted) completed the first and second surveys respectively. The data obtained from the same subjects during the two occasions were needed for subsequent matching and assessment of changes, both negative and positive, over time. Therefore, students who were absent from school on either one of the days the surveys were conducted were unable to provide the two scores needed and so their responses were not used for the comparison of the measures.

(3) The Sample

The overall research design is predicated on the notion that the impacts of the MOI can be best measured by directly comparing the students of the two MOI streams. However, sampling for research in Hong Kong on the significance of MOI as a factor affecting students' affective responses is not at all straightforward as the way schools are bifurcated has inevitably complicated the issue, making it difficult for any research to single out the MOI factor without involving other variables such as the general academic achievement of students and the linguistic environment of the schools. To minimize the concomitant effects from factors other than MOI, this research targets at comparing samples from the two MOI streams within the CMI sector²⁶.

Convenience samples were used and participants were drawn from three CMI secondary schools from which the researcher managed to solicit their support and consents. Common to all three schools is that in the first three grades, English and Chinese are taught as school subjects but Chinese is the main language of communication at school. All students upon transition to S4 are streamed into either the EMI or CMI classes within

²⁵ For more details, please see Section 3.3 (3) below.

²⁶ More details on the background can be found in Chapter One.

each school. According to the three school principals, the major criterion for the allocation is the competence of the students. Only students with an acceptable level of English proficiency and academic competence are allowed to join the EMI stream as a reasonably high level of English competence is prerequisite for students to benefit from learning through the English medium. Therefore, these CMI schools provide the opportunity of comparing groups of students who have to receive their education in senior grades in either one of the two MOI settings within a similar bilingual setting.

Two samples of S4 students, representing respectively the CMI and EMI populations (each of five classes of around 40 students, totalling 401 students), from these three CMI secondary schools were chosen for the purpose of this study. 213 of these students were male, and 188 were female. After discarding incomplete responses, 379 questionnaires from each of the two surveys were used in the analysis.

The fact that the EMI and CMI groups can be compared within the same school provides an ideal setting to compare the effect of MOI on the attitudinal and affective factors, because participants also share many other characteristics related to the general culture, linguistic environment and pedagogical approach adopted by the schools. There may still be differences in academic ability among the three schools, but since all are located in similar social settings and all participants in this research study have Chinese as their first language, it is expected that the differences in these respects would not be significant. Also, as only the students with better academic performance and English ability are enrolled in the EMI stream, the difference, if any, among students of the same stream would have been further minimized. This study therefore basically describes the differences between the two groups (CMI and EMI), developed immediately after the MOI streaming and some time after the transition, in terms of language attitudes and

other motivational and behavioural responses.

(4) The Procedures

In all cases participation was voluntary. Permission to participate in the study was obtained from the participants and their principals/teachers (see section below on ethical issues). Classroom teachers administered the Questionnaire to whole classes of around 40 students. Student participants were asked to complete the Questionnaire twice: Version I at the beginning of the S4 CMI/EMI programme in September 2004, and Version II during the first half of the second term in early 2005. The two versions of the Questionnaires were identical across MOI groups and administered by the classroom teacher with a maximum time of 30 minutes for completion. In order to reduce discrepancies among different questionnaire administrators, an information sheet with clear instructions in both languages on the administration of the questionnaire and the announcement to be made to the participants were provided to each questionnaire administrator (Appendix A).

Participants were asked to respond to a number of statements in the questionnaire which describe their affective and behavioural orientations on a 6-point Likert-scale ranging from 1 (strongly disagree) to 6 (strongly agree). Student responses to each question were given numeric values and entered into the SPSS programme. Entries were verified by a research assistant for the statistical analysis.

4. Part Two: The Interviews

The quantitative instrument described above enables the researcher to collect a large

quantity of data from a sizable sample. It however has its limitations – it can generate an outline of the subjects' inclination, but it does not dig deep to collect information on the students' perceptions or judgements underlining their responses. Burgess (1985) suggests that qualitative data can assist in the analysis and interpretation of questionnaire data by providing a theoretical structure, by validating and helping to interpret statistical results, by providing the framework for the construction of indices, and by clarifying questionnaire data. Hence, in this study, the key instrument used was the questionnaire to generate a sufficiently large quantity of data from the sample, but it also had a qualitative component to supplement the interpretation of the results. Although the qualitative data collected could hardly assist in establishing patterns of statistically significant findings, due to the small sample available, it provided richer detail and helped to substantiate and elaborate the quantitative output of the questionnaire survey. It is for the above advantages that this study adopted a mixed approach of both quantitative and qualitative methods.

There are many kinds of techniques of data-gathering in qualitative inquiry to reveal firsthand answers to issues in question (Bogdan & Biklen, 1982; Walcott, 1992; Miles & Huberman, 1994; Mertens, 1998), for example, interviewing, case study and participant observation. Patton (1982) considers in-depth interviewing as a major way in which the “qualitative methodologist seeks to understand the perceptions, feelings, and knowledge of people” (p.29). Seidman (1991:4) says that “interviewing provides access to the context of people’s behaviour” and thereby helps the researcher understand the meaning of this behaviour. He further concludes that “interviewing is a powerful way to gain insight into educational issues through understanding the experience of the individuals whose lives constitute education.” Since the qualitative part of this study is more concerned about the perceptions or beliefs behind the scores of the questions, than about

students' behaviour, interviewing is therefore the most appropriate method. The interviews will provide the researcher with data to assess whether there is a fundamental difference in perceptions/beliefs between the students of the two streams. This will greatly complement the findings of the quantitative measures (i.e. the two questionnaire surveys) as the differences, if any, shown in the statistics, though perhaps small in terms of magnitude and effect size, may stem from very divergent thinking. For this reason, interviewing provides the right access and the suitable level of data collection, in terms of both breadth and depth.

Due to limitation in resources, a small scale interview study was adopted so that some details of the subjects' views and feelings towards the two languages and their learning experience could be collected. A total of four interviews each with two representatives from each one of the two streams were conducted to allow the subjects to express their views and elaborate on their feelings towards the learning experience in a CMI/EMI class (i.e. a total of eight interviewees). The interviewing of selected students in pairs has the following advantages: a) it is more efficient; b) the student representatives will feel more at ease when he or she is accompanied by a classmate; and c) the interaction between the pairs will help generate more perspectives to stimulate more in-depth discussion.

4.1 The Structure of the Interviews

According to Patton (1982:162), there are three basic approaches to collecting data from interviewing: "(1) the informal, conversational interview, (2) the general interview guide approach, and (3) the standardized, open-ended interview." In this investigation, the general interview guide approach was used. The guiding interview questions help focus on the specific problem while not disrupting the flow of information (Patton, 1982). The

advantage of the interview guide is that the researcher must decide how to utilize time efficiently while conducting an interview. It helps reduce the issues in question and more importantly, allows the emergence of “individual perspectives and experiences” (Patton:163). According to Patton, an interview guide (IG) is:

a list of questions or issues that are to be explored in the course of an interview.

An IG is prepared in order to make sure that basically the same information is obtained from a number of people by covering the same material. The IG provides topics or subject areas within which the interviewer is free to explore, probe, and ask questions that will elucidates and illuminate that particular subject. ... the IG simply serves as a checklist during the interview to make sure that all relevant topics are covered. (Patton, 1982:163)

Semi-structured interviews guided by a general interview guide were conducted to elucidate student perceptions and student preference for placement in either EMI classes or CMI ones. Questions were asked to ascertain whether students: were satisfied with their present placement; perceived themselves as different to other students; had positive and/or negative learning experience in their current educational placement; had integrative or instrumental orientation towards learning English; expended different efforts in L2 learning; and were confident or worried about their studies (Appendix D).

4.2 Selection of participants

Gorden (1987:48) maintains that often there is no need to interview all participants of the same background, but “several must be located because they have had certain relevant experiences.” The ideal sample for the interviews would be to have a random sample from each S4 class of the three participating schools. However, owing to the researcher’s

limited access to the students involved in the questionnaire survey, and the constraints in time and in gathering students of different classes from different schools for the interviews, it was decided that, to compromise, only students from one school be selected for the interviews. The choosing of the sample from the same school will however have the advantage of better controlling for the differences in students' backgrounds: the socio-economic background, the school environment and learning experience, etc. This may to a certain extent compensate the drawbacks for not being a representative group for the whole sample.

The sample of students was selected through convenience sampling. Assistance from teachers of the school which had granted permission for the researcher to interview their students was sought. They were requested to help identify two students from each class of the S4 classes who had taken part in the questionnaire survey to participate in the interview. A total of eight students, two from each of the four S4 classes, agreed to take part in the after-school interviews.

4.3 The Procedures

The interviews were conducted in Cantonese (the students' mother-tongue) and audio recorded. The researcher started the interview by making the participants feel comfortable with the digital recorder and briefly informing them about the goals of the research. After establishing rapport, the researcher asked the questions on the basis of the interview guide. Each interview lasted about an hour. The interviews were first transcribed in Chinese-Cantonese and then translated into English by a bilingual research assistant. Both versions of the transcripts were then checked by the researcher, who has a qualification in translation, for accuracy.

The interviews focused on the issue of examining motivations and attitudes (see Appendix D). The interviewing of selected students, which allows the subjects to express their views and elaborate on their feelings towards the learning experience in a CMI/EMI class, was to identify the details of the subjects' perception behind their responses to the questionnaire. The information collected from the meetings would provide some insights into the relationship between the MOI and the differential feelings and learning experience of the EMI and CMI students. Findings were used to illustrate and validate data collected from the questionnaire method.

5. Ethical Issues

Ethical issues were taken into consideration in the administration of the data collection. All parties involved (including the principals, teachers and students) were informed of the academic purpose and the significance of the study and that participation in the study was absolutely voluntary. Consent was sought from all the three participating schools and the relevant ethics clearance forms were forwarded to the University for approval and record purposes. All participants were advised that there were no right or wrong answers for any of the questions, that the identity of participants would be kept anonymous, and that all the responses would be confidential and group analyzed with each individual only identified by his/her school, class and class number, in order to facilitate the paired sample comparison required of in the data analysis. Further consent was sought from the individual students/teachers for the interviews. During the interviews, students were addressed by false names they agreed to use (e.g. Amy, Ah Wing) to maintain the anonymity of the participants. These pseudo names were used in the extracts in Chapter 4, although each speaker was also identified by codes (e.g. E3A - the first letter denotes

the MOI stream, the second numerical the interview group and the last letter the first alphabet of the pseudo name used) for easy identification of the MOI stream and interview group an interviewee belongs to.

6. Methods of Analysis

6.1 Establishing Reliability and Validity

As explained above, data for analyses were collected through a questionnaire (two versions with a common core of 65 questions) with items adapted from a number of sources to form various sets of sub-scales or sub-measures which require reliability and validity checks for their properties as tests, rather than an assortment of unrelated questions on student behaviour or experience. Since the original sources on which the sub-scales were based, e.g. the AMTB, Rosenberg's (1979) Locus of Control Scale, Marsh's SDQs, and also the scales used by SMMM (Lui-Lau, 2001) in her unpublished thesis, had all been subjected to careful psychometric analyses and various tests for reliability and validity, the researcher judged that the items which formed the composite sub-scales are highly credible measures for the variables considered. However, as some of the sub-scales are composed of items from more than one source and that some changes (e.g. wording) have been made to individual items, and since all items have been translated into Chinese, it is advantageous that reliability and validity of the measures be established for greater confidence in the findings to be identified.

First of all, reliability checks for internal consistency of items forming each of the sub-scales were conducted by computing the alpha coefficients on the data collected from the first survey. The various sub-scales assessed for internal consistency include the two

language attitude sub-scales, the motivation sub-scale, the sub-scales on self-concepts, and the sub-scales on locus of control, perseverance in learning, and parental support. For the reliability test of the sub-scales to be acceptable, which suggests a high level of internal consistency among the items in each of the sub-scales and that the items within each sub-scale are generally homogeneous and purport to measure a common underlying construct, the alpha value for each should be >0.5 (Green, Salkind and Akey, 2000).

Scale	Alpha	No. of Items	No. of Cases (1 st survey)
Language Attitudes			
1. English	0.81	12	389
2. Chinese	0.56	10	385
3. Self-concepts	0.69	12	387
4. Locus of Control	0.24	5	385
5. Motivation	0.65	15	381
6. Perseverance in Learning	0.75	6	386
7. Parental Support	0.64	4	383

From the table above, all except Locus of Control, have an alpha value of >0.5 , which suggests that each sub-scale is relatively consistent internally. As to the sub-scale of Locus of Control, since it is the exact version of the abridged version of the established Rosenberg's (1979) Locus of Control Scale extracted from Pearlin et al. (1981), internal consistency of items within the Scale has already been established in previous research. On the other hand, since the majority of its questions (four out of five) were negatively worded, the low value of the alpha coefficient in this subscale may reflect more of the behaviour of Chinese students in handling negative questions than of the internal consistency of the individual items²⁷.

²⁷ As pointed out in previous research (e.g. Anderson et al., 1996; Britt, 1992; Tetrick & Farkas, 1988; Scheier and Carver, 1985), negatively worded items are semantically more complex than positively worded

In order to further ascertain the reliability and validity of the constructs identified, confirmatory factor analysis of the measures were conducted, based on the seven constructs (factors) identified. Results generated are given in Table 3 below.

Confirmatory factor analysis is appropriate in situations where the dimensionality of a set of variables for a given population is already known because of previous research (Beaudoin, 2006). It may be used to investigate whether the established dimensionality and factor-loading pattern fits a new sample from the same population or from a new population. It therefore is the appropriate test for the measures adopted in this study, all items of which have been selected from established measures developed by previous research.

Data collected in the first survey were analysed. Generally agreed upon standards were followed: for instance, for a model to have an adequate fit to the data, the Normed Fit Index, Non-Normed Fit Index, Goodness-of-fit Index, and Adjusted Goodness-of-fit Index must be higher than 0.90 and the Root Mean Square Residual must not be much greater than 0.08 (Joreskog and Sorbom, 1993; Mueller, 1996).

Table 3: LISREL Goodness-of-Fit Measures for Confirmatory Factor Analysis

Normed Fit Index (NFI)	0.789
Non-Normed Fit Index (NNFI)	0.848
Goodness-of-Fit Index (GFI)	0.632
Adjusted Goodness-of-Fit Index (AGFI)	0.604
Root Mean Square Residual (RMSR)	0.075

All the indexes are short of the recommended level of .90. However, the NFI and NNFI values of .789 and .848 respectively are close to the .90 level, and the RMSR (0.075) is

ones, and as such they likely form the basis of difference in responding between the positive and negative items. Consistent with previous findings, a number of research conducted on Chinese students reported that the negatively worded items lack stability (Keung, J. and Watkins, D., 2006; Lam et al. 2005; Siu, 2002; Poon, et. al., 1999; Lai, J. C. L., 1997).

below 0.08, and so marginal acceptance of the model can be given on this measure. Although the other measures have not reached the recommended level, a look at the indicator loadings for statistical significance for each item will allow additional support to the model. Table 4 presents the indicator loadings for statistical significance for each item on the basis of the seven factors.

Table 4: LISREL Estimates (Maximum Likelihood)

Factor	Item	t-values	Error Variance
1	4	10.067	0.696
	24	13.856	0.477
	43	-0.686	0.998
	25	9.470	0.727
	50	1.284	0.994
	11	3.595	0.956
	7	9.116	0.745
	27	10.032	0.698
	12	6.877	0.847
	2	18	4.578
21		6.801	0.868
46		4.611	0.937
14		13.860	0.551
17		8.001	0.822
40		7.271	0.851
16		13.421	0.573
38		11.120	0.684
15		6.626	0.874
65		9.904	0.741
23		15.528	0.468
53		11.800	0.652
61		14.168	0.536
42		5.293	0.918
3	13	8.009	0.816
	19	13.716	0.543
	20	13.558	0.543
	28	11.413	0.660
	49	13.484	0.555
	29	8.899	0.778
4	10	3.195	0.963
	26	2.018	0.985
	47	-1.059	0.996
	56	-6.764	0.280
	60	-1.100	0.996
5	37	12.352	0.638
	3	10.381	0.730
	9	10.635	0.718

	30	12.394	0.636
	54	0.902	0.998
	55	5.050	0.928
	59	-7.650	0.843
	1	9.364	0.774
	8	9.928	0.750
	32	-3.718	0.960
	2	12.036	0.653
	41	-1.881	0.990
	62	9.008	0.789
	39	11.569	0.675
	48	10.934	0.704
6	6	4.795	0.927
	31	8.448	0.789
	34	16.075	0.336
	51	15.556	0.375
7	5	11.958	0.633
	36	11.865	0.637
	45	13.562	0.552
	57	-2.638	0.978
	22	-1.576	0.992
	35	-0.660	0.999
	44	14.429	0.507
	63	12.950	0.583
	33	10.382	0.710
	52	4.729	0.931
	58	7.625	0.832
	64	10.748	0.692

An examination of the *t*-values associated with each of the loadings indicates that all except eight exceeded the critical values required for the 0.5 significance level (critical value = 1.96) and among them, all except one exceeded the higher .01 significance level (critical value = 2.576). The eight items with a *t*-value lower than the 1.96 were all negative items in the scale (e.g. At times, I think I am no good at all.) However, among these eight items with a lower *t*-value, two had a *t*-value of greater than or close to 1.64 (the 10% significance level), and thus marginal acceptance can be given to these two as well. From the statistics above, the various measures lent some though limited support to believing that the items are significantly related to their specified constructs (factors), verifying the posited relationships among indicators and constructs, and for confirmation

of the proposed seven-factor model. This had offered some empirical support for the validity and utility of the instrument for the local Chinese students.

7. Analysis

To address the two research questions, various methods of analysis are to be employed to generate findings to shed light on issues pertinent to the impact of streaming of students into different MOI settings in the local language and social contexts.

The first research focus is about students' attitudes and perceptions of the two languages and people associated with them, their self-concepts and sense of locus of control. The first analysis is to find out if students from very similar language and school background will develop different attitudes and perceptions of the above variables once they are assigned into one of the two language streams. It is hypothesized that the way the streaming is administered and the fact that the medium of instruction in context is such an important factor that students will adopt different perceptions and viewpoints towards the languages and themselves.

The second research focus is about students' behavioural developments under the MOI streaming arrangement. Specifically, the second analysis is to detect differences, if any, between the two MOI groups in respect of their support-seeking behaviour and perseverance in learning, and of their reported achievement in the two languages. Furthermore, it also explores the relations among the attitudinal and motivational factors, the behavioural responses, and students' self-reported achievement.

To identify the differences, first, composite scores and composite mean scores of each of the measures were computed. Then, the scores were used for a variety of multivariate analyses, for examples: a one-way ANOVA to allow the analysis of the mean differences between the two MOI groups on each of the identified attitudinal and behavioural domains and a MANOVA test to find out the overall multivariate effect, based on the seven sub-scales of the questionnaire. For the measurement of changes after the lapse of time between the two surveys, the paired-sample *t*-test and the Repeated Measure of the ANOVA test were conducted to identify changes, if any, in and between the two groups; and a One-way Analysis of Covariance (ANCOVA) be performed to see if the differences among the two groups remain after the adjustment of covariates identified (e.g. self-assessment of English, parents' education level, etc.). To ascertain the relations between the attitudinal factors and achievement, regression analyses were performed to confirm the relations as well as identify the key players in the equation.

8. Limitations of the research

8.1 Sampling

The selection of subjects from only the CMI sector has both advantages, which has been explicated in Chapter One in great detail, as well as limitations. Under the streaming arrangement in CMI schools, the EMI informants, after having been in an educational environment in their mother-tongue for 13 years or more, are allowed to receive an education in the more prestigious but less familiar language – English. At the beginning, the difference in status of the two languages, viz. English and their mother-tongue, will surely have a positive impact on the affective responses of the subjects of the EMI stream towards English. However, once moved out of their comfort zone, the EMI students will have to deal with the reality - to start a new experience of learning through a medium in

which they are less competent. The concomitant difficulty that accompanies the acquisition of a 'foreign' language and learning other subjects through it may easily create frustration and anxiety. The failure experienced during the transition to a new MOI, particularly at the early stage, and the resultant resistance generated from anxiety and worry over performance may outweigh the positive feelings associated with a higher rank language. This is particularly so when the surveys were done upon the early stages of the transition. The EMI subjects upon transition to the English classes may have to overcome extra hurdles and suffer from their relatively low competence in English (in comparison to their Chinese proficiency). The need to adapt to a 'new' medium and the relatively short experience in an 'English' education in the first year may not facilitate the students to experience the benefits and joy of learning the language and through it. The short time span between the two surveys therefore might allow the researcher to capture only the initial responses of the EMI students, the base of which, as in most of the cases at the beginning of any transition, will typically be characterized with more failure than success. An examination of the changes in the subjects' attitudes and behavioural response at this transitional stage may therefore not be reflective on the full force of the changes, which may be developed further in the more positive direction when the language competence of the subjects in the EMI stream are enhanced over time.

8.2 The Problem associated with Convenience Sampling

The school sample in this research is a convenience sample and, as in all research using non-probability sampling, has the problem of not being a representative sample, which limits the estimate of the risks of sampling error and, therefore, the generalizations of the findings identified. The ideal solution to this research problem is to obtain a random sample of the two MOI streams from among the secondary schools in Hong Kong.

However, representative sampling involving all schools in this case is either impossible since schools are applied settings²⁸ or impracticable due to the researcher's limited access to schools. As the study is premised on an interest in the comparison of students' affective and behavioural responses on the basis of the students' MOI, the selection of the sample of students of the two streams from all the four classes of the target year group of one institution will have the advantage of capturing the effects in a more controlled setting because within the same school environment, other confounding variables that may contribute to the differences, if any, are more effectively controlled for than those of a sample from a diversified group of schools.

8.3 The Presence of other Competing Influences

Given the above analysis, another type of limitations that need to be addressed is the difficulty in separating the influence of the MOI from that due to other factors or competing influences, such as the influence from teachers and the individual characteristics of the participants i.e. the final level of Dornyei's model. Although it is not practical to put in place an effective control for the teacher variation within each of the three participating schools, the comparison of the students of the two streams within the same school had already enabled a significant reduction in the contamination of the MOI effect by other factors such as school environment and the linguistic context of each school.

However, the grouping of students into either the EMI or CMI stream on the basis of the competence of the students may form a basis for comparison of ability and consequently

²⁸ In his comparison of applied research and theoretical research, Lens (1987:454) comments that applied research is conducted in problem-based setting rather than in the laboratory, and as such research in an applied setting is mostly carried out in complex real-life situations in which the researchers usually have "much less freedom in selecting their research questions and the conditions in which they can study them".

affect children's self-concept beyond what is justified by actual differences in performance (Strang et al., 1978; Schwarzer et al., 1983; Marsh & Parker, 1984). In other words, the MOI streaming of students is in effect a form of ability grouping, and so the placement of students in either MOI stream will convey a message about the students' aptitudes and educational trajectories that defines a student as an academic success or failure, regardless of a student's actual level of performance. On the basis of the above, the MOI streaming of students is in essence a bifurcation of the students into either the high- or low- rank ability groups, which will have effects on students' motivation, self-concept and achievement.

Although relatively little is known about the magnitude of the ability group effects and the ways in which these effects occur, research has confirmed that group placement influences the quantity, quality and pace of instruction and hence of learning (e.g. Pallas, Entwistle; Alexander, K. L. & Stluka, 1994). Studies of children in streamed classes demonstrate that ability grouping may have a negative impact on the self-concepts of children in low-ability groups (Oakes, 1985; Marsh, 1984), while those in high-ability groups, in Oakes's (1985:3) words, "[are] seen as high-achieving [persons], bright, smart, quick, and in the eyes of many, good. Children in high-ability groups may be treated as though they have learned more, independent of any actual changes in the children's performance." In other words, group placements symbolize certain shared understandings of the qualities and capacities of the group members and thus influence the perceptions and expectations of other members of a society, including parents and the students themselves.

Also, from the standpoint of ability groups as social groups, students in high-ability groups tend to be more highly motivated owing to more favourable self-concepts

resulting from social comparisons and interactions within the classroom or because of the future high-status placements and rewards they anticipate (Gamoran,1984). In this light, it is possible, then, that within each school, the ability group effects might still be present and affect students' responses.

8.4 Problems with students' self-reports

The validity of part of the research design rests on the students' self-report of their attitudes and behaviour in a number of dimensions. This will tentatively pose a validity problem as the subjectivity and adequacy of the reported measures and those of measuring changes in student development over time may not correspond to more objective measures. On the measures of students' level of achievement, the best indicators would be the results obtained from the administration of a uniform test or examination. However, because of the lack of such a test/examination for the subjects at this grade and the researcher's lack of access to school performance data, the only best alternative is to include a test to be conducted at the same time the survey was administered. But given the restriction on time for student contact, the researcher was not able to give out a reliable but very short test that can differentiate effectively the students' competence. Also, with very limited resources at the researcher's disposal, the time and tremendous costs needed for the development and administration of other more objective tests such as observation had rendered these alternatives not practical. Although the assessing of students' responses and changes by relying on students' self-reports is far from perfect, research (e.g. Kuncel, N. R., Credé, M. and Thomas, L. L.(2005) generally supports that self-reports do have some modest validity when compared against actual pretest-posttest measures.

In the preceding chapter, the design of the study and the method of data collection have been presented. This chapter will give a detailed account of the results and findings to examine the impact of the MOI arrangement in the local context on students' affective and behavioural development, and as a result, their self-reported performance.

The analyses commenced with a general description of the overall characteristics of the total sample for the questionnaire surveys. It then proceeded to the identification of the differences in the affective and behavioural domains between the participants of the two MOI streams. As the study consisted of two main components, viz. the quantitative surveys and the qualitative interviews, the analyses began with the quantitative data collected from the two questionnaire surveys first. To ascertain the existence of any differences between the two language groups in all the affective factors and behavioural preferences measured on the basis of the two rounds of the questionnaire survey, a number of statistical tests were employed, which were expounded in great details in the previous Chapter, and the results were reported under different sections of this Chapter. Then, the qualitative information collected from the interviews was studied and the findings were, in accordance with their relevance to each of the attitudinal dispositions and behavioural variables measured, embedded in the pertinent Sections, juxtaposed with those from the surveys, to either give details of the thinking behind the figures or to expand on the responses and differences, if any, identified.

1. General Profile

1.1 The Total Sample

The sample was composed of 173 female and 206 male participants from three CMI schools²⁹. Of the total 379 participants, 186 of them were CMI students (49%) and 193 EMI students (51%). Those who were born in Hong Kong made up nearly 76% of the sample. More than fourth-fifths of the sample reported they had lived in Hong Kong for ten or more years, while only 3% of the participants had been here for less than five years. Nearly half (49%) indicated they lived in public housing estates, and a comparable 45% identified themselves as living in housing estates developed by private developers (including the home-ownership scheme). Almost all (94%) of the participants reported that Cantonese was the language they use at home while none reported the use of a non-Chinese language/dialect as their home language. A clear majority of the participants (73%) indicated that one or both of their parents had had secondary education as their highest level of educational attainment, while only 9% and 12% of them classified their parents' education under the post-secondary education and primary education categories respectively. The majority of the participants reported a low level of competence in their parents' English language proficiency (around 36% and 35% of the respondents, adding up to a total of around 71%, reported that their parents could speak no or very little English respectively). The above data outline the linguistic background of the sample: it is quite a homogeneous group brought up in a monolingual Chinese linguistic environment in which home support in English learning was rather limited as their parents speak mainly Cantonese or a Chinese dialect and could speak relatively limited English.

²⁹ Chi-square tests were administered to identify if there were any significant differences among the participants from the three schools chosen in terms of student profile and home linguistic environment of the participants. No significant differences were identified in the measures of gender, place of birth and number of years in Hong Kong. No significant difference was detected among the three schools in parents' education and language competence.

1.2 Profile of the Two Language Groups

Statistical analyses indicate that the two MOI groups did not differ on important demographic characteristics: gender, place of birth, years in Hong Kong, or home linguistic backgrounds. Gender breakdown by the two MOI groups was as follows: there were 101 female students in the CMI group and 86 in the EMI group; there were 100 male students in the CMI group and 119 in the EMI group. Chi-square tests were conducted to detect if there were any differences in the two MOI groups in terms of their biographical as well as socio-economic backgrounds. No difference of any significance was spotted in the measures of gender, place of birth and years in Hong Kong. As to the measure on socio-economic background, as reflected in housing type, parents' education and parents' English language competence, results indicated that there were no significant differences in these measures for the two MOI groups. As expected, the home linguistic backgrounds of the two groups were quite homogeneous as both MOI groups had reported having Cantonese as their home language (EMI=95%, CMI=91%), and no major differences in their parents' levels of proficiency in the two target languages were identified.

2. Differences between the Two MOI Streams

The research focus is about students' attitudinal and motivational developments as a result of their MOI experience in S4. Specifically, it addresses the following issues with respect to the various attitudinal and behavioural measures:

- i. motivational attitudes (attitudes to Chinese and its speakers, attitudes to English and its speakers, attitudes to learning Chinese and English);
- ii. motivational characteristics (motivational intensity, integrative orientation, instrumental orientation);

- iii. motivational attributes (self-concepts, locus of control); and
- iv. the academic behaviour of the students (perseverance in learning, parental support sought).

2.1 Correlations Among Constructs

Before the analyses of the differences between the two MOI groups in respect of the affective and behavioural factors measured in the two surveys were performed, on the basis of the composite scores of each factor computed for the two groups, a number of correlational tests were performed to identify if there were any significant correlations among the factors. As shown in Tables 5-8, most of the factors were highly correlated among themselves.

Table 5 Correlations among factors measured in the first survey (EMI Group)

Subscale		1	2	3	4	5	6	7	8
1	Perseverance in Learning	Pearson Correlation Sig. (2-tailed) N	1 193						
2	Locus of Control	Pearson Correlation Sig. (2-tailed) N	.315** .000 193	1 193					
3	Motivation to learn English	Pearson Correlation Sig. (2-tailed) N	.584** .000 190	.251** .000 190	1 190				
4	Motivation (Overall)	Pearson Correlation Sig. (2-tailed) N	.641** .000 189	.366** .000 189	.761** .000 189	1 189			
5	Parental Support	Pearson Correlation Sig. (2-tailed) N	.434** .000 191	.229** .001 191	.232** .001 188	.451** .001 187	1 191		
6	Self-Concept	Pearson Correlation Sig. (2-tailed) N	.374** .000 192	.499** .000 192	.338** .000 189	.500** .000 188	.304** .000 190	1 192	
7	Language Attitudes - Chinese	Pearson Correlation Sig. (2-tailed) N	.149* .040 192	.031 .667 192	-.002 .982 189	.273** .000 188	.149* .040 190	.231** .001 191	1 192
8	Language Attitudes - English	Pearson Correlation Sig. (2-tailed) N	.318** .000 191	.128 .077 191	.361** .000 188	.606** .000 187	.366** .000 189	.219** .002 190	.078 .283 190

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 6 Correlations among factors measured in the second survey (EMI Group)

Subscale		1	2	3	4	5	6	7	8
1	Perseverance in Learning Pearson Correlation Sig. (2-tailed) N	1 193							
2	Locus of Control Pearson Correlation Sig. (2-tailed) N	.190** .009 190	1 190						
3	Motivation to learn English Pearson Correlation Sig. (2-tailed) N	.589** .000 192	.180* .013 190	1 192					
4	Motivation (Overall) Pearson Correlation Sig. (2-tailed) N	.611** .000 191	.249** .001 189	.750** .000 191	1 191				
5	Parental Support Pearson Correlation Sig. (2-tailed) N	.432** .000 193	.187** .010 190	.276** .000 192	.451** .000 191	1 193			
6	Self-Concept Pearson Correlation Sig. (2-tailed) N	.362** .000 187	.613** .000 184	.216** .003 186	.434** .000 185	.352** .000 187	1 187		
7	Language Attitudes - Chinese Pearson Correlation Sig. (2-tailed) N	.179* .013 191	.042 .566 188	-.036 .625 190	.238** .001 189	.239** .001 191	.351** .000 186	1 191	
8	Language Attitudes - English Pearson Correlation Sig. (2-tailed) N	.437** .000 187	-.062 .405 184	.472** .000 186	.657** .000 186	.415** .000 187	.146* .049 181	.078 .290 185	1 187

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 7 Correlations among factors measured in the first survey (CMI Group)

Subscale		1	2	3	4	5	6	7	8
1	Perseverance in Learning Pearson Correlation Sig. (2-tailed) N	1 186							
2	Locus of Control Pearson Correlation Sig. (2-tailed) N	.139 .059 185	1 185						
3	Motivation to learn English Pearson Correlation Sig. (2-tailed) N	.587** .000 185	.214** .004 184	1 185					
4	Motivation (Overall) Pearson Correlation Sig. (2-tailed) N	.626** .000 184	.144 .052 183	.800** .000 184	1 184				
5	Parental Support Pearson Correlation Sig. (2-tailed) N	.483** .000 185	.136 .066 184	.368** .000 184	.439** .000 183	1 185			
6	Self-Concept Pearson Correlation Sig. (2-tailed) N	.331** .000 181	.489** .000 180	.355** .000 180	.459** .000 180	.244** .001 180	1 181		
7	Language Attitudes - Chinese Pearson Correlation Sig. (2-tailed) N	.322** .000 185	-.051 .492 184	.104 .160 184	.375** .000 183	.378** .000 184	.365** .000 180	1 185	
8	Language Attitudes - English Pearson Correlation Sig. (2-tailed) N	.314** .000 183	-.209** .005 182	.406** .000 182	.622** .000 181	.207** .005 182	.071 .344 178	.221** .003 182	1 183

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 8 Correlations among factors measured in the second survey (CMI Group)

Subscale		1	2	3	4	5	6	7	8	
1	Perseverance in Learning	Pearson Correlation Sig. (2-tailed) N	1 185							
2	Locus of Control	Pearson Correlation Sig. (2-tailed) N	.298** .000 182	1 183						
3	Motivation to learn English	Pearson Correlation Sig. (2-tailed) N	.556** .000 185	.172* .020 183	1 186					
4	Motivation (Overall)	Pearson Correlation Sig. (2-tailed) N	.587** .000 181	.177* .018 179	.756** .000 182	1 182				
5	Parental Support	Pearson Correlation Sig. (2-tailed) N	.571** .000 185	.250** .001 183	.494** .000 186	.601** .000 182	1 186			
6	Self-Concept	Pearson Correlation Sig. (2-tailed) N	.344** .000 179	.519** .000 178	.445** .000 180	.578** .000 176	.451** .000 180	1 180		
7	Language Attitudes - Chinese	Pearson Correlation Sig. (2-tailed) N	.117 .115 182	.077 .304 180	.049 .510 183	.311** .000 179	.317** .000 183	.400** .000 177	1 183	
8	Language Attitudes - English	Pearson Correlation Sig. (2-tailed) N	.241** .001 179	-.176* .019 177	.325** .000 179	.554** .000 175	.232** .002 179	.133 .079 174	.080 .289 176	1 179

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

The four tables above clearly indicate that most of the variables are highly correlated with each other in both surveys. The major exceptions are the measures on language attitudes towards Chinese and Locus of Control: in all four analyses, the Language Attitudes towards Chinese reported non-significant correlations with Language Attitudes towards English, Motivation to learn English and Locus of Control; while in Table 7 (data from the CMI group in the second survey), the Locus of Control had no significant correlations with a number of factors, viz. Perseverance, Language Attitudes towards English, Language Attitudes towards Chinese, and Motivation. Given that there are significant correlations among most of the factors, the researcher decided to use One-way ANOVA for the analyses of the differences between the two MOI groups in respect of the factors identified. Field (2000) pointed out that the ANOVA test has the advantage over the *t*-test in that it can be used to analyze situations in which there are several

independent variables. By looking at the *F-statistic* or *F-ratio* ANOVA produces, one can tell how these independent variables interact with each other and the effects these interactions have on the dependent variable. Therefore, a number of ANOVA tests were conducted to gauge the differences between the two MOI groups in the analysis.

As an initial step to verify the relationships between MOI and the attitudinal and behavioural factors, a multivariate analysis of variance (MANOVA) test was performed, by including all the outcome variable factors in the same survey to detect if the MOI groups differ along a single or a combination of dimensions. MANOVA has greater power to detect an effect or group differences in circumstances in which there are several dependent variables as it takes account of the interactions between the factors measured simultaneously (Field, 2000). In this study, there are seven major attitudinal and behavioural factors measured. As “the more ANOVAs would need to be conducted, the greater chance of making a type I error” (Field, 2000:376), the researcher decided to perform a MANOVA first to ascertain the effects among the outcome factors. With the overall MANOVA test protecting against any possible inflation of type I errors in univariate tests, subsequent ANOVAs were then carried out on all of the dependent factors. The Multivariate test for the first survey generated an *F-ratio* (1, 357) of 0.952, with a $p < 0.05$ (Wilks’ lambda). The results of the between-subjects effects among the two MOI groups are detailed in Table 9 below:

Table 9 Multivariate Analysis – First Survey (N=357: EMI=183, CMI=174)

Factors	Mean Square	F	Sig.	Partial Eta Squared
Language Attitude – Chinese	2.267	.076	.783	.000
Language Attitude – English	583.297	8.358	.004**	.023
Motivation	310.670	4.429	.036*	.012
Locus of Control	1.344	.130	.719	.000
Self-concepts	2.816	.051	.822	.000
Perseverance	226.928	11.115	.001**	.030
Parental Support	16.254	1.308	.254	.004

** Significant at the 0.01 level (2-tailed).

* Significant at the 0.05 level (2-tailed).

The same test was performed again on the data collected from the second survey. The F -ratio (1, 361) was 2.590, with a $p < 0.05$ (Wilks' lambda).

Table 10 Multivariate Analysis – Second Survey (N=366: EMI=186, CMI=180)

Factors	Mean Square	F	Sig.	Partial Eta Squared
Language Attitude – Chinese	48.134	1.657	.199	.005
Language Attitude – English	659.519	9.428	.002**	.027
Motivation	756.974	11.266	.001**	.032
Locus of Control	3.227	.296	.587	.001
Self-concepts	23.814	.367	.545	.001
Perseverance	132.309	6.761	.010**	.019
Parental Support	11.399	1.113	.292	.003

** Significant at the 0.01 level (2-tailed).

* Significant at the 0.05 level (2-tailed).

As shown in Tables 9 and 10 above, significant differences between the two MOI groups were found in Language Attitude–English, Motivation and Perseverance. The effect sizes of the MOI factor, however, were rather small, accounting for an effect of 3 percent or less only. There were no significant differences among the two language groups in the other measures. On the basis of the initial findings, a series of univariate comparison at various levels were conducted and the results are explicated below.

2.2 Differences in the Attitudinal and Behavioural Dispositions between the two MOI groups

The first research question is about students' attitudinal and motivational developments as a result of their MOI streaming experience. Specifically, it addresses the following issues:

Do students of the two streams exhibit or develop any differences in language attitudes, motivational patterns, locus of control and self-concept upon transition to their respective MOI classes; and if so, whether their affective responses change over

time as they pass through the system under different MOI settings.

In other words, it aims to gauge any differences between the two MOI groups with respect to the following attitudinal and motivational measures upon and some time after the MOI streaming:

- (1) motivational attitudes (attitudes to Chinese and its speakers, attitudes to English and its speakers, attitudes to learning Chinese and English);
- (2) motivational characteristics (motivational intensity, integrative orientation, instrumental orientation); and
- (3) motivational attributes (self-concepts, locus of control).

(1) Language Attitudes

In the questionnaire surveys, the measures on language attitudes towards Chinese and English comprise a number of subscales which gauge the participants' views on the following: the relative standing of English and Chinese, the effectiveness of the two languages as a medium for learning, the usefulness and instrumental values of these two languages, the cultural values of the Chinese language, and the participants' overall affection towards the languages and their speakers. Composite mean scores were calculated to form the basis of comparison of the two language groups of students. In the interviews, student participants were asked about their views on the effectiveness of the two languages, in comparison with each other, as a medium for communication as well as learning; their perceptions of the instrumental values of the two languages; and their opinions on their speakers.

(a) Attitudes towards Chinese

As shown in Table 11 below, respondents of the two groups reported considerable positive attitudes towards the Chinese language. For both groups in the first survey, the highest means were recorded for Chinese as a Language itself and the Educational Effectiveness of Chinese as a MOI, while the lowest mean was recorded for its Speakers. Similar results were obtained in the second survey. The modest composite means in Table 11 suggest that students in both groups show a generally positive (albeit not impressive) attitude towards Chinese.

In order to ascertain if informants of the two MOI groups would exhibit any difference in their attitudes toward Chinese, one-way ANOVA tests were performed on mean scores calculated for this factor and for each of the subscales as the dependent variables. On the basis of the mean scores alone, it seemed that the CMI respondents tended to give higher ratings to most of the measures in both surveys than their EMI schoolmates (Table 11). To verify if these differences among the two groups could be substantiated, the *F-ratios* of this factor with the composite overall mean scores for the two surveys as the dependent variables, as shown in Table 11 below, were captured: first survey – $F(1, 375) = 0.071$ with a $p = 0.790$; and second survey - $F(1, 372) = 0.595$ with a $p = 0.441$ (Table 11). The results of the one-way ANOVA test were non-significant, indicating that there were no differences between the two MOI groups in the overall measure concerning language attitudes towards Chinese.

Also as detailed in Table 11 below, results of the one-way ANOVA comparing the scores of the individual sub-measures were found to be also not significant, indicating that no differences were prevalent in all the sub-measures. These results pointed towards the

same conclusion that both MOI groups seemed to share similar views in their attitudes towards Chinese.

Table 11 ANOVA Test – Between-Group Difference in Language Attitudes towards Chinese

		Stream	Mean	SD	N	df	F	Sig.	Eta Squared
Survey 1									
Overall		CMI	4.05	.55	185	1, 375	.071	.790	.000
		EMI	4.02	.54	192				
a.	As a Language	CMI	4.98	.95	186	1, 377	.192	.661	.000
		EMI	5.03	.92	193				
b.	Instrumental Values	CMI	4.11	.92	186	1, 377	.164	.686	.000
		EMI	4.08	.89	193				
c.	Educational Effectiveness	CMI	4.94	.90	186	1, 376	3.317	.069	.009
		EMI	4.76	.97	192				
d.	Its Speakers	CMI	3.18	1.11	186	1, 377	.272	.602	.000
		EMI	3.12	1.06	193				
e.	Cultural Values	CMI	3.83	.64	184	1, 376	.012	.912	.000
		EMI	3.84	.60	191				
Survey 2									
Overall		CMI	4.06	.56	183	1, 372	.595	.441	.002
		EMI	4.01	.55	191				
a.	As a Language	CMI	4.96	.93	186	1, 377	.063	.802	.000
		EMI	4.94	.97	193				
b.	Instrumental Values	CMI	4.11	.82	186	1, 377	.542	.462	.001
		EMI	4.05	.87	193				
c.	Educational Effectiveness	CMI	4.74	.89	186	1, 377	.425	.515	.001
		EMI	4.80	.93	193				
d.	Its Speakers	CMI	3.22	1.11	185	1, 376	1.787	.182	.003
		EMI	3.06	1.21	193				
e.	Cultural Values	CMI	3.88	.65	184	1, 373	.432	.511	.001
		EMI	3.85	.58	191				

On the basis of the findings from the two surveys, both MOI groups displayed no substantially different attitudes towards the Chinese language in both the overall and individual sub-measures.

(i) Chinese as a language for communication

In the two surveys, students were found to hold very favourable views about Chinese as a language (with mean scores ranging from 4.94 to 5.03; for details, please see Element a, Table 11). Views collected from the interviews supported the above findings as there was an apparent consensus among the student interviewees from both MOI groups that Chinese is a more effective language for communication. Their native proficiency in the Chinese language could have possibly contributed to their affective attachment to Chinese (Cantonese). The exchange below between two interviewees from the CMI stream illustrates that Chinese is definitely to them a more effective means of communication:

*C2F: Chinese can describe things/feelings, etc. in a more detailed way. English, when used to describe an object, seems to be very abstract. For example, an English word may have many meanings, unlike a **Chinese word**, which usually has a very **clear meaning**. In describing a thing, although there may be words in **English** to describe it, it seems a bit **abstract** and you have to **guess** what the English word exactly means.*

*C2W: I agree that **Chinese** can give a very **clear answer with clear meaning**. It is more effective in communicating directly meanings and feelings.*

C2F: Chinese is more communicative.

C2W: Yes, more communicative.

Although, like English, a Chinese word may have more than one meaning, to these Chinese students, it is apparent that they have very few problems in understanding the meaning of the Chinese words. On the other hand, obviously due to the limitations in their English competence, they tended to find the English words “abstract” and they often had to resort to “guessing” to figure out the meanings. It is therefore not unreasonable to conclude that one reason why the two language groups held similar views towards Chinese as a language for communication, was that they had benefited from similar



levels of competence in the Chinese language.

(ii) The instrumental values of Chinese

As explained in Chapter One, Chinese, when compared with English, has been a language of lower instrumental value in the Hong Kong economy. This consensual perception of the society can explain why no between-group difference was detected in the students' evaluation of the instrumental values of Chinese in the two surveys (see Element b, Table 11 above). In similar vein, in all the group interviews, none expressed any concern over their command of the Chinese language or any worry about their Chinese language competence over their future.

*E3M: My Chinese is not very good and honestly speaking, I have **not worried** about this....*

I: Then, have you worried about (the impact of your Chinese language ability) on your future?

E3M: No.

...

*E3G: In my case, the opportunities for me to use (Chinese) are fewer. ... Unless you are poor in memorizing, otherwise, **there won't be much influence** (on our future).*

I: That means that you're not worried about your Chinese.

E3G: Yes.

I: But if your English was not good, would you be worried?

E3G: Very much worried (in emphatic tone). The time we should spend on Chinese is usually spent on improving our English.

The above remarks made by two EMI interviewees echoed with the values attached to the two languages by the local economy in which the minority English, instead of the majority Chinese, is the higher status language with more promising educational and economic advantages for its speakers (see Yau, 1989; So, 2002). Priority always went to

the development of their competence in English. As such, opportunities to learn and improve English such as studying in an EMI school or class tended to be welcomed by all, while those for improving Chinese had seldom been mentioned. On the other hand, as reflected in the extract below, even though proficiency in Chinese is a prerequisite for university admission³⁰, deep in the young minds, there is always a belief that it is their English, not Chinese, that has the direct bearing on their future academic development.

I: ... Do you think you can go to university in a few years' time? How confident are you?

...

C2W: Again, it is the English problem. If I couldn't improve my English this year - it would be too late to have improvement in the next year. If I could do so in this year, I am confident that I will be able to get through to S6 because my performance in other subjects is not bad at all. As to university, I think it will be more difficult as the competition is keen.

To Student C2W, even though he has confidence in his performance in other subjects (studied in Chinese), his academic future definitely hinges on whether he can raise his performance in English.

Further, the low instrumental values of the Chinese language and its status relative to English might have led to a negative association the interviewees had in general on CMI and academic ability. The extract below recorded the feelings of a student from the EMI stream who regarded CMI as an option which suited her 'lower' level of competence very well. It gives a representative view of students' perception, which is in line with those reported in previous local research (e.g. Cheung, Mayes & Randall, 2000; So, 2002), of the Chinese language, as well as the CMI stream or school – they are for the less competent:

³⁰ There is a language requirement for university entrance – Chinese Language at AS level

I: *How about your first choice?*

E3G: *It was xxx, also a CMI school.*

I: *So, when you finally got in here (a CMI school), did you feel very disappointed?*

E3G: *Not very disappointed because even though I am a Band One³¹ student, I'm at the bottom of the Band. If I had to catch up with the others, it would be a very difficult job for me.*

I: *Did you pick this school, knowing it is a CMI one?*

C2W: *Yes, I picked this school myself, knowing it is a CMI school because I thought that my English level was not very good, so I picked a CMI school.*

It is also worth noting that for those interviewees who said the CMI school they were in was one of their own choices and for those who reported that they were quite satisfied with their CMI school, none of them gave the school's MOI policy and a good prospect of developing their Chinese in a CMI setting as the main reasons for their choices. Quite the contrary, the majority of the reasons given to support their choice were non-MOI related (such as closeness to home or that it was their sibling's school).

E1A: *Both my parents and I wanted to pick this school.*

I: *When you picked this school, was it because of its reputation or because it adopts a CMI instruction policy? Or were there any other reasons?*

E1A: *It is because it is near my home and my brother is studying here and so I think it is safer to pick a school in the vicinity.*

...

E1F: *I always heard my aunty and grandma, who live nearby, said their neighbours who are studying here are doing quite well. It is also close to my home, so I gradually wanted to pick this school. ...*

³¹ Based on achievement tests in Chinese, Mathematics and English towards the end of primary school, students are arranged to one of the three bands of secondary schools. Students with the highest achievement levels are allocated to the top band (i.e. band 1), those with lower achievement levels are placed in middle band schools (i.e. band 2) and students with the lowest achievement levels are allocated to the band 3 schools.

*C2F: I applied directly to this school, though it was not my first choice. I chose it, knowing that it is a CMI school, because it is **close to my home** and it saves me a lot of trouble in travelling.*

(iii) Chinese as an Effective Educational medium

Same as the findings from the two surveys (Element c, Table 11 above), views gathered from the group interviews indicated that there was no dispute between the two MOI groups over the functional effectiveness of Chinese as a medium for learning in general. The interviewees all appreciated that they could understand and learn well in their mother-tongue. In the extract below, Student E3M, a strong EMI supporter among all interviewees, had pointed out the obvious:

I: ... when (the teacher) explains a chemical reaction, a physical theory, or a theorem in Maths, which language is better.

...

*E3M: I think Chinese is better. First, it is easier to understand as **Chinese is our mother-tongue**.*

Notwithstanding that, students were concerned about the inherent inadequacy of the CMI setting, particularly in the development of their English competence. Quite contrary to the above initial findings and the original thinking that the CMI students, learning through Chinese in S4, would hold more positive views on the educational values of the Chinese, the CMI students in the second survey recorded a reduction in their ratings on the educational values of the Chinese, while the EMI rating had slightly improved. However, paired-sample *t*-tests were performed, which generated a *t* (185) of 1.881 with a *p*=0.062, which showed that the changes in rating identified in this measure was not big enough to be statistically significant. Results computed from the Repeated Measure Design of the ANOVA test also indicated no significant differences over time among the

two MOI groups in this respect.

Although there was no statistical evidence to support any significant changes in students' attitudes towards the educational values of Chinese over time, views gathered from the interviews did suggest strongly a concern over the limitation of Chinese as a medium of instruction. In a society in which English is the higher status language and the general view is that a good education must necessarily include a requisite component of a high proficiency in the English language (So, 2002), it is highly probable that the CMI students, having learned through the Chinese medium for quite some time, might have experienced the limitations Chinese as an MOI had in raising their English standard, and as a result, had had concerns over their learning in the CMI setting. The undertone in the following remarks made by a CMI interviewee underlined the dilemma students had to deal with when they had Chinese as a MOI: there is no doubt that they all agreed on the effectiveness of Chinese as a medium for learning, but they at the same time voiced out the concern that learning through Chinese would jeopardize their English acquisition.

C2W: ... I chose to stay in the CMI stream.

I: Why?

C2W: 'Cause my English is poor and I fear that because my English is poor, I might fail to learn anything because of that. If I chose to learn in Chinese, I would at least learn something; that is better than studying in English but learning nothing at the end. But, I'm a bit worried about my English competence.

This discernable concern over Chinese as the MOI was echoed by his classmate.

C2F: I would prefer English. It is because if Chinese is the medium of instruction, the opportunity for you to learn English will be reduced and your English may suffer. If you learn in English, your English will improve while your Chinese, as you have already mastered it well, will not be adversely affected.

This is probably attributable to the full appreciation among local students of a more pressing need to improve their English in Hong Kong. The remarks below made by Student C2F summed up the predicament students in the CMI stream/schools were in:

C2W: I think that CMI and EMI schools have their own benefits. Explaining in Chinese is better as I can understand better. But the (English) language level achieved would be much lower, when compared with the EMI ones.

From the above analyses, students were appreciative of the benefits of Chinese as a medium for education, but students, particularly those from the CMI streams, were also concerned about the downside of learning in Chinese. This strongly suggests that on the one hand, students regard Chinese (or Cantonese) as an effective learning medium, but on the other, the above-explained deficiency inherent in the CMI setting might have clearly had an adverse effect on the CMI students' evaluation towards Chinese as a language for education.

(iv) Chinese Language – its Speakers

Quite surprisingly, both MOI groups did not give a very high regard towards the native speakers of the Chinese language in the two surveys (Element d, Table 11). Both MOI groups recorded an almost negative attitude towards the Chinese people (first survey: CMI-3.18, EMI-3.12; second survey: CMI- 3.22. EMI-3.06). As it was worded in such a way in the questions that the reference to the Chinese people is not restricted to a specific group of Chinese speakers in the questions (e.g. Cantonese speaking Hongkongers or Putonghua speaking Mainlanders), 'Chinese people' refers broadly to people of Chinese origin. Their attitudes may be based on their general impressions of local Chinese here in Hong Kong and those from the Mainland.

Views collected from the interviews also supported the above findings. There was an unanimous agreement among students of the two language groups in their general attitudes toward Chinese, their fellow countrymen: every time when Chinese or local Chinese were compared with English speakers, their comments on Chinese were surprisingly more negative than positive: the descriptions that both groups of the students used to describe Chinese speakers suggested strongly that, in contrast to English speakers, Chinese were more “conservative”, “very concerned about how others feel/think” (with negative connotations), less open-minded, less accommodating but more insistent.

C2F: Our impressions ... (English speakers are) less conservative than Chinese. They won't talk in a soft voice. They just say what they have in mind and they're not like Chinese, who would be very “concerned” about how others feel or think.

C2W: They're very friendly and when compared with Chinese, they're more open-minded. They're more accommodating and not that insistent.

Student C2W added his remark to that of Student C2F to give an interesting comparison of the students' attitudes towards the speakers of the two languages. To these two students, the English speakers are assertive (“won't talk in a soft voice”), articulate (“say what they have in mind”), while Chinese speakers are not able to do so as they are too “concerned” about how others feel or think, probably not out of respect but for fear of disapproval of others. To them, English speakers are friendly, and in comparison with the Chinese, who are found to be “insistent”, are open-minded and accommodating. Their attitudes may be based on their general contacts with local Chinese here in Hong Kong and those in or from the Mainland. From the above, it is obvious that the MOI experience in the two language streams seems to have helped very little in building in the students a positive attitude towards the Chinese people, which was already formed in the young minds. This is rather interesting as it indicates that greater exposure to a language

and its speakers may not necessarily produce favourable attitudes towards its speakers. In view of the low socio-cultural values attached to their mother-tongue (L1) in the Hong Kong context (for details, see paras. 2.3.1 and 3.2.2, Chapter 1), the findings above apparently offer to extend Dornyei's (1990) concept of "identification" in L2 learning, which can be "generalized to the cultural and intellectual values" associated with the language itself (Dornyei, 2003:6), to the learning of the L1 as well.

Analyses so far indicated that both groups of students held relatively speaking favourable attitudes towards the Chinese language, the mother-tongue of the majority, while they at the same time were concerned about the limitations Chinese has in terms of its instrumental and educational values. Further, no substantial changes in these attitudes had been detected over time. Also, no evidence was identified to indicate that the MOI factor had produced differences in attitudes towards Chinese people between the two language groups nor changed their attitudes in this respect, which probably were long formed in the young minds over the years, substantially over the eight-month period.

(b) Attitudes towards English

Exposure to English is found to be essential in building one's confidence in the language, and consequently a positive attitude towards it (Lau, 2002). In Lau's study, there was evidence to support that EMI students showed a more positive attitude towards English than the CMI group. The findings in this study also support the same.

Unlike the findings in the previous section on attitudes towards Chinese, participants of the two language groups did show some substantial differences in their attitudes towards the English language. First of all, overall speaking, there was a tendency for the EMI participants to report more favourable attitudes towards the English language:

significantly higher composite mean scores for this factor were recorded for EMI students (4.27 in the first survey and 4.24 in the second survey, compared with the composite means of 4.07 and 3.99 respectively of the CMI group). As shown in Table 12 below, these differences were found to be statistically significant [$F(1, 372) = 7.722$, which is significant with a $p < 0.01$ in the first survey; and $F(1, 364) = 11.02$, which is significant with a $p = 0.001$ in the second survey]. The results suggest that students under the bifurcation setting did show differences in their attitudes towards the English language.

Table 12 ANOVA Test – Between-Group Difference in Language Attitudes towards English

		Steam	Mean	SD	N	df	F	Sig.	Eta Squared
Survey 1									
Overall		CMI	4.07	.73	179	1, 372	7.722	.006**	.020
		EMI	4.27	.68	187				
a.	Language	CMI	4.09	.81	182	1, 376	7.066	.008**	.018
		EMI	4.32	.82	193				
b.	Instrumental Values	CMI	4.65	.89	185	1, 376	3.055	.081	.008
		EMI	4.80	.82	193				
c.	Educational Effectiveness	CMI	3.60	.98	186	1, 375	6.737	.010**	.018
		EMI	3.85	.93	192				
d.	Speakers	CMI	4.11	.92	185	1, 376	2.659	.104	.007
		EMI	4.26	.85	193				
Survey 2									
Overall		CMI	3.99	.73	186	1, 364	11.020	.001**	.029
		EMI	4.24	.66	192				
a.	Language	CMI	3.96	.78	185	1, 373	11.870	.001**	.031
		EMI	4.26	.82	192				
b.	Instrumental Values	CMI	4.53	.83	183	1, 371	7.689	.006**	.020
		EMI	4.76	.81	190				
c.	Educational Effectiveness	CMI	3.56	.99	186	1, 374	5.577	.019*	.015
		EMI	3.80	.92	190				
d.	Speakers	CMI	4.07	.93	186	1, 377	6.004	.015*	.016
		EMI	4.30	.86	193				

** Significant at the 0.01 level (2-tailed).

* Significant at the 0.05 level (2-tailed).

The Repeated Measures Design of the ANOVA test employed to detect any changes over time produced an $F(1, 359)$ of 10.986, with a $p=0.001$ and an eta squared of 0.030. The statistical strength of the result confirmed that there was a significant main effect of MOI on language attitudes towards English, of which the EMI students' ratings were generally significantly more positive than the CMI students'. Albeit small in effect size, the MOI factor alone had accounted for around 3% of the variance between the two language groups developed over the eight-month period.

(i) The standing of the English language

To throw further light on the effect of the streaming arrangement on language attitudes towards English, the above findings were viewed together with the differences identified in the sub-scales under this category. First of all, the first subscale captured the participants' view on the standing of the English language. The mean scores of the two surveys indicated that the EMI group tended to agree more that the English language is superior to the Chinese language ($F(1, 376) = 7.066$, with a $p<0.01$ in the first survey and $F(1, 373) = 11.87$, with a $p=0.001$ in the second survey). The disparity continued and was enlarged after the streaming, though the reported ratings of the two MOI groups on this measure in the second survey were both slightly reduced. The results of the Repeated Measures Design of the ANOVA test provided further proof of the MOI effect on the divergence ($F(1, 372) = 13.012$, with a $p<0.001$ and an eta squared of 0.034). These findings confirmed the hypothesis that the two MOI groups of students would have and exhibit a divergence in their attitudes towards the English language, and this divergence would continue and probably grow in the course of time.

The above statistical results indicated that EMI students showed a more positive attitude towards English, their MOI, than CMI students. The slight drop in ratings given by the

EMI students in the second survey is understandable as learning through the relatively 'alien' English, they might have encountered additional hurdles, which may have accounted for the lower ratings. On the other hand, the CMI respondents, with a clear awareness that they will go on with learning through their mother-tongue, which will mean lesser opportunities for them to have contact with the higher status English, tended to give a slightly lower evaluation to the English language.

Findings from the interviews gave similar results. In the interviews, students from both MOI streams in general were able to bring out the higher value they attached to English as an international language. The only slight difference between the two MOI groups lay in their views on the relative importance of English *vis-à-vis* Chinese: as shown below, both interviewees from the EMI stream below pointed out the usefulness of English as a world language, in contrast with the perceived limitations in the usage of the Chinese language. On the other hand, Students C2W from the CMI stream emphasized clearly the needs for a good command of both Chinese and English in Hong Kong, indicating that to him both languages are equally important.

E3G: I think it is very worthwhile. I think that if I have to spend time to improve my English, it is very worthwhile. In the international arena, people use English to communicate. Therefore, spending more time on improving my English is good.

E3M: Chinese is still limited in use in Asia only. English is an international language. You can communicate with different peoples in English. It has many advantages.

C2W: I think that in Hong Kong ... as Hong Kong is so close to the Mainland, our

Chinese must be very good first. Then English is also a must. You should learn English so that you can communicate with others because Hong Kong is situated between PRC and the West. We should focus on both.

As shown above, no discernable differences were identified among the two MOI groups of interviewees in their perceptions of the English language: the interviewees from both streams regarded English as an important international language. However, unlike Student E3M's response which highlighted the limitation of the Chinese as a relatively speaking important language regionally, Student C2W had positioned Chinese as important a language as English, which was a view not present in the preceding two extracts. This suggests strongly that the attitudes towards English in relation to Chinese did differ to a certain extent between the two MOI groups.

Apart from the above, student respondents also associated English with high level of academic competence and considered EMI schools better schools in general. An illustration of this perception can be found in the two extracts below:

E3M: My English and my performance in Primary school was very good and my teachers all said so. They were very disappointed when they knew that I was allocated to a CMI school. If I were allowed to choose, I would pick an EMI school.

...

E3G: This is because the Government has labelled that English schools are good and so we have people like him. (Laughter)

The undertone is clearly that to both teachers and students, CMI schools were a less desirable option, in comparison to the EMI schools. This view is in line with "the widely held belief that Chinese schools are inferior to English" and that "most students who

come to [Chinese] schools are of much lower academic caliber” (Cheung, Mayes and Randall, 2000:7-8). Obviously, as pointed out by these researchers, the MOI policy which allows a small number of schools to adopt English as the MOI “has reinforced this belief” among the student population (p.8).

As shown in the extract below, the two students from the CMI stream, like their EMI counterparts, were aware of the general feelings on CMI schools and shared similar views. They agreed that students in EMI classes were smarter. Student C2F particularly emphasized in his response that EMI students, to him, were good at “not just English”, but also other subjects/areas as well.

*I: Do you find (students of the EMI classes are) **smarter** than you are?*

Both: Yes.

*C2F: **Not just English.***

I: Then do you find students in EMI schools smarter than those in CMI schools?

C2F: Yes, I have such a feeling. Yes, I do.

I: Do you find people around you share the same feelings?

...

C2F: Yes, they do.

Although C2W, another CMI student, did not totally agree with the above views and had attempted to make his point that there was no difference in terms of intelligence between the two language groups of students, he nevertheless admitted that a good command of the English language is evidence of a good ability to learn. Yet, he remained ambivalent in the second part of this statement with ‘not much difference’ and eventually he only acknowledged the language aptitude of the EMI students.

C2W: I think that their ability to learn is higher because their English is better and therefore they'll be able to learn other things in a better way. However, in

*terms of overall IQ, I don't think there is much difference between us. It is not that they are better nor that we are better. There is **not much difference in our ability** in acquiring knowledge. It is only that the ability of those in non-English classes to acquire the English language is lower, in comparison. Apart from this, there is no other major difference.*

The findings above can be contrasted with the negative association students tended to have on Chinese and academic ability (see the section on Language Attitudes towards Chinese above for details).

From the above, English was perceived as a more superior language associated to some degree with competence and academic ability but not always without ambivalence in views, particularly among students in CMI streams. There is also no doubt that to the youngsters from both MOI streams, English, unlike Chinese which is relatively more limited in its scope of prevalence and instrumental values, is clearly a language for both the local economy and for the world. Furthermore, the statistical results echo with the findings from the interviews that differences in exposure to the English language due to the bifurcation seemed to have given rise to some disparity between the two groups over time, not only in the opportunities to improve their English, but also their attitudes towards the relative standing of the two languages. On the other hand, the interview data reveal their strength in showing how a simple choice is not always possible, and that the nuances of opinions which may not appear in the questionnaire answers do appear in the interviews.

- (ii) The instrumental values of the English language

The importance of English in Hong Kong has hardly ever declined after the change of sovereignty in 1997. Lai in her study (2002) pointed out that this high status of the English language in Hong Kong has led to a small difference in students' attitudes towards English in the 'cognition' domain. In an economy in which English is a marker of elite status and the gatekeeper for higher education, which in turn determines the access to a better job and a better future, it was expected that students from both language streams would recognize the importance of English and develop favourable attitude towards the English language. It was on this logic that respondents from both streams were believed to be well aware of the instrumental value of English and to incline positively to English.

Results from the questionnaire surveys showed that at the beginning of the study, the views of the two MOI groups on the instrumental value of the English language were no different from each other's ($F(1, 376) = 3.055, p = .081$). As explained above, English as the language for education and business has always enjoyed a high status in Hong Kong and the high mean scores in the first survey (CMI: 4.65, EMI: 4.80) confirmed that there is very little dispute over its instrumental values to its learners (See Element b, Table 12 for details).

To ascertain such in the qualitative survey, interviewees from both streams were asked about their views on their preferred medium of instruction and to give reason to support their choices. The findings were that the majority shared the same MOI preference, i.e. English over Chinese, and there was almost unanimous agreement over the instrumental value of English, which was the major reason why they preferred to study in English. Students' remarks below spoke very plainly of the association in the young minds of English competence and 'professional' and 'highly-paid jobs'.

C2F: *I think if you anticipate that the job you take up in the future will not be a **highly paid job**, then English is not very important. But if your job is more **professional** and requires you to have a lot of contacts with foreigners, then your English must be very good – not exactly very good, but at least you can **communicate well with foreigners**. That is my view.*

E3M: *Yes, you don't have a **future**, if you don't follow that model. In this society, no matter what you do, for example, if you're looking for a job, you need to produce a certificate (for English)...*

E3G: *You don't know English? Ok, goodbye to you.*

Here in C2F there is also explicit reference to the use of English as an international language. Further examples quoted below also pointed out that it is the instrumental values of the English language that had prompted their language preference:

I: *When you're in S3, which class did you want to get in when you're promoted to S4, the English class or the Chinese class?*

E1A: *If I were given a chance to get in, I would pick (the) English (class) as this is good for my **future**.*

I: *You think that it is good for your future as being put in an EMI class will help you find a job or further your studies. Is that what you mean?*

E1A: *Yes.*

E1F: *(I think) basically the same way as Amy³² does.*

I: *Then what was your first choice, an EMI or CMI school?*

C2F: *An EMI school.*

...

I: *Then why in the first place did you choose an EMI school as your first choice?*

C2F: *Because studying in an EMI school will help me in my **future career**.*

³² Pseudonyms were used to maintain anonymity of the participants, as explained in Chapter 3.

I: *So, what type of school would you like to be in?*

E3M: *EMI school.*

I: *Why?*

E3M: *You'll have a better future and I think my English is not bad.*

In all of these quotes, it is notable how future-oriented students were when they thought about their English. Evidence shown above underscores that students from both MOI streams agreed on the instrumental advantages of learning in English, whether it is for further education or better life chances. However, a gap in perception in this respect seems to have developed subsequently. After the participants were streamed to receive different exposure to the English language for a period of around of eight months, the EMI participants gave a rating to the utility values of the English language substantially higher than their CMI counterparts' ($F(1, 371)=7.689, p<0.05$ and $\eta^2=0.020$). Although the *F-ratio* is not big, the variance signifies the emergence of the first sign of a divergence in their attitudes after the splitting into the two language groups.

A follow-up Repeated Measures ANOVA test was conducted to determine whether there were differences over time which could be accounted for by the bifurcation of the students. The analysis generated an *F-ratio* of 6.902, which is significant with a $p<0.01$ and an η^2 of 0.018. This means that a divergence in their attitudes towards the instrumental values of the English language did develop over time and a very small percentage (around 2%) of the variation between the two groups was explained by the streaming arrangement. Both ANOVA and the Repeated Measures Design ANOVA tests indicated that the streaming arrangement did have an impact on the language attitudes of the students in the two language groups, albeit it should be cautioned that only very small effects were detected. Also, both groups reported a slightly lower mean in this measure in the second survey, but the reductions were found to be not significant.

(iii) Educational Effectiveness

On the measure of the educational effectiveness of the English language as a medium for learning, the EMI group gave a higher rating than the CMI respondents in the two questionnaire surveys. The differences identified were found to be significant ($F(1, 375) = 6.737$, with a $p=0.010$ and an eta squared of 0.018 in the first survey and $F(1, 374) = 5.577$, with a $p<0.05$ and an eta squared of 0.015 in the second survey) (see element c, Table 12). The Repeated Measures Design of ANOVA test was computed and results indicated that the MOI factor had a significant main effect which contributed to the divergence in attitudes towards the educational effectiveness of the English language over time ($F(1, 372) = 8.086$, with a $p=0.005$ and an eta squared of 0.021).

During the interviews, students from the EMI class who have more exposure to English and a higher confidence in their English competence on the one hand acknowledged the fact that they could understand better when taught in Chinese, but on the other they were more appreciative of the advantages English as a MOI has over Chinese and were more ready to point out the disadvantages of the Chinese language (e.g. the linguistic characteristics) as a medium for learning.

I: Which of the two languages is better for your learning?

*E3M: I myself ... Chinese is easier than English, but I think English in many respects ... **easier to memorize, easy to write**, not so complicated as Chinese characters (referring probably to the fact that a Chinese character normally comprise many strokes of different types).*

I: How about you, Gina?

*E3G: I'm in a Science class. **English is better than Chinese**. For example, the periodic table – many of the names of the elements in Chinese have the Chinese word “metal” as part of its components, and you don't find these*

words (names) in your everyday life. But in English, the A, B, C, D and E are all familiar to you. So it is easier to study in English than in Chinese.

...

E3M: ... To me, English is not difficult. For example, sometimes its pronunciation is easier to grasp and understand. On the other hand, in Chinese sometimes the words are difficult to pronounce.

I: You mean the chemical terms?

E3M: Yes.

In the second survey, both MOI groups registered lower mean scores for this measure, but none of the reductions was significant. Although the reduction in their evaluation on the effectiveness of English as an MOI had not been fully materialized and supported by statistical evidence, it is useful to find out whether the difficulties students had encountered as they learned through the English language in an EMI environment, particularly for those in the EMI stream who had to overcome additional hurdles after the transition in adapting to a new medium of instruction, was a concern, which would eventually affect their attitudes towards the language. Evidence unveiled in the interviews did indicate that students who had experienced some difficulties in their learning through English had a bigger concern over the limitations English as a MOI had on their learning and performance. Two students from an EMI class reported some changes in their attitudes towards English as a MOI, after learning through English without much success for some time: they were more aware of the disadvantages of learning through a non-native language and their motivation had dropped.

I: Do you think that this is a difficult task as you have to not only understand the subject matter, but also express yourself and answer the questions in English?

Both: Yes, it is quite a challenge.

EIF: I've found that the classmates who joined the Chinese stream had a much easier task – even though they might not know the questions well, they could use their common sense and still write a lot in Chinese. But I did not know

how to write the ideas down in English.

I: How about you, Amy?

E1A: Yes, the same problem.

I: At first, when you're in this English class, you were happy as it was good to your future, as Amy said. But now, after the test you were worried. Do you think that you'll be able to get through?

E1A: I'm a bit worried as I felt that I was not willing to work hard ... I felt that I may not be able to catch up.

E1F: I'm worried about this as well.

In sum, the above extracts from the interviews do throw light on why respondents of the two MOI streams reported a slight but significant difference in their attitudes towards the educational values of English in the two surveys, and secondly might explain why the EMI group's evaluation of the effectiveness of English as a MOI had dropped in the second survey. The observation at this juncture is that with more exposure and a higher level of confidence in their English competence, the EMI respondents were in general more able to appreciate the educational values of English as a MOI and therefore tended to have more favourable attitudes toward English, notwithstanding the learning difficulties EMI students had in a Chinese-dominant community.

(iv) English and its speakers

On the attitudes towards the English speakers, the scores collected in the first survey reveal a non-significant difference in the general perceptions of the two MOI groups of students towards the speakers of the English languages ($F(1, 376) = 2.659, p=0.104$) (see Element d, Table 12 above). In Hong Kong with a population of nearly 98% Chinese, most of the contacts local Chinese have with English speaking people are through their limited interactions with tourists or via watching television programmes or movies, or in a minority of cases, through interactions with expatriate relatives/colleagues at work.

Although for school students, they may have the benefits of having one (in most cases) native English-speaking teacher (NET) at school, limited by the huge teacher-student ratio (1: nearly 1000), interactions between the NET(s) and the students have been minimal. As shown in the extract below, students seemed to have very little interaction with their NET.

*E3M: ... We have only one lesson (taught by the NET) each cycle. I even **do not know him much**. I don't see him that often. ...*

...
E3G: Yes, and we didn't have his lessons when we're in S1-S3. ...

...
I: When you see him in school, have you tried to talk to him?

*E3M: No. ... I know a lot of other teachers. **Among all the teachers and senior teachers in the school, he is the least I know.***

On the other hand, Hong Kong, often described as the melting pot of the East and the West, had been heavily influenced by the western culture during its colonial days and has all along cherished its strong tie with the English speaking world. It is not surprising that local students, brought up in an economy that emphasizes English as a language of trade and welcomes English speakers who either are visitors or holders of respectable positions living in decent places away from the local public, and surviving in an education system which equates the raising of the students' proficiency in English with the success of the education system, normally associate the highly regarded English language positively with its speakers. It is therefore not unreasonable to infer that the favourable impressions towards the English speakers common to both language groups may not be based on personal experiences but are the results of an auspicious projection of the high status language itself on its speakers. This finding echoes with Dornyei's (1990) contention that in a foreign language learning context without a salient L2 group in the learning environment, the 'integrative disposition' displayed by the language learners to the L2,

which involves a positive interpersonal/affective disposition toward the L2 speakers, can be “generalized to the cultural and intellectual values associated with the language, as well as to the actual L2 itself” (Dornyei, 2003:6).

This above inference is supported by the evidence collected from the interviews. Students from both MOI groups reported that they had very high opinions on English speaking people³³, although they in actuality had very few opportunities to interact with English speakers. Their general impressions of English speaking people were mainly gained from movies, television programmes, and in a few cases, their limited interactions with tourists. English speaking people were, in the interviews, often described as nice, open-minded, friendly, vocal, helpful, warm and welcoming (see also section (a) (iv) above).

I: *In your daily life, do you have a lot of opportunities to contact English speaking people?*

C2F: *Very few.*

...

C2F: *Our impression ... they're **less conservative** than Chinese. They won't talk in a soft voice. They just say what they have in mind and they're not like Chinese who would be very concerned about how others feel or think.*

C2W: *They're very friendly and when compared with Chinese, they're more **open-minded**. They're **more accommodating** and not that insistent.*

I: *How did you get this impression?*

C2W: *When I had some outdoor activities ... we met some foreigners and sometimes we chatted with them. From the **encounters**, I got the impression.*

...

C2F: *From watching the **TV programmes** on for example the Pearl Channel. It was mainly from TV programmes.*

I: *What was your impression of the foreigners afterwards?*

³³ See Note 22.

E1F: *Very nice.*

...

I: *Do you think that they will help you?*

E1A: *I think they will.*

E1F: *The people from outside (Hong Kong)³⁴ are really nice*

E3G: *They're quite open. It is very happy when you talk to them. You say one sentence to them and they will answer you in, say, ten sentences.*

E3M: *They are warm and welcoming. Because I live near the old airport and so I saw a lot of foreigners. I found them very nice to each other and they hug each other often.*

On the one hand, the favourable comments on English speakers may result from a munificent projection of the more prestigious language on its speakers. On the other, another possible explanation for such a difference in attitudes towards the speakers of the two languages was given by E3M, as shown in the extract below:

I: *How do you find them in treating you or Chinese people?*

E3G: *I think they're nicer than those (Chinese) we meet in the street. When you meet another Chinese in the street, you would not say 'hello' to him. But if you look at them (foreigners), they will smile back or say 'hello' to you. They are really nice.*

E3M: *Maybe because they are not in their own country. One may greet foreigners more readily and eagerly.*

However, after the streaming of the students into their respective MOI groups for some time, a wider divergence in perception in this respect had developed in the second survey. Again, the EMI group reported a more favourable evaluation of the English speakers than the CMI group did ($F(1, 377) = 6.004, p=0.015$ and $\eta^2=0.016$). A follow-up Regression analysis was performed and the R Square was 0.031, with an F -ratio of 11.87,

³⁴ Here and in the next extract, it is clear that "English speakers" is a category into which all foreigners fall, as pointed out earlier.

which is significant with a $p=.001$. In other words, the MOI streaming arrangement was found to have an impact on the participants' perception of English speakers. The Repeated Measures Design of the ANOVA was conducted to capture the main effect of MOI on the changes in attitudes over time. Results indicated that the MOI bifurcation had a very small but significant contribution to the continuation of the differences in attitudes between the two language groups in this respect ($F(1, 376) = 5.642, p=0.018$ and $\eta^2=0.015$).

In sum, the above findings confirm the hypothesis that the MOI factor would have an effect on students' attitudes towards English speakers. An interesting observation at this juncture is that students from the EMI stream, those with more exposure to the language or a higher level of English competence, tended to have more favourable attitudes towards English speakers than their CMI counterparts, and there is evidence that this divergence in attitudes between the two MOI groups had grown in the course of time.

(2) Motivation Characteristics

The second research focus of the first research question intends to investigate whether the MOI experience will have an effect on the motivational intensity and orientations of the students of the two language streams. Specifically, it is to measure whether the two MOI groups would display differences in their motivational characteristics (e.g. motivational intensity, integrative orientation, and instrumental orientation).

The quantitative measure on motivation comprises a subscale on motivation in L2 learning and four subscales to measure the instrumental and integrative orientations in L2 learning, and the intrinsic and extrinsic orientations in learning in general. Composite

total scores and composite mean scores for each subscale were calculated to form the basis of comparison of the two language groups of students in the two surveys. A higher mean score in the overall scale or in a subscale indicates a higher level of motivational intensity in the relevant dimension. In the qualitative study, a number of questions were asked at the interviews to collect information on the participants' overall level of motivation and their motivation to learn English. In particular, students were probed to reflect on whether they had expended efforts in improving their English after their promotion to S4. They were also encouraged to expound on the motives behind their English learning.

(a) Motivational Intensity

In the analyses, first of all, on the basis of data collected from the questionnaire surveys, composite mean scores were calculated to compare the overall levels of motivation of the two MOI groups and their motivation to learn English, and to identify the respondents' various motivational orientations. A clear difference in the overall level of motivation of the two MOI groups was discerned. The comparison tests generally found that the EMI group was a more motivated group of students. As shown in Table 13 below, overall speaking, the EMI participants exhibited a higher level of motivation in both surveys. In the first survey, the difference [with a mean difference of 0.12, $F(1, 371) = 4.002, p < 0.05$] was small but significant. Although the difference between the two MOI groups identified in the first survey could just be the difference which had prevailed prior to the streaming (as it was probably the more motivated students who were able to gain the last ticket to the EMI stream in S4), it is also probable either that the difference prior to the streaming, if any, was strengthened by the streaming, or that the differential effect of the MOI had begun to surface as a result of the streaming. This proposition of the MOI

effect is supported by the growth in the difference detected over time, as expounded below.

In the second survey, the divergence obviously had widened [$F(1, 371) = 16.54, p=.001$]. Although the mean scores showed that the EMI groups reported a heightened overall level of motivation (mean=3.96) eight months after the streaming, while the CMI informants reported a slight drop (mean=3.76) in the motivational level after the period, the Within-subjects Effect measure of the ANOVA test did not find the change reported to be significant. However, the F statistic for the Tests of Between-Subject Effects generated from the Repeated Measures ANOVA test to gauge the difference between the two MOI groups was significant: $F(1, 365) = 8.468$, with a $p < 0.005$ and an Eta Squared of 0.023. Again, the effect size of around 2-3% is rather small, but the above findings support the hypothesis that there was a significant main effect of the streaming arrangement on the motivational development of the two groups of students over time.

Table 13 ANOVA Test – Between-Group Difference in Motivation

Measures		Stream	Mean	SD	df	F	Sig.	Eta Squared
Survey 1								
Overall		CMI	3.83	.59	1, 371	4.002	.046*	.011
		EMI	3.95	.55				
a.	Motivation - English	CMI	3.45	.86	1, 373	16.54	.000**	.042
		EMI	3.80	.83				
b.	Instrumental Orientation	CMI	4.09	.76	1, 373	.031	.861	.000
		EMI	4.10	.80				
c.	Extrinsic Orientation	CMI	4.10	.93	1, 376	.094	.076	.000
		EMI	4.08	.92				
d.	Intrinsic Orientation	CMI	3.86	.79	1, 377	.271	.603	.001
		EMI	3.90	.75				
e.	Integrative Orientation	CMI	4.05	.94	1, 376	.017	.895	.000
		EMI	4.08	.97				

Survey 2								
Overall		CMI	3.76	.54	1, 371	11.465	.001**	.030
		EMI	3.96	.54				
a.	Motivation - English	CMI	3.48	.79	1, 376	13.014	.000**	.033
		EMI	3.78	.84				
b.	Instrumental Orientation	CMI	4.02	.74	1, 376	4.472	.035*	.012
		EMI	4.18	.82				
c.	Extrinsic Orientation	CMI	3.97	.94	1, 375	1.913	.167	.005
		EMI	4.11	.91				
d.	Intrinsic Orientation	CMI	3.72	.80	1, 375	2.074	.151	.006
		EMI	3.84	.81				
e.	Integrative Orientation	CMI	3.95	.85	1, 377	2.204	.138	.006
		EMI	4.09	.90				

** Significant at the 0.01 level (2-tailed).

* Significant at the 0.05 level (2-tailed).

Findings from the interviews supported the findings above. During the interviews, a number of questions were asked to detect the motivational characteristics of the two language groups. As expected, students from the EMI stream exhibited a higher level of motivation in learning in general and in L2 learning in particular. First of all, as shown in the extracts below, the EMI interviewees were found to be more ready to work hard for better results, even though similar to the situations of the CMI students, they also complained about the heavy load of homework. There was distinctly a higher sense of motivation, and a willingness to endure “pressure” and to take on more “tests” in the following discourses of two EMI students:

*E3G: I think (giving ourselves) some **pressure** (from tests) is quite **good**.*

E3M: If there is no pressure, we will not work hard...

*E3G: Even though we have **tests** everyday, I **enjoy** that very much as the marks are quite good and I am very **happy**.*

Obviously benefited from a higher level of academic performance³⁵, these two EMI students explicitly welcomed more work and tests that would help their academic development. As also can be seen from the extract below, they disciplined themselves and were very focused in their learning, with clear academic objectives and a high sense of effort-effectiveness in mind. What distinguishes these EMI students from the other students is a clear focus on the instrumental values of each learning activity: they were very mindful of how their limited 'free' time was spent and of the purpose and effectiveness of each learning activity in order that the limited time they had would not be 'wasted'.

*E3M: I have actually read the English version of Harry Potter. It is not very difficult and the vocabulary and expressions used are those we can find in our everyday use. But it is a very thick book – the Chinese version is already a very thick one, and the English version is even thicker. So I think it is about (leisure) reading, why not spend the time doing revisions and **not to waste** ... I don't mean 'waste', I mean not to spend too much time on reading such books.*

The second EMI student from this group had a different view of the book but also saw the question of reading in terms of usefulness and the instrumental value of 'leisure' reading:

*E3G: I read Harry Potter. Actually, I had seen the movie and knew the story. The reason (to read the book) is **to develop my vocabulary**. My thinking is different from Ming's.*

In face of huge demand and pressure from their studies, they had very little free time for activities other than homework and learning. However, it is apparent that they remained

³⁵ According to the teachers, the 4A class (i.e. the E3 Group) is the elite class (please also see remarks made by Student E3M in one of the quotations given below). The fact that they were admitted to the elite class of the EMI stream underscored their academic standing in general, and more specifically their English competence.

motivated and chose to do as much learning-related activities as they can.

*E3G: Yes, **no time at all**. I really would like to read them (English books borrowed from the library). Even when the due date was going to pass, I still would like to read them ... gradually, the privilege expired and I 'gradually' didn't have the time and had to return them.*

Even though, as reported above, they had lots of homework to do (“no time at all”) and “tests everyday” (see the quotation above by E3G), this group of EMI students exhibited a clear motivation to pursue in activities that are conducive to enhancing their L2 competence (e.g. Student E3G borrowed English books from the library to develop her vocabulary).

Also, as shown in the citation below, the two EMI students above, E3M and E3G, seemed to be motivated by the simple fact that they were admitted to an elite class, entry to which is highly competitive, and apparently were confident and not bothered by the difficulties they may have when learning through an unfamiliar medium.

*E3M: The fact that it is very difficult to get in is of course a very important point. 4A being **an elite class** is another important point. But, if (I) can cope with the difficulties in learning through English, then I find this ok.*

*E3G: (I) can cope with (learning through English), and in fact, it is **not that difficult** – maybe because we have a very good foundation.*

Views expressed by another group of EMI students, those with a lower self-perception of English competence³⁶, also indicated that they had study plans and were willing to take up learning tasks, even though they reported that they often lacked the determination to follow through.

³⁶ According to the teachers, 4B (i.e. the E1 Group) is, in comparison with 4A, the class with a lower level of English competence. As reflected in remarks made by the two E1 interviewees in section 3.2.3 (a) below, they had displayed a lower self-perception in terms of academic performance.

I: Mm ... what do you do to improve your English?

E1A: Read the newspaper and make use of the dictionary. Do some reading comprehension exercises.

I: Do you spend a lot of time on these tasks?

*E1A: I have **planned to do so** and I have bought the materials **but I have not done that**.*

From the above, the first sight of a possible difference between students of the two EMI groups can be detected. Student E1A admitted that she had not persisted to follow through her own plan of studying. This viewed together with the extract given below, a discernable difference between students of the two EMI groups gradually surfaced. The E1 Group students, with a lower self-concept of English competence, appeared to be less motivated to persist – they were more ready to give their time to non-learning related activities than their more capable counterparts. Unlike E3 group students, who appeared to be persistent in their learning, the two students from EMI Group 1 reported that they tended to choose to take a break rather than pick up additional work after homework.

*E1A: We have to do the homework and sometimes after we have finished the homework, we **don't have the time** to find out the [vocabulary].*

*E1F: Sometimes after we have finished homework, we feel **very tired**. And we feel the **huge pressure** once you are in F.4. Sometimes, after homework, we would like to watch TV, take a nap, listen to the music, take a bath and relax a while.*

On the other hand, there was still a slight difference between these two EMI students with a lower self-perception of English competence and those from the CMI stream. Student E1A reported that she had actually a “plan” for her study but confessed that she had not worked hard enough according to her study plan. On the other hand, apparently daunted by the higher demand in their English competence and a more difficult learning job, the two E1 group students had expressed more worries over the challenge they had

to deal with in learning through a less competent language than a loss of interest in their learning.

*E1A: We are feeling **more worried**, aren't we?*

I: More worried?

*E1F: Because there is a **higher requirement** in terms of our English competence. Even though (studying in the EMI class) is good, if I can't handle it, it makes me **more worried**.*

Unlike the E1 group, none of the students from the CMI group complained about workload, though they were aware that learning through their mother-tongue had spared them a higher demand in terms of language competence and great pressure from learning through an alien language. Secondly, they were concerned more about whether a learning activity was enjoyable than about whether it was instrumental to enhancing their L2 competence or good use of their free time to maximize their learning.

I: Do you read books at home, say, at your free time?

C2F: Normally not. I normally will switch on my pc.

I: You can find a lot of useful information on the internet as well.

*C2F: We **don't normally go to the websites for learning**.*

I: Do you mean that you go to websites for ICQ only?

C2F: Yes.

*C2W: It depends on what kinds of activities they are. As I am quite active, I like activities that involve a lot of actions. **For activities such as book clubs, I seldom join such.***

*C2F: If, say, we are to play a game and all instructions are in English, I think I will find it interesting to join. **If it is about coming back to school to read books to improve English, I will not join such activities at all.***

Although they realized that there should be no delay for them to work hard to improve

their performance, they reported that they had not done much to that effect. They also appeared to be less willing to work hard.

C2W: ... I know that if I don't work hard now, I will have to work even harder in the future. I don't know why – even though I know that will happen, I have not put in as much effort as it needs in (improving my learning). ... I am not willing to work hard now.

Overall, findings from both the surveys and the interviews lend support to the hypothesis that the MOI arrangement would have a differential effect on the two language groups of students. In general, the EMI students, irrespective of their level of English proficiency, were found to have exhibited a higher level of motivational intensity in their learning and the difference between the two MOI groups seemed to have further substantiated in the course of time.

(b) Motivation to learn English

A comparison of the mean scores of this measure (see Element a, Table 13 above) of the two groups indicates that EMI participants reported to have enjoyed a higher level of motivation to learn English than their CMI counterparts [EMI means: 3.80 (first survey) and 3.78 (second survey); CMI means: 3.45 (first survey) and 3.48 (second survey)]. This cursory finding is confirmed by the ANOVA tests conducted [$F(1, 373) = 16.54$, $p < 0.001$, with an eta squared of 0.042 in the first survey; and $F(1, 376) = 13.014$, $p < 0.001$, with an eta squared of 0.033 in the second survey]. Obviously, the access to the EMI class is a clear sign of success to the EMI students, and the assignment to learn through English will give them more incentives to work hard for better results after promotion to S4. This is particularly so at the beginning of the survey when they were qualified to change their MOI to English.

A subsequent paired *t*-test was performed to compare the ratings of each of the two MOI groups in the two surveys, and there was no evidence of a statistically significant within-subject change in this measure of motivation for both groups. The same result was obtained with the Repeated Measures ANOVA, indicating that the respective changes of the two language groups in the level of motivation to learn English had not been significant. It is therefore worth noting that the boosting effect had remained in the second survey for the EMI group, despite the fact that the EMI students, in a Cantonese dominant linguistic environment, had to face the various problems associated with learning through a foreign language in the Chinese educational context, i.e. overcoming the two difficult tasks of improving their English substantially to enable them to learn through it and mastering the subject matters of the individual subjects at the same time. In terms of comparison of changes over time, the test statistics generated from the Repeated Measures ANOVA test indicated that the grouping effect was growing in significance [$F(1, 372) = 19.853$, with a $p < 0.001$ and an eta squared of .051], implying that the two language groups developed different levels of motivation to learn the foreign language over time, with about 5% of the variance being explained by the MOI grouping factor.

Similar to the findings in the previous section on overall motivation, the interviewees from the EMI stream showed a higher level of motivation in their pursuit of English learning. As shown in the remarks made by the two E3 students below, one was always ready to take up less interesting learning tasks to enhance their English competence, while the other, finding the learning task assigned boring, was able to manage his own learning by taking alternative but effective learning tasks instead.

I: Then, do you spend time and effort on improving your English?

Both: Yes, we do.

I: *What do you do most?*

E3G: *Our school makes us read the newspapers. Many can't do this as they would fall asleep. But **I think the intention of our school is good and so I will read.***

E3M: *You said that our school makes us read English newspaper. Frankly speaking, I will not read them. Asking us early in the morning, immediately after we've sat down, to read an English newspaper ... **I would rather do so in the afternoon.** If you say that in the morning we'd like to read the newspaper... I don't believe that they are willing, very willing to read. **I would rather watch TV programmes in some other times or read English books that we like.***

In the case of the two interviewees in the E1 group, their motivation to learn in English had not subsided in the face of the daunting task of learning through a foreign language. When asked whether they would choose Chinese or English as the medium of instruction if they were given a choice again, they both went for the English option.

E1A: *I would like to pick Commerce, but I would like to pick **English**, i.e. commerce in English.*

E1F: *I would like to pick Arts **in English**, if I had a choice.*

I: *... Is it because it is more practical, or because you're interested in it or because you find it more effective in learning?*

E1A: *I find that subjects in Commerce are not that difficult and more practical.*

...

E1F: *I'm more interested in Arts subjects.*

I: *You still would like to choose the English class?*

E1F: ***Learn more English.** Even though you may not get used to it at the very beginning, you will get used to it eventually.*

On the other hand, an observable difference in their motivation to L2 learning can be found in the CMI interviewees. Obviously handicapped by their language competence, both C2 (CMI) students expressed their frustration, and as a result, found learning English boring. One even reported that he had developed certain degree of resistance to English learning. They also frankly admitted that they were less persistent in their

pursuit of L2 learning:

I: Do you think that you have put in (in this respect) much effort? ...

*C2W: In comparison, I have **not put as much effort in learning English** as I have for other subjects I like. I felt that I am **a little bit resistant to (learning English)**.*

...

*C2F: ... I find dealing with English very troublesome because even though I've tried very hard to read and study, I have to, because of my limited vocabulary, **consult the dictionary many times** before I can finish reading an English passage. And it takes me a lot of time or (I'd) feel very **puzzled** to think of how to deal with it and sometimes it is quite **annoying**.*

The above discourse reveals a high level of frustration in their English learning – obviously bound by limited vocabulary, they were not able to enjoy the fun of learning and were quite ‘puzzled’ and ‘annoyed’ by not knowing how to tackle problems in this difficult but important subject. Although on one occasion they did indicate their desire to improve their English proficiency so that they could read books in English and understand the original intention of the author, they also reiterated (see extract below) to have lost their interest in keeping up with their English learning as they found English tasks “boring” and had been put off by the many problems they repeatedly encountered:

I: ... What is the biggest obstacle or what has caused you to lose interest in keeping up with your English learning?

*C2F: **Boredom and the many problems** we have encountered (in the course of studying). For example, after you have worked out the meaning of one sentence, you may have problem in understanding the next sentence; and after you've solved the problems for the second sentence, you may still have problems in understanding the third one. In this way, even though you may have the determination (to work hard) at the very beginning, (all these problems) **will make you lose your determination to read on**.*

...

C2W: *Yes, I think my case is very similar. There is a **lack of interaction** (in the learning). ... there are definitely some elements that are quite **boring** (to learn). So, you'll find learning such topics particularly **boring** and when you encounter difficulty (in comprehension), you'll further be put off and not willing to learn and work hard.*

As shown in the citations below, in the discourse of the CMI students, there is always an undertone that they lost their interest and motivation quickly as, overwhelmed by the difficulties inherent in the learning tasks, they had not had much success in dealing with and overcoming the problems in English learning, which had turned the L2 learning tasks unrewarding and 'boring'.

Both: *Yes, for example, we have our announcement done in English once every cycle.*

C2W: *This is to encourage us to use English for our communication.*

I: *Do you find this useful?*

Both: *Yes.*

C2F: *Whether you are willing to learn accordingly is another issue. I mean **whether you are willing to follow the way to learn is another issue.***

I: *... If you have more opportunities to take part in activities that promote English, will you take part?*

C2F: *If it is **conducive to the learning of English**, I will try to ask myself to participate in.*

C2W: ***It depends on what kinds of activities they are.** As I am quite active, I like activities that involve a lot of actions. For activities such as book clubs, I seldom join such.*

C2F: *If, say, we are to play **a game** and all instructions are in English, I think I will **find it interesting to join**. If it is about coming back to school to read books to improve English, I will not join such activities at all.*

I: *So, activities such as the ones that require you to memorize a few passages or some vocabulary will not be attractive to you.*

Both: *Yes.*

C2F: *We are young kids and so we like to play more.*

It can therefore be concluded from the above that, the students from the two MOI stream did exhibit different levels of motivational intensity in their English learning. The EMI students, including the two E1 students who had encountered problems similar to those of the CMI group in their English learning, had demonstrated a higher level of willingness and motivation to learn and improve their English than their CMI schoolmates.

(c) Motivational Orientations

Further, in the two surveys, students were asked questions about their intrinsic-extrinsic and instrumental-integrative motivational orientations. First of all, to ascertain any difference between the two groups in their intrinsic motivation orientation, a series of paired *t*-tests were conducted on the survey data and found that the CMI group reported a negative downturn in their evaluation of their intrinsic motivation orientation [$t(185) = 2.234, p < 0.05$], suggesting that they might have experienced less interest or satisfaction in their studies after the streaming in S4. The above change was further confirmed by the repeated measure component of the Repeated Measures ANOVA test, which generated a Within-Subject effect of $F(1, 375) = 5.997$, with a $p = 0.015$ and an eta squared of .016, for the two surveys, indicating that a marked difference in the intrinsic motivation orientation within the two groups had developed in the course of time. The between-group effect was however found to be not significant.

The two groups reported no significant differences in their extrinsic motivation orientation and in their motivation to learn English for a better level of integration with

its speakers. There was also no significant difference in the measure for instrumental orientation of student motivation at the beginning of the transition. Paired comparisons of the two MOI groups in the two surveys also yielded no significant within-subject differences over time nor any significant between-group differences in the above mentioned measures in the two surveys. However, an exception was discerned for the between-group comparison in the measure for instrumental orientation in the second survey. A clear divergence between the two MOI groups in their instrumental orientation had emerged after a lapse of time [$F(1, 376) = 4.472$, with a $p < 0.05$ and an eta squared of .012].

In the interviews, questions were specifically directed to the motivational orientation of their English learning. As expected, studying and English learning, to nearly all of the interviewees, was mainly for the instrumental values on their future academic and career developments.

*E3M: We study Science and the English we use, e.g. English for Physics, Chemistry, Biology, Maths and A Maths, is not something we use in our everyday life. For example, you don't use English in the marketplace or use A Maths to do the simple calculations. **Studying to me is for my future** – it doesn't help my daily life much.*

So English is not something they need for 'everyday life' but for the future. Studying and learning to prepare them for a better job or future was clearly high on the priority list of both language groups.

*E3M: ... If you look at the present moment, studying in an EMI class is better than in a CMI one. When you look at the merits, studying in an EMI class will have more (merits) than studying in a CMI class. For example, **it is good for your future in terms of job prospects.***

E1F: *Learn more English. Even though you may not get used to it at the very beginning, you will get used to it eventually.*

I: *So, you think that it is good for you to be in the English stream as it is **good for your future and for your development.***

Both: *Nodded.*

I: *... What do you think at this moment ... is your main purpose (of learning English)?*

C2F: ***Mainly for the future job.** Communicating with foreigners would be 'secondary'³⁷.*

...

C2W: *For the time being, I think it is **mainly for the job for the future.***

But the EMI groups appeared to have more on their agenda. The intrinsic and extrinsic values of English learning and the motive to communicate with the English speaking people and to understand them or their cultures were also high on the list.

E3G: *I would like to learn English for myself, not for my studying only. ... If we would like to learn English to **improve our lives and our future**, ... if we learn English to **enhance our ability**, we have to get help from outside (of the school).*

Here the emphasis is on personal development and in the next extract on this and on the status which English gives them in the eyes of their parents:

E3G: *... Well, (I) feel great when (I) find that (I) can **communicate** with foreigners, something that even (my) parents are not able to do, but (I) can. They are **proud of me.** And it is **interesting** (to do so) too.*

...

³⁷ The Chinese word used here can mean either "the next" in importance or "the less" in importance. On the basis of the context here, it means more as "a less important" purpose than "the next important" purpose.

E3M: Yes, before I was promoted to F4, I had communicated with relatives in other countries in English. I did not deliberately seek opportunities to communicate with foreigners. Same as Gina's case, my parents did not have much education and so they're very proud of me.

The following extracts go a step further by explaining what might be involved in the personal development associated with English, namely an insight into a different world:

*I: Do you mean that you would like to learn English well because you would like to get the **original flavour** to understand a piece of literature or a movie or to get to know the English speaking people there directly **without having to go through a ...***

*E3G: **An interpreter.***

I: A translator of an interpreter.

E3G/E3M: Yes.

I: ... what do think is the main purpose of learning English ...for a better job, or for better communication with other people in other countries.

*E1A: **I want to communicate better with others.***

*E1F: **Me too.** At least when you meet someone you would like to know or when you are studying in a foreign country, if you cannot communicate well, when you have problems, others may not understand you well and therefore may not be able to help you.*

The research focus of this part is to investigate whether the MOI experience will have an effect on the motivational characteristics and orientations of the students of the two language streams. From the above analyses, divergences were found in the sub-measures for motivation to English learning, instrumental orientations and intrinsic orientations, and in the overall measure for Motivation, although there were no significant differences in the other sub-scales of the motivation measure of the quantitative study. On the whole, the findings suggest that differences between the two language groups gradually surface

after the streaming and that the EMI group is a more motivated group of students.

It is no accident that, in an economy in which English is the language of power (Phillipson, 1992) and the gate-keeper for higher education and job opportunities (Pennycook, 1995; So, 1992), students in Hong Kong, irrespective of the language streams they are in, displayed a strong instrumental orientation in their motivation to learn the English language. It is also understandable that differences in the above aspects between the two MOI groups developed over time, as the EMI groups of students, being the only group allowed to study in the powerful L2, are in a position more conducive to their L2 development, and thus tend to be more positive about L2 learning and more convinced of the instrumental values of the learning medium. On the other hand, a discernable difference between the two MOI groups was also apparent in that the EMI students, studying and learning through the language, were able to treasure the intrinsic value of English learning, which is lacking in the discussions with the CMI groups, and attach more importance to the benefits of being able to communicate well and integrate better with English speaking people. In sum, from both the quantitative and qualitative analyses, differences in the overall motivation and the motivational characteristics and attributes of the two MOI groups were revealed and a clear between-group divergence had developed over time.

(3) Motivational Attributes

(a) Self-Concepts

Self-concepts are self-perceptions of one's competence, which, once formed, are less susceptible to change (e.g. Craven, Marsh, & Debus, 1991) and therefore are not expected to report any discernible change as easily as other attitudinal factors. In this

study, the impact of MOI on students' self-concepts was assessed not by comparing directly the self-concepts of the students of the EMI and CMI schools, but by following the development of the reported self-concepts in the two surveys of the two MOI groups segregated within the same CMI schools. It was anticipated that, although the MOI streaming at S4 within the same school may not be as significant a change as the allocation of students to either the EMI or CMI schools upon transition to S1 from primary schools, this intervention would mean the last chance for the students to gain access to learning in the English medium and, as such, might be regarded as another major milestone in their academic careers. As deliberated in previous chapters, it was expected that the MOI segregation in S4 would instigate a difference in the development of self-concepts of the students in the two language groups.

In the quantitative study, questions were asked to determine three key domains of students' self-concepts, namely, academic self-concept, self-esteem and social self-concept. On the basis of data collected from the two questionnaire surveys, composite mean scores and composite total scores were calculated for the three individual subscales respectively and for the overall level of self-concepts. The higher the scores in this measure, the more positive the self-concepts reported.

Mean scores calculated from the questionnaire data indicated that the EMI students seemed to have given slightly higher scores in the overall measure on self-concepts in both surveys (means: EMI- 46.20 and CMI- 46.09 in the first survey; EMI- 46.39 and CMI- 45.74 in the second survey; for details, see Table 14 below). The above observable differences however were not supported by the statistical ANOVA tests performed when only the MOI factor was taken into consideration in the equation [$F(1, 371) = 0.018$, with a $p=0.894$ in the first survey and $F(1, 365) = 0.580$, with a $p=0.447$ in the second

survey].

Comparing the breakdown scores of the individual domains, while there were no noticeable differences in the social concepts of the two MOI groups in the two surveys (a mean score difference of 0.05 in the first survey and zero difference in the second), there were observable divergence in the development of their academic self-concept and self-esteem. To ascertain whether such differences between the two MOI groups in both surveys could be substantiated and explained by the MOI effect, ANOVA tests were again employed. However, the results generated did not find the differences between the two MOI groups statistically significant enough to support the surfacing of such a divergence in both occasions (See Table 14 below).

Although it cannot be concluded in this initial data analysis that the MOI streaming factor alone does have an impact on the self-concepts development of the students concerned, the general pattern of the appearance of a divergence and a noticeable wider gap over time do suggest the possible presence of such an effect. At this juncture, the researcher decided to refer to the information collected from the interviews for a better understanding of the thinking behind the ratings and scores in order that any possible differences in the development of student self-concepts after the transition could be unveiled. In the interviews, questions were asked to gauge students' level of self-concepts in comparison with their counterparts both within and without the school. As detailed below, results from the interviews lent support to the hypothesis that the two MOI groups would display some differences in their self-concepts after the MOI streaming.

Table 14 ANOVA Test – Between-Group Difference in Self-Concepts

		Steam	Mean	SD	N	df	F	Sig.
Survey 1								
Overall		CMI	46.09	7.44	181	1, 371	.018	.894
		EMI	46.20	7.61	192			
a.	Academic Self-concept	CMI	14.02	2.64	185	1, 375	.208	.649
		EMI	14.14	2.65	192			
b.	Self-esteem	CMI	15.70	3.58	185	1, 376	.000	.983
		EMI	15.69	3.74	193			
c.	Social Self-concept	CMI	16.32	2.89	183	1, 374	.030	.861
		EMI	16.37	2.74	193			
Survey 2								
Overall		CMI	45.74	8.13	180	1, 365	.580	.447
		EMI	46.39	8.12	187			
a.	Academic Self-concept	CMI	13.87	2.96	181	1, 370	1.054	.305
		EMI	14.19	3.06	191			
b.	Self-esteem	CMI	15.49	3.72	185	1, 373	1.317	.252
		EMI	15.93	3.70	190			
c.	Social Self-concept	CMI	16.28	3.06	185	1, 375	.000	.999
		EMI	16.28	3.04	192			

With respect to academic self-concept, during the interviews, E3M and E3G, EMI students from the class with a higher level of self-perceived English competence, gave more readily positive perceptions on their academic performance than their CMI schoolmates. It was evident that they had enjoyed a very favourable academic self-concept:

I: Have you sometimes compared yourself with the high performers of the EMI schools?

E3M: Yes, sometimes. But I don't feel that I am particularly bad (in terms of performance) because I know my level of performance well – it is good, not bad at all.

I: Then how about within this school. You're in an EMI class. Do you feel that or do others feel that you are better than the other classes.

E3M: Yes.

E3G: Will definitely think this way.

In line with previous findings (e.g. Yip, Tsang and Cheung, 2003; Moll, 1992), these two students, going through the Hong Kong education system, a setting in which academic performance is strongly emphasized, had benefited from a high academic self-concept by comparing their ability with others in their immediate environment (e.g. schoolmates). As shown in the citation below, their confidence in their academic performance remained high even though they admitted that the marks they obtained in a recent test were not as high as some of their CMI schoolmates'. In other words, they had a very high opinion on their academic competence and their academic self-concept was not adversely affected by the less satisfactory results in school tests at the early stage of the transition.

E3G: I think that we should not judge our performance in English by simply looking at the marks.

E3M: Yes.

E3G: It is not that fair.

E3M: ... For the Arts and Commerce classes, they use Chinese as their MOI. If we look at the results, they will have higher marks because they learn in Chinese. But in our case, we are the Science group. This is the first year and we took our first test in English. In general, the marks we got are a bit lower. It is because we had learnt in Chinese for the past three years, and now this is the first time we switched to English – we found it a bit difficult for us.

The undertone in the above citation was that, in comparison with learning in the CMI stream with a simpler and easier task of learning in one's mother-tongue, the plain fact that EMI students are given the more challenging task of learning through the English medium, i.e. the need to handle the two learning tasks of grasping the subject matters and mastering the English language at the same time, had clearly underscored their academic

competence. Also, as can be seen from the citation below, apart from the external reference, these two EMI students also had benefited from favourable internal reference and considered themselves good not only in English, but also in other areas as well.

*E3M: ... in respect to communicating in Putonghua, I am doing quite well. I once participated in an exchange trip in the Mainland, meeting students there, and the comments I received had been **very positive**. (Learning) Chinese, being my mother-tongue ... (I) normally don't have much problem. And English, ... my English is **quite OK**.*

The above suggests strongly that the assignment to the more challenging EMI stream in S4, coupled with the prospect of their mastering of the two learning tasks simultaneously in the EMI setting, had profoundly emphasised their academic standing and helped boost up their confidence in their overall academic self-concept. In contrast, the responses, cited below, given by the two E1 interviewees with a lower self-evaluation of their English competence, displayed an obvious difference in self-concepts. Unlike the two E3 interviewees above, the two students below readily claimed that they were the worst among all four classes.

I: How do you think, when compared with the other classes (i.e. 4A, an English class, and 4C and 4D, the two Chinese classes)? Is your standard higher or lower than theirs?

*E1A: **Worse.***

I: Including those in 4C and 4D (the CMI classes)?

*E1A: Yeah, they have all along learned English and I think their English is quite good. And it seems that they don't have to worry too much about this. **Maybe because we study in an EMI class, and so we are more worried.***

...

*E1F: I am worse than they are. I have noticed that since F.1 – **my English has been worse than theirs.** Maybe because they had paid very good attention in class during primary school years, and so they understood their lessons well.*

E1A: Maybe because we had problems in primary school.

From the above discourse, one can tell that both E1A and E1F had a low academic self-concept. It is highly probable that the problems these two EMI students had were more or less similar to the predicament students of EMI schools might have had as perceived by Student E1A below:

I: But don't you think that you are no different from them (students of EMI schools) in terms of ability, except for English proficiency?

E1F: If we could try hard.

I: Amy?

E1A: I think that in some respects, we are better than they.

I: For example?

*E1A: Sometimes, they bear the name [EMI school] only. **If they don't understand and internalize [the lessons], they may end up in a worse situation than us.***

Unlike their EMI schoolmates in E3, these two E1 students, probably on the basis of their apprehension of the problems they had in dealing with the English medium for learning, which the students of CMI classes had been spared in their learning through the Chinese medium, seemed to have been overwhelmed by the double difficulties brought about by the EMI learning and so thought lowly of themselves (in other words, highly of others, including their CMI schoolmates) in terms of academic performance and their perceived level of English proficiency.

This unequivocal distinction between the academic self-concepts of the two groups of EMI interviewees unveiled a possible confounding factor in the development of students' academic self-concept under the MOI bifurcation arrangement: their self-perception of English competence. The initial finding from the above suggests that competence in

English, the L2, provides an important basis for the formation and changes of self-concepts in local students (see also Yeung & Lau (1998)).

On the other hand, interviewees of the CMI stream, though given an easier task to learn in their first language, were well aware of the implications of the MOI streaming on their English as well as future development. Facing a future with perceived limited opportunities for their improvement in the higher status L2, interviewees from the CMI stream, like all others (as pointed out by students from the EMI streams), were also inclined to share the view that EMI students are better. Such a thinking can best be summed up by Student C2W below, indicating that student interviewees tended to think that if one could do well in English, he or she would be able to do well overall speaking.

*I: Do you find they're **smarter** than you are?*

Both: Yes.

*C2F: **Not just English.***

*I: Then do you find **students in EMI schools smarter** than those in CMI schools?*

*C2F: **Yes, I have such a feeling. Yes, I do.***

I: Do you find people around you share the same feelings?

...

*C2F: **Yes, they do.***

I: They think that students in 4A and 4B are better?

*C2F: **Yes, definitely.***

*C2W: **I think that their ability to learn is higher because their English is better and therefore they'll be able to learn other things in a better way.***

However, at the same time, there was obvious evidence that student respondents had not accepted the general perceptions of the MOI schools without struggle. Student C2W, as he continued, had tried to negate the generally perceived difference in ability between the

students from the two types of MOI schools/classes in order to maintain their own academic self-concept and self-esteem.

*C2W: ... However, in terms of overall IQ, I don't think there is much difference between us (i.e. EMI and CMI students). ... There is not much difference in our ability in acquiring knowledge. It is only that the ability of those in non-English classes to acquire the English language is lower, in comparison. Apart from this, there is **no other major difference**.*

...

C2W: Yes, my English is not as good as theirs.

...

*C2W: Yes, because 4A and 4B are the elite classes and so their performance is better. As to the **EMI schools**, only those **elite students** are able to get in and so their performance is definitely better.*

In the citation above, Student C2W endeavored to delink English competence from the overall ability to learn, but to no avail. He finally admitted that those in the EMI classes or schools were the chosen 'elite' and they (CMI students) were worse than the chosen groups. In the last statement above, he put everything in perspective, underlining the interacting effects of the MOI factor and English competence on the perceived performance as well as the self-concepts of the two MOI groups of students.

As expounded above, in the interview, the CMI interviewees gradually unveiled their relatively low academic self-concept and confirmed that there was a general perception that EMI students were regarded as smarter and more capable. It can therefore be logical to infer that the self academic perceptions of the local students were dominated by a strong proclivity of equating English competence with overall ability to learn: one with a better command of the English language was perceived to be also capable of learning well in other areas (Marsh, 1990). As pointed out by the student of Group 1 in the extract

below, it is highly probable that the MOI factor would have a stronger impact on their perceptions when the comparison was made between schools of the two MOI streams.

E1F: ... If you compare a CMI school with an EMI school, the [students in the] CMI school will be regarded by those in the EMI school as not very good in performance and in English.

In similar vein, the self-esteem of the students seemed to be also contingent upon their command of the English language. In the citation below, the sources of their pride mainly stemmed from their perception of their high English competence and their final security of a place in the EMI stream in their schools.

*E3G: ... Well, you feel great when you find that you can communicate with foreigners, something that even your parents are not able to do, but you can. They are **proud** of me. And it is interesting (to do so) too.*

...

*E3M: ... Same as Gina's case, my parents did not have much education and so they're very **proud** of me.*

I: What type of school is (your brother) in?

E3M: A CMI secondary school.

*I: He must be very **proud** of you (being admitted to an EMI class) as well.*

ESM: (Nodded, emphatically.)

In the Hong Kong context, a good command of the English language clearly played an important role in determining students' self-esteem and academic self-concept (e.g. Yeung, A. S. and Lau, I. C. 1998). In line with the widely accepted understanding that an individual's self concept is related to school adjustment, satisfaction and achievement (Marsh, 1990, 1993; Marsh & Craven, 1997; see also Graham, 1994; Sanders, 1987; McInerney, 2001), it can be deduced from the above that under the MOI bifurcation

arrangements, students of the two language streams had different needs, expectations and challenges, and thus would have experienced either success or failure, satisfaction or frustration, and a strong sense of confidence or helplessness, all largely contingent upon, *inter alia*, their competence in mastering their learning through the designated medium (i.e. Chinese and English respectively for the CMI and EMI streams). Therefore, the students' judgment of their language competence for learning in a MOI bifurcated environment, coupled with the awareness of the need to have a good command of the English language for a better future, is very likely a key factor in shaping the students' self-concepts. It will therefore be worthwhile to ascertain whether the MOI arrangement interacts with the students' self-perception of their L2 competence to have different impacts on the self-concepts of students of the two language streams.

The above findings from the interviews point to the presence of the effect of one's English competence on the development of students' self-concepts. To initially confirm such an effect, correlational tests were performed to ascertain the correlations between English competence (for details of this measure, see Section 3.2.2 (g) of Chapter 3) and self-concepts. As indicated by the Pearson correlation coefficients generated [first survey: $r(355)=0.272$, $r^2=0.074$, $p<0.001$; and second survey: $r(339)=0.280$, $r^2=0.078$, $p<0.001$], student self-concepts were highly correlated with the students' self-assessment in their English proficiency. In such light, the students' perception of their level of English competence could be a key confounding factor in the changes in self-concepts, and therefore for the comparison of the two language groups, it had to be controlled for in the analyses to better measure the impact of the MOI factor on self-concepts.

Table 15 ANCOVA tests for Between-group Difference – Self-Concepts

Self-Concept	Covariate	Source	df	F	Sig	Eta Squared
1 st Survey	Self-assessment (English)	MOI	1, 368	3.237	.073	.009
		SE-Eng [#]		33.35	.000 ^{**}	.083
		MOI *SE-Eng		3.86	.050 [*]	.010
2 nd Survey	Self-assessment (English)	MOI	1, 362	5.903	.016 [*]	.016
		SE-Eng		28.36	.000 ^{**}	.073
		MOI *SE-Eng		6.51	.011 [*]	.018

[#] SE-English – Self-assessment (English)

^{**} Significant at the 0.01 level (2-tailed).

^{*} Significant at the 0.05 level (2-tailed).

As expected, after the effect of the confounding factor was controlled for, the effect of the MOI factor was uncovered: in the first survey, although the MOI factor alone was not found to have created a significant difference among the two MOI groups, the significant values in the interaction of the two factors, MOI and the self-assessment in English, was found to have a significant impact on student self-concepts (F -ratio (1, 368) = 3.86, $p=0.05$), signifying that the interaction effect of the two factors had begun to emerge and have a significant influence on students' self-concepts after their transition to S4. The development in the second survey is more revealing: after the extraneous factor of English competence was partialled out, the effect of the MOI factor had gained strength and materialized eight months after the transition (F -ratio (1, 362) = 5.903, $p < 0.05$), showing a significant influence on the participants' self-concepts, while at the same time, the effect of the interaction of the two factors had increased in strength (F -ratio (1, 362) = 6.51, $p < 0.05$).

Changes Over Time

Apart from the above analyses of the differences between groups, tests on paired differences were performed to ascertain precisely whether there were any significant

changes in the self-concepts of the two respective MOI groups over time. The *t*-statistics of the paired-sample test, however, did not find the respective upward or downward movements spotted in the second survey (see Table 14 above) to be significant in this study.

The Repeated Measures Design of the ANOVA tests were also conducted to detect any differences among the two language groups over time. The initial results of the test found no differences between the MOI groups in terms of the overall self-concepts in the two surveys. On the basis of the understanding that the students' self-perception of their English competence is a key confounding factor, the repeated measures ANCOVA test was performed with the students' self-perception of their language competence entered as the Covariate. As shown in Table 16 below, there was a significant main effect of students' self-assessment on self-concepts (F -ratio (1, 356) = 26.279, $p < 0.001$). It is clear from the summary table that after the effect of the confounding factor was controlled for, the effect of the MOI factor over time was revealed (F -ratio (1, 356) = 4.852, $p < 0.05$), supporting the hypothesis that the MOI streaming has a differential effect on the development of self-concepts of the students of the two language streams over time. The results also showed that there was a significant interaction between the students' self-assessment of English competence and the MOI factor (F -ratio (1, 356) = 5.879, $p < 0.05$), which suggests that the interacting effect of the two had a small main effect on the respective development of CMI and EMI students' self-concepts.

Table 16 Repeated Measures Design of ANCOVA Analysis
Between-Group comparison of Self-Concepts with Self-assessment (English) as Covariate

Factors/Covariates	Mean Square	df	F	Sig.	Eta Squared
MOI	442.435	1, 356	4.852	.028*	.013
SE-Eng [#]	2396.357		26.279	.000**	.069
MOI*SE-Eng	536.135		5.879	.016*	.016

[#] SE-English – Self-assessment (English)

** Significant at the 0.01 level (2-tailed)

* Significant at the 0.05 level (2-tailed).

The above findings, without doubt, confirm the first sight of the effect of the MOI intervention on student self-concepts over time. In sum, the analyses from both the surveys and the interviews corroborate to lend support to the hypothesis that EMI students with a higher level of English competence who were able to handle the more challenging task of learning through a 'foreign' language, would have gained a better 'perception' or 'evaluation' of their academic abilities and, as a result, fostered a higher self-esteem by making both positive internal and external references, e.g. by reference to other students in the school, who were either the less English competent EMI students struggling with the less familiar medium or CMI students who were given an easier task of learning in their own language.

(b) Locus of Control

The factor of Locus of Control in this study tests the degree to which individual students perceive themselves as having control over outcomes in their own fate. Specifically, this study intends to ascertain whether EMI and CMI students would develop different perceptions of control after the MOI streaming at S4. As this is an assessment that measures the participants' feeling of control over their own life, it was anticipated that the CMI group of participants might develop a lower sense of Locus of Control after the opportunities for them to be admitted to the EMI stream, which augurs greater promises for future access to better English, and thus to higher education and a better career, were lost for the second time in S4. Based on the same logic, the EMI students were expected, quite contrary to the CMI experience, to report a higher score in this measure, as in their case, they should have experienced a greater sense of control over their own destiny after they earned the access to the more prestigious EMI stream of study which promises a better future in terms of both their education and career developments.

The quantitative measure on locus of control comprises a set of five questions, testing whether the respondents had an internal or external sense of locus of control. All questions indicating a strong sense of external locus of control were reversely scored for the calculation of the composite mean scores. The higher the scores, the stronger the orientation to an internal locus of control. To ascertain whether there was any difference between the two language groups, the data collected from the surveys were analysed. The amalgamated scores of this measure of the two language groups and the mean scores of the two surveys were initially compared by using the One-way ANOVA tests and the paired-sample *t*-tests respectively.

Table 17 ANOVA Test – Comparison between MOI groups - Locus of Control

	Stream	Mean	SD	N	df	F	Sig.
Survey 1	CMI	3.58	.644	185	1, 376	.250	.617
	EMI	3.61	.640	193			
Survey 2	CMI	3.45	.605	183	1, 371	.442	.507
	EMI	3.50	.677	190			

Firstly, as shown in Table 17 above, overall speaking, there was a tendency for the EMI participants to report in the surveys slightly higher ratings in their sense of locus of control than their CMI counterparts: slightly higher composite mean scores for this factor were recorded for EMI students (3.61 in the first survey and 3.50 in the second survey, compared with the composite means of 3.58 and 3.45 respectively of the CMI group).

However, the initial analyses of the ANOVA tests found that differences identified between the two MOI groups in each of the surveys were insignificant statistically speaking [$F(1, 376) = 0.250$, with a $p=0.617$ in the first survey and $F(1, 371) = 0.442$,

with a $p=0.507$ in the second survey], suggesting that both groups of students had more or less similar views on the outcomes and events in their lives. The values of the mean scores, however, suggested that the views of the students gave no clear indication to an internal locus of control, a view that life events were contingent more on their own behaviour than on other factors external to them. One obvious reason for this is that the EMI students, like their CMI counterparts, also reported a slight drop in their scores for locus of control in the second survey. This suggests that even though the interviewees from the EMI stream of the CMI school were found to have enjoyed higher academic self-concepts and a sense of pride of being in the English stream (See Section on Self-concept), according to the analyses of the students' responses in the surveys, they had not reported to have benefited from a higher internal sense of locus of control than their CMI schoolmates.

One possible reason for not enjoying a higher internal sense of control among the EMI group may be that seeing themselves, like their CMI counterparts in the same school, as “victims” of the educational system ‘trapped’ in a CMI school with relatively less opportunity to learn and improve their English, the students of the EMI stream in the interviews were distinctly conscious about impacts of the education system in general and the MOI policy in particular on their own future. The undertones of frustration in the two extracts below suggest very strongly the disappointment and dissatisfaction the two EMI students had over the own destiny – they were well aware that they were sailing in a rough sea but they were not the ones on the bridge.

E3M: ... Because we male students were at a disadvantage that year as some changes favourable to girls were introduced (by the Government). It was said that (the change) was to ensure that both girls and boys would be treated fairly. But, in actuality, girls were in a better position.

E3G: *I find that it is the Government who plans (for our future).*

E3M: *Yes, it is the Government. For example, my target is to study law in university. However, you can see that none of the subjects, i.e. Physics, Chemistry and Biology, is related to law.*

...

E3G: *I started to dance when I was in primary school and I want to be a dancer or a dance teacher. However, unfortunately there is no such subject in school. ... I think **the Government has decided our future** – they think that the majority of HK people would definitely not study this subject and so they make no provision for this in schools. So, I don't have the opportunity to learn dancing at school in a professional way. ... So, I feel that **it is the Government who decides our fate, which is not in our own hands.***

From the above, it is not unreasonable to speculate that their frustration over the lack of control over the choice of school subjects is a mirror reflection of their frustration over the choice of schools after the MOI streaming. This strong sense of victimization in an 'unfair' system might have offset the gain, if any, in the sense of control generated from the successful security of a place in the EMI stream in S4 of a CMI school. Apart from the strong feelings that their destiny was very much affected by the education system and the MOI policy, another possible reason is that EMI students in this study, in face of a substantial change in their medium of learning, had to struggle in a basically CMI setting to meet the higher demands for English proficiency for academic purposes. As reported earlier on by two EMI students in the interviews (see extract in section 3.2.3 (a) above), they experienced some frustration in their learning through English in the early stage of the transition. As pointed out by Student E3G below, it is evident that mastering two tasks (i.e. learning and learning through the L2) simultaneously, without knowing whether they would be able to cope with the demands of the higher requirements while at the same time well aware of the keen competition from EMI schools, did affect their

sense of control over their own fate.

I: Do you feel that so far ... you are quite confident about your future?

E3M: Confident ... a little bit.

E3G: I don't.

I: Why?

E3G: Because we not only have to compete with those in our year group, we have to compete with those ahead of us and the old ones (those in senior forms or the graduates in the past) as well. They have a lot of experience but we have nothing.

As nicely summed up by the citation below, their apprehension about the limited opportunity for developing their English in a CMI school setting and, in particular, their concern about their English competence seemed to be important factors contributing to a lower sense of control.

I: So, you feel that the Government has set the model for you. ... For the time being, within this model, do you think that you are in control of your lives ...

E3M: Half and half.

E3G: I think I should not follow the model and do what is set because that will affect you ...

E3M: But if you do not follow the model, then they will ..

E3G: They will say that you don't have a future.

E3M: Yes, you don't have a future. ...

E3G: You don't know English? OK, goodbye to you.

E3M: Yes, just like someone who has just come out of prison. If you don't follow the model, you're like someone who has recently served his sentence – you've got nothing.

The analogy used by Student E3M is a strong and powerful one, depicting vividly the predicament a student without an acceptable level of English competence will have to face. To them, it is not simply that a good command of the English language augurs a good future, but also that the lack of it will provide a graduate with probably 'nothing' to

hang on to in face of future challenges. Echoing this point, the two EMI students with a lower self-assessment of their English proficiency had reported very gloomy outlooks and exhibited a very low sense of control over their own future:

E1F: I don't have a lot of expectation about my future.

E1A: I haven't thought much of the future.

*E1F: I don't have a lot to expect or demand of my future. There is also no need to get a very high level job. So, there is **not a lot of expectation**.*

The recurring theme in the discourse above is that they did not have high expectations of their future, not even a “high-level job”. This relatively speaking low sense of control over their own lives was evidently related to their low self-perception of their competence in the high power English, one reason of which is apparently their awareness of the limitations of the CMI school setting on their English development.

On the other hand, it is interesting to note that while the EMI students grumbled more about their disappointment with the effectiveness of the education system they are now in and their worry over their English competence, the interviewees from the CMI groups seemed to see themselves as the one who should be in control of their own fate, though they at the same time were well aware of their inertia in their learning, which had given them a low sense of control over their own future. As explicated in the extract below, C2F and C2W, who failed to get into the EMI stream for the second time, were more introspective in that they were more conscious of their failure to work hard, which was the culprit of their present predicament – ending up in the CMI stream with little hope of developing their English well.

C2F: I think 80% of your future is in one's own hands and 20% is dependent on other factors such as your networking.

I: ... you've said “if you could work hard”, do you mean that you have so far

not been able to do so? ...

C2F: Yes, knowing but not doing it.

I: Since you have not done what you should, do you think that will affect your ability to be in control of your future?

C2F: Yes, it will. I know that if I don't work hard now, I will have to work even harder in the future. I don't know why – even though I know that will happen, I have not put in as much effort as it needs in (improving my learning). ... I am not willing to work hard now.

...

C2W: I think that you are in control of 100% of your future. How much of it is lost is also a result of your own doing. If I fail to put in the effort required, I myself should be blamed. It is that we are put off by the hard work required. We have to put in a lot of effort to learn English and it is hard work. Yeah, we are put off by the hard work required. When we take up a job in future, if we have not learnt English well, we will also be put off by the hard work required.

Both of them shared a strong tendency of self-criticism – for not being able to exercise self-control to work hard enough to secure themselves a more promising future. However, the undertone in the discourse was that they did not think that they were able to overcome these shortcomings at the moment nor would they be able to do so in the future; and as a result, a sense of helplessness had tainted their views on locus of control. A simple comparison of the respective thinking behind the scores of the two MOI groups in the two surveys will reveal why both groups adopted a relatively similar but low sense of internal locus of control, thus displaying very little difference in the statistics in this measure. Also, the findings in this Section, when compared with those of the Section on Self-concepts, will throw light on the complexity of the underlining factors affecting or shaping students' attitudinal responses.

From the above analyses and on the understanding that the sense of locus of control is a rather stable attitudinal factor which is formed on a solid basis of experiences over time

(Rotter, 1966; Lefcourt, Miller, Ware & Sherk, 1981), the researcher decided to identify other possible confounding factors that may have modified the impact of the MOI factor on the subjects' attitudinal developments. As expounded above, how the students evaluated their level of English competence and whether they perceived they could exercise perseverance in their learning did lead to some differences among the various groups of interviewees in their thinking and, eventually, in their sense of control. The researcher therefore decided to take the students self-assessment in their English competence and the level of perseverance in learning (for details of the measure, see Section 3.3.2 below), which bears direct impact on the successful acquisition of the English language, as the confounding factors for analysis.

Table 18 ANCOVA Analysis – Between-(MOI)Group comparison with Self-assessment (English) and Perseverance in Learning as Covariates

Factors	Mean Square	df	F	Sig.	Eta Squared
First Survey					
MOI	29.581	1, 369	3.237	.073	.009
SE-Eng [#]	13.493		1.477	.225	.004
Perseverance (P) [#]	9.968		1.091	.297	.003
MOI*SE-Eng	66.013		7.225	.008 ^{^^}	.019
SE-Eng * P	.103		.011	.915	.000
MOI * SE-English * P	46.623	2, 369	5.103	.024 [^]	.014
Second Survey					
MOI	57.432	1, 363	5.935	.015 [^]	.016
SE-Eng	6.200		.641	.424	.002
Perseverance	.201		.021	.886	.000
MOI * SE-Eng	52.499		5.425	.020 [^]	.015
SE-Eng * P	12.529		1.295	.256	.004
MOI * SE-English * P	39.132	2, 363	4.044	.045 [^]	.011

[#] SE-English – Self-assessment (English), P - Perseverance

^{^^} Significant at the 0.01 level (2-tailed)

[^] Significant at the 0.05 level (2-tailed).

To begin, the correlational analyses done earlier on (Tables 5-8) had supported that both self-assessment of English competence and perseverance in learning were significantly

correlated with the factor of locus of control, ascertaining the correlational relationships among the three. On this basis, ANCOVA tests were performed with the two confounding factors as covariates.

From the results (Table 18), it can be reported that, as expected, after the impacts of the two covariates were controlled for, the effect of the MOI factor on locus of control was gradually revealed ($F(1, 363) = 5.935, p < 0.05$) to be significant in the second survey. The results also supported that the MOI factor interacted with the other two confounding factors to produce a significant impact on the students' locus of control. In the first survey, the effect of the MOI factor had not been found to be significant yet ($F(1, 369) = 3.237, p = 0.073$), though the interaction effect between MOI and Self-assessment ($F(1, 369) = 7.225, p < 0.01$) and the interaction between all three factors ($F(1, 369) = 5.103, p < 0.05$) were found to have a significant impact on the students' locus of control. However, in the second survey, eight months after the streaming, the strength of the MOI factor began to surface. The streaming of students into MOI classes, after partialling out the effects of the two confounding factors, was reported to have a significant impact on the students' locus of control. Apart from that, the interactions among the three factors were also significant: the interacting effect between MOI and Perseverance: $F(1, 363) = 4.453, p < 0.05$; the interacting effect between MOI and Self-assessment: ($F(1, 363) = 5.425, p < 0.05$); and the interacting effect among the three factors: ($F(2, 363) = 4.044, p < 0.05$).

Comparison over time

In the second survey, both language groups reported a slight drop in their scores in this measure (EMI: -0.11554 and CMI: -0.12446; also, see Table 19 below). Paired-sample *t*-test comparison analyses of the two language groups over time confirmed that both

groups had reported a drop in the measure on Locus of Control in the second survey (EMI: $t(192) = 2.610$, with a $p=0.01$; CMI: $t(185) = 2.621$, with a $p=0.01$), suggesting that both group of students agreed less that the outcomes and events in their lives were more contingent on their own behaviour than on other factors external to them.

Table 19 Paired Sample T-tests - Comparison of the two surveys - Locus of Control

Measure	Steam	Mean – S1	Mean – S2	df	<i>t</i>	Sig.
LC1 vs LC2	CMI	3.58	3.45	185	2.621	.010**
	EMI	3.61	3.50	192	2.610	.010**

** Significant at the 0.01 level (2-tailed).

In the Hong Kong context, external factors may include a wide variety of factors ranging from those that are more personal, such as luck or teachers, to those that are more impersonal, such as the MOI policy or the opportunities to improve English, etc. On the one hand, this may mean that these students were more aware of their limitations in shaping their own fate, and on the other, their experience in the CMI setting in the eight-month interval might have exacerbated their concern about the constraints the present education system has imposed on their English development, which in turn would adversely affect their future academic and career developments. By making reference to the ‘prisoner’ analogy given by Student E3M above, it will not be difficult to understand why both groups of students in the same CMI school reported a reduction in their sense of control: although the EMI students were allowed to switch to English as their MOI in S4, the facts that they in essence continued to learn in a predominantly Chinese setting and that the switch was only effected at a late stage of secondary education had probably left little doubt in these young minds that their English development was less promising than those who had begun their learning in English at English rich EMI schools at a much earlier stage.

To further track the between-group effect on changes over time in their attribution after

the students had experienced substantially different outcomes in their learning under the bifurcated environment, the Repeated Measures Design of the ANCOVA test was performed with both the self-assessment (English) and perseverance in L2 learning as the covariates. As shown in Table 20, the MOI factor registered a significant effect on the between-group difference over time ($F(1, 362) = 8.542, p < 0.05$ and $\eta^2 = 0.023$). Also, the interactions among the three factors were also significant: the interacting effect between MOI and Self-assessment: $F(1, 362) = 9.505, p < 0.05$; the interacting effect between MOI and Perseverance: $F(1, 362) = 5.458, p < 0.05$; and the interacting effect among the three factors: $F(2, 362) = 4.211, p < 0.05$. With the effects of the covariates partialled out, the main effect of the MOI factor was revealed, suggesting that the MOI streaming arrangement would in the long run have adverse impact on the students' attribution in their sense of locus of control.

Table 20 Repeated Measures Design of ANCOVA Analysis - Between-(MOI)Group comparison of Locus of Control with Self-assessment (English) and Perseverance in Learning as Covariates

Factors/Covariates [#]	Mean Square	df	F	Sig.	Eta Squared
MOI	118.854	1, 362	8.542	.004**	.023
SE-Eng	21.987		1.580	.210	.004
Perseverance	1.705		.123	.727	.000
MOI*SE-Eng	132.260		9.505	.002**	.026
MOI * P	75.944		5.458	.020*	.015
MOI * SE-English * P	58.594		2, 362	4.211	.016*

[#] SE-English – Self-assessment (English), P – Perseverance

** Significant at the 0.01 level (2-tailed).

* Significant at the 0.05 level (2-tailed).

The above findings from both surveys and the qualitative study have unveiled the complexity of the development of the construct. Although the above can only be regarded as an inference based on the findings from both the qualitative and quantitative surveys and requiring further proof, it rings the bell that the MOI policy does have an adverse impact on the sense of locus of control of the students, who might have fallen

victim under the bifurcation arrangements.

2.3 Differences in the behavioural dispositions between the two MOI groups

The second research question is about the behavioural responses of the students in their MOI streaming experience. Specifically, it addresses the following issues:

Do students of the two streams exhibit different behavioural dispositions (e.g. in their support seeking behaviour and the levels of perseverance in the learning of the L2 (i.e. the high-status English))? To what extent are the differences, if any, associated with the differences in attitudinal and motivational orientations? Do the students in the two classroom types register significantly different progresses in L2 proficiency development and academic performance, as evidenced in self-reported school assessments?

In other words, it aims to gauge any differences between the two MOI groups with respect to the following behavioural measures upon transition and some time after the MOI streaming:

- i. the support seeking behaviour of the students, with particular reference to assistance given by and involvement of parents;
- ii. perseverance in L2 learning, with particular reference to time devoted to L2 learning, and the amount of efforts dedicated to L2 literacy development (e.g. preference for books, reading at home, watching or listening to L2 media, gaining more exposure to L2 outside schools, etc.);
- iii. the relationship between the differences in the above behavioural dispositions, if any, and the differences in attitudinal and motivational dispositions identified;

and

iv. the self-reported academic performance of the students of the two MOI streams.

(1) Support Seeking Behaviour - Parental Support

(a) The total sample

As S4 signifies the beginning of the critical stage of secondary education and the first preparation year for the HKCEE examination, it was expected that the participants' parents would show more concern about the academic performance of their children and therefore would provide more assistance to their children to support their learning and, in particular, the learning of the English language. On the other hand, the informants, beginning to feel the gravity and imminence of the school certificate examination and in face of a more complex and demanding learning task under a segregated MOI environment at the final years of secondary education, were expected to be more aware of the need for support from others, of whom the significant others are their parents. It was therefore hypothesized that participants studying in the two MOI streams, as explained in previous chapters, having experienced the streaming effects in different ways, would exhibit differences in their behaviour in seeking support from their parents.

In the questionnaire surveys, the Subscale on parental support measured how much parents were involved in the subjects' learning. Half of the questions of the Subscale focused on the assistance parents gave to the informants in support of their English learning (e.g. helping their children in their English learning by providing personal assistance or purchasing extra tutorial lessons for their children), while the other half were on the respondents' involvement of their parents in their learning and school life. The higher the scores, the more support from parents was reported.

As indicated in Table 21 below, in general, parental support given to students tended to be on the low side, indicating that parents seldom got involved in their children's learning. This initial result is congruent with the findings from the interviews. When asked whether they had obtained support and assistance from their parents, all interviewees except E3G reported that they had received virtually no support from their parents in their learning in general and in their English learning in particular.

I: How about your parents? Can they help you in this respect?

E3M: No, not much.

...

I: When you have encountered some problems in your study, do you discuss about them with your parents?

...

E3M: In my study ...no. ...

When asked whether their parents bought them books to read or private tutorial lessons to improve their English, the answers given by students from both streams suggested that they did not get much help at home or outside school:

E1A: Not buying such things.

I: Then, apart from (learning at) school, you don't have opportunities to learn English?

E1F: Basically none.

E1A: Self-learning.

E1F: We study by ourselves.

C2F: I get very little help from my parents, almost none at all. Whenever I have problems, I will seek help from my elder brother.

I: Do you mean that you have not got much help from your parents in not only English, but all other subjects as well?

C2F: Yes.

...

C2F: Normally, we have to take our own initiative. We take care of our own

business. Sometimes, my parents will push me by reminding me of what I should do.

The only exception was found in the EMI stream: Student E3G was the only one who reported to have support from her mother in terms of English learning.

E3G: My mum will teach me English grammar.

...

I: When you have encountered some problems in your study, do you discuss about them with your parents?

E3G: Yes.

From the above, overall speaking, student respondents in both the surveys and the interviews had reported similar problems in getting very little help from their parents. The researcher therefore proceeded to ascertain whether there was any difference among the two MOI groups in terms of parental support at home.

(b) Difference between MOI groups

A simple comparison of the respective means of the two MOI groups in the questionnaire surveys indicated that the EMI subjects had a consistently slightly higher level of parental support in both surveys (see elements a-c, Table 21). The EMI group seemed to have enjoyed a higher level of support provided by parents and reported a higher degree of readiness to discuss with their parents about their learning at school, thus resulting in higher overall scores in terms of parental support solicited. Univariate analyses were performed to detect if the differences between the subjects of the two groups were significant. However, the differences identified between the two MOI groups were too small (see Table 21) to be statistically significant.

Despite the insignificant results in the statistics shown above, on the basis of comparing

the mean scores calculated, the consistent presence of a higher rating in the EMI scores in both surveys suggests that a difference in this respect between the two language groups after the streaming might have developed and the present lack of statistical strength in the two surveys might be the result of the limiting effect of the rather constrained supply of parental support on the impact of the MOI factor. The researcher therefore decided to explore whether there were any confounding factors that have to be partialled out for any effective analysis in this measure.

Table 21 ANOVA tests for Parental Support – Between-group Differences

Parental Support		Steam	Mean	SD	N	df	F	Sig.
Survey 1								
a.	Overall	CMI	14.08	3.63	185	1, 374	1.169	.280
		EMI	14.47	3.37	191			
b.	Support in English learning	CMI	7.47	1.76	185	1, 376	.758	.385
		EMI	7.62	1.63	193			
c.	Discussion with parents on learning/school matters	CMI	6.61	2.47	186	1, 375	.882	.348
		EMI	6.84	2.39	191			
Survey 2								
a.	Overall	CMI	14.55	3.09	186	1, 377	1.181	.278
		EMI	14.91	3.32	193			
b.	Support in English learning	CMI	7.49	1.56	186	1, 377	1.330	.250
		EMI	7.68	1.63	193			
c.	Discussion with parents on learning/school matters	CMI	7.05	2.14	186	1, 377	.548	.460
		EMI	7.22	2.30	193			

First of all, to initially ascertain the presence of any confounding factors in the provision of parental support, the researcher referred to the questions asked during the interviews about the reasons why parental support and involvement in their learning had been limited. As shown in the citations below, data from the interviews suggested that parental support was very much constrained by the educational level and language ability of their parents.

C2W: Not much help (from my family members). I have to rely on my own. My parents had not had a good education and so they cannot help much.

The researcher, in the light of the above, took parents' ability as a possible confounding factor, as whether parents could step up within a short period of time their support to their children substantially in terms of English learning is very much contingent upon their educational level or competence in the English language. By the same token, it can be maintained that parents' educational background or competence as reflected by how much education they had received will also determine how far their children could seek advice from them on matters concerning learning at school.

Secondly, on assistance provided at home, interviewees from both MOI groups had only reported the lack of support from the parents due to the personal limitations of their parents. They had no choice but had to work on their own and what the parents could do, as C2F had said in the citation above, was to remind them of what they had to do to improve their learning. However, apart from competence, the researcher also assumed that parents' ability to afford to employ external assistance (e.g. hiring private tutors or buying supplementary lessons) would be another possible constraint that would impact on how much parental support the respondents could obtain. It was therefore asked in the questionnaire surveys whether the respondents could have access to external assistance, which was normally available at a cost. In this respect, there was however not much mentioning of the affordability issue in the interviews, except for the citation below:

E3G: ... We are labelled as 'Chinese' or 'English' students. If we would like to learn English to improve our lives and our future, ...if we learn English to enhance our ability, we have to get help from outside (of the school). However, whether we can afford it is another question.

On the basis of the logic behind this, the researcher decided to test whether the “affordability” was another confounding factor. In the light of the above, it was speculated that the educational level and competence (Parents’ Competence) and socio-economic background (Affordability) of the participants could be confounding factors that should be taken into account in the analyses.

Analysis with confounding factors controlled for

The researcher at this juncture, in the light of the analyses above, reconsidered the probability that there was an MOI effect, which might be very small, on students’ behaviour in seeking and responding to parental assistance. It was therefore decided to perform the ANCOVA tests again to gauge any differences not detected in the previous analyses by taking into account the two above-mentioned confounding factors at the same time.

Data collected from the questions on parents’ educational level and parents’ level of English competence were transformed into z-scores to create a comparable metric, which were then summed to create an overall index of parents’ ability to provide assistance in English learning and school work support. For affordability, the data on housing type were simplified to categorize the participants into two main groups, the High and Low groups, on the basis of ability to own/rent more expensive (e.g. private properties or the Home Ownership Scheme units) or cheaper houses (e.g. public housing units and old properties of low value/rental). ANCOVA tests were performed with parents’ ability controlled for and the effect of the affordability (by way of a categorical variable on housing) gauged at the same time.

Firstly, it was ascertained that overall speaking, parents’ educational background

(competence) was found to be a significant factor in determining the level of parental support [first survey: $F(1, 319) = 12.882, p < 0.001$]; and second survey: [$F(1, 319) = 17.623, p < 0.001$]] (see element c, Table 22 for details). When the analyses were done on the two subscales, namely, parental support in English learning and parental support to school life, parents' competence was again found to be a significant confounding factor. In the measure on parental support in English learning, the competence factor accounted for 6.3% and 5.4% of the differences respectively in the first [$F(1, 318) = 21.420, p < 0.001$] and second [$F(1, 319) = 18.260, p < 0.001$]] surveys, while in the measure on parental support in school life, the effect of the competence factor was much lower, accounting for 2.7% of the effect in the second survey only [$F(1, 319) = 8.936, p < 0.005$]] (the result of the first survey was $F(1, 317) = 3.838$, with a $p = 0.051$, which should be marginally regarded as non-significant).

On the other hand, affordability was detected to have no significant influence on both measures of parental support in the first survey, but was found to have a small effect on the differences in parental support in English learning in the second survey [$F(1, 319) = 4.332, p < 0.05$]] (see element b, Table 22 for details).

Most interestingly, although the MOI factor alone was not found to have any significant impact on the amount of parental support sought by the two groups of participants, when the above confounding factors were added into the equation at the same time, it was found that the interaction between the MOI factor and the confounding factors did make a difference. The three factors, namely, MOI, parents' affordability and competence, accounted for in the second survey significant differences between the two language groups in terms of parental support to English learning [$F(1, 319) = 3.293, p < 0.05$]] (see

element f, Table 22). Again in the second survey, the interacting effect of the MOI factor and parents' ability was found to be significantly associated with students' behaviour in terms of parental support to learning and school life in general, producing a *F*-ratio (1, 319) of 3.898, with a $p < 0.05$ and an eta squared of 0.012. Although the effect size was

Table 22 ANCOVA Tests for Parental Support with Parents' Competence and Affordability as Covariates

Factor/Covariates		df	Mean Square	F	Sig.	Partial Eta Squared
1st Survey – Overall Parental Support						
a.	MOI	1, 316	.518	.047	.829	.000
b.	P(Affordability)		.300	.027	.869	.000
c.	P(Competence)		142.610	12.882	.000 ^{***}	.039
d.	MOI * P (Affordability)		27.040	2.443	.119	.008
e.	MOI * P (Competence)		2.914	.263	.608	.001
f.	MOI * P (Affordability) * P (Competence)	2, 316	11.650	1.052	.350	.007
2nd Survey – Overall Parental Support						
a.	MOI	1, 319	16.281	1.658	.199	.005
b.	P(Affordability)		5.658	.576	.448	.002
c.	P(Competence)		173.035	17.623	.000 ^{***}	.052
d.	MOI * P (Affordability)		1.015	.103	.748	.000
e.	MOI * P (Competence)		25.321	2.579	.109	.008
f.	MOI * P (Affordability) * P (Competence)	2, 319	6.014	.613	.543	.004
1st Survey – Parental Support in English Learning						
a.	MOI	1, 318	1.947	.788	.375	.002
b.	P(Affordability)		3.051	1.234	.267	.004
c.	P(Competence)		52.944	21.420	.000 ^{***}	.063
d.	MOI * P (Affordability)		5.470	2.213	.138	.007
e.	MOI * P (Competence)		3.075	1.244	.266	.004
f.	MOI * P (Affordability) * P (Competence)	2, 318	7.162	2.898	.057	.018
2nd Survey – Parental Support in English Learning						
a.	MOI	1, 319	.032	.013	.908	.000
b.	P(Affordability)		10.389	4.332	.038 [^]	.013
c.	P(Competence)		43.793	18.260	.000 ^{***}	.054
d.	MOI * P (Affordability)		4.930	2.056	.153	.006
e.	MOI * P (Competence)		.511	.213	.645	.001
f.	MOI * P (Affordability) * P (Competence)	2, 319	7.898	3.293	.038 [^]	.020
1st Survey - Parental Support to School Life						
a.	MOI	1, 317	.456	.080	.777	.000
b.	P(Affordability)		5.214	.919	.339	.003
c.	P(Competence)		21.777	3.838	.051	.012
d.	MOI * P (Affordability)		8.148	1.436	.232	.005
e.	MOI * P (Competence)		.002	.000	.984	.000
f.	MOI * P (Affordability) * P (Competence)	2, 317	4.247	.748	.474	.005
2nd Survey - Parental Support to School Life						
a.	MOI	1, 319	14.875	3.111	.079	.010
b.	P(Affordability)		.713	.149	.700	.000
c.	P(Competence)		42.728	8.936	.003 ^{***}	.027
d.	MOI * P (Affordability)		1.472	.308	.579	.001
e.	MOI * P (Competence)		18.639	3.898	.049 [^]	.012
f.	MOI * P (Affordability) * P (Competence)	2, 319	.151	.032	.969	.000

^{***} Significant at the 0.01 level (2-tailed).

[^] Significant at the 0.05 level (2-tailed).

rather small (around 1%), it serves as a very good indicator that the MOI factor, in the context of constraints such as those created by the two confounding factors, had started to have an impact, after a reasonable lapse of time, on students' behaviour in their seeking of parental support and assistance, a factor which is very much limited by factors external to the students themselves (e.g. parents' competence and affordability).

Changes over time

Pair-sample *t*-tests were conducted (see Table 23) to gauge any change in parental support over time. As expected, parental support had increased in the course of time (CMI: $t(185) = -2.2027, p < 0.05$; EMI: $t(193) = -1.984, p < 0.05$), properly due to the slight increase in the involvement of their parents in their learning (CMI: $t(185) = -2.447, p < 0.05$; EMI: $t(193) = -2.263, p < 0.05$). As detailed above, the lack of change in parental support in English learning could be explained by the relatively stable supply of parental help in this respect, which most probably was constrained by the confounding factor of parents' competence.

Table 23 Paired Samples *t*- tests - Parental Support Over Time

MOI Group	Mean	SD	<i>t</i>	df	Sig.
CMI					
Overall	-.12097	.81	-2.2027	185	.044*
Support in English learning	-.02151	.82	-.357	185	.722
Parental Support to School Life	-.22312	1.24	-2.447	185	.015*
EMI					
Overall	-.11254	.79	-1.984	193	.049*
Support in English learning	-.03590	.81	-.617	194	.538
Parental Support to School Life	-.18814	1.15	-2.263	193	.025*

* Significant at the 0.05 level (2-tailed).

The Repeated Measures Design of the ANCOVA test was performed to gauge any effect of the MOI factor on the changes in parental support over time. Using the same two

covariates, the ANCOVA tests found no significant between-subject effect of the MOI factor on the changes in parental support. However, a very small differential impact on parental support in English learning was uncovered when MOI interacted with the two covariates [$F(2, 318) = 4.176, p < 0.05$] and eta squared=0.026]. On the other hand, of the two covariates, only parents' competence was again found to be a significant confounding factor to have a small but significant differential effect on changes in parental support given to the two MOI groups of students [Overall parental support: $F(1, 316) = 5.784, p < 0.05$] and eta squared=0.018; Parental Support to school life: $F(1, 317) = 4.937, p < 0.05$] and eta squared=0.015]. (For details, see Table 24 below).

The above analysis results showed that although the MOI factor alone was not found to be associated with parental support, the small but significant interacting effects of the MOI factor and the two covariates should not be underestimated as, unlike other factors, the level of parental support was very much constrained by the rather stable nature of the supply of parental support, of which was very much limited by the two covariates.

Table 24 Repeated Measures Design of ANCOVA - Parental Support

Covariate - Parents' Ability	df	Mean Square	F	Sig.	Eta Squared
Parental Support - Overall	1, 316	91.942	5.784	.017*	.018
Parental Support in English learning	1, 318	11.057	3.108	.079	.010
Parental Support to School Life	1, 317	38.469	4.937	.027*	.015

* Significant at the 0.05 level (2-tailed).

Interestingly, in terms of students' reactions to the lack of support in general, EMI students tended to be more positive and self-assuring. As pointed out by Students E1A and E1F above and as shown in the citation below, students from EMI stream seemed to have less worry over the lack of parental support but be able to turn the problem into an opportunity to train themselves up to work independently:

*E3M: I took care of myself since Primary 3 or 4. My parents seldom care about my business. I think that it is not good to rely on others now. If you can **work independently**, then you will **have the heart to study diligently**.*

It was therefore interesting to note that students from the EMI stream had more readily a more positive view on the lack of parental support and consequently the need to work independently on their own.

(2) Perseverance in L2 Learning

The second research focus intends to investigate if students of the two streams exhibit different levels of perseverance in the learning of the L2. In particular, it targets to detect whether there are any differences between the two MOI groups in the time devoted to L2 learning and the amount of efforts dedicated to L2 literacy development (e.g. preference for books, reading at home, watching or listening to L2 media, gaining more exposure to L2 outside schools, etc.).

For the quantitative component of the study, the Subscale on students' perseverance in English learning evaluated the efforts the respondents expended in the study of English and the extent of self-regulation they exercised in managing their studies. A total of six questions were included in the Subscale, with five focusing on whether the respondents had expended efforts in developing their English competence (e.g. whether they had actively pursued any English learning opportunities available, such as by reading English books, watching or listening to English programmes, or practicing their spoken English with English speakers, etc.) and one on whether in general they had planned and managed their own learning well. Composite mean scores were calculated and the higher the scores, the higher level of perseverance in English learning reported. It was predicted

that, as in the cases of the attitudinal and motivational variables, students of the two MOI streams would develop and exhibit different inclination in their efforts to maintain their performance by availing themselves of facilities, such as actively seeking access to English-medium learning materials, to increase the probability of their success, i.e. their academic performance.

Composite mean scores of the two MOI groups for the Subscale were first compared by way of the one-way ANOVA tests. Consistent with most of the findings reported in earlier sections, the EMI group indicated a higher level of perseverance in English learning in both surveys (Table 25). The difference between the two MOI groups was first shown in the September survey, at a time very shortly after the bifurcation [$F(1, 377) = 11.047, p = 0.001$]. In the second survey, eight months after the transition to S4, although the CMI participants reported a slightly higher improvement in this respect than their EMI counterparts (Table 25), the difference between the two MOI groups continued to prevail [$F(1, 377) = 7.781, p < 0.01$].

Table 25 ANOVA tests – Perseverance in English Learning

Perseverance	Stream	Mean	SD	df	F	Sig.	Eta Squared
1 st Survey	CMI	3.17	.75	1, 377	11.047	.001**	.028
	EMI	3.42	.76				
2 nd Survey	CMI	3.27	.71	1, 377	7.781	.006**	.020
	EMI	3.48	.75				

** Significant at the 0.01 level (2-tailed).

The Repeated Measures Design for the ANOVA test was again employed to ascertain the divergence between the two MOI groups over time. Results confirmed that the two MOI groups exhibited continued divergence in their perseverance in L2 learning in the second survey [$F(1, 377) = 12.121, p=0.001$, with an eta squared of 0.031], even though the CMI group had reported a bigger improvement in this respect (Mean=+0.1) than the EMI

respondents (Mean=+0.06), thus reducing the gap between the two groups. Although the effect size was small, the divergence in behaviour is no doubt unequivocal.

The above findings from the two surveys uncovered that the EMI group of respondents had a higher level of perseverance in English learning than their CMI schoolmates. Certainly, it can be argued that the differences in perseverance in English learning might have been prevalent before the streaming in S4, as the difference could have been a key factor that had contributed to the performance of the participants at end of S3, which was the main criterion for the selection into the two language streams in S4. However, the above-mentioned continued presence of the differences over time and the following discussions during the interviews provide some evidence to support the possibility that the MOI streaming did have an impact on students' perseverance in English learning.

During the interviews, the students from both EMI classes gave, relatively speaking, more positive responses when asked whether they had expended efforts on improving their English, although they faced problems similar to their counterparts in the Chinese stream, e.g. limited vocabularies, heavy workload, boredom associated with learning an unfamiliar language, etc. Both students from Group 3 reported they had spent time and effort to raise their English standards. In particular, Student E3G said she had put in extra effort to persist in reading the newspapers, as required by their school, everyday to improve her English.

I: Then, do you spend time and effort on improving your English?

Both: Yes, we do.

I: What do you do most?

E3G: Our school makes us read the newspapers. Many can't do this as they would fall asleep. But I think the intention of our school is good and so I will read.

Student E3M of the same group, on the other hand, had demonstrated a high sense of priority of his own and had his personal plan to improve his English:

E3M: ... our school makes us read English newspaper. Frankly speaking, I will not read them. Asking us early in the morning, immediately after we've sat down, to read an English newspaper ... I would rather do so in the afternoon. If you say that in the morning we'd like to read the newspaper... I don't believe that they are willing, very willing to read. I would rather watch TV programmes in some other times or English books that we like.

Both students of Group 3 clearly indicated that they had tried to develop the habit of reading English books:

I: Have you tried to develop the habit of reading English books.

E3M: Yes.

...

E3M: ...The main reason for going to the English section is to look for some reference books or the books we like.

E3G: I go to the Chinese collection more, but I also go to the English section. I did borrow some (English books) but I just did not have the time (to read).

...

E3G: Yes, no time at all. I really would like to read them. Even when the due date was going to past, I still would like to read them ... gradually, the privilege expired and I 'gradually' didn't have the time (to read them) and had to return them.

Students from the other EMI class with a lower academic self-concept in English also reported that they had read newspapers as required and done some extra exercise at their own initiatives:

I: Mm ... what do you do to improve your English?

E1A: Read the newspaper and make use of the dictionary. Do some reading

comprehension exercises.

I: Do you spend a lot of time on these tasks?

E1A: I have planned to do so and I have bought the materials but I have not done that.

(E1F nodded.)

When probed further into why they had not expended the effort required, although they frankly admitted that they had been “too lazy” to persevere, it seemed more likely that they were daunted by the heavy load of homework and the difficulties encountered in their English learning.

I: Then do you spend a lot of time on [learning English]?

E1F: Very little.

I: Why spending so little time as you mentioned that ...

E1A: Because we are too lazy.

E1F: Yes, lazy.

*E1A: We have to do the homework and sometimes after we have finished the homework, **we don't have the time** to find out the [vocabulary].*

*E1F: Sometimes after we have finished homework, **we feel very tired**. And we feel the huge pressure once you are in F.4. ...*

Obviously, suffering from a lower level of command of the English language, they had stumbled upon additional difficulties, in comparison with the two EMI students in Group 3, in their English learning, and were therefore less motivated to persevere in face of the unfamiliar vocabularies and complicated expressions. The extract below sums up the difficulties they had in their English learning.

*E1A: In many cases, you **can't find the difficult words of the English books** in the dictionary.*

*E1F: **Words in the newspapers** as well.*

One thing worth noting is that even though they said that they had not followed through

their study plans well, they had not reported any sense of resistance in their English learning. Similar to the two EMI students in Group 1 above, answers from the CMI class were a straight-forward 'no' when asked the same questions on English learning. They attributed the failure not to external factors but to their lack of determination and persistence.

I: ...do you look for other extra opportunities to learn English ...

C2W: Normally not.

C2F: 'Cause not having the determination.

I: Is it because you think that that requires a great deal of motivation?

C2F: Yes, yes. Apart from determination, you still need to persist. You have to do it every day - for example, you have to read a newspaper article each day and pay attention to English. I do not have such determination.

...

C2W: Sometimes, but not too often. Sometimes I will listen to English songs, pop songs, because I find music more agreeable.

From the above, the differences in their perseverance in English learning were clearly related to their levels of competence in the language. Difficulties arising from the lack of a good command of the language including limited vocabularies, problems in comprehension, boring topics, and insufficient time, had generated negative experience for such students. However, the difference between the two MOI groups apparently lies in their responses to problems in English learning: while in general the two EMI interviewees from the lower competence group could remain relatively positive towards extra work for English learning, the two CMI students had exhibited a sense of resistance, probably instigated by the frequent frustrations encountered in their English learning. The frustration could be easily detected from the exchange between the two CMI students below.

C2W: *In comparison, I have **not put as much effort in learning English** as I have for other subjects I like. I felt that I am a little bit **resistant** to (learning English).*

...

C2F: *Yes, I find dealing with English very **troublesome** because even though I've tried very hard to read and study, I have to, because of my **limited vocabulary**, consult the dictionary many times before I can finish reading an English passage. And it takes me a lot of time or (I'd) feel very **puzzled** to think of how to deal with it and sometimes it is quite **annoying**.*

Here, the two CMI students tried to explain why they had not put in the effort required to improve their English. With the problems as reported here, it is understandable that the CMI students would be less able to persevere in face of the recurring difficulties in the learning process, and thus less able to persist in putting in the efforts required for them to improve their English competence.

(3) Relationships between Perseverance in English learning and Attitudinal and Motivational Dispositions

From the initial analyses above, it is apparent that the differences in learning behaviour of the two language groups is related to their differences in attitudes and behavioural preferences such as attitudes towards the two languages and student motivation. Further analyses were needed to ascertain and identify the extent of the influence of the attitudinal and behavioural factors on the students' perseverance in learning. A series of regression analyses were conducted and the results are provided in Table 26 below.

Table 26 Stepwise regression analysis for predictors of students perseverance in learning

S [#]	Predictors	R	R ²	R ² Change	F Change	df1	df2	Sig. F Change
S1	Step 1: (Constant), Motivation-1	.626	.392	.392	229.048	1	355	.000**
	Step 2: (Constant), Motivation-1, Parental Support-1	.660	.436	.044	27.660	1	354	.000**
	Step 3: (Constant), Motivation-1, Parental Support-1, MOI	.668	.447	.011	6.747	1	353	.010**
	Step 4: (Constant), Motivation-1, Parental Support-1, MOI, Language Attitude-English1	.673	.454	.007	4.334	1	352	.038*
	Variables excluded: Language Attitude-Chinese-1, Self-Concepts-1, Locus of Control-1							
S2	Step 1 : (Constant), Motivation-2	.617	.381	.381	210.130	1	341	.000**
	Step 2: (Constant) Motivation-2, Parental Support-2	.654	.428	.047	27.729	1	340	.000**
	Variables excluded: MOI, Language Attitude-English-2, Language Attitude –Chinese-2, Self-Concepts-2, Locus of Control-2							

S – Survey ** Significant at the 0.01 level (2-tailed)

* Significant at the 0.05 level (2-tailed).

The MOI factor and all the other attitudinal and behavioural measures were entered into the prediction calculation to assess for the actual effects of each of the measures on the predicted outcome, which in this case is the level of perseverance in L2 learning. Stepwise regression analyses were adopted so that the changes in R² can be captured to show the relative contribution of each of the predictors on the predicted outcome by partialling out the effects of the other preceding variables entered into the regression equation. As shown in Table 26 above, motivation was the greatest predictor of the students' perseverance in L2 learning, as indicated by the significant changes in R² recorded after the motivation factor was entered into the prediction in both surveys. The motivation factor alone accounted for about 40% of the effect. Given that, as detailed in the Section 3.2.2 on Motivation, the bifurcation of students into the two MOI streams does have an impact on student motivation, the MOI factor, acting through shaping the motivational dimensions of the students, will surely have an influence on the students' perseverance in L2 learning, as also confirmed by the regression analysis above.

Table 27 Stepwise regression analysis for predictors of students' self-reported performance

Dependent Variables	Predictors	R	R ²	R ² Change	F Change	df1	df2	Sig. F Change
Self-assessment – English (S4 & Cert English)	Perseverance in L2 learning	.323	.105	.105	43.295	1	371	.000**
	MOI	.386	.149	.044	19.317	1	370	.000**
Self-assessment – Chinese (S4 & Cert Chinese)	Perseverance in L2 learning	.208	.043	.043	16.784	1	373	.000**
	MOI – excluded							
Overall English	Perseverance in L2 learning	.342	.117	.117	49.116	1	370	.000**
	MOI	.391	.153	.036	15.574	1	369	.000**
Cert Eng	Perseverance in L2 learning	.360	.129	.129	55.109	1	371	.000**
	MOI	.400	.160	.031	13.550	1	370	.000**
Cert Chi	Perseverance in L2 learning	.244	.059	.059	23.588	1	373	.000**
	MOI – excluded							
Confidence in gaining a place in a university	Perseverance in L2 learning	.320	.103	.103	42.619	1	373	.000**
	MOI	.355	.126	.023	9.925	1	372	.002**

** Significant at the 0.01 level (2-tailed).

What is more crucial is that perseverance in L2 learning was found to have a significant influence on students' reported performance. Composite scores of students' self-assessment of performance in the two languages, English and Chinese, were calculated for comparison (for details of the calculation, see Section (4) below). Regression analyses were performed to identify the effect of the students' perseverance in learning on their reported performance in the two languages and on their expressed confidence in being able to gain a place in a university. As shown in Table 27 above, students' perseverance in L2 learning was a key predictor of the various performance outcomes, while MOI was also a good predictor for these performance related outcomes, except for Chinese related performance outcomes. A more detailed analysis of the MOI factor and students' performance are provided in the next Section under Academic Achievement.

Albeit the impact of the MOI factor shown in this study is small, it is not unreasonable to predict that the effect of the MOI factor on students in sector-wide context of CMI and EMI schools would be quite substantial and may have more long term effects.

(4) Academic Achievement

Limited by the accessibility to results in school tests or examinations, the researcher relied on students' self-reported performance for the analyses. In the first survey, students were asked to indicate how they perceived their levels of competence in the two languages (i.e. Chinese and English). The data collected formed the base for comparative analyses between the two groups and for detection of changes in achievement over time. In the second survey, after a lapse of around eight months, students were asked again their perception of their competence in the two languages at that moment; this is a focus on proficiency. Further questions were set to allow students to report their perception of their grades in the two languages at the end-of-S3 examination and at a major test/term-end examination in S4; this is a focus on achievement. On the basis of the data collected from the above questions, composite mean scores were calculated for the relevant questions on students' perception of their language competence in the second survey. In addition, students were also asked in the second survey to report the level of improvement achieved in the two languages and their predicted grades of the two languages in the coming HHKCEE. Finally, there was a question to gauge how confident they were in their chances of getting into university.

One-way ANOVA tests were performed to identify whether there was any significant effect of the MOI factor on the reported performances in the two languages. Results are given in Table 28 below.

Table 28 ANOVA tests – Between-group effect of MOI on Academic Performance

	Steam	Mean	SD	N	df	F	Sig.	Eta Squared
Survey 1								
Self-Assessment - Chinese	CMI	3.29	.714	185	1, 375	7.286	.007**	.009
	EMI	3.09	.672	192				
Self-Assessment - English	CMI	2.59	.841	189	1, 376	3.398	.066	.019
	EMI	2.75	.831	192				
Survey 2								
Self-Assessment - Chinese	CMI	4.22	.961	186	1, 377	.335	.563	.001
	EMI	4.16	1.04	193				
Self-Assessment - English	CMI	3.63	1.11	186	1, 377	15.624	.000**	.040
	EMI	4.08	1.14	193				
Improvement in Chinese	CMI	4.29	1.11	182	1, 369	3.061	.081	.008
	EMI	4.08	1.11	189				
Improvement in English	CMI	4.18	1.11	182	1, 369	2.418	.121	.007
	EMI	4.35	1.06	189				
Certificate Exam - Chinese	CMI	4.49	1.05	183	1, 373	.127	.722	.000
	EMI	4.53	.967	191				
Certificate Exam - English	CMI	3.97	1.23	183	1, 372	19.076	.000**	.049
	EMI	4.48	.988	191				
Confidence (gaining a place in a university)	CMI	2.80	1.49	184	1, 374	14.645	.000**	.038
	EMI	3.38	1.45	192				

** Significant at the 0.01 level (2-tailed).

As explained in previous chapters, the allocation of students into the two MOI streams was done mainly on the basis of the students' performance, in particular, their proficiency in the English language. As such, it was expected that the English self-assessment of the EMI students would be higher than that of their CMI counterparts, as being admitted to the EMI classes is a clear sign of achieving the required level of English competence. However, interestingly, at the beginning of the transition, although the figures showed that EMI students reported a slightly higher level of self-reported competence in English, such differences between the two groups of students were not

significant statistically. The lack of significant difference in this respect is not surprising as the data were collected within the first month of the transition, during which the influence of the MOI effect might not have materialized yet. Or one could speculate that, given a more challenging job of studying through the foreign medium, students of the EMI stream might, being more aware of their limitation in their English competence, tended to give an assessment of their English competence lower than that of their actual performance.

On the other hand, the students of the two MOI groups reported significant differences in their levels of competence in Chinese [$F(1, 375) = 7.286, p < 0.01$] in the first survey, the CMI students clearly enjoying a higher self-assessment in Chinese. The differences in self-evaluation of competence in Chinese, together with the non-significant differences in English self-assessment, might be due to the contextual influences of the schools, in which the linguistic environment is mainly Chinese. Within such a context, the CMI respondents, required to learn through the familiar medium (i.e. their mother-tongue) would have a higher confidence in their command of the medium (i.e. the Chinese language). In contrast, the EMI students, assigned with a more difficult task of learning through the less familiar foreign language in a predominantly Chinese environment, might not have much confidence in mastering the language and attaining the standard required. So, in giving their self-assessment, the respondents might be influenced by their standing in these respects relative to the levels of competence required of them in their respective learning tasks.

Around eight months after the streaming, marked differences between the two language groups were unveiled. In terms of language competence, the differences identified in proficiency in Chinese disappeared while the differences in their self-evaluation of the

English competence surfaced [$F(1, 377) = 15.627, p < 0.001$]. As shown in Tables 29-30 below, differences between the two MOI groups also emerged in their self-estimated grades in English [$F(1, 372) = 19.076, p < 0.001$] and the level of confidence they had in access to further education [$F(1, 374) = 14.645, p < 0.001$].

Table 29 Multivariate Analysis - Tests of Between-Subjects Effects of MOI on Performance

Source	Dependent Variable	df	Mean Square	F	Sig.	Partial Eta Squared
MOI	Cert – English	1, 372	23.717	19.076	.000**	.049
	Cert – Chinese	1, 373	.128	.126	.723	.000
	Confidence	1, 374	30.758	14.130	.000**	.037

** Significant at the 0.01 level (2-tailed).

Table 30 Multivariate Analysis - Tests of Between-Subjects Effects of Confidence on Locus of Control and Self-Concepts

Source	Dependent Variable	Df	F	Sig.
Confidence	Locus of Control	1, 363	9.163	.000**
	Self-Concepts	1, 358	15.038	.000**

** Significant at the 0.01 level (2-tailed).

The above findings speak loudly that the MOI streaming effect had contributed to substantial differences in students' self-reported performance in the English language, and more importantly, their confidence in earning good grades in the key examinations and in gaining access to university education (Confidence). The level of Confidence was found to have a significant effect on students locus of control [$F(1, 363) = 9.163, p < 0.001$] and self-concepts [$F(1, 358) = 15.038, p < 0.001$] (Table 30). Given the effect of Confidence on Locus of Control, the differential effect of the MOI factor might in turn have an adverse impact on students' locus of control and self-concepts, which will be detrimental to their learning and future development.

Given the above initial findings, as the level of motivation at the beginning of S4 might

have a bearing on their English performance at S4 or at a later stage, or *vice versa*, it is worth ascertaining such a relationship on their performance. Regression analyses were performed on the basis of the two surveys and it was found that Motivation was a key predictor of students' self-reported performance in both languages and of students' confidence in gaining access to university education (See Table 31). If Motivation to learn is a key factor that will affect the performance of students, this rings the bell that the streaming arrangement should be reviewed as it may not be conducive to the boosting of students' performance in both languages and in fostering students' confidence. (For details of the findings on motivation, please see Section 3.2.2) This is particularly a concern for the CMI group, which had recorded a low level of motivation in most of the measures.

Table 31 Regression Analysis (data from second survey) – Overall level of Motivation as Predictor

Outcome Variables [#]	<i>R</i>	<i>R</i> ²	<i>F</i>	df1	df2	Sig. <i>F</i>
Self-reported performance in English	.412	.170	72.355	1	354	.000**
Expected performance in Cert. English	.376	.142	58.616	1	355	.000**
Self-reported performance in Chinese	.375	.141	59.949	1	366	.000**
Self-reported performance in Cert. Chinese	.223	.050	19.257	1	368	.000**
Confidence in gaining University education	.326	.106	42.433	1	357	.000**

[#] Composite scores calculated on the basis of self-reported assessments in the 2nd survey

** Significant at the 0.01 level (2-tailed).

3. Chapter Summary

The MOI bifurcation arrangement in Hong Kong has basically segregated the students into two language streams, imposing different labels and learning experiences on the students, which in turn breed different concerns and reactions among the students. Findings of the quantitative surveys and information gathered from the group interviews corroborated to support the hypothesis that the MOI bifurcation arrangement would have

differential effects on the attitudinal and motivational dispositions of the students of the two MOI groups, which in turn would directly or indirectly affect their perseverance in learning and eventually their academic performance.

First of all, findings from this study indicate that students of the two language groups did not show much difference in their attitudes towards Chinese, although the CMI students were found to be more assertive of the values of learning Chinese as a language and as a medium of instruction. Both language groups tended not to bother much with their Chinese standards.

Secondly, the EMI groups tended to have more positive attitudes towards English than their CMI schoolmates, though both groups were equally aware of the instrumental values of the English language in Hong Kong. Their only concern was their English competence.

In terms of motivation, the EMI groups had exhibited a higher level of motivation to learn, in particular the English language, though there were discernable differences between the two groups of EMI students in the strength of the motivation. Group Three, the ones with a higher self-evaluation of their English competence, were more focused, were willing to expend extra efforts in their learning and were able to work more persistently. On the other hand, students from Group One with a lower academic self-concept seemed to be only able to manage their homework, but were not able to extend their efforts more to tasks on their own initiatives.

As to their CMI counterparts, they showed a much lower level of motivation to learn, as evidenced by their less serious attitudes towards homework or school requirements.

They reported that their study behaviour was more determined by their preference for interesting, interactive or activity-based tasks to boring and uninteresting assignments. One obvious reason for such was that they were handicapped by their limited competence in English, which had turned interesting learning tasks or topics (such as reading) into boring and repetitive chores. Obviously, they had experienced less joy and fun from their L2 learning.

With regards to self-concepts, the discourses during interviews supported the survey findings that the EMI groups had relatively speaking more positive self-concepts, when compared with students in EMI schools or their schoolmates in CMI streams. The point worth noting was that their level of English competence was however a major confounding factor in instigating such a difference. What distinguishes the CMI students from the EMI ones was a stronger sense of self-criticism in that the CMI students tended to attribute their failure to their lack of effort or determination, while the EMI students were more aware of the limitations imposed on them by external factors, such as the educational system. Following this line of thinking, the EMI students were found to have a stronger sense of control while the CMI students were quite well aware that they could not even exercise self-control to improve their learning. Another interesting point to note was that this group of students (from CMI schools) strongly felt that it was the government that had decided things for them.

In the analyses of behavioural differences between the two MOI groups, findings in this study indicate that after the MOI streaming, the two language groups did exhibit some differences in the respects measured. First of all, after the effects of the two confounding factors, parental competence and affordability, were partialled out, a small between-group divergence in parental support sought gradually emerged. For such a stable factor,

the supply of which is rather inelastic, it was found that, overall speaking, parental support given to students of both streams appeared on the low side, though data from the second survey reported an increase in this respect. As such, the between-group difference identified, albeit small, is significant. One probable reason for this is that the differences in status and importance of the two MOI language and in the perceived level of difficulty in learning through the respective medium might have prompted students (and parents) of the EMI stream to seek (and provide) more support for their learning. Another interesting finding from the interviews is that the students from the EMI groups had reacted more positively to the low level of parental support available, perceiving it more as an opportunity to train up their independence than as a limitation. This lends further support to the small differences identified on the self-concepts and locus of control of the two groups of students.

In terms of perseverance in L2 learning, both the quantitative and qualitative analyses yielded conspicuous differences between the two language groups. In general, the EMI group of students fared better in this respect: they had a higher sense of priority, personal plans for learning and were more ready to engage in L2 learning activities. On the other hand, their CMI counterparts seemed to be easily daunted by the difficulties involved in the L2 learning and therefore had experienced more frustration and boredom in the learning, which in turn further affects their perseverance in the academic pursuit.

In the light of the above findings, the differences identified between the two MOI groups in terms of the academic achievement in the areas of English competence, self-predicted grades in the coming HKCEE examination and confidence in gaining access to university education do not come as a surprise. These, viewed together with the strong relationship between perseverance in L2 learning and achievement and between motivation and

achievement in the regression analyses, support the hypothesis of the research questions that the MOI bifurcation would impact on the attitudinal and motivational dispositions of the students of the respective language groups, the effect of which will have a direct bearing on their learning behaviour, which in turn affects their academic achievement.

In this final chapter of the thesis, the researcher aims to draw conclusions and implications about the impacts of the MOI bifurcation (a unique feature of the language-in-education policy in Hong Kong) on the affective, behavioural and cognitive (i.e. proficiency in English) developments of secondary school students. First, the researcher will identify the major conclusions in this study and look at them in perspective with reference to the local learning environment, and make comparison of the findings on students' development with those of previous research. Second, implications are drawn to shed light on the impacts the differences identified will have on student performance and development under the bifurcated environment. Finally, this chapter ends with a few suggestions for future research and comments on methods of inquiry that will help to advance the study of MOI on students' development.

Major Conclusions and Discussion

1. The First Research Question

The first research question is about students' attitudinal and motivational developments as a result of their MOI streaming experience. Specifically, it addresses the following issues:

Do students of the two streams exhibit or develop any differences in language attitudes, motivational patterns, locus of control and self-concept upon transition to

their respective MOI classes; and if so, whether their affective responses change over time as they pass through the system under different MOI settings.

From the results of this research investigation reported in the previous Chapter, the following major conclusions can be drawn. The data collected supported the key predictions detailed in Chapter 3. The primary postulate on which the hypotheses were based is that the MOI factor would create differential effects on the levels of attitudinal and behavioural development of the two language groups of students in the local context. In general, the EMI students reported a significantly higher level of ratings with respect to the various attitudinal and behavioural measures. The results strengthen the conceptualization of the MOI bifurcation in the local context as an essential factor not only governing the exposure to the English language, but also shaping the following:

- motivational attributes (self-concepts, locus of control),
- motivational characteristics (motivational intensity, integrative orientation, instrumental orientation),
- motivational attitudes (attitudes to Chinese and its speakers, attitudes to English and its speakers, attitudes to learning Chinese and English),

and the academic behaviour of the students (perseverance in learning, parental support sought).

1.1 Language Attitudes

(1) Attitudes towards Chinese language and people

First, the MOI bifurcation arrangement was found not to have observable and significant differential effects on students' attitudes towards their first language, which in this case is the majority but lower-status Chinese-Cantonese. As expected, students of the two MOI

streams in this study showed no differences in their attitudes toward the Chinese language: they expressed their appreciation of the effectiveness of Chinese (their L1) as a medium of communication and instruction. These similarities in attitudes are understandable given that this sample of students were basically a homogeneous group in terms of their cultural environment and the education they received before the streaming. The lack of a between-group difference may have stemmed from their native proficiency in the Chinese language and the fewer problems or unpleasant experiences the students of both MOI groups had had in learning through their first language, than with learning with the alien English.

Second, and most notably, this study echoes with previous research (e.g. Clement et al., 1994; Dornyei, 1990 and 1994) that language attitudes tend to be situation-specific. The results in this study highlight the importance of the social context in understanding the MOI factor and its impact on student learning. Despite the above consensus of the two MOI groups over the effectiveness of the L1 for educational purposes, attitudes of the students from both language groups towards their L1 were not entirely positive and learning through the L1 (Chinese-Cantonese) was not perceived to have provided an absolute advantage over learning through the foreign medium, English, the L2 in this case. In an economy in which the minority foreign English, instead of the majority local Chinese, is the higher status language with more promising educational and economic advantages for its speakers than the Chinese-Cantonese, the respondents, irrespective of MOI streams, tended to give a lukewarm evaluation on its educational values with explicit reservations and a rather low evaluation on the instrumental values of their L1.

This suggests that even though Chinese-Cantonese is the local vernacular and proficiency

in Chinese is a prerequisite for university admission³⁸ and workplace communication, deep in the young minds, there is always a belief that it is their English, not Chinese, that has the direct bearing on their future academic and career development. The above perception is in fact a faithful reflection of the general preference of the society for the educational and instrumental values of the two languages³⁹. This can therefore be extended to explain why no reported substantial difference between the two MOI groups was detected throughout the study in the students' evaluation of the Chinese language in these respects.

Related to this is the student respondents' common but rather negative views on the Chinese people, their fellow L1 speakers, as distinct from the more positive evaluation they had of L2 speakers. This rather negative perception towards their fellow Chinese speakers could be explained by following Dornyei (1990) on the social dimension in L2 learning. He suggests that it is the instrumental value which is dominant in L2 learning in an environment without a salient L2 community. In the local context, as also shown in this study, it is the respective instrumental values of both the L1 and L2 which are dominant in the learning of the two languages. Following the logic of Dornyei's model, it could be speculated that the less than positive disposition towards Chinese speakers in the Hong Kong context might be a disposition "generalized" from the relatively low cultural and instrumental values that the students had associated with the low status Chinese-Cantonese, in comparison with the highly regarded English.

The lack of any substantial differences between the two groups of respondents in the evaluations of the educational and instrumental values of the L1 and its speakers suggests

³⁸ There is a language requirement for university entrance – Chinese Language at AS level

³⁹ Ming Pao, 23 February, 2007, reported an increasing concern of the principals of primary schools in the YMT-TST District over the dwindling places in EMI secondary schools available for non-allied primary schools in the district for open competition, reflecting a general preference for EMI schools.

strongly that MOI, a factor determining the level of exposure to the L1, although it is the mother-tongue of the respondents, will have very little effect on changing the attitudes of the respondents towards it in an area where the evaluation is not only determined by the learners themselves but also by the socio-cultural environment.

What is more worrying is that in the qualitative study, a number of negative connotations were also identified with CMI teaching. These comprise, first, the limitations CMI teaching would have on English acquisition and second, the negative association the participants had in general with CMI and academic ability, i.e. the general feelings that the CMI stream was for those with a 'lower' level of competence. This deficiency in the CMI setting and participants' negative association with it will have an adverse impact on student motivation and as a result students' learning (more in-depth discussion on this is included in later sections).

As a result, the advantages that CMI teaching may have, i.e. more effective cognitive development over time when learning is taking place in L1, may be easily negated by the above perceived disadvantages. What makes the situation worse is that the disadvantages of learning through a low status language are more readily perceptible throughout the learning process and normally precede the advantages, if any, the realization of which is also contingent upon a number of confounding factors in the process (e.g. the problems associated with the vernacular Cantonese).

The above dispositions towards Chinese common to both MOI groups are crucial to understanding the resultant attitudes of the students towards Chinese as a language as well as an MOI. All in all, in regard to their first language, the participants were generally appreciative of the benefits of Chinese-Cantonese as a language as well as a

medium for education. However, it is the above-elaborated deficiency inherent in the language and in CMI learning in the local social context that could have accounted for the lukewarm, if not negative, evaluation of both language groups towards Chinese. This is interesting as it indicates that greater exposure to a language (including one's mother-tongue) and its speakers may not necessarily produce favourable attitudes towards the language and its people. The social dimension and the status of the language have clearly a significant role to play in modifying language attitudes and therefore should be taken into consideration in deciding on any policy concerning language and education.

(2) Attitudes towards English and English-speaking people

Unlike their attitudes toward their mother-tongue, the two language groups displayed growing differences in their attitudes towards English, the minority but high-status second language in the territory. Overall, the results of this study showed a subtle but consistent difference in the attitudes towards the L2 between the two MOI groups: students in the L2 language stream (the EMI students) tended to be more positive towards the language in almost all the domains measured. They reported a higher evaluation of English as a medium for education, were able to make more positive comments on the L2 as a language for learning, gave a more assertive view on the instrumental values of the language and presented a more positive affective disposition towards its speakers than their CMI counterparts.

There was also evidence that this divergence in attitudes between the two MOI groups had grown in the course of time. As such, the consistent disparity between the two MOI groups substantiates the hypothesis that MOI and thus exposure to an L2 were found to be an effective force in producing in the learners more favourable attitudes toward the L2.

This is in line with most research in bilingual education that more exposure to a target “second” language will facilitate the fostering of positive attitudes or responses to the language, its cultures and its speakers (e.g. Lambert, Giles, and Picard, 1975; Feuerverger, 1989 & 1994; Garrett et al., 1994; Gan, Humphreys & Hamp–Lyons, 2004), which in turn are contributors to the successful acquisition of the L2 (e.g. McCombs, 1990; Masgoret and Gardner, 2003).

The analysis also revealed an almost unanimous agreement over the instrumental values of English. The attitudes identified from the analyses corroborate the typical sentiments in the local community towards the two language streams: a good development in students’ English, the language for higher education and a good career, is always a prerequisite indicator of the effectiveness of any local educational programme, and proficiency in the English language is evidence to establish a student’s academic competence (So, 2002). This explains the findings that students from both streams not only regarded English as a more important language, they also associated English with high level of academic competence and considered EMI schools better schools in general (see also Johnson, 1998). It is therefore easy to explain why students’ priority always goes to the development of their competence in English. As shown in this study, opportunities to learn and improve English such as studying in an EMI school or class tended to be treasured by all⁴⁰, while studying in Chinese had, without exception, been viewed as posing an unwelcome limitation on the development of the L2.

Unfortunately, the MOI bifurcation adopted in the territory has in effect divided the

⁴⁰ A report made by Ming Pao (28/12/2006) at a time when the local primary students began to apply for the secondary schools of their own choice in the first round of the Schedule for secondary school places allocation clearly underscored the unequivocal preference of local students for EMI schools. It was about a hard working student from a broken family who had vowed to get a place in an EMI school as a tribute to her seriously ill mother, who has single-handedly raised the family and whose biggest wish is to have her children admitted to EMI schools.

secondary school sector into two main sub-sectors: the EMI sectors, in the local Chinese dominant linguistic contexts within and outside the schools, are providing, to a certain extent, a bilingual education with an emphasis on English development; while what the CMI schools are offering is a basically monolingual education with English taught as a foreign language. In the light of the attitudes identified above, students (as well as teachers and parents), particularly those in the CMI schools/streams, perceive Chinese as a MOI and CMI education as inadequate, particularly in the development and enhancement of their English competence. This perception, interacting with the other attitudinal and motivational factors discussed both in the above and later sections, will shape their self-concepts and behaviour, which eventually will leave profound yet indelible imprints on their academic achievement and confidence.

(3) The Impact of the MOI policy on Language Attitudes

The above analysis sheds light on how the MOI policy has affected student learning in the bifurcated context and why mother-tongue teaching may not be able to deliver the advantages as reported in other bilingual contexts on students' learning and language development (e.g. Hoffmann, 1998; Lindholm-Leary, 2001; Baker, 2001). Most evident in the findings is that the problem with the MOI streaming lies first in the less favourable attitudes towards Chinese as a medium of instruction in view of its inherent limitations on English acquisition and thus the access to opportunities to higher education and a better future. Second, it lies in the more favourable attitudes EMI learning will generate in students over the English language, and this will have direct bearing on the motivation of EMI students in their learning in general and in their acquisition of English.

A key success indicator of any language-in-education policy is its effectiveness in fostering or fortifying positive language attitudes among the students. Results from this study however indicate that the MOI policy adopted in Hong Kong had failed in this respect. On the one hand, CMI students who are detoured to an avenue which promises more effective cognitive development through Chinese, had not, as expected, developed a more favourable attitude towards their mother-tongue, but a rather sceptical attitude towards their mother-tongue as an MOI. On the other, with far from satisfactory experience in English learning, such group of students, the majority of the local student population, was found to have developed a less favourable attitude towards English than their EMI schoolmates. The chance of success for such students learning an L2 with a less favourable attitudes towards the L2 in an unfavourable local linguistic environment will be less than promising than for those in the EMI sector who tend to exhibit a more favourable attitude towards the L2 and who are provided with a more appropriate and promising language environment for L2 development.

Along this line of reasoning, the above findings, consistent with previous research (e.g. Johnson, 1998), strongly support the general perception that children who attend EMI schools are of a higher calibre and at an advantage of acquiring proficient English, which will enable them to open up a bright future, while those trapped in the CMI stream would have to face a more uncertain future, very much of which was contingent upon their L2 development and their cognitive development through learning in their mother-tongue. In other words, the language-in-education policy has created a potentially damaging effect on the students of the CMI stream. This probably is due to the fact that the difference in status and instrumental values between English and Chinese-Cantonese in the wider community, a key factor in Dornyei's Language Level that shapes the effect of the MOI, had been left out in the original consideration of the policy makers.

1.2 Motivation

Previous research has shown that motivation is the key intermediary catalyst that consolidates the effect of attitudes on academic achievement (e.g. Gardner, 1975, Masgoret and Gardner, 2003). Regression analyses performed in this study also showed that motivation is the greatest predictor of the students' perseverance in L2 learning, and that it is also a key predictor of students' self-reported performance in both languages and of students' confidence in gaining access to further education. It is therefore important to ascertain the differentiation effect, if any, of the MOI bifurcation on the motivation of the two language groups.

As reported in previous research⁴¹, the findings in both the questionnaire surveys and the interviews concurred that, in comparison with the CMI respondents, the EMI group was a more motivated group of students. With a more favourable attitude towards English in the various aspects measured, the EMI respondents had also been found to have a higher level of motivation to learn in general and to improve their English in particular. On the whole, the EMI students, irrespective of their level of English proficiency, were found to be more ready to exert efforts to improve their English performance (e.g. by actively availing themselves of facilities). Second, what distinguishes these EMI students from the CMI counterparts is a clear focus on the instrumental values of each learning activity: as indicated in the interviews, they demonstrated a stronger sense of self-discipline, with clear academic objectives and a high sense of effort-effectiveness in their learning. Their motivation to learn in English tended not to subside easily in the face of the daunting task

⁴¹ The EC Review of MOI for secondary schools (2005) reported that in a commissioned study by the Chinese University of Hong Kong done in 2004, the interest, motivation and confidence in learning English of the CMI students are relatively weaker than the EMI students, and so is their performance in the subject.

of learning through a less familiar foreign language and the tiresome and tedious tasks involved in language learning, e.g. reading English articles crammed with difficult words and expressions.

On the other hand, the CMI respondents were found to exhibit a lower level of motivational intensity in their learning in general and in their English acquisition. Findings from the interviews unveiled the emergence of a resistance in their English learning, which might gradually built up as a result of the hardship and boredom they had to encounter before they reached the threshold for satisfaction in the language learning and of the perceived constraints for L2 improvement imposed on them when they were confined to the CMI environment.

Another finding is that despite the lack of a between-group divergence in the extrinsic motivation orientation and in their integrative orientation in their English learning, the two groups displayed some distinctive difference in the development of their intrinsic motivation orientation: the CMI respondents displayed a downturn in their intrinsic motivation in the course of time. This suggests that the CMI students, under the MOI bifurcation setting, tended to have experienced less joy of learning, which might be explained by their awareness of the limited opportunities they had in improving their English competence in the mother-tongue setting and of the labelling effect of the Chinese stream on them. As research has long established (e.g. Ellis, 2004; Noels et al ., 2003) that students with an intrinsic motivation are more able to exercise effort and be self-motivated to take part in learning activities, a reported reduction in such an orientation is an alarm indicator to the policy makers that the CMI students might have experienced significantly less satisfaction in their learning through their mother-tongue, a low status variant, than normally expected in other language contexts.

This adds further credence to the hypothesis that the MOI factor would generate differential effects on the motivational dispositions of the students of the two language groups. This is increased by the local linguistic context in which the relative importance of the L1 and L2 is having a strong influence on the students' perception of the instrumental values of the respective languages, and thus the instrumental values of learning through either of them. This is further supported by another finding in this study that although the two MOI groups did not show any difference in their instrumental orientation to learning English at the beginning, the gap between them in the perception had surfaced over time, suggesting that both the CMI and EMI students, with different exposure to English and opportunities to improve their L2 competence under the segregated environment, had adjusted their motivational orientation in response to the respective limitations or opportunities the MOI setting offered.

Although it could not be ascertained whether the above differences had emerged only after the MOI intervention or had prevailed before the segregation, as it was probable that such differences in motivation might have affected the students' achievement in S3, on which basis they were designated to their respective stream in S4, the continued presence of the differences in these two areas and the emergence of the difference in their instrumental orientation to L2 learning after the streaming do attest that the MOI factor had gained strength in its effects on the motivational dispositions of the two groups of students. Also, the substance of the between-group divergence illustrated by the findings from the interviews suggested strongly that motivation for L2 learning was associated with the level of the respondents' English competence. Given that the MOI is the key factor in the local environment that governs the exposure to the target language and thus the opportunity to better English proficiency, it is not unreasonable to argue that the

differential effect of the MOI factor would grow in strength, particularly in the longer term when the academic outcomes materialize over time.

What is more revealing is that the differences identified above between the two MOI groups have grown both in scope and magnitude in the course of time. In other words, the streaming on the basis of one's English competence will spin off an increasingly powerful effect on the motivation orientations of the two language groups. The EMI students, who, with a higher level of perceived capacity in general and more exposure to the high power English language in particular, will develop a higher level of motivational intensity in their learning and a stronger sense of motivation in L2 acquisition. This then interacting with other confounding factors will probably breed positive behaviour in terms of perseverance in learning, which, in turn, will further help boost their academic performance.

In contrast, the CMI group, apparently a less focused group with lower self-perceptions in English competence, appeared to be less motivated – they were more ready to give their time to non-learning related activities than their more capable counterparts. Following the same logic on the relationship between motivation and academic development for the EMI students above, the CMI students, quite the reverse, with a reported lower level of motivation for both learning and for L2 acquisition would most likely not be able to do well in their learning.

The above findings are significant as, despite the fact that the EMI students had to face the various problems associated with learning through a foreign language in a Chinese dominant educational context, i.e. overcoming the two difficult tasks of improving their English substantially to enable them to learn through it and mastering the subject matters

of the individual subjects at a higher level at the same time, they were able to sustain a higher level of motivational intensity in their learning and L2 acquisition, which are conducive to enhancement in academic performance. On the other hand, the CMI respondents, though given a lighter task of learning through their mother-tongue, seemed not to have benefited from the MOI separation in their motivational development. The fact that the two language groups developed different levels of motivation to learn the foreign English language over time indicated that the MOI factor does have a differential impact on the motivational development of the two language groups. The results of this study suggest strongly that the MOI factor, interacting with the factor of the relative standing of the L1 and L2 in a community, will generate a more positive effect on the motivational development of students studying the higher power language than those learning through a lower status language, albeit it is their mother-tongue in this context.

From the above, it can be said that the MOI arrangements have fostered and reinforced differences in motivation between the two language groups: those with a ticket to the better development of the language of power (i.e. English, see Phillipson, 1992) and with more pleasant exposure to the English language will be more likely to develop a higher level of motivation, while those denied EMI access as a result of their less successful records have yet to demonstrate that they had also benefited from the MOI streaming in respect of their motivational intensity in learning. In sum, the bifurcation arrangement, in which students were streamed into the two MOI streams which opens up different educational opportunities, appears to exacerbate the undesirable influence on the affective and motivational development of the students.

1.3 Self-concepts

Self-concepts are self-perceptions of one's competence, formed on the basis of an aggregated judgement of past experiences typically assessed at domain-specific levels that entails both internal and external references⁴² (e.g. Marsh, 1986; Craven, Marsh, & Debus, 1991). This study specifically addresses the issue of how the MOI factor would affect students' self-concepts, which as proven in previous research would subsequently affect students' achievement (e.g. Zimmerman, 1989b; Bandura, 1989; McCombs and Whisler, 1989). What gives significance to any finding in this respect is that the causal relationship between self-concepts and subsequent achievement is also found to be reciprocal in nature (e.g. Hay, 1997; Helmke & Aken, 1995; Marsh & Yeung, 1997a), and therefore will spin off either a benign or vicious cycle of development in the students' self-concepts and academic achievement.

Evidence collected in this study supports the hypothesis that in general, mediated through a positive self-assessment of their English competence, the EMI students were found to display higher academic self-concepts and self-esteem than their CMI counterparts. What is of concern is that such a trend was found to accelerate over time, creating a greater gap between the two MOI groups. Another finding was that among the students in the EMI stream, those with a higher level of self-assessment in English were able to demonstrate better academic self-concepts than those with a lower self-assessment in English. This is in line with findings in previous research (Yeung & Lau, 1998) that competence in English is a salient factor in the formation of the academic self-concepts of students in Hong Kong. It also illustrates that as English in Hong Kong has always had a priority over other subjects, a student's view of him/herself as either good or poor

⁴² See Section 4.1 (4), Chapter 2 for details.

in English will have a corresponding positive or detrimental effect on his/her overall self-concepts. Against such a background, the MOI factor was found to be able to exercise distinct effects on the self-concepts of the students of the respective language groups.

First of all, the MOI streaming interferes with students' development in their English competence by governing the exposure to the language and thus determining the opportunity to improve their achievement in this important domain. Second, as indicated in the students' responses, even though not all student respondents (students of CMI schools) would consent with the general comment that CMI students are not as good as their EMI counterparts in not only English, but also in their overall ability, they more or less tended to agree that if one can do well in English, one can also do well in other areas as well. The above provides the necessary insights into the development of the divergence in students' development in their self-concepts: it is likely that the EMI students, most probably with a better chance to enhance their competence in the high power English and a higher self-evaluation of their English proficiency, will be able to benefit from a favourable internal reference and consider themselves (or are considered to be) good not only in English, but also in other areas as well. On the other hand, the CMI students, with a less than certain future for their English development, will have to struggle to maintain or develop their academic self-concepts by either strengthening their English development or by doing well in other key domains in order to benefit from a more positive internal reference to cover lost ground due to a lower self-evaluation in the English domain. However, under the MOI streaming arrangement, it is evident that it is very likely that difference in the English competence of students of the two MOI groups will grow over time substantially on top of whatever differences there might have been before the MOI streaming. In the light of the results of the present study, it can be therefore argued that as students' English development would probably be disadvantaged

in a CMI setting under the MOI bifurcation arrangement, so would be the development of the academic self-concepts of the students studying in CMI schools/stream.

In addition to the effect on internal reference, the MOI factor seems also to have an effect on students' external reference. In the local setting in which academic performance is overtly emphasized and students are used to displaying a strong external comparison with their peers in forming their self-concepts (Ho, 1976; Yeung and Lau, 1998), the streaming of the students into the two language streams on the basis of their language competence is in essence an ability grouping, providing students of the two MOI streams with a very convenient benchmark for external comparison.

As revealed in the study, the view commonly held by both groups of interviewees was that the EMI schools/students, studying in the high status L2, were associated with the more capable or the 'elite'. Implicit in this view is that EMI students, benefiting from an easy and convenient external reference group of CMI students, will be able to develop or maintain more positive academic self-concepts. In contrast, the CMI students, aware of the existence of a group of competent counterparts with proven English ability and a better chance of developing their English competence further, will easily fall victim to such unfavourable external reference. As attested in the quantitative analyses in the preceding Chapter, CMI student respondents seemed to have tried hard but without much success to maintain or improve their self-concepts. The responses from the CMI students in the interviews are particularly illustrative of this point – they on the one hand struggled to dismiss the notion that EMI was associated with the elite and the more capable while CMI was for the less able, but on the other hand were found to have developed certain resistance in their English learning, further lowering their chances of success in their performance in the key English domain, which in turn would have an undesirable effect

on their confidence and academic self-concepts.

Data collected have also indicated that the development in the academic self-concepts and self-esteem of the two MOI groups had shown signs of further divergence in the course of time. This is another piece of evidence to suggest that after the intriguing internal and external comparisons⁴³, the EMI students will readily get more positive reinforcement leading to stronger self-concepts and higher self-esteem, while the CMI students who have to strive hard to counterbalance the negative effect of the MOI grouping on their performance in the key domain of English competence will be more susceptible to the vicious cycle of developing less favourable self-concepts and self-esteem.

As a high evaluation of the self is often found to relate to a high level of motivation to learn and to adopt constructive learning strategies and behaviour, and as a result, a higher level of achievement (Skaalvik & Rankin, 1995; Ames, 1983; Skaalvik & Rankin, 1996b; Skinner, Wellborn & Connell, 1990), what makes the above findings significant is that the MOI language policy may cause great damage to the self-concepts of the CMI students, who are more prone to make less favourable internal and external references in the course of time in comparison with their counterparts in the EMI schools, and as a result, to achieve fewer successful experiences in their academic performance, which in turn will have further adverse effect on their self-concepts and other attitudinal and motivational development. This echoes with Law's (1997) concern that the MOI language policy in secondary schools is divisive because students who fail to enter the more promising English stream will suffer from great damage to their self-esteem.

⁴³ See Section 4.1 (4), Chapter 2 for details.

1.4 Locus of Control

In this study, locus of control refers to the way a student accounts for personal successes and personal failures in their academic performance. The accumulative evidence of research attests that students' locus of control orientation affects students' achievement behaviour, which in turn affects academic performance⁴⁴. It is therefore of significance to ascertain whether the MOI intervention would affect the sense of locus of control of the two language groups differently and over time. In other words, this study specifically intends to identify whether EMI and CMI students would exhibit differences or changes in the development of their perceptions of control after the MOI intervention.

First of all, when the MOI factor was considered alone, no significant difference between the two MOI groups in their sense of control could be detected in the two surveys. However, both groups reported a small but statistically significant decrease in their sense of internal control over time. The reduction pointed to a shift from a slightly positive sense of internal control to an inclination towards an external locus of control. This suggests that after the MOI bifurcation, the students of both streams felt less certain that their personal success or failure was attributable to their own efforts. The within-subject change detected over time also underlines the fluidness and vulnerability of the sense of internality of this sample of students (all from CMI schools) under the sector-wide MOI bifurcation arrangement.

The reduction over time, though small but significant, in the students' locus of control poses a warning signal that, after studying in their respective MOI settings for about eight

⁴⁴ As explained in Chapter 2, students' beliefs about their abilities and their locus control orientation mediate motivational predispositions to engage in achievement behaviour, affecting cognitive and selection processes (e.g. Bandura, 1989; McCombs & Whisler, 1989; Lau & Chan, 2001), and as such, academic achievement (e.g. Finch, Shanahan, Mortimer, and Ryu 1991; Levis, Ross, and Mirowsky 1999)⁴⁴. Their attributions may or may not be accurate perceptions but are able to influence future behaviour profoundly.

months, the students of both language streams in this sample might have had less favourable experiences which would have been conducive to the fostering or maintenance of an internal locus of control. As English learning has been a salient concern to the local students (see previous sections), it is not unreasonable to speculate that at least some of such experiences were related to their English learning. The students' responses collected from the interviews are particularly illustrative of this. Respondents, irrespective of their language streams, had displayed their frustration when they talked about the problems they had encountered in their learning of the L2. To the CMI students, the fact that they had lost the chance of learning in the high power L2 for the second time underlined their apprehension about the limited opportunity they would have to develop their English to the required level for higher education and future careers. This acute awareness of an inadequacy in L2 learning might have reinforced their beliefs that they would not be able to, in a CMI environment, effect much improvement in the high status L2, the successful mastering of which has a direct bearing on their future life chances. As to the students of the EMI classes in this study, they saw themselves more as "victims" of the "unfair" education system. They complained about not being able to choose the school or subjects of their choice. Also, the difficulties associated with switching to an unfamiliar medium for learning might have weakened their sense of control, to a certain extent, over the outcomes of their academic future.

Secondly, the differentiating impacts of the MOI factor on the development of students' sense of control gradually surfaced after the effects of the students' self-assessment of their English competence and their perseverance in learning had been partialled out: the two MOI groups started out with no substantial difference in this respect, but some time after the transition, reported a small but statistically significant divergence in the sense of control. In comparison, the EMI students reported a slightly lower drop in their sense of

internal control than their CMI schoolmates in the second survey. The emergence of the between-group difference over time in this respect suggests that the group learning through the low status L1 had suffered from a bigger loss in their sense of internal control.

This finding runs counter to the logical inference that a learner would normally experience less difficulty and thus a stronger sense of internal control when learning through the familiar L1 (a language of high proficiency) than one who learns through an unfamiliar L2 (a language of lower proficiency). However, it makes good sense when the socio-cultural dimension is added to provide the backdrop. The difference identified here suggests strongly that the advantages that mother-tongue teaching may have, i.e. more effective learning over time, which is conducive to a better sense of internality, may be easily negated by the perceived disadvantages it has on the development of the high power English and thus, one's future prospect. On the other hand, the advantages of studying in the high power L2, i.e. more promising L2 development and thus a better prospect, which will assure the learner a higher sense of control over one's future, may easily outweigh or compensate the disadvantages associated with learning through an unfamiliar medium. This echoes with the findings in previous sections that the affective experience generated by the MOI arrangement is very much a contextual product largely priced by the reference to the values the learners attached to the respective languages. In the Hong Kong context, it is more related to their instrumental values.

What is of concern is that the CMI students, once again, are shown to be easily trapped in the vicious cycle of lower sense of internal control and weaker performance. Given the relationship between internality and academic achievement suggested in previous

research⁴⁵, the above findings boil down to one possibility: the students studying through the low status L1 tend to be less able to fare well in their development of a strong sense of locus of control and therefore may not engage in as many achievement related activities as those learning through the high status L2. This in turn will directly affect the chances of success of the former in their academic pursuits in comparison with those of the latter. Like the findings in other constructs explained above, a lower chance of success in academic performance may induce further loss in the sense of control, and as such will trigger the chain effect of another round of deterioration in motivation and academic performance. The significance of the impacts of such a chain effect should not be underestimated as it will interact with other motivational variables to have a summation impact on the learning behaviours of the students of the two language streams.

The above findings, corroborated with the observations from the interviews, suggest that the MOI arrangement may not be a good measure for such attitudinal development of the students who remained in the low status L1 stream. Bearing in mind that the EMI students in EMI schools are spared some of the frustration the EMI students in this study (all from CMI schools) had experienced (e.g. the feeling of victimization for being allocated to a CMI school), it is plausible that the differences between the two MOI groups at the school level in terms of their sense of internal control would be more conspicuous.

1.5 Conclusion

The first research focus investigates whether medium of instruction is an important factor affecting student attitudes towards the two languages, motivation, self-concepts and locus

⁴⁵ See 4.1 (3), Chapter 2 for details.

of control. It boils down to the question of whether the students of the two MOI streams would exhibit or develop differences in the above respects. The results expounded above show that the MOI bifurcation is associated with differential findings with respect to the attitudinal and motivational dispositions of the two MOI groups of students. Although the MOI relationship to each attitudinal and motivational factor measured were reported to be rather small, the consistency of the presence of the divergence in nearly *all* measures upon and some time after the streaming has built up a very strong case to support the hypothesis on the effects of MOI on students' affective and motivational development.

Secondly, in general, under the MOI bifurcation arrangement, students learning through the low status Chinese-Cantonese were found to have scored lower in almost all of the variables measured, with the exception of their attitudes towards Chinese, than their EMI counterparts. Their responses in the interviews revealed that they were well aware of a wide range of possible problems and limitations in relation to their learning through a low status medium, while their feedback from the surveys underscored the challenges they have to face across a number of domains, both attitudinal and motivational. In comparison with the respondents in the high status L2 stream, they showed less favourable attitudes towards English, were less motivated, held lower self-concept and had a lower sense of internality.

On the other hand, the EMI students, though learning through the alien L2, seemed to be a more promising group of students, who were able to have a clear idea of what and how learning activities should be carried out and be more confident of themselves. With more promising opportunities for their development in the high power L2, they appeared to have more positive language attitudes to English, demonstrated a higher sense of

motivation to learn and confidence to accomplish personal goals, were able to develop a better self-concept over time after being selected into EMI, and worked with a higher sense of internal control in their own doing, such as the enhancement of specific language skills or performance in tests and examinations.

At the outset, it was hypothesized that the above differences identified between the two language groups would be related to the students' evaluation of the MOI factor on their learning, in the light of the status and utilization values the local economy has attached to the two respective languages. Accordingly, the EMI students, learning through the high power English, would measure higher on their attitudinal and motivational scores than the CMI students. Both of these predictions were confirmed in this study.

The findings also echo the inspiring work of Dornyei (2001b, 2003) on motivational strategies. More specifically, the differential effects detailed above indicate that the MOI bifurcation would not be able to produce as high a level of positive effect on students' learning in the low rank L1 as on those learning in the high value L2 in at least three out of the four main dimensions of motivational strategies of Dornyei's model⁴⁶:

- a) in generating initial student motivation
 - enhancing the learner's L2 related values and attitudes
 - increasing the learner's expectancy of success in L2 and in learning in general
- b) in maintaining and protecting motivation
 - protecting the learners' self-esteem and increasing their self-confidence
- c) in encouraging positive retrospective self-evaluation
 - providing motivational feedback

⁴⁶ They are (a) creating the basic motivational conditions, (b) generating initial student motivation, (c) maintaining and protecting motivation, and (d) encouraging positive retrospective self-evaluation (Dornyei, 2003:23)

- increasing learners' satisfaction
- promoting motivational attributions

The implication is that, also consistent with the perspective offered by the comprehensive framework provided by Dornyei and his colleagues (e.g. Dornyei and Csizer 1998) which emphasizes the situation-specific aspects of L2 motivation, it is likely that the students in the L1 stream are not as effective as their counterparts in the L2 stream in their development of self-motivating strategies - which is essential to enable them to take personal control of their affective conditions and experiences that shape their subjective involvement in learning in general and in L2 acquisition in particular.

In addition, the regression analyses (explained below) suggested students' attitudinal and motivational dispositions are reliable predictors of achievement behaviours and academic performance. A logical development of these initial findings given above is to ask the next question: whether the MOI streaming is an effective educational measure in the local context in the fostering of learning behaviours which are conducive to students' academic performance. The significance of the above findings will be further enhanced when it is viewed together with the findings (to be expounded below) of the MOI effects on the behavioural development and academic performance of students of the two language streams.

2. The Second Research Question

The second research question is about students' behavioural responses of the students as a result of their MOI streaming experience. Specifically, it addresses the following issues:

Do students of the two streams exhibit different behavioural dispositions (e.g. in their support seeking behaviour and the levels of perseverance in the learning of the L2 (i.e. the high-status English))? To what extent are the differences, if any, associated with the differences in attitudinal and motivational orientations? Do the students in the two classroom types register significantly different progresses in L2 proficiency development and academic performance, as evidenced in self-reported school assessments?

2.1 Behavioural Development and Academic Performance

Effort and persistence are motivational in nature and are therefore susceptible to change in the learning environment (Schunk 1984). The weight of research bears out that the differences identified above in the attitudinal and motivational development will result in differences in learning behaviours (e.g. support seeking behaviour, efforts expended on learning and the ability to persevere in face of difficulties), which in turn will affect school performance (e.g. Oxford, 1990; Gan, Humphreys and Hamp-Lyons, 2004). In other words, on the basis of the findings in respect of the attitudinal and motivational differences, it was expected that the MOI factor would also have differentiating effects on the learning behaviour of the students of the two MOI groups, which would eventually determine their academic achievement.

In such light, the second research question is focused on detecting whether students of the two streams exhibit different levels of perseverance in the learning of the L2 with particular reference to the following:

- (a) the support seeking behaviour of the students, in particular their involvement of their parents in their L2 learning;
- (b) perseverance in L2 learning - the efforts the respondents expended in the study of

English and the extent of self-regulation they exercised in managing their studies,
and

- (c) whether such differences, if any, are associated with the differences in attitudinal dispositions and motivational orientations between the two MOI groups; and
- (d) whether the students in the two classroom types register significantly different progresses in L2 proficiency development and academic performance.

(1) Support Seeking Behaviour - Parental Support and Involvement in Student Learning

To begin with, it has to be pointed out that the supply of parental support is quite inelastic as its availability can be very much limited by parents' education level and the means they can afford in providing or purchasing learning assistance to their children. As such, in the analyses, the effects of these two restrictions on parental support and involvement in the students' learning had to be controlled for. After the two confounding factors were added in the analyses, the finding reveals that a divergence between the two language groups had developed over time. This supports the hypothesis that, the MOI factor, interacting with the confounding factors, did account for a difference in the support seeking behaviour of the two language streams.

Despite the restrictions imposed by the confounding factors, the differences identified in the course of time indicates that the EMI students were more able to avail themselves of the assistance of their parents and report a higher level of parental involvement in their school life. There of course may be other possible reasons for the difference, but the fact that the two MOI media are different in status and the general perception of a higher

level of difficulty associated with the shift to an unfamiliar medium might have promoted students of the EMI stream to be more aware of the need to seek support from their parents in their learning through the highly regarded foreign language at this critical stage of secondary education.

Moreover, the results show that, on the whole, parental support given to students of both groups tended to be on the low side at the beginning of the study, although it had increased in the course of time, probably due to the approach of the critical School Certificate Examination. Here, the findings from the interviews illustrated that EMI students appeared to be more positive and self-assured in their reactions to the generally low level of support from their parents: they seemed to be able to perceive the problem as an opportunity to develop their independence in their learning. This echoes with the findings on the higher self-concepts and sense of internal control of this group of students identified earlier on.

These two pieces of evidence viewed together lend additional support to the conceptualization that the streaming of students into the two MOI streams on the basis of the competence in the high status English will have more positive impacts on the students learning through the powerful foreign medium than on those learning through their low status native language in terms of their support seeking behaviours.

(2) Perseverance in L2 Learning

Findings in this study indicate that this is the area where the differences are most conspicuous. Overall, the EMI group of respondents had reported a higher level of perseverance in English learning and the divergence prevailed over time. Although it

could not be ascertained in this study whether the differences had already existed before the MOI intervention, the continued presence of the differences and the substance of the divergence illustrated by the findings from the interviews attest that the MOI factor has had an effect on the prevalence of such differences.

The findings from the interviews illustrate the nature of the differences between the two MOI groups. EMI students, though not without problems in their learning through a less competent medium, demonstrated a high sense of priority of their own, had personal plans for English enhancement, and appeared to be able to actively avail themselves of facilities (such as seeking access to English-medium learning materials) to increase the probability of their success, i.e. their academic performance. In contrast, the CMI students, with less exposure to the L2, were less ready to exert extra effort to overcome their deficiency in handling L2 tasks (e.g. unfamiliar vocabulary and complicated expressions) and appeared to be less willing to participate in less interactive or interesting learning activities. What is of concern is that they seemed to have developed a sense of resistance to English learning, probably due to the frequent frustrations encountered in the learning process. The unrelieved presence of a lower level of perseverance in L2 learning among the CMI students raises the concern that under the MOI bifurcation arrangements, CMI students may easily fall victim to the vicious cycle of less perseverance and weaker performance in the important L2.

Given the importance of English in the local context, students irrespective of their language streams, appreciate its instrumental values (as illustrated in the findings in Section 1.1 (2) above), and thus the need to enhance their competence in the language. Against such a background, one possible reason for the difference in learning behaviours identified above between the two MOI streams is the grouping arrangement on the basis

of students' English competence. By the criterion for admission, students in the EMI streams are those with demonstrated higher level of L2 competence. This, coupled with a better prospect for further enhancement of the highly regarded L2 under the MOI bifurcation arrangement, would have motivated them to exert more efforts in this respect.

On the other hand, the CMI students are those with a lower level of L2 competence, probably at a level below the established language requirements, and would have encountered more difficulties and thus frustration in the L2 learning. Also, under the MOI streaming arrangement, they are fully aware of the limitations of their MOI on their exposure to and thus further enhancement of the higher status L2. These factors would probably have contributed to the development of a lower level of motivation (see also section (c) below) to engage in L2 learning related activities for this group of students. Another reason can also be found in the analysis in the following section, which expounds the relationships between the attitudinal and motivational dispositions of the two MOI groups and their respective learning-related behaviour.

(3) Association with Attitudinal Dispositions and Motivational Orientations

In line with previous research which suggests that student attitudes towards the language, motivation, self-concepts and locus of control are important variables affecting persistence in second language learning (e.g. Kuhlemeier, H., Van Den Bergh, H. & Melse, L. 1996; Morton, Lemieux, Diffey & Awender, 1999), this study confirms that students' perseverance in L2 learning was highly correlated to almost all of the attitudinal and motivational variables measured. Among these factors, students' motivation was found to be the greatest predictor of the students' perseverance in L2 learning. In the light of the effects of the MOI bifurcation on student motivation as well as other

attitudinal dispositions, as identified in the previous Section, there is compelling evidence to suggest that the MOI factor, acting alone as well as through shaping the attitudinal and motivational dimensions of the students, surely has an influence on the students' perseverance in L2 learning.

More crucial to the understanding of the MOI effect is that in this study, perseverance in L2 learning was found to be a key predictor of students' reported performance in English, while MOI was also a good predictor of the same performance outcomes (to be expounded further in the following section). This, viewed together with the findings in the section on parental support, adds further weight to the findings of the first research question that the MOI arrangement may do more harm than good to students studying in the lower status CMI stream in terms of their behavioural development. Implicit in the findings from this homogeneous group of participants is that such differential effects of the MOI factor on students under the sector-wide bifurcation of CMI and EMI schools would be much more substantial and may have more long term effects.

(4) Academic achievement

The place of attitudes, motivation and self-perceptions in discussions of educational achievement and of bilingualism is well-documented (e.g. Hay, 1997; Helmke & Aken, 1995; Marsh & Yeung, 1997a; Muijs, 1997; Masgoret & Gardner, 2003). The established relationships between attitudinal and behavioural variables and academic performance (e.g. Ryan & Connell, 1989; and Heckhausen & Schultz, 1995) and the differences identified above between the two MOI groups in their support-seeking behaviour and perseverance in learning have laid a strong base to predict that the two MOI groups would achieve performance at different levels. Here, the final set of analyses concerning

the relationship between MOI and academic performance confirmed the above. Results in the measure of perceived/self-reported academic achievement bear out that the EMI students were able to perform better academically than their CMI counterparts.

At first, no difference was identified in the respondents' self-assessed proficiency in English, but CMI students reported a short-lived higher self-evaluation of performance in Chinese, the edge of which soon disappeared over time. Then, significant difference between the two MOI groups in their self-reported performance in the English language emerged eight months after the transition. More importantly, the two language groups reported differences in their self-estimated performance in English in the key School Certificate Examination and the level of confidence they had in gaining access to university education. The above differences underscore the growing strength of the impacts of the MOI segregation over time and the direction of changes in the academic performance of the students in the respective streams.

The hypothesis of the MOI effects is further attested by the findings in the regression analyses: students' perseverance in L2 learning was a key predictor of the performance outcomes mentioned above, while MOI was also a good predictor for the performance outcomes, except for Chinese related performance indicators. Given the effects of past academic performance on students' attitudes and motivation, locus of control and self-concepts (e.g. Hay, 1997; Helmke & Aken, 1995; Marsh & Yeung, 1997a; Muijs, 1997; Masgoret & Gardner, 2003) and that such relationships are reciprocal (see also Taylor & Hegarty, 1985; Baker, 1988; Kuhlemeier, Van Den Bergh & Melse, 1996; Gan, Humphreys & Hamp-Lyons, 2004), it can be predicted that once the effects of the MOI factor have been in motion, the cyclical chain effects will evolve, generating, in the longer term, an accumulative effect of different degrees on the learning and future

performance of the students of the two respective streams.

2.2 Conclusion

The findings above confirmed that MOI is an influential factor on students' engagement in achievement related activities and these behavioural variables would in turn impact on students' academic performance.

The differences between the MOI groups identified in their behavioural developments support the hypotheses set in the second research question. This confirms that the MOI streaming arrangement in the local context had gradually built up its differential effects on the developments of students' support-seeking behaviour, perseverance in learning, self-reported performance in the English language, and more importantly, their confidence in earning good grades for access to higher education. Given the link between students' achievement and students' attitudinal and motivational developments (e.g. Hay, 1997; Helmke & Aken, 1995; Marsh & Yeung, 1997a; Muijs, 1997; Masgoret & Gardner, 2003), the differential effects of the MOI factor on the former identified in this part of the study might augment the evolution of differences of the two language groups in the latter. This will, in the light of the direction of the changes identified in the respective MOI groups in this study, mean that the group learning through the high power L2 will have a higher chance of benefiting from a benign cycle of positive reinforcement while those with the low status L1 as the MOI will be more susceptible to a downward spiral development in their learning and future achievement.

3. Summary of Findings

The study set out to test whether the MOI bifurcation arrangement in the Hong Kong context would be associated with the attitudinal and behavioural developments of the students of the respective language groups and whether such differences, if any, would impact on students' perseverance as well as their academic performance. The hypotheses predict the existence of the differences among the two MOI groups in both the attitudinal and behavioural dimensions measured. It has then been argued that the associations which exist are strong indications of a cause and effect relationship between MOI and these other factors, given the social context in which MOI has to be seen.

Based on the analyses above, the most important findings of the study are:

- (1) on the question of the relationships between MOI and attitudinal and motivational dispositions, differences to various extents were consistently detected between the two MOI groups of respondents in their attitudinal and motivational developments, specifically in the following constructs measured: language attitudes towards the English language (L2), motivational dispositions, self-concept and locus of control; and as such, the effect of the MOI factor on the affect of the learners has been ascertained;
- (2) on the question of the effect and strength of the MOI factor in the course of time, there was evidence which points towards a tendency of the emergence (in areas where there was no difference at first) or continuation, or in some cases, intensification (in a domain in which between-group difference was detected upon the transition) of differences between the two language groups in the domains

mentioned in (1) above over time, suggesting strongly that the MOI effect will develop and in some respects gain strength over time;

- (3) on the question of the relationship between the attitudinal and motivational dispositions and behavioural developments, the analyses confirmed positive associations between the attitudinal and motivational dispositions measured and the achievement-related behavioural responses reported, such as support-seeking behaviour, perseverance in learning and academic performance; as such, it leads to the notion that the MOI factor would generate a chain effect directly or indirectly on both the affective dispositions and the academic behaviour and performance of the students of the two respective groups; and
- (4) that in general, EMI students learning through the high status L2 fared in a better way in almost all of the above aspects than their CMI counterparts in the low status L1 stream. The weight of the evidence supported the view that on the whole, the EMI students were able to hold more constructive language attitudes, exhibit a higher level of motivation for learning and the development of their L2, have more a positive self-concept, display a higher sense of internal control, demonstrate more active participation in learning-related activities, and report better performance and greater confidence in their academic achievement.
- (5) Another important finding is that for the more stable motivational attributes such as self-concepts and locus of control, the students' self-assessment of their proficiency in the high status L2, not the lower rank L1, was found to be an important factor which interacts with the MOI factor to account for the changes identified. In other words, the level of the students' (perceived) proficiency in the high status L2 is an

additional powerful modifying variable. This underlines first the importance of the English (L2) domain in students' self-perceptions, and second, expounds how MOI, a key determining factor in students' English competence, would affect students' attitudinal and motivational dispositions. It also adds further credence to the projection that, given the relative standing of the two MOI languages, the impact of the interaction between the MOI factor and the students' perceived competence in the high power L2 on the motivational attributes will be of a much greater magnitude at the sector-wide, between-school level.

- (6) The findings from the present study are consistent with past research on the interaction of learner difference factors and contextual factors and its contribution to differential success as language learners (e.g. Clement & Gardner, 2001; Sinclair, McGrath, & Lamb, 2000).

4. Implications

First of all, it has to be pointed out that although the impact of the MOI factor shown in this study is not big, the findings present its undeniable effect on the ontogeny of the learning psychology and behaviours of the students under the bifurcated environment in Hong Kong. The significance of the above findings is that even with such a homogeneous group of student respondents (all students from CMI schools), the MOI bifurcation has clearly left its distinctive imprints on the attitudinal and motivational dispositions of the young minds of the two within-school MOI streams. It is therefore logical to infer that the differential effects of the MOI factor on the attitudinal and motivational development of students of the two language camps at the sector-wide level,

i.e. between EMI and CMI schools, will be of a much greater magnitude and thus consequences.

Secondly, this study identified a high level of importance attached to the instrumental values of L2 learning by the local students. In other words, students' perception of their ability to gain access to desirable future outcomes or statuses via the enhancement of their competence in the more promising and high status medium will influence their motivation and levels of aspiration, and hence, the efforts they put in learning. As attested in this study, the attitudinal and motivational dispositions of the students under the MOI bifurcation were found to be contingent upon the students' confidence in their respective MOI in the facilitation of their access to advantageous academic outcomes and high-status future positions. In this light, it is highly likely that students of the EMI sector, with both confirmed English competence and better opportunities for further enhancement in the high status L2, will enjoy a higher level of motivation and more favourable attitudes.

Third, the present study suggests that the MOI bifurcation arrangement, in essence a form of ability grouping, may persist as an institutional form with long term effects on student development. Above all, it is the symbolic meaning or the labeling effect of MOI grouping that will have an influence on the psychological development of the students. The present study corroborates research on ability grouping (e.g. Pallas, *et al.*, 1994) to contend that students in the EMI schools, the perceived higher ability group learning through the high power L2, will benefit from being in a high-ability group, and their confirmed competence in the powerful L2 as well as their higher level of motivation may easily be generalized and carried over across other subject domains.

It then follows that the MOI arrangement may reinforce the institutional effects of ability grouping. The MOI placements are public. In the local context, students, parents, and teachers know which is the higher ability and status group, as the criteria for placement and the relative standing of the two MOI languages leave very little doubt in the minds of the local population that it is the EMI sector that is the better group⁴⁷. What is worse is that the MOI group placements are relatively stable. Mobility between the two streams is kept at a minimum as the places in the EMI sector are limited and the practice of transferring from a CMI school to an EMI school has neither been common nor encouraged. In other words, the MOI bifurcation will easily persist as an organizational form, resulting in, to a certain extent, stratification of schools as well as their students in the secondary sector.

Findings summarized above confirmed that the MOI factor, a key predictor in the students' learning experiences, in particular the acquisition of the high power L2, has interacted with such experiences, the success or failure of which is very much defined by the sociocultural values attached to the two MOI languages, to shape the ontogeny of individual differences and orientations in the students' psychological dispositions. These have, in turn, affected the behavioural responses of the students, and thus their expected, and probably, actual academic achievement in the respective MOI settings. In short, the early MOI trajectories are valid predictors of later educational success.

The above analysis implies that to assess the effects of the MOI on student development, one has to go beyond the learning within the classroom to include the affective

⁴⁷ It was reported in Ming Pao (19 March 2007) that a primary school which had failed to admit the number of students required had announced it planned to reverse its fate of closing down (in accordance with the regulation set by the EMB) by converting itself into a DSS (direct subsidy scheme) school with English as the MOI. Included in its blueprint for resurgence are the adoption of the 'Common European Framework' with equal emphasis on English and Putonghua, more NETs, smaller class size and a plan to secure a direct link with an EMI secondary school so as to attract students from middle income groups in the districts nearby.

experiences as shaped and defined by the socio-cultural context in which the learning takes place. The logic behind this is that the contextual elements will give meaning to students' learning experiences, which will in turn affect the way the students perceive themselves and respond (Noels, Clement, and Pelletier, 1999; Oxford, 2001). The present study underlines that when students enter the classroom, they bring to the learning context a personal construction of the purpose of learning and a set of beliefs about themselves as learners (see also Simons, Dewitte & Lens, 2004). It is confirmed in this study, as detailed above, that when they go through the learning process (engagement in learning activities) in the assigned MOI settings and the respective learning experiences (success or failure as defined also by the socio-cultural context), they modify their purposes and beliefs in the light of the affect experienced (associated with their learning experiences) in the process and exhibit behavioural responses under the influence of such beliefs, which in turn determine the learning outcomes (expected or actual level of performance, etc).

In the light of the above, it can be concluded that the allocation of students into MOI streams will have implications other than classroom language learning and cognitive development. In a context where the two language media differ substantially in terms of its status or instrumental values, it is likely that differential advantages will be conferred to the students of the respective language groups (See also Phillipson, 1992; Lai and Byram, 2006). It is reasonable to predict, on the basis of the findings in this study, that students studying through the high status medium will fare well while their counterparts studying in the less prestigious medium may be disadvantaged in their psychological developments even though the medium concerned is their L1. These detrimental effects of mother tongue education in a low status language in a community with the presence of and the need for competence in a strong powerful L2 on both the learning of the high

status L2 and the psychological and behavioural developments of the students studying in the L1 stream should not be underestimated.

5. Significance of the Research

First of all, the most substantial finding offered by this study is that it has successfully established that the effectiveness of learning is also contingent upon, in addition to the factors related to the learner and the classroom where the learning takes place (see Dornyei, 2003), the socio-cultural context, which determines the potential pragmatic gains of or deficiency in any learning. This adds to the literature by showing the values of exploring crucial contextual as well as learner factors and their interactions within the complex of learning processes that underlie and explain the affect of the learners and the subsequent learning outcomes.

Second, the present study takes on new significance as it supplements past findings on the relationship between medium of instruction and affective factors in contexts where the relative dominance of the minority L1 and the majority L2 in terms of their availability is consistent with that of their status and instrumental values. It confirms that the MOI factor in Hong Kong has its unique differential effects within the context of the local socio-cultural values attached to the two MOI languages on the attitudinal and motivational dispositions of the students learning in either of the MOI settings. Premising on the significance of the learning context in shaping the students' learning experience, this study throws light on how the students in the two MOI groups would negotiate and finalize their attitudinal and behavioural responses to their learning experiences in their respective MOI settings. By bringing the sociocultural dimension of students' motivation onto the stage, this study provides a comprehensive picture by

illustrating the intriguing link between the learner, the L2 learning and the contextual surroundings of L2 learning, thus unveiling a long-neglected but substantial aspect of the effect of the MOI in the local context on the attitudinal and motivational patterns of students in the respective language streams.

5.1 Implications for educational practice

What then, are the implications for educators? The findings suggest that MOI as a factor to attitudinal and motivational dispositions and behavioural choices is more specific to the context where the L1 and L2 are learned, and the strength of the relationship may be mediated by such contextual factors as the relative status of the two languages in the wider community, and the availability and utility values of the L2.

The diglossic situation in Hong Kong, as described in Section 2 of Chapter 1 is no less complex than the multifaceted nature of the entire issue of L2 learning. As a result of this study, we are at least enlightened as to the impacts of the territory-wide mother-tongue education policy on students' learning in general as well as their acquisition of the L2. The results of this study challenge the proclaimed stance of the HKSAR Government that adopting the mother-tongue, the low status local variant, as the medium of instruction would necessarily improve students' academic performance and interest. Quite the reverse, this study postulates that the MOI policy in Hong Kong, which allocates the majority of students to schools with the L1 as the MOI while allowing a minority of schools to keep the high status English as the medium of instruction, will very likely instigate and perpetuate less favourable affective developments among the students of the L1 sector.

The logical conclusion from the findings in this study runs contrary to some findings reported in the Government's review of the MOI policy for secondary schools in 2005 (Education Commission (EC), the HKSAR Government), on which the decision to continue the present MOI policy was based. It was reported that in surveys commissioned by the Education Commission (EC), CMI students, in comparison with students of EMI schools, were found to be more intrinsically motivated in learning and have reported more improvement in the pass rates of the CMI students⁴⁸ in the HKCEE (EC, HKSAR, 2005). Problems of inconsistency between the findings in this study and those of the EC's may point in fact to a need for greater recognition of the interaction between a whole constellation of factors (at various levels), as Dornyei (2003) rightly points out. As no details were given about the methodology of the studies in the EC report, it is highly desirable for a more comprehensive full-scale study in this respect to be conducted to identify whether the benefits of the CMI as an effective means of learning will outweigh the perceived drawbacks in its instrumental as well as educational values within the local socio-cultural context.

What is more worrying is that the lack of strong evidence to substantiate the proclaimed merits of choosing the low status variant (Cantonese) as the MOI for the majority, in particular in the raising of the language standards (Chinese and English) of the local student population, will easily induce undesirable remedial responses from the policy makers⁴⁹, many of which may defeat the original purpose of fostering trilingualism and

⁴⁸ It was stated in the EC report that since "EMI schools have not changed their teaching medium, their performance in HKCEE is less likely to be affected by the *Guidance* (note: the document governing the MOI arrangements for secondary schools implemented since 1998). Therefore, [they] only set out the analysis of the HKCEE results of CMI schools" only.

⁴⁹ It was reported in the newspapers (e.g. *Wen Wei Po*, 26 Mar 2007; *Ta Kung Pao*, 36 Mar 2007) that the newly introduced format for the English subject in the coming HKCEE was an attempt to combine the two English tests in the past, i.e. the more demanding Syllabus B for students from EMI schools and the less demanding Syllabus A, a test mainly for students from Chinese schools, into one. The general comments were that the new test was "less demanding than the mainstream Syllabus B in the past, and as such, it was expected that the pass rate would rise substantially" (translation provided by the researcher). There was, as

biliteracy in the territory. Another concern would be the lack of trust and support from the public on the MOI policy. This is evident in the continued explicit preference of the Hong Kong public for EMI schools since the inception of the MOI policy: the sharp increase in the number of DSS schools⁵⁰ is a good indicator of the preference of the parents, who choose to opt out of the public education system in order not to see their children being disadvantaged against in the learning process and in future job finding. The survival strategies adopted by many primary schools to secure a link with an EMI secondary school or by secondary schools to adopt EMI under the private school or DSS schemes also speak for the general predilection of the society. The major concern, as revealed in this study, is that the MOI policy, instead of fulfilling its claims of augmenting both students' cognitive development and competence in the two key languages, may in fact create an unfavourable and inferior environment for the affective and behavioural developments of the majority of the students in the territory.

As Morton, et al. (1999) has pointed out, educators have more impact on motivational and affective variables than fixed aptitudes and abilities. The affective developments of the local students are important for several reasons. First, they have direct implications for students' performance in general, and their L2 acquisition in particular. Second, the students affected are the new and upcoming generations of the society. In addition, their attitudes are a reflection of the attitudes and beliefs of the broader society. As such, if there are no convincing and effective methods to enhance or maintain the English standards of students receiving education through the low status L1, and if proficiency in the L2 (English) remains an important criterion in academic success and social mobility

a result, a concern that the students, given an easier task now for the HKCEE, may have problems when they have to deal with the higher level A-level English in future.

⁵⁰ Under the DSS scheme, schools are free to decide on their design and content of its curriculum, fees and entrance requirements. DSS schools can choose what they consider to be the most suitable medium of instruction (MOI) for different subjects in their curriculum.

(which is very likely to be the case), there is a great likelihood that the majority of the new and upcoming generations of the society going through the L1 MOI may be disadvantaged in the learning as well as in their future prospects. The above suggests that more investigations and evaluations of the total effect of the MOI policy in context are necessary to ensure that more actions and appropriate intervention on the part of the policy makers are carried out to successfully accomplish the important and worthwhile task of transforming Hong Kong into a truly trilingual and biliterate society.

6. Need for further research

6.1 It is important to reiterate at this point the small-scale, preliminary nature of this study. The study was done on the basis of data collected from three CMI schools only and serves as a pilot study of a hypothesis-generating nature. This however is an area of research that should be extended to the full comparison of students from EMI and CMI schools. Drawing conclusions using a city-wide representative sample of students from both streams would attest to whether these findings hold for students in other types of situations. Nevertheless, the present study has offered a perspective of what constitutes a fair assessment of the affective responses of the students to the MOI intervention: the students' language attitudes, the motivational attributes and characteristics that appear to be encouraged under the MOI setting, the students' behavioural responses, and the interactions between these factors and the MOI factor in the unique local context.

6.2 While the qualitative component of the study did contribute to understanding the mechanism that connects the MOI factor with attitudinal and behavioural developments of the students, the small scale of the qualitative study as well as the loss of part of the data collected had limited the information to be generalized to supplement the findings of

the quantitative study. It is therefore felt that the line of research discussed in the present study should be pursued vigorously since a number of promising areas revealed themselves during the investigation. One particularly promising direction lies in a more extensive qualitative study, which may dig deep to uncover the thinking and psychology of the students in order to understand more accurately the interaction among the factors concerning the learner, the classroom and the social-cultural milieu. The researcher hopes that the findings in this study will be further developed and tested on a full scale qualitative analysis in which generalizations can be made to throw light on the affective and behavioural developments of the students under the MOI bifurcation setting in the unique context of the local community.

6.3 Furthermore, the lack of power in the individual measures reported in this study is an indication of the complexity of the issues involved in this study. Because a high percentage of the variance was still unaccounted for, it might be the case that the interaction among factors was more influential than the MOI factor acting alone. Also, other important variables (in the learning environment), such as teacher attitude and teaching approaches, were not investigated in this study. It is possible that one or more teacher characteristics or teaching pedagogies might also affect student motivation and learning in the MOI settings. Another reason is that the time horizon in this study was too short for the effects to materialize. As such, it is also desirable to have follow-up longitudinal studies covering a longer horizon to gauge the strengths of the effects in the longer terms.

6.4 A limitation to this research is that the results were not intended to be interpreted as causal even though the analysis was time series. However, on the basis of previous research on the relationships among the affect, learning behaviours and achievement and

on the findings of some regression analyses done in this study, it is not unreasonable to conclude that the MOI is a key factor in the complex dynamic interplay of the internal affective and behavioural responses and external incentives and social context to have significant impacts on students' achievement. Yet, further research is necessary to take account of other factors not dealt with in this study, e.g. how the effects of MOI may differ across grade levels and the educational structure.

6.5 An area of improvement for further studies is to enhance the reliability and validity of the instruments used to acquire attitude and motivation information, and on the reliability of data on students' performance. The design of competence tests (for both the L2 or other subjects) for such comparison should take preference over the adoption of ready-made tests such as results of individual schools' internal examinations or the HKCEE results, in which, as in the case of the English tests used in the EC report, different tests might be taken by the two language groups. Moreover, a greater challenge lies in the identification of a reliable methodology to gauge accurately the effects of MOI by comparing the two MOI groups who are in the first place not equal in many respects, e.g. with known differences in aptitude and L2 proficiency. Nonetheless, the sampling method adopted in this study, i.e. using informants from the same schools and backgrounds, had enhanced the reliability in this respect, as it offers to a certain extent the advantages of a 'natural experiment'.

Clearly, this research was a first step in explaining the effect MOI streaming may have on students. With the above directions for further research on the effects of the MOI factor on the affective developments of the students, language-in-education policy studies could be significantly advanced to provide a more complete and comprehensive understanding of the interactive complex of the learning processes involving the learner, the learning

classroom and the social context in which the learning takes place.

- End of Thesis -

- Appendix A - Information Sheet (for the administration of the questionnaires)
- Appendix B - The Questionnaire (Version I) – for the first survey
- Appendix C - The Questionnaire (Version II) – for the second survey
- Appendix D - The Guiding Interview Questions

Information Sheet

Project Title: Language-in-education: Identifying Student Attitudes

研究題目： 教學語言：探討學生觀感

<請老師宣讀以下指示。> (Please read the following instructions.)

多謝各位同學早前參與是項題目為『教學語言：探討學生觀感』(Language-in-education: Identifying Student Attitudes)的學術研究，今次是此項研究第二階段的問卷調查，主要是要進一步探討各位同學最近對語文及學習等觀感和取向。各位同學今次的參與屬自願性質，而所提供的資料，亦將會完全保密。此項研究將會有助探討香港現行母語教學政策對學習的影響，研究結果將有助探索香港教學語言政策及語文教學未來發展的方向。多謝各位同學今次再度參與和合作。

(Thank you for your September participation in this academic research, entitled "Language-in-education: Identifying Student Attitudes". Today we are to do the second part of the survey, the purpose of which is to collect further data on your views on language attitudes, motivation, medium of instruction, etc. Participation in this survey is absolutely voluntary and the information collected will be treated in strict confidence. This study will throw light on the impacts of the mother-tongue education policy on student learning. It is expected that the findings will be useful for further exploration of the future development of the educational language policy in Hong Kong and of teaching and learning in Hong Kong schools. Thank you once again for your participation in this survey.)

<請老師派發問卷。> (Please distribute the questionnaire.)

<派發問卷後，請老師宣讀以下指示。> (Please read the following instructions.)

同學只要根據問卷指示，閱讀問卷上的句子問題，並依照你個人的觀感和確實情況，在表格相應的行列上，圈出適當的數字，以表達你的意見或情況。例如在問卷第一部份，假若句子的意思與你的情況或想法極為相同或相近，你只需要在 6 字上打圈，表示你完全同意。相反，假如句子的意思與你的情況或想法完全不同，甚或完全相反，那你便需要在 1 字上打圈，表示你完全不同意，如此類推。同學如有疑問，可舉手發問。

(You can begin by following the instructions. Read each statement in the questionnaire and circle the number in the corresponding row that can best indicate your views or represent your case. For example in Part I, if you find what the statement describes matches perfectly well with your situation or your view, what you have to do is to circle number 6 to indicate that you strongly agree with the statement. On the contrary, if you find what the statement describes is completely different or the opposite of your situation or your view, you should circle number 1 to indicate that you strongly disagree with the statement. If you have any question, please raise your hand and let me know.)

謹此多謝老師合作!

(Thank you for your kind assistance in administering this questionnaire!)

The Questionnaire (Version 1)

Please answer the following questions as instructed. Data collected will be used only for research purposes.

Part I: Personal Information

- 1.1 Class: _____ Class No. _____ Sex: _____
- 1.2 Length of residence in Hong Kong if you were not born in HK: _____ years
- 1.3 Type of residence: Please circle the correct number.

- 1 private development/private buildings
2 home ownership housing
3 public housing estates
4 old-style housing/cottage
5 others _____

- 1.4 How will you describe your proficiency in the following languages? Please circle the correct number.

	Very Good	Good	Average	Below Average	Poor
English	1	2	3	4	5
Chinese	1	2	3	4	5

- 1.5 Parents' proficiency in the following languages: Please circle the correct number.

	First language	Fluent	Average	A little	Not at all
English	1	2	3	4	5
Chinese	1	2	3	4	5

- 1.6 Parents' education level: Please circle the correct number.

Primary or below	High school	Post-secondary	University or higher	Don't know
1	2	3	4	5

Part II: Please circle the number which best indicates what you think about the following statements

Statements	Strongly Agree	Strongly Disagree
E.g.1. Andy Lau is my favourite singer.	1 2 <u>3</u> 4 5 6 (Slightly agree)	
E.g.2. I like outdoor activities.	1 2 3 <u>4</u> 5 6 (Slightly disagree)	

1	I enjoy my work in my class a lot.	1 2 3 4 5 6
2	A knowledge of two languages will make me a better educated person.	1 2 3 4 5 6
3	Considering how I go about studying for English, I can honestly say that I really try hard to learn English.	1 2 3 4 5 6
4	In order to preserve their cultural identity, it is important for Hong Kong people to be able to speak and read Chinese.	1 2 3 4 5 6
5	I am just as clever as others in my class.	1 2 3 4 5 6
6	My parents encourage me to practice my English as much as possible.	1 2 3 4 5 6
7	A sufficient knowledge of Chinese can keep science and learning in Hong Kong in touch with world-wide developments.	1 2 3 4 5 6
8	Learning English is important for me because other people will respect me more if I have a good command of English.	1 2 3 4 5 6
9	English is my most preferred course.	1 2 3 4 5 6
10	Every time I try to get ahead, something or somebody stops me.	1 2 3 4 5 6
11	Compared to English-speakers, Chinese are more sincere and honest.	1 2 3 4 5 6
12	Mixing English and Chinese helps students to understand.	1 2 3 4 5 6
13	I have opportunities to learn English somewhere other than school.	1 2 3 4 5 6
14	I want my children to grow up speaking English.	1 2 3 4 5 6
15	Compared to Chinese, English-speakers are very sociable and warm-hearted.	1 2 3 4 5 6
16	English-medium education means equal chances for all children in their future, because English is the basis for further education.	1 2 3 4 5 6
17	English is a more superior language system than Chinese.	1 2 3 4 5 6
18	Favouring English may lead to class differences in Hong Kong.	1 2 3 4 5 6
19	Apart from school homework, I spend at least one hour each day learning English.	1 2 3 4 5 6
20	After school, I watch English television or radio programmes in order to improve my English proficiency.	1 2 3 4 5 6
21	English makes Hong Kong people too Western-minded.	1 2 3 4 5 6
22	I feel I do not have much to be proud of.	1 2 3 4 5 6
23	Studying English is important for me because it is useful in	1 2 3 4 5 6

	getting me a good job.	
24	Chinese is as effective for communication as English.	1 2 3 4 5 6
25	It is easier for pupils to understand concepts when they are explained in Chinese.	1 2 3 4 5 6
26	I don't have enough control over the direction my life is taking.	1 2 3 4 5 6
27	For a career in the civil service and the business sector, it is essential to know Chinese as well.	1 2 3 4 5 6
28	I like meeting or talking to English speakers so that I can have more opportunities to use English.	1 2 3 4 5 6
29	I organize my study time well for my school work by myself.	1 2 3 4 5 6
30	I find studying English very interesting.	1 2 3 4 5 6
31	I get help from my parents and/or private tutors very often for my English homework.	1 2 3 4 5 6
32	I need to learn English well in order to finish high school.	1 2 3 4 5 6
33	I have a lot of friends in my class.	1 2 3 4 5 6
34	Since the beginning of the school year, I have discussed things I have studied in class with either or both of my parents many times.	1 2 3 4 5 6
35	At times, I think I am no good at all.	1 2 3 4 5 6
36	I like school because I can do well in my school work.	1 2 3 4 5 6
37	I try to pick up English in everyday situations. (i.e. read English books, and newspapers, try to speak it when possible, and go to English movies).	1 2 3 4 5 6
38	If I had the opportunity to change the way English is taught in our school, I would allow all subjects to be taught in English.	1 2 3 4 5 6
39	I learn English because it will allow me to meet and converse with more and varied people.	1 2 3 4 5 6
40	If you are good at English, you are good at other subjects, too.	1 2 3 4 5 6
41	In general, I find school work very boring.	1 2 3 4 5 6
42	The English-speaking people would benefit greatly if they adopted many aspects of the Chinese culture.	1 2 3 4 5 6
43	Knowing Chinese only means being less educated.	1 2 3 4 5 6
44	I feel I am a person of worth, the equal of other people.	1 2 3 4 5 6
45	My teachers are always pleased with my work.	1 2 3 4 5 6
46	A decline in the use of English could strengthen national identity.	1 2 3 4 5 6

47	In my life, good luck is more important than hard work for success.	1 2 3 4 5 6
48	A good knowledge of English will help me to understand better the English people and their way of life.	1 2 3 4 5 6
49	Whenever I visit a library/bookshop, I will pick some English books to read.	1 2 3 4 5 6
50	The switch to Chinese as a medium of instruction in primary and secondary schools will bring down the educational standard.	1 2 3 4 5 6
51	Since the beginning of the school year, I have discussed school activities or events of particular interest to me with either or both of my parents many times.	1 2 3 4 5 6
52	When I make plans, I am almost certain I can make them work.	1 2 3 4 5 6
53	Only a sufficient knowledge of English can keep science and learning in Hong Kong in touch with world-wide developments.	1 2 3 4 5 6
54	When I have an assignment to do in English, I will put it off until all my other homework is finished.	1 2 3 4 5 6
55	I try to do my work well so my parents/teachers will be pleased with me.	1 2 3 4 5 6
56	I am afraid the other students will laugh at me when I speak English.	1 2 3 4 5 6

THANK YOU

The Questionnaire (Version 2)

Please answer the following questions as instructed. Data collected will be used only for research purposes.

Part I: Please circle the number which best indicates what you think about the following statements

	Statements	Strongly Agree	Strongly Disagree
	E.g.1. Andy Lau is my favourite singer.	1 2 3 4 5 6 (Slightly agree)	
	E.g.2. I like outdoor activities.	1 2 3 4 5 6 (Slightly disagree)	
1	I enjoy my work in my class a lot.	1 2 3 4 5 6	
2	A knowledge of two languages will make me a better educated person.	1 2 3 4 5 6	
3	Considering how I go about studying for English, I can honestly say that I really try hard to learn English.	1 2 3 4 5 6	
4	In order to preserve their cultural identity, it is important for Hong Kong people to be able to speak and read Chinese.	1 2 3 4 5 6	
5	I am just as clever as others in my school.	1 2 3 4 5 6	
6	My parents encourage me to practice my English as much as possible.	1 2 3 4 5 6	
7	A sufficient knowledge of Chinese can keep science and learning in Hong Kong in touch with world-wide developments.	1 2 3 4 5 6	
8	Learning English is important for me because other people will respect me more if I have a good command of English.	1 2 3 4 5 6	
9	English is my most preferred course.	1 2 3 4 5 6	
10	Every time I try to get ahead, something or somebody stops me.	1 2 3 4 5 6	
11	Compared to English-speakers, Chinese are more sincere and honest.	1 2 3 4 5 6	
12	Mixing English and Chinese helps students to understand.	1 2 3 4 5 6	
13	I have opportunities to learn English somewhere other than school (e.g. private tutorials).	1 2 3 4 5 6	
14	I want my children to grow up speaking English.	1 2 3 4 5 6	
15	Compared to Chinese, English-speakers are very sociable and warm-hearted.	1 2 3 4 5 6	
16	English-medium education means equal chances for all children in their future, because English is the basis for further education.	1 2 3 4 5 6	

17	English is a more superior language system than Chinese.	1 2 3 4 5 6
18	Favouring English may lead to class differences in Hong Kong.	1 2 3 4 5 6
19	Apart from school homework, I spend at least one hour each day learning English.	1 2 3 4 5 6
20	After school, I watch English television or radio programmes in order to improve my English proficiency.	1 2 3 4 5 6
21	English makes Hong Kong people too Western-minded.	1 2 3 4 5 6
22	I feel I do not have much to be proud of.	1 2 3 4 5 6
23	Studying English is important for me because it is useful in getting me a good job.	1 2 3 4 5 6
24	Chinese is as effective for communication as English.	1 2 3 4 5 6
25	It is easier for pupils to understand concepts when they are explained in Chinese.	1 2 3 4 5 6
26	I don't have enough control over the direction my life is taking.	1 2 3 4 5 6
27	For a career in the civil service and the business sector, it is essential to know Chinese as well.	1 2 3 4 5 6
28	I like meeting or talking to English speakers so that I can have more opportunities to use English.	1 2 3 4 5 6
29	I organize my study time well for my school work by myself.	1 2 3 4 5 6
30	I find studying English very interesting.	1 2 3 4 5 6
31	I get help from my parents and/or private tutors very often for my English homework.	1 2 3 4 5 6
32	I need to learn English well in order to finish high school.	1 2 3 4 5 6
33	I have a lot of friends in my class.	1 2 3 4 5 6
34	Since the beginning of the school year, I have discussed things I have studied in class with either or both of my parents many times.	1 2 3 4 5 6
35	At times, I think I am no good at all.	1 2 3 4 5 6
36	I like school because I can do well in my school work.	1 2 3 4 5 6
37	If English was not taught in this school, I would probably try to pick up English in everyday situations. (i.e. read English books, and newspapers, try to speak it when possible, and go to English movies).	1 2 3 4 5 6
38	If I had the opportunity to change the way English is taught in our school, I would allow all subjects to be taught in English.	1 2 3 4 5 6
39	I learn English because it will allow me to meet and converse with more and varied people.	1 2 3 4 5 6

40	If you are good at English, you are good at other subjects, too.	1 2 3 4 5 6
41	In general, I find school work very boring.	1 2 3 4 5 6
42	The English-speaking people would benefit greatly if they adopted many aspects of the Chinese culture.	1 2 3 4 5 6
43	Knowing Chinese only means being less educated.	1 2 3 4 5 6
44	I feel I am a person of worth, the equal of other people.	1 2 3 4 5 6
45	My teachers are always pleased with my work.	1 2 3 4 5 6
46	A decline in the use of English could strengthen national identity.	1 2 3 4 5 6
47	In my life, good luck is more important than hard work for success.	1 2 3 4 5 6
48	A good knowledge of English will help me to understand better the English people and their way of life.	1 2 3 4 5 6
49	Whenever I visit a library/bookshop, I will pick some English books to read.	1 2 3 4 5 6
50	The switch to Chinese as a medium of instruction in primary and secondary schools will bring down the educational standard.	1 2 3 4 5 6
51	Since the beginning of the school year, I have discussed school activities or events of particular interest to me with either or both of my parents many times.	1 2 3 4 5 6
52	Many students in my class try to avoid me.	1 2 3 4 5 6
53	Only a sufficient knowledge of English can keep science and learning in Hong Kong in touch with world-wide developments.	1 2 3 4 5 6
54	When I have an assignment to do in English, I will put it off until all my other homework is finished.	1 2 3 4 5 6
55	I try to do my work well so my parents/teachers will be pleased with me.	1 2 3 4 5 6
56	When I make plans, I am almost certain I can make them work.	1 2 3 4 5 6
57	Most school subjects are just too hard for me.	1 2 3 4 5 6
58	It is easy for me to make friends with other children in the school.	1 2 3 4 5 6
59	I work hard in school so I can have things I want someday.	1 2 3 4 5 6
60	My plans hardly ever work out, so planning only makes me unhappy.	1 2 3 4 5 6
61	One needs a good knowledge of English to merit social recognition.	1 2 3 4 5 6

62	I am not afraid of hard and challenging work.	1	2	3	4	5	6
63	I can do things as well as most people.	1	2	3	4	5	6
64	I find it easy to do things/work with other kids in my class.	1	2	3	4	5	6
65	I would like to know more English speakers.	1	2	3	4	5	6

Part II Language Learning

- 1.7 How will you describe your proficiency in the following languages? Please circle the correct number.

	Very Good	Good	Average	Below Average	Poor
Chinese	5	4	3	2	1
English	5	4	3	2	1

- 1.8 How will you describe your performance in the final examination of S3 in the following languages? Please circle the correct number.

Subject	Performance						
	Very Good						Very Poor
Chinese	7	6	5	4	3	2	1
English	7	6	5	4	3	2	1

- 1.9 How will you describe your performance in the following languages in this year's (S4) mid-term test/examination? Please circle the correct number.

Subject	Performance						
	Very Good						Very Poor
Chinese	7	6	5	4	3	2	1
English	7	6	5	4	3	2	1

- 1.10 How will you describe your performance in the following languages in comparison with your performance at the beginning of the academic year (S4) – better or worse? Please circle the correct number.

	Substantially Better	Moderately Better	Slightly Better	No Difference	Slightly Worse	Moderately Worse	Substantially Worse
Chinese	7	6	5	4	3	2	1
English	7	6	5	4	3	2	1

- 1.11 Do you agree that studying in either an EMI or CMI class has enhanced your language proficiency in the following languages? Please circle the correct number.

	Strongly Agree					Strongly Disagree
Chinese	6	5	4	3	2	1
English	6	5	4	3	2	1

The Guiding Interview Questions

Choice of school

What did they put in as their first choice, a CMI school or EMI school, when they chose their secondary schools a few years ago? Why did they ~~want to~~ pick an EMI/CMI school?

Did they pick the school (a CMI), or did their parents choose the school for them? Or whether it was the result of the Central Allocation System?

When they picked this school, was it because of its reputation or because it adopts a CMI instruction policy? Or were there other reasons?

Were they happy with their choice of school?

Do they have any concern studying in a CMI school?

Choice of MOI

What do they think would be more important to a Hong Kong student, like themselves – learning Chinese well or English well?

When they first joined the school, did they know that they could select the English stream when they were in S4?

When they were in S3, which class did they want to get in upon promotion to S4, the English or Chinese class?

Language Attitudes

For EMI students: Do they find English an effective medium of instruction? Do they have any worry about studying in an English class as all subjects are taught in English?

After they joined the EMI class in S4, have they found that their confidence has increased (e.g. when they communicate with English speakers)?

For CMI students: Do they find Chinese an effective medium of instruction? Do they have any worry or concern about studying in the CMI stream?

Were they happy with their learning this year?

Do they think that with too much English in school, students will become too westernized and they will lose their 'Chineseness' or Chinese characteristics?

If their Chinese/English is not particularly good, would they be worried?

What do they think by now is the main purpose of learning/improving English?

English Speakers

Other than talking to their NET teacher, is there any opportunity for them to talk to other English speakers?

What was their impression of English speakers/foreigners? How do they get the impression?

Self-Concepts

Do they think that the students in English/Chinese classes are regarded as the better/worse group – do they think they/their parents/schoolmates will feel that way?

Do they feel good, studying in an EMI/CMI school/class?

Locus of Control

Up to this moment, how much do they think they are in control of their own destiny?

Now that they are in S4, an English class. Do they feel that their future is now in their control?

Do they have the confidence in getting into the University?

Perseverance in L2 learning

Do they spend a lot of time on learning/improving their English?

Apart from learning English at school, do they have opportunities for L2 improvement outside school?

Apart from taking private tutorial classes and school homework, do they actively look for other opportunities to enhance their English (e.g. read and listen to English books/ TV programmes) to make up for the fewer opportunities at school?

Apart from textbooks or assigned reading, do they read other English books (e.g. those borrowed from the library)?

Apart from the lessons, do they participate in the English extra-curricular activities?

What do they do to improve their English?

Parental Support

Do they get some support from their family in their learning of English, e.g. parents?

Do their parents provide them with private tuition for English learning?

Do they talk to their parents about their schoolwork?

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