

The Composing Process of Hong Kong Children in Primary Schools



by

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Synopsis

Writing is the act of putting thoughts into visible print, a means of articulating and refining one's thinking and a means of communicating such thinking to others. In the past twenty years, a growing number of research studies have been concerned with elucidating the mental faculties, routines and sequences involved as people compose messages in writing representing thoughts in forms which they hope will be mutually understood by intended targets of the communication. Such research has been useful in illuminating ways in which writers can express themselves, and be taught to express themselves, in ways suitable to the task in hand. The bulk of such research has been concerned with English, and it seems to be presumed that the outcomes of such studies carry relevance for languages other than English. Equally, it seems to be presumed that the findings pertain to composers using English when it is a second language of state or a foreign language. -This thesis explores in a modest way the validity of these presumptions using as subjects primary school age children from Hong Kong. The study is hence concerned with English, the world's premier international language, and Chinese, the world's most commonly used language.

The thesis presents research into the composing processes in English and in Chinese employed by 18 primary school pupils in Hong Kong. It offers an in-depth study of the key subprocesses of generating, transforming, pausing and revising. The research was exploratory in nature and sought to gather evidence which might throw light on what happens when primary school pupils in Hong Kong compose in Chinese and in English. The strategy employed was a multiple case study approach. Subjects were asked to write two scripts, one in Chinese and one in English. Although the

mother tongue of all the subjects is Cantonese, a dialect of Chinese, in school they are required to write either in Modern Standard Written Chinese or in English, the second language of Hong Kong. The subjects were given set tasks, either to write in a narrative or an expository style. The methods used to gather evidence and data were composing aloud and transcribing their utterances, video and audio-recorded observation, text analysis, on-task observational notes, cued-recall interviews and retrospective reports. The subjects' reflections were cued by being shown the video recordings.

The opening chapter serves as an introduction, setting out the background to the study, giving details of the writer and his previous work in the area, defining terms and highlighting the need for research into the areas addressed by the present study. Chapter Two critically reviews published literature bearing on the study, discussing important findings and theories and laying the foundation to justify the methods used in the study and the foci of the fieldwork. Chapter Three is concerned with a model of the composing process, drawn up by the writer of this study especially for this thesis. This model hopefully acts as a framework around which discussion of the composing process may revolve. Chapter Four offers an account of the research design and the methods used for data collection and analysis. The choice of research probes is justified and the strengths and weaknesses inherent in the research strategy are acknowledged. Chapters Five to Ten are the major results chapters, each focusing on a separate subprocess of composing.

Chapter Five describes the generating processes employed by the subjects. It was found that, with the help of mental imagery and reflection, the subjects were able to retrieve information to serve as content, recall the spelling of English words and strokes of Chinese characters. When writing in Chinese, most subjects reported that they selected information from a wide range of sources. When writing stories in

English, they tended to use 'model' stories from English course books and readers familiar to them. It seemed that confidence in using English was their most important criteria for choosing what to write about in English; content familiarity and interest were more important criteria when choosing what to write about in Chinese.

Chapters Six and Seven are concerned with the transformations occurring during the composing process when, for one reason or another, intended meanings in the mind are modified or transformed before being placed on paper. Subjects seemed sensitive to the influence of Cantonese on Modern Standard Written Chinese. In fact, the differences between the sentence patterns of Cantonese and Modern Standard Written Chinese are not great, and similar patterns, for example Subject-Verb-Object, were commonly used both in the Cantonese transcripts and the Modern Standard Written Chinese scripts. Grammatical forms did not appear to be major considerations when the subjects were writing Modern Standard Written Chinese. In fact, making adjustments to accommodate the words in their personal lexicon for English and for the two variations of Chinese seemed most difficult for the subjects. It was found that subjects used two sets of particles, Cantonese particles for composing aloud and Modern Standard Written Chinese particles for writing. The interviews revealed that the subjects had received no formal advice in school on how to transform Cantonese into Modern Standard Written Chinese.

More transformations occurred when writing in Chinese than in English, and subjects made improvements generally in the organization of the final product in Chinese, but not in English. More fragmented 'group idea units' appeared during the process of writing in English than in Chinese. The subjects used different approaches to transform ideas generated in the composing aloud stage to the form in which they

appeared in the written text. These approaches included topic avoidance, abandoning messages, replacements, generalizations, topic changes and literal translation. All these phenomena were apparent both in the Modern Standard Written Chinese and the English. Transfer effects from Cantonese to Modern Standard Written Chinese and from Cantonese and Modern Standard Written Chinese to English were able to be detected in the writing.

Chapter Eight deals with the pausing occurring as the subjects wrote. More subjects paused to retrieve and select information and reflect on logical problems when writing in Chinese than in English. They did not pause much over linguistic considerations when writing in Chinese. However, when writing in English, they often paused to look for words to express their ideas. When writing in Chinese, fewer subjects reported that they paused to think about matters of grammar. When writing in Chinese, most subjects paused occasionally to think about transforming Cantonese to Modern Standard Written Chinese. In contrast, they all paused to think of grammatical issues when writing in English. Most subjects paused regularly over mechanical aspects of writing, for instance punctuation and the spelling of English words and the writing of strokes in Chinese characters. To a large extent, the pausal activities reflect the foci of thinking of the subjects, their attention seeming to be directed at 'surface' features of the writing, at the word and sentence level of writing rather than at the deeper gist structural element. As subjects were writing, they all paused to rescan their writing in Chinese and in English, reading over the text both for its sense and accuracy.

Chapter Nine focuses on the revisions carried out by the subjects. Generally speaking, their revisions were addressed to minor errors, such as correcting misspelt words, wrong characters and careless mistakes. These made up about half of the total

revisions. They also made revisions to punctuation, words and phrases. Very few subjects revised clauses and sentences. Revision at the paragraph level was undertaken in three scripts only. The largest amount of revisions were of Chinese characters and spelling, reflecting that, in the mind of the subject, producing error-free compositions is a key objective in both languages. When the subjects wrote in English, they adjusted grammatical mistakes. When they wrote in Chinese, they made very few such revisions. This might reflect the fact that little formal grammar is taught in Chinese language lessons in primary schools. It was found that the major revising completed by subjects was carried out during the writing itself rather than in the final reviewing stage, both in English and in Chinese.

Whereas the results chapters offer discussion of data gathered from all 18 subjects, Chapter Ten reports the writing profile of one writer. The report hopefully gives an in-depth account of the composing of one subject and illustrates (a) the diverse nature, variety and width of the composing ability of the subjects generally, and (b) the problems in erecting a representative overview of the performance of all 18 subjects. Chapter Eleven summarises the study, its results, conclusions and implications. In general, it was found that, both in English and Chinese writing, the subjects went through the same four subprocesses, generating, transforming, pausing and revising, with variations in the dimensions and magnitude of these elements. The four subprocesses seem clearly interrelated, reflecting the notion that writing is a complex cognitive activity and that knowledge transfers across languages, with subjects using first language strategies and knowledge to aid and facilitate their second language efforts.

The subjects' on-task behaviour and the follow-up interviews suggest that they had little confidence in expressing themselves freely in English. Even when writing in Chinese, their mother tongue, they were also very cautious, only opting to write on

topics with which they were very familiar. The implications for the way children of primary school age in Hong Kong are taught to write, both in Chinese and in English, are far reaching and these are discussed at some length in the final chapter.

Chapter One

General Background to the Study

1.1 Introduction: the Language of the People of Hong Kong

Hong Kong is a British colony situated on the southern coast of China. Its people are mainly ethnic Chinese and their knowledge of English and Chinese has helped Hong Kong develop into one of the world's most prosperous centres of international commerce. According to the 1991 census, of the 5.82 million residents of Hong Kong 95% are Chinese. Within this Chinese community, 60% are locally born, the rest originating from the neighbouring province of Guangdong. Cantonese, the spoken dialect used in the provincial capital of Guangdong, serves as the lingua franca (88.7% of the population) among the Chinese in Hong Kong. Other dialects of Chinese, such as Kejia (Hakka), Siyi (Seyap), Chaochou (Teochiu), Fujian (Hakkien) and Shanghainese and numerous sub-dialects may also be heard occasionally. Their usage is limited to social communication among the family and close friends.

The mother tongue of the majority of the people of Hong Kong, Cantonese, is used for communication in the home, school and the work place. It is the language of solidarity and social identity, helping bind together the ethnic Chinese population in Hong Kong (Cheung, 1984). Despite the prevalence of spoken Cantonese in everyday life, Modern Standard Written Chinese (MSWC) is used exclusively in school as the written form of Chinese (CDC, 1990a, p.51). Written Cantonese is technically possible and can be found in mass media publications, comic books, captions of newspaper cartoons, advertisements in newspapers, advertising posters, magazines and novels for the working class and the like (Bauer, 1982, p.277).

However, officially, in terms of accepted Chinese orthodoxy at least, there is no standard form of written Cantonese. As Bauer (1984) writes,

"It (Cantonese) has been developed unofficially and conventionally with most writers using approximately the same characters but has never been officially standardized." (p.18)

In addition, there are Cantonese words used in speech which have no written equivalent. That Hong Kong pupils are unable to write down in words exactly the thoughts they have in their mind must have a profound influence on the way they set about composing.

Since the 1984 Anglo-Chinese Joint Declaration, announcing the return of Hong Kong to Chinese sovereignty in 1997, there has been an understandable desire on the part of many Chinese in Hong Kong to learn Putonghua. Putonghua, the official spoken language of China, is much less commonly used in Hong Kong than is Cantonese but many residents and pupils are now learning the language. The 1984 Anglo-Chinese Accord signalled the beginning of the end of English supremacy in Hong Kong and the start of the ascendancy of Chinese, the current emphasis on Putonghua reflecting its growing status as a favoured medium of communication. Such emphases are also associated with the increasing growth in trade between Hong Kong and China in recent years.

MSWC is the written form of spoken Putonghua (Cheung, 1984; Bauer, 1984). Although it is possible to argue that MSWC and Putonghua are not entirely congruent, Putonghua has high correspondence in terms of syntax and lexis to MSWC and serves as a common means of communication and way of sharing common cultural and literary values within the wider Chinese community. However, written Chinese in Hong Kong, influenced both by English and Cantonese, is the product of mixture of norms, which Hsu (1979) refers to as the "Hong Kong quasi-norm". The Chinese in

Hong Kong use a large number of loan words translated from English which are not accepted by the Peoples' Republic of China. At the same time, the people in Hong Kong tend to write long and complicated Chinese sentences, which too is not common in China (Cheung, 1984). These factors leave the people of Hong Kong in a quandary, for although they are ethnic Chinese and will soon be part of China, the language they use sets them apart from their compatriots in China. At the same time, the difficulties they face in mastering English, the colony's second language (L2), leave them bereft of the power which writing supplies, allowing people quickly and easily to communicate with others.

1.2 The Status of English in Hong Kong Today

For the last century and a half, English has been the official language of the British ruling class in Hong Kong and is therefore popularly perceived as the language of power. Although the Chinese language assumed equal official status alongside English in the territory in 1974, the highly prestigious position enjoyed by English through the colonial years lives on and to this day it remains the language of government, the law and international trade. Perceived as opening the gate to a successful career, proficiency in English is coveted and, not unexpectedly, most parents in Hong Kong are keen for their children to be able to master English (HKED, 1989; ECR4, 1990). Yet, despite its enduring and obvious utilitarian value, English is not spoken well by the general public in Hong Kong (Llewellyn et al., 1982). According to Gibbons (1979) and Luke and Richards (1982), a mixture of Cantonese with English lexical terms in Cantonese ('Chinglish') is commonly spoken by civil servants and even by students in Hong Kong University which prides itself on its English medium tradition.

That standards of English in Hong Kong are not exemplary is to an extent surprising, given the high profile of English language teaching and its widespread use

in Hong Kong schools. English is taught in a rudimentary form in most kindergartens, is a compulsory subject in primary schools, and is supposed to be the medium of instruction in the vast majority (90%) of secondary schools. According to the present English Syllabus for Primary Schools (CDC, 1981), the foundations for English language mastery are supposed to be established in primary schools and, by the time they leave primary school, pupils are supposed to have grasped the fundamentals of spoken and written English and to be able to use these for a wide range of communicative purposes.

1.3 Primary Schools in Hong Kong

There are two broad categories of primary school in Hong Kong, Chinese-medium and English-medium, with less than 10% of primary pupils in the latter. According to the Chinese Language Curriculum for Primary Schools (CDC, 1990a, p.51), the target written language is MSWC. As noted above, the spoken form of MSWC is Putonghua, whereas the spoken language used by the pupils is Cantonese. Hence, Hong Kong primary pupils learn MSWC with Cantonese pronunciation. Furthermore, they learn how to write using texts and readers written in MSWC, when the oral medium of instruction in the classroom is Cantonese. Students thus use one language for listening and speaking, and presumably thinking, and another for writing and reading. In addition, as Chinese characters are idiographic, Hong Kong students are not able to draw upon the words in their mind and express them in written form until the written code has been mastered. In contrast, most children in British primary schools can write relatively freely, if not always accurately, from the time they can read (Plowden Report, 1967). Thus, although there is little evidence to suggest that children in British primary schools are employing fundamentally different mental processes when writing in English from those used by Hong Kong children writing in Chinese, there are likely to be extra procedural obstacles which complicate the facility and fluency of the latter.

Most English-medium primary schools in Hong Kong are well established feeder schools to prestigious secondary schools, and usually have a long tradition of excellence and often a religious background. All school subjects are taught in English in these schools except for Social Studies and Chinese. Students therefore have more exposure to English than their counterparts studying in Chinese-medium primary schools, where English is taught as a single subject. English-medium schools are generally well respected by parents, so much so that parents who are ambitious for their children will usually try hard to have their children admitted to these schools. These parents believe that mastery of English will open up opportunities for their children, both in terms of career prospects and higher education (Fu, 1987).

In the educational climate surrounding primary education in Hong Kong, parents' perceptions of the importance of learning English are reinforced by the obvious utilitarian value attached by the public to it as a gateway to better prospects, and by the ways in which so many privileged people tend to exert great pressure to gain entry for their children to schools with English-medium education (HKED, 1989). In spite of this, to most Chinese students themselves, English remains a foreign rather than a 'second' language (Richards and Luke, 1981). These students have little exposure to English other than in school, for outside school they seldom listen to English channels on the radio, watch English television channels or films, read English newspapers and magazines, or face any situation where they are forced to use English. Older students nearing public examination dates may appreciate the utilitarian purposes of learning English, but, in the writer's experience as a teacher and a parent, few children of primary school age share these concerns. In fact, students seem to have so many problems mastering Chinese, their mother-tongue, that they find the addition of having simultaneously to try to learn English an unwelcome imposition. The result is that most children in Hong Kong generally find language learning a rather complicated affair.

1.4 Learning to Write in Hong Kong Primary Schools

As outlined above, in terms of mastering the written and spoken forms of their first language (L1), the majority of Chinese children learn to speak Cantonese at home and use it in school for verbal exchanges, but then need to learn MSWC in order to express themselves in writing. Hence, they have to (a) master two sets of vocabulary; (b) learn two sets of written and spoken linguistic conventions; and (c) know when it is appropriate to use each in order to express themselves in speech and writing (Bauer, 1984). When they learn to write in English the situation is complicated even further. For example, in translating even simple text from Chinese to English, children read the script in MSWC but use Cantonese to access and consider its meaning and hold such understanding in memory. They then set about translating these encodings into English by imagining what they wish to say in Cantonese, converting this to English and writing it down in a language which is very different in terms of grammar, lexis and conventions from the MSWC in the original source reading. Furthermore, these cross-linguistic difficulties are heightened by the way Hong Kong children learn to read and write Chinese.

In Hong Kong, learning to write in Chinese is a subject surrounded by controversy. The differences between the spoken and written forms of the Chinese which students have to master are so marked that some scholars, for instance Liu (1988), consider learning how to write akin to learning an L2. In contrast, writers such as W.L. Wong (1991) insist that written Chinese cannot be anything other than an L1, acquired in much the same way as other L1s are mastered universally. Theorists such as Skinner (1957) describe how infants have their L1 utterances shaped into acceptable forms by 'caretakers' (usually parents and grandparents) who will tolerate incorrectly expressed language, so long as it manages to convey the intended meaning, especially in the initial stages. Perceiving the purpose of communication as being to convey meaning rather than to express precisely correct forms of language,

children gradually have their utterances conditioned until they approximate fairly precisely to those of the people around them. Thus, L1 learners can rarely put a finger on isolated instances where particular items of language were mastered, and their responses become generalised. It is not suggested here that behaviourist theory accounts fully for language acquisition, but this view of the role of caretakers in the generalisation process finds sympathy from a number of scholars (Mowrer, 1954; Cromer, 1991).

1.5 The Second Language of Hong Kong: English or Written Chinese?

The writer will set aside for the moment the question of whether behaviouristic accounts of spoken language acquisition hold merit when one turns to writing acquisition, or indeed whether L1 acquisition accounts also hold for the learning of L2s. It is certainly the case that some language acquisition accounts have been specially proposed to explain the routes by which an L2 is acquired. One of the most notable of such accounts is that proposed by Krashen (1981; 1982). Krashen (1982) describes language acquisition as follows:

"Language acquisition is a subconscious process; language acquirers are not usually aware of the fact that they are acquiring, but are only aware of the fact that they are using the language for communication. The result of language acquisition, acquired competence, is also subconscious. We are generally not consciously aware of the rules of the languages we have acquired. Instead, we have a 'feel' for correctness." (p.10)

According to Krashen, one develops competence in one's L1 by a 'natural' acquisition process. In contrast, for the majority of people, most L2s are "learned" in ways very different from those which characterise L1 acquisition. Krashen is critical of the ways most teachers set about teaching children an L2. Instead of allowing learners to 'acquire' the new language, they expose them to a route to mastery which

is quite different from the one usually pursued by L1 acquirers. Instead of allowing the children to engage in using the L2 to fulfil their own communicative needs, teachers usually present the target language a little at a time, systematically expose the children to formal grammar, teach speech and writing simultaneously, arrange for extensive practice out of communicative context to drive home what has been taught, and use textbooks as a framework for the subject matter. Krashen (1982) points out that such learning entails:

"conscious knowledge of a second language, knowing the rules, being aware of them, and being able to talk about them." (p.10)

Krashen's writings make it clear that he is talking about an L1 and an L2 which are clearly very different, with cross-linguistic differences which make it impossible for an untaught person to understand the new language at all. One might call such differences 'intralanguage' differences, as opposed to 'interlanguage' differences which refer to the differences in the language characterising the various stages of language mastery possessed by learners at different grades of expertise in a single language. Thus, intralanguage differences are often focused upon by L2 teachers, whereas interlanguage differences are often the focus of linguistic theorists tracing the path of language growth (e.g. Cromer, 1991). Interlanguage progression is usually gradual, spontaneously initiated and often unconsciously generated.

The path toward mastery of English by native-speakers of the language is usually an interlanguage affair, with no serious disturbance to the developmental path of communication emanating from differences between written and spoken English (Perera, 1984). However, in terms of learning how to write in Chinese, since Hong Kong children do not usually learn to write MSWC until they start primary school, it might be argued that they are indeed faced with an 'intralanguage' situation involving conscious 'learning' rather than acquiring written Chinese in 'interlanguage' growth fashion. Perera (1984) points out that most pupils at school in England only become

aware of grammar when they realise that their written expressions are unable to convey the intended meaning because their writing offends linguistic conventions or is ambiguous. She thus argues that grammar should only be taught when children signal that they are ready to have their writing refined, and that there is no need to teach grammar which has no bearing on immediate communicational acts.

The issue of whether or not to teach grammar in primary schools is a very controversial topic for teachers of Chinese. Some scholars (Tian, 1990; Wong, 1990) insist that students formally learn Chinese grammar in school, and it is clear that pedagogic grammar is an important part of the Chinese language curriculum in mainland China (Wong, 1988). Returning to the Hong Kong context, M.C. So (1988) argues that Hong Kong students should be allowed to acquire their mother tongue without conscious learning of language rules. However, some grammar items have been included in the Chinese language curriculum for secondary school students (CDC, 1990b, p.61). Many secondary students in Hong Kong are taught elements of grammar formally when they are being taught Chinese. Another controversial issue among Chinese teachers in primary schools is whether or not to teach sentence patterns. To the writer's knowledge, no in-depth research has been conducted to study the sentence patterns habitually used by the people of Hong Kong. No suggested sentence patterns list for primary courses is provided in the Chinese Syllabus for Primary Schools (CDC, 1990b). However, sentence pattern drilling is included in the Syllabus and many primary school teachers have problems in knowing exactly what to teach.

1.6 Learning to Write in Chinese in Hong Kong

Since it is most improbable that any child has ever started school in Hong Kong fluent in English and able to write it proficiently before having to start the whole language

learning process again, this time in Chinese, it is safe to assume that all ethnic Chinese children who learn to write in English do so after being taught Chinese. In order to understand how this experience might influence the way they set about mastering English, it is first necessary to understand how they are taught to write in Chinese.

In any language, learning to write is usually very different from learning to speak, and written and spoken discourse are rarely synonymous. Widdowson (1983) writes:

"Learning to write one's own language involves a shift in mode of discourse, from one which is reciprocal interaction through spoken exchange to one which is non-reciprocal and covert" (pp.44-5)

Turning to learning to write in a foreign language, he (1983) writes:

"If the foreign learners have already learned how to write in their own language, then they will have acquired the essential interactive ability underlying discourse enactment and the ability to record it in text. Their problem is how to textualize discourse in a different language" (p.45)

According to the views propounded by Widdowson, native-speaking Cantonese students in Hong Kong learning to write English have simultaneously to learn both a new discourse mode and a new textual medium. The fact that both modes are new complicates the task, but at least there is fair linguistic consistency between speech and writing in the new language. However, these same children learning to write MSWC have first to accept the need to change discourse mode from the spoken mode (Cantonese) to the written mode (MSWC). The task of mastering the textual medium is also complicated by the written form being idiographic rather than phonetic. There are also lexical differences between Putonghua and Cantonese. One can perhaps imagine the difficulties Hong Kong children encounter in learning to write Chinese.

In fact, generally speaking, the only primary school pupils in Hong Kong who know how to speak fluent Putonghua are those who have migrated to Hong Kong from China. The rest, the overwhelming majority, find it quite difficult to learn to write MSWC, due to speaking Cantonese as their mother-tongue. Not all Chinese language specialists are sympathetic to their plight, however. For example, Cheung (1984) writes: "Students in Hong Kong in their writing use unnecessary dialectal and foreign elements. This will jeopardize the integrity of our language." (p.105) In more sympathetic vein, Tian (1987) recognises that written Chinese in Hong Kong is a non-standard and impure form of the Chinese language, and points out that there are great differences between Cantonese and Putonghua in terms of phonetics, lexis and syntax. Recognising these linguistic differences, Liu (1988) disapproves of using Cantonese as the medium of instruction in schools in Hong Kong. At the same time, the Education Department of Hong Kong clearly states in the Curriculum for Chinese Language for Primary School (CDC, 1990b, p.51) that pupils should not use Cantonese in their writing.

When teaching children to write in Chinese, teachers of Chinese are to a great extent influenced by the views of Chinese scholars and by the recommendations in the official Syllabus. Although they appreciate the difficulties caused by the differences between Cantonese and Putonghua, most of them accept the official view and forbid their pupils to write in Cantonese or to include lexical and syntactical items from Cantonese in their writing. As a matter of fact, a great number of Chinese language teachers in Hong Kong do not know Putonghua themselves and some cannot write MSWC well (Wong, 1988). Nevertheless, they still insist that pupils should not use Cantonese when writing. Thus, unlike English children of the same age learning to write their mother tongue, Hong Kong pupils trying to write in Chinese are trained automatically to turn away from knowledge of the language which is most familiar to them, Cantonese.

Concerning the teaching syllabus for writing in Chinese, teachers in primary schools receive guidelines from the Education Department in the form of a syllabus which describes the contents of teaching for each level (CDC, 1990a). Briefly, at Primary One level, the emphasis in teaching Chinese writing is on sentence construction, including sentence completion and sentence pattern drilling; at Primary Two, the emphasis is the same but is extended by including the teaching of sentence construction using prescribed phrases, and paragraph writing. From Primary Three onwards, students are required to write passages of different kinds: they begin to write narrative passages in Primary Three and Four; expository essays in Primary Five; and argumentative essays in Primary Six.

There are clear targets in number of words for each phase of writing at the different levels:

Primary Three about 150 words

Primary Four about 200 words

Primary Five about 250 words

Primary Six about 300 words

In fact, these targets have become an important criterion for assessment. If pupils do not reach the appropriate target, they will often fail the assessment. At the same time, pupils are usually discouraged from writing more than is prescribed. For many primary school pupils, the number of words has become an important goal in writing, and many will count the number of words written and try to end their script on the precise number when the target is achieved. The number of words is also a hidden objective for teaching emphasized by Chinese language teachers. They infer from the Syllabus that there is a direct correlation between the number of words produced and the writing development of their pupils. Number targets are thus also found in the Syllabus for the Chinese Language for Secondary Schools (CDC, 1990b), with, for example, students being required to write 600 words in the School Certificate

Examination. The implication from such target word specification is that there is an implicit link between quantity and quality.

Following the recommendations as contained in Chapter 5 of the Education Commission Report No. 4, the Education Department has embarked on a long term policy initiative called Targets and Target-Related Assessment (TTRA)(CDC, 1992). These are designed to set clear directions for learning, to connect learning and its assessment more closely and to promote the individual progress of all primary and secondary school learners (p.5). The targets listed for composing for Primary One to Three school pupils in the June edition of the TTRA of the Chinese language are: to construct sentences, paragraphs, and different genres of writing including narratives, letter writing and different types of writing; to use punctuation and write sentences correctly and to express complete ideas in modern Chinese language. The targets for Primary Four to Six for composing are: to write different genres of writing including narrative, expository, letter writing, diary, weekly reports, memos and other types of writing; to use punctuation correctly; and to use lexis and to write sentences correctly; to write composition with rich contents and logical ideas (CDC, 1992, p.17).

In the writer's view, the learning targets for writing in Chinese for primary school pupils are rather vague and not ordered in hierarchical form. Aspects of cognitive development, learning and use in Chinese are not considered and integrated within the targets. Consequently, the targets set by the CDC are not providing a framework within which teachers can design schemes of work appropriate to learner groups in their schools.

Concerning pedagogy, teachers of Chinese writing are very much influenced by traditional ideals and approaches. Perfection is attained when the child can mimic examples of good writing and generalise from them spontaneously. Thus, frequent

practice in learning in which pupils try to base their own writing on classic styles is given in the hope that the characteristics of such writing will be appreciated and absorbed (So, 1988; W.L. Wong, 1991). This approach focuses primarily on forms and syntax of writing and imitation of prescribed texts for study. Consequently, students are not encouraged to be creative and the concepts of communication for a distinct or utilitarian purpose and a sense of audience are usually ignored. In terms of classroom exercises, the tasks set are usually either rigid reproduction of sentence patterns according to set rules, picture descriptions with provided vocabulary, guided compositions or free compositions under a set title.

When marking pupils' written assignments, Chinese language teachers feel it is their duty to highlight all the mistakes and errors made by the pupils. They are also expected by parents, most panel heads and principals to draw every single mistake to the attention of the pupil. In addition, teachers are expected to make comments in the margin and add a general comment at the end of the piece of writing (CDC, 1990a, p.50). It is also a tradition held by most teachers not to give high marks for pupils' writing, the range of marks being from 55 to 70 (the total mark is 100). Thus, there is limited positive reinforcement for pupils and this approach to teaching writing, with its heavy emphasis on error-free writing and accurate writing of sentences, causes some apprehension about writing in the learner. For most students, writing is difficult and uninteresting: for most teachers, it is exacting, painstaking and dull.

1.7 Learning to Write in English in Hong Kong

Having set the above background, one might turn more explicitly to writing English, its teaching and learning. The official Syllabus for the Teaching of English Writing in Chinese Primary Schools (CDC, 1981) divides the programme into two stages: lower primary and upper primary stages. The overall aim of Stage One is to give

pupils a foundation of elementary English which they can use to carry out simple tasks. At Stage Two, the emphasis is on reading comprehension and the use of skilled reading to complete tasks.

Traditional methods of teaching English writing include the grammatical approach, the grammar-translation method, the structural method, the oral-lingual approach and the pattern drilling method, all of which find support from the behaviourist account of language acquisition proposed by Skinner (1957). Although Skinner's theory is addressed to L1 learners, it is also drawn upon to support and inform approaches to teaching L2s. Language learners are placed in positions where they imitate linguistic models, usually provided by the teachers themselves or by audio and visual tapes. It is believed that by repetition and mechanical drilling, language patterns will be internalized within the learners' mind so that they can be drawn upon automatically whenever the occasion to use them arises. All errors are identified and corrected in detail, irrespective of the English competence of the learner. Such correction of errors is not always cost effective, in that the same errors often appear again and again. Equally undesirable, the motivation and the communicative purposes of the learner are usually ignored. Students often want to communicate with their teachers, expressing their opinions and feelings about matters. However, most teachers using traditional approaches will often ignore these messages, negatively concentrating on errors of expression in the writing.

It has been shown that such over-detailed error correction in writing can have harmful effects on L2 learners (Corder, 1967). The interest and confidence of the learner in trying to communicate in language are destroyed, with learners reluctant to experiment with the language or to try to say what they mean unless they possess the exact language structures adequate for the task. The traditional approach to L2 teaching based on behaviourism often yields unsatisfactory outcomes. For example,

many students in Hong Kong schools leaving school after having learnt English at primary and secondary level for eleven years using traditional approaches cannot comfortably use English for communication (HKED, 1989). Official moves to reduce the emphasis on traditional teaching in Hong Kong came to a head after the introduction of nine years of compulsory education for all. Whereas these methods might have enjoyed some success with very able children, they only succeeded in boring and disaffecting children from the wider population range. Since 1981, the Education Department has recommended the Communicative Approach (CA) for the teaching of English and new teaching syllabi and textbooks were published for primary schools (CDC, 1981) and secondary schools (CDC, 1983).

1.8 Learning to Write within the Communicative Approach to Learning English in Hong Kong

Fundamentally, the CA involves basing classroom activities on the learners' needs and interests, and exposing learners to the target language used in authentic English use situations. Learners are placed in interesting situations where they simply must use the target language to communicate their intentions, and a range of communicative activities is recommended to involve learners in active rather than passive forms of learning. It is recognised that the aim of communication is to get "the message across", and that this should be the basic criterion by which communicative activities are evaluated (Johnson and Morrow, 1981). Errors in production which children make are responded to selectively and pupils are encouraged to write to a real purpose. Instead of pupils being systematically exposed to language forms, they learn them through using various forms in communicative activities. Instead of endless drilling and practising addressed to language which the pupils might some day need, practice is directed at perfecting the language they themselves actually need to use to communicate for the present.

However, although the CA has met with success in the teaching of language in many places in the world (Brumfit, 1979, 1986; Krashen, 1982), its implementation in Hong Kong has not been smooth. Furthermore, even though the CA has not been implemented fully and the fact that traditional approaches are still adhered to by many teachers (ECR4, 1990), a number of teachers seem to imagine that it is the new approaches which have been responsible for the poor standards displayed by pupils. A report of a Working Group set up by the Education Department to review language improvement measures denies that standards are falling, but comments nevertheless that:

"There is a widespread expression of belief in certain groups within the universities, in the business community and governmental circles that standards of English are declining. Partly as a result of the press publicity given to the many reiterations of this belief, the view now seems to be common among members of the public at large." (HKED, 1989, para.1.5.1.1)

The Working Group denies that allegations of falling standards have validity, but it accepts that some teachers may not be giving of their best at the moment. It is suggested that this may be partly connected with current methodology and partly with (a) loss of morale due to popular feelings of uncertainty about the future in Hong Kong, and (b) complaints that teachers are not doing their job well. Taking a defensive stance, the Group comments that:

"This constant complaint has already begun to affect the morale of the teaching force, and has almost certainly had a negative effect upon pupils' learning. It is not fear of failure and constant criticism that motivates effective teaching and learning, it is success and confidence in what one is doing. This feeling of success is being denied in the education system as a whole, and in the learning component of it in particular." (HKED, 1989, para.1.2.16)

The CA is claimed to be ineffective because many teachers think that, despite the clearly presented Syllabuses (CDC, 1981; CDC, 1983), it is only suitable for teaching oral and listening processes, not writing (Chiu, 1990). In fact, there are genuine obstacles which hinder the implementation of the CA, and indeed any learning based upon activity methods in Hong Kong schools. For example, the average class size of around 40 pupils per class makes it difficult to find space to organise communicative learning activities; the fixed furniture lay-out in each class makes rearrangement noisy; most classrooms are rather small and crowded, so that movement around the class is difficult; the timetable is rigid and teachers moving from one class to the next find it burdensome to carry materials; lesson length is usually too short to practise active forms of learning; and the children are unable for one reason or another to transfer what they have learned in school to their Cantonese oriented environment outside school.

(Many English panel chairpersons do not fully understand the essence and principles of writing within the CA, and they practise their own approaches. In many schools, writing is often taught by dictation, rearrangement of given sentences, patterns drilling and guided composition. Teachers in prestigious schools give lots of supplementary exercises for students to do, many of which were written as long as ten years ago and, in the writer's experience, are guarded as precious property by the school. If one examines these exercises closely, one usually finds that they are based on structural and pattern drilling approaches.) Some exercises are printed and publicly available and many parents use them in private tutorial lessons for their children.

English teachers still mark pupils' writing meticulously, with the focus on accuracy rather than communication and creativity. Teachers spend hours marking and commenting on the assignments. On being handed their marked assignments, many pupils simply copy the corrected assignment again without really understanding

the nature or origin of their errors. Writing assignments are usually considered a means of testing, not teaching. Since students often receive back assignments which have been marked in great detail, they experience the type of constant failure in their writing which discourages them from enjoying writing as a medium of expression and communication.

In teaching children to write in English, teachers seem to rely heavily on the method of guided composition. The idea behind this approach is to ensure that errors are eliminated, with the degree of control engineered by giving exercises to students with diminishing levels of guidance as they progress. According to the English Syllabus (CDC, 1981), the forms of free writing recommended include simple narratives, diary entries and letters to friends, but usually these are only encouraged in proficient classes. Instead of primary pupils enjoying writing as a form of expression and outlet for emotion and thought, Hong Kong primary pupils see it as an exacting and tedious chore.

In June, 1992, the Curriculum Development Council and the Education Department presented the proposed learning targets and exemplar target-related tasks of Target and Target-related Assessment to schools and teachers. Much effort and many resources had been put into the development of learning targets for English (Hong Kong Language Campaign, 1991). The learning targets for English are ordered in a hierarchy from the most general to the least general target. The subject target is to develop an ever-improving capability to use English to communicate, learn, think and know, form judgements and develop values: reflect upon language in use, the uses of language and language learning. There are three dimension targets: interpersonal, cognitive and aesthetic purpose. It is hoped that the content of the document can be implemented in schools. However, the writer fears that the rationale of TTRA is so complicated that many English language teachers may not be able to understand and put it into practice, especially in teaching writing.

From the above analysis, it is clear that there are many problems in the teaching of writing in Hong Kong. If these are to be solved, it is necessary for teachers to understand the issues which underlie language acquisition and appropriate methodologies to support it; the relationship between thought and language and the implications for the teaching of writing; and the developmental path pursued by children as they progress from naivety to maturity in their ability to write fluently, with meaning and style.

1.9 Theoretical Analyses of the Composing Process

Many psychologists propose that writing is largely a cognitive activity, all composing processes taking place in the head (Perera, 1984). In the words of the psychologist Vygotsky (1962):

"The relation between thought and word is a living process; thought is born through words. A word devoid of thought is a dead thing, and a thought unembodied in words remains a shadow." (p.153)

Inspired by writers such as Vygotsky, many researchers, including the writer, have investigated the developmental path of children's writing, the cognitive processing involved in writing as opposed to speaking, and the implications of all this for teaching. One striking feature is that many researchers, especially in western countries, seem to have shifted focus away from looking at what children write to how they compose when writing, from the "what" to the "how" (Barritt and Kroll, 1978; Perera, 1984). Teachers who have followed the progress of such researchers have been attracted by the attention given to such issues as defining the objectives of writing, understanding the composing process itself, the effects of writing for a specific audience, and the idea that writers be allowed the freedom to edit their offerings as freely and often as they wish.

Morgan (1989) reports that many children in the United Kingdom are not clear about the purpose of writing. For instance, writing as a means to express oneself and as a means for enjoyment seem not to have entered the mind of the pupil. On the other hand, Morgan complains that far too many teachers assess what has been written by pupils on the basis of appearance rather than content, on the number of spelling mistakes and errors rather than originality. In order to improve the situation, the National Writing Project was started in 1985. Conceived by the School Curriculum Development Committee, not as a set of 'bright ideas' to be carried out to the letter but rather as a collaborative process, the Project encouraged teachers to develop their own projects and try out both their own ideas and those of the children. The underlying objective was to extend the use of writing as a vehicle of expression, a way of communicating of ideas and above all as a means for learning. The Project initially involved 24 local education authorities and up to 2,000 teachers, but from 1988, teachers outside the experiment were encouraged to join.

The results published in 1989 were very surprising. When writing was presented as a process of reflection and exploration to children, the children demonstrated an astonishing level of creativity and fluency of expression. Writing for an audience was also emphasized, so that the children knew that their writing might be read by teachers, peers and people outside school. Consequently, the standard of presentation and accuracy improved dramatically. Czerniewsha, Director of the Central Project Team, reported at the launch of the Nelson teaching materials:

"There has been a shift from mere skill acquisition to using language for their own ends... Children are not just receiving learning but are actively involved in the writing process." (Morgan, 1989, p.303)

She also said that even very young children aged four to five are conscious of writing and able to use their limited knowledge to communicate in drawings or single letters.

An important concept explicated by the Project is that writing does not flourish in a vacuum, in that, unless it is read and responded to, it loses its point. The idea of writing partners, often in the form of a peer or class-mate, was recommended. Books and collections of written products were produced by the whole class, the intention being to give all involved a sense of achievement. The concept of writing as a medium of learning was extended right across the curriculum (Morgan, 1989, p.303).

The above project has mainly been concerned with writing in English as an L1, but the outcomes have nonetheless been of compelling interest to those concerned with teaching children to write English as an L2. In Hong Kong, some teachers have welcomed the approach, for they have been convinced for some time that the way children are taught to write and teachers' conceptions of the best way to teach children to write need re-examining. As described earlier, when children are taught to write Chinese in Hong Kong, the problems they face in having to write in a form of language which differs markedly from the form of their natural speech, lead teachers to teach pupils to write in highly formal and prescribed ways. This might have a negative transfer effect on the way these children are taught to write in English. Therefore, a number of studies have been carried out of the mental processes that are involved as children write, and how these operate when children produce writing which is judged to be expressive, communicative and interesting (Tse and Shum, 1989).

1.10 Research into the Composing process in Hong Kong

The writer is at the time of writing a lecturer and teacher trainer in a university in Hong Kong and has been involved in the above area of research over a considerable period of time. In one study (Tse, 1984), the composing process of four secondary

school students writing in Chinese was recorded and analyzed in detail. It was concluded that the basic composing process followed was common to all of the students, but there were individual differences and emphases in the sub-processes. Transformation was found to be a most important, necessary and common sub-process in the subjects' writing. On the basis of this research, an approach to teaching writing was developed and the writer has taught trainee teachers to apply it for some years now. The 'process' approach applied to teaching secondary students to write in Chinese has proved to be effective (Tse and Shum, 1989), and the teaching method developed by the writer has been introduced to Chinese language teachers in Hong Kong, Shenzhen in the People's Republic of China, and in Malaysia. It is now being increasingly accepted as one of the most popular teaching methods currently employed.

A more recent study (Tse, 1990a) focused on the composing process in English and in Chinese of primary school pupils in Hong Kong. The researcher found clear differences in the process of transformation when each of the two languages was involved. In a subsequent study with the collaboration of the Department of Physiology in Hong Kong University (Tse and Chan, 1990), the researcher used a Disa Neuromatic 2000, computer-controlled, 2-channel neuromyograph for studying clinical EEG and evoked responses to study thought imagery during composing in Chinese by eight subjects, primary and secondary schools students. The students were found to seek information from their past experience by retrieval of thought imagery. It was also found that the children experienced emotions during this imagery retrieval.

The researcher is at present a member of a research team, supported by the Hong Kong Research Grant Council, to develop a computer based writing environment in Chinese, designed to allow the incorporation of teaching ideas and provide resource support. The work so far suggests that a supportive writing environment provides a

good setting for the learning of different writing strategies (Law et al., 1990; Tse et al. 1991). The project has also concluded that the difficulties students face in writing germinate in their primary school years.

Emerging from the above research has been a clearer understanding of the composing processes and this has allowed the writer to draw up a model of the composing process, details of which are presented in Chapter Three. In the writer's opinion, this model applies both to writing in Chinese and in English. At the same time, a central assumption tested in the present study was that the cognitive processing underpinning writing is not language bound, in the sense that structural modifications do not have to be made to the model to accommodate different languages. Nevertheless, the relative emphasis given by primary school pupils to the various elements in the model will reflect a number of factors, including the way the child has been taught to write, the way language is used in the generation of words and discourse and the child's perception of the dimensions of the task itself.

1.11 Purpose of the Present Study

The purpose of the present study was not to test the validity of the model proposed by the writer on later pages in this thesis, even though the research was always likely to illuminate its structures and the interlinking of elements. In fact, the researcher is convinced that an in-depth study would fully occupy any researcher for years, testing the processes governing the operation of any cell and what is happening within the model whilst the act of composing is taking place. For this reason, it was decided to focus primarily on sub-processes which had been the centre of attention in the researcher's previous investigations. Furthermore, the writer's previous research would lead him to conclude that a clearer idea of how the composing process is influenced by being conducted in an L2 might best be obtained by looking at children

of primary school age. They are in an embryonic stage of writing and it should be possible to see from their efforts how the foundations for further growth are being set down.

1.12 Nature of the Research and the Research Strategy

The research was exploratory in nature and not concerned with verifying experimentally conclusions reached from substantial pilot work and conjecture. Rather, it set out carefully to obtain reliable and valid data which would form a bank of information which would be open to investigation and interpretation. In particular, it allowed the researcher to ask a number of research questions and to consult evidence from the data bank, previous research and learned opinion in an effort to answer them. The writer is convinced that, in order to further develop the syllabi of writing and adjust the orientation of primary level writing instruction, an understanding of the composing processes of pupils and their difficulties in writing is essential. In addition, as students in Hong Kong have to write in Chinese and English, it is of more than academic interest to compare the composing processes of students when writing in these two languages.

Since research into the L1 and L2 writing processes in Hong Kong primary school pupils is still in its infancy, there is little related pertinent research literature available for reference. The writer thus elected to proceed in accordance with his own judgment and in a fashion similar to that used by Emig (1971) by looking at the composing aloud protocols and the written output of a carefully chosen small sample of subjects rather than conducting a large-scale in-depth study of composing. Thus, the research strategy employed was a multiple-case study approach (Yin, 1989).

1.13 Elements of the Composing Process Selected for Closer Study

Given that the researcher's model is complicated, reflecting the complexity of the composing process itself, it was decided to narrow the focus and to look at a number of key sub-processes only: generating, transforming, pausing, and revising. These are all key sub-processes in writing and have been explored in relation to writing in the mother tongue by Emig (1971), Hayes and Flowers (1980), Tse (1984, 1990a) and Tse & Law (1991). Other sub-processes, like planning and organizing, could not be ignored, but were not discussed in the same depth of detail. At this stage, it may be helpful to clarify the writer's conceptualisation of generating, transforming, pausing, and revising.

1.13.1 Generating

Generating is a sub-process involving the writer in bringing into consciousness ideas, language and thoughts which may be committed to print. When a topic is given to a writer to write about, the writer will usually start by seeking to retrieve information from long-term memory about what is known about the topic in hand to supplement the cues given during the assignment of the task. Hayes and Flowers (1980) observe that "each retrieved item is used as the new memory probe .. items are retrieved in associative chains" (p.13). The information retrieved from memory may take the form of abstract ideas; past experiences, actual, concrete and imaginary; what might have been written previously on the topic or a closely related subject; lists of words associated with the topic; known facts about the topic; and images from the past or reflecting how the information has been encoded in memory (Tse and Chan, 1990). Some of this information generated is relevant and some is not, and the writer has to identify and select useful material, using criteria for selection. A key issue addressed by the present study was to elucidate the above in the hope of clarifying the sources of the information called to mind, any images generated and the criteria used by the

writer when selecting information.

1.13.2 Transforming

During writing, subjects have to make transformational operations like addition, deletion, reordering or substitution, and embedding (Emig, 1971; Tse, 1984). Bereiter and Scardamalia (1987) note that:

"During the course of composition, two kinds of mental representations are built up and stored in long-term memory. These are a representation of the text written so far, and a representation of the text as intended, which includes the whole text, not just parts already written." (p.287)

Normally, in the course of putting ideas into print, the above operations are executed privately 'in the head'. In order to throw light on this usually hidden processing, in the present study the subjects were requested to compose aloud and their efforts were video-recorded. The oral data collected are assumed to be indications, direct or otherwise, of the representations intended for inclusion in the intended text: the scripts which were written are assumed to be representations eventually written down. When a discrepancy exists between the compose-aloud transcription and what is on the paper, this is referred as a 'transformation'. Some transformational operations can also be identified by referring to the revisions made by the writer (Perl, 1979). At the same time, discrepancies between what outwardly appeared to be the writer's intentions and what was actually produced can also indicate the difficulties encountered by the subjects in writing. Investigation of discrepancies and transformations can tell the researcher of the strategies used by the writer and the difficulties encountered. They also reflect such factors as the subject's facility with the language used. The difference between Cantonese and MSWC, one of the key issues of transformation, was also addressed by the research.

1.13.3 Pausing

Pauses, as moments of physical inactivity during writing, offer observable clues to the covert processes of writing (Matsuhashi, 1981). Some writers pause in order to generate or plan what they are going to say next; some pause in order to carry out problem solving (Flower and Hayes, 1981). Analysis of such pauses can help reveal the difficulties the writer is encountering and how they solve their problems. The present study investigated the types and the nature of the pauses engaged in by the subjects and how these pauses seem to affect the written product.

1.13.4 Revising

Revising is the most accessible sub-process in the composing process, in the sense of tangible hard evidence. Bridwell (1980) calls it a window into the cognitive operations of the writer in the composing process. Murray (1978) defines revising as "what the writer does after a draft is completed" (p.87). However, Sommers (1980) maintains that revising occurs continually throughout writing, not just at the final review stage in the writing act. Revising covers a wide range of behaviours, including editing tasks and reformulations, and comprises behaviour that entails changing the mind of the writer and changing the written text. In reviewing the text, when writers see mismatches between their intentions and the written product, they may make changes if they have the ability and desire to make amendments. An important aspect of the present study was to look closely at the kinds of on-going revisions made by the subjects. The revising strategies used with Chinese characters and English words were also studied.

1.14 The Research: its Aims and Educational Relevance

In summary, the present thesis reports research into the composing processes in English and in Chinese employed by primary school pupils in Hong Kong. It sought

to gather evidence which might throw light on what happens when pupils of primary school age write in Chinese and in English; how they generate ideas using, for example, mental images as cues to writing, the sources of knowledge used when writing, and how they select their ideas when carrying out given tasks; how, where necessary, they transform the intended text into the written product; why subjects make pauses during composing; the types of revisions they make, in particular how they revise Chinese characters and English words. All of the above were considered keeping in mind that the present subjects in their schools are not allowed to write in Cantonese. Instead, they are compelled to write in MSWC, the written equivalent of Putonghua, a language which few children in Hong Kong know how to speak. This complicates enormously their writing in Chinese, and to understand its impact on the task one needs to look at sentence patterns, lexicon and particles of Cantonese utterances and see if one can detect their influence on the children's attempts to write MSWC. As the children in Hong Kong learn to write in Chinese, their L1, and English, their L2, it was hoped to establish the nature of any marked differences in their composing processes in the two languages.

Arising out of all these analyses, it was hoped that any increase in the understanding of the composing processes of pupils in Hong Kong would suggest useful insights about the nature of composing in general and the manner in which writing might best be taught in the schools of Hong Kong. In the present educational environment in Hong Kong, students learn both Chinese and English, not without considerable controversy over the most appropriate teaching method which might be used. The scenario in Hong Kong changes quickly and, over the course of preparing this thesis, a number of events have taken place which, had they been known prior to commencing the study, might have altered the direction of the study slightly. Nevertheless, the objective of seeking to illuminate the composing process from a cognitive point of view has guided the research endeavour throughout. At present,

research in this area is sparse and the present study represents an attempt to contribute here.

1.15 Definition of Terms

For the purposes of this research, the following definitions apply:

Cantonese: refers to the Cantonese spoken in Hong Kong, made up of the Cantonese dialect, loan words and local slang.

First language (L1): refers to the mother tongue of the research subjects (the spoken language is Cantonese and the written language is Modern Standard Written Chinese.)

Modern Standard Written Chinese: refers to the modern written form of Chinese of the Han people (Cheung 1982).

Putonghua: defined as "the Common Speech or Language of the Han People" (Hsu, 1979, p.120).

Second language (L2): throughout this study, 'L2' is used to refer to English. A 'foreign' language is a language used by people from a region or country which differs markedly from that used by the indigenous population, Norwegian in Japan for example, and which has no obvious social relevance. A second language, in contrast, usually has an official, social, civic or commercial role. However, it ought to be pointed out that many writers appear to use the terms 'foreign' and 'second' language interchangeably.

The Composing Process: refers to the dynamic sequence of behaviours and stages whose end result is the creation of a written text.

1.16 Thesis Outline

Following this introductory chapter, the next chapter offers a review of the pertinent literature in an attempt to provide a background against which the results of the study might be interpreted. Chapter Three introduces a model drawn up by the writer of the composing process. Chapter Four reports the research design, looks at case study methods, common techniques in studying composing, and at the rationale behind the choice of techniques, the sample, the instrument, the methods used in data collection and the analyses engaged. Chapters Five to Ten are the major results chapters and include preliminary discussion of the findings and implications in terms of the research questions addressed and the background variables specified earlier. Chapter Five is concerned with the generating process of the subjects, including sources of the knowledge, imagery and methods of selecting writing material. Chapter Six deals with transformations during the composing process and is focused on contrastive analyses of sentence patterns, lexicons and particles of Cantonese utterances and MSWC. Chapter Seven centres more generally on transformations in Chinese and in English. It looks at transformation of ideas, transformation of organization, transformational approaches and cross-linguistic influences. Chapter Eight describes the reasons behind pauses during the composing process and the types of pausing whilst composing. Chapter Nine focuses on types of revising and the revising strategies of the research subjects on Chinese characters and English words. Chapter Ten reports the writing profile of a Primary Four writer in the hope of offering the reader a more complete picture of the composing behaviour of a child taken at random from the sample. Chapter Eleven summarises the study, its results, conclusions and implications, with special reference to generating, transforming, pausing and revising.

Chapter Two

A Review of Related Literature

During the past forty years, a great deal of research has been conducted in the fields of written language and the composing process. Research into writing covers a very broad field and includes learning how to write, writing instruction, theories of written language, curriculum development and the like. The literature review offered in this chapter focuses principally on the composing process, discussion directed at the following areas: models of the composing process; studies of the composing process; generating (mental imagery in composing; sources of knowledge and criteria for selection), transforming (the influence of Cantonese on MSWC; the influence of Chinese as an L1 on written English as an L2; communicative strategies); pausing; revising; studies of L2 writing processes; and the teaching of writing in Hong Kong.

2.1 Models of the Composing Process

Research into the nature of the composing process has confirmed the complexity of the writing subsystem of language. Several models have been proposed which attempt to explain how the various behaviours that make up the composing process function and interact.

2.1.1 The 'Traditional' Linear Model

In the 1950s and 1960s, the 'traditional' model of the composing process divided the composing task into a serial three-stage linear process of planning, writing and revision, or pre-writing, writing and post-writing. In the various changes of labels for

the various stages which came later, for example precision, vision, revision (Murray, 1978), rehearsing, drafting, revising (Graves, 1981a) and conception, incubation/formulation, revising/editing (Petrosky and Brozick, 1979), the three fundamental stages were still broadly preserved, recognition of their value as a framework for analysing the composing process.

However, there are serious problems with serial stage models. For example, the 'stages', whilst convenient ways of representing linear steps in the composing process, are probably not a valid representation of what actually takes place when people write. During composing, numerous subsystems operate in parallel, not in series, in the same way that thinking processes or strategies operate during decision making. At the same time, the stages do not necessarily function in a strictly linear fashion. In other words, the true model is interactive rather than strictly linear. Emig (1971) showed in her case study of the composing process of 12th Graders that the process is not linear, but a dynamic and recursive process that includes generating ideas, setting goals, planning, evaluating and revising, sometimes simultaneously, sometimes separately and sometimes in different orders.

2.1.2 Cognitive Process Models

Several cognitive process models have been constructed, each highlighting aspects of the composing process from the point of view of the mental processing involved. Flowers and Hayes (1980a, 1980b, 1981a) constructed an empirically based model of composing that takes into account the nature of the writer's long-term memory storage and retrieval systems, a range of composing subprocesses and the environment of the writing act. The main components of the Hayes and Flowers model are planning, translating and reviewing. Planning consists of generating, goal-setting and organizing; the actual text production is called translating; and the final process is

reviewing. The model emphasizes ‘recursion’ and is probably the most widely cited model in teaching and research into the composing process. Figure 2.1 describes the structure of the Hayes and Flowers model.

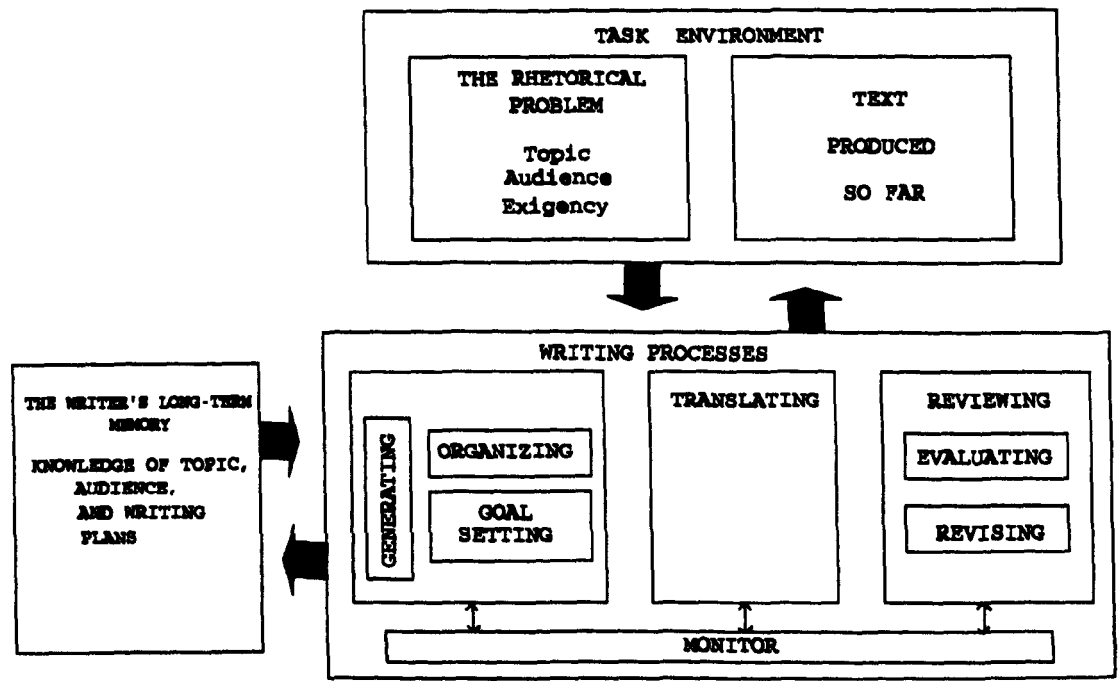


Figure 2.1 Structure of a model of the composing process.

(From Hays and Flowers, 1980, p.11)

In the model proposed by Rose (1984), an attempt is made to identify the cognitive elements operating during composing. In Rose’s (1984) view, the writer comes to the writing task with:

- (i) domain knowledge: information stored in long-term memory;
- (ii) composing subprocesses: linguistic, stylistic, rhetorical, sociolinguistic and process rules, discourse frames and attitudes. All of these select and shape, organize and evaluate domain knowledge as it relates to written language. These subprocesses can be categorized as either flexible and multi-optional or unidirectional and rigid;

(iii) executive operations: high level, often assumption-based strategies that select, organize and activate the composing subprocesses; and

(iv) the task environment: including the particular writing project and the words on the page that the writer has already converted from thought to written language (p.10).

According to Rose (p.9), the composing process is characterized by an "opportunistic shifting" between the various components. That is to say, the goals, plans, discourse frames and information emerge as the writer confronts the task, and they interact in a variety of ways as the writer actually composes. This model identifies and categorizes the complex factors involved in writing, emphasising their individual importance and the importance of the interaction between them.

Beaugrande (1982) offers a multilevel model that attaches importance to the different kinds of mental units that must be navigated through when a person is composing. Figure 2.2 depicts the composing process model developed by de Beaugrande and is based on a synthesis of experimental findings related to the kinds of symbolic structures operated on within the course of text production. The various levels of processing are shown in Figure 2.2, with the "shallower" levels at the top and the "deeper" ones at the bottom. The levels are determined by the materials processed, the text or the processor's memory, sounds/letters to words to syntactic phrasing, and concepts/relations to ideas and goals. Goals include the representations of the writer's intended outcome and the representations of the reader, of text type and style. An idea is a configuration of conceptual content that acts as a control centre for building the text-world model. Conceptual development is the generation and integration of specific items of contents. The text is 'factored' into retrospective representation of prior text, perception of current text, and predictive representation of subsequent text. Beaugrande indicates that the various processes go on simultaneously and are "interpenetrable" (1982, p.116).

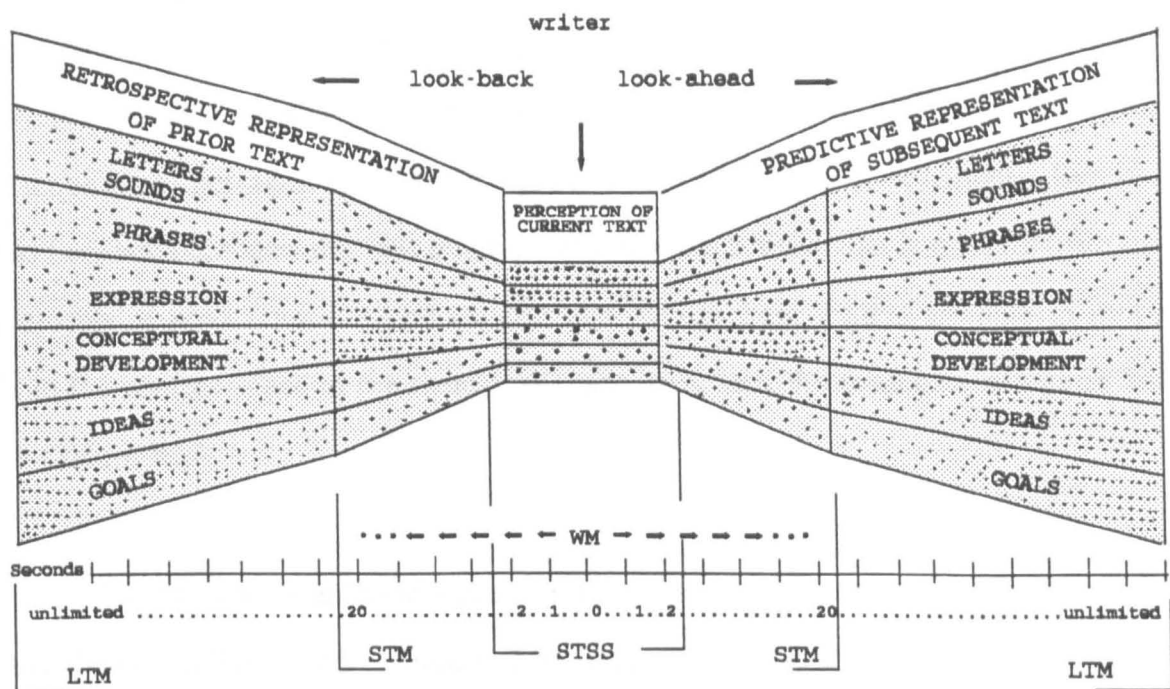


Figure 2.2 A parallel-stage interaction model of text production. (LTM = long-term memory; STM = short-term memory; STSS = short-term sensory storage; WM = working memory.)

(From R. de Beaugraude, 1985, p.167)

Bereiter and Scardamalia (1987) argue that there are two chief kinds of process spaces implicit in most cognitive descriptions of the composing process, a 'content space' and a 'rhetorical space', and that the interaction between these two spaces constitutes the essence of reflection in writing. The content space is made up of beliefs from which opinions, inferences and decisions are generated, and rhetorical space, which is specifically tied to text production and consists of mental representations of actual or intended text for achieving the various purposes in

composition. According to this model, a writer converts ideas into text, which is then examined for any mismatch with the writer's intention or any potential problems anticipated for the reader. If problems are found, then the writer returns to the content space to search for alternatives, definitions, a reanalysis of the problem or whatever is required, writes again and revises again. And so the process continues. Bereiter and Scardamalia report that it is this type of reflective activity that is missing from the protocols of novice writers, and suggest that, whilst these writers are able to move from the content space to the rhetorical space, they lack the strategies necessary for the "return trip".

Bereiter and Scardamalia propose two models of the composing process, the 'knowledge telling' model (Figure 2.3), intended to capture essential features of immature composing, and the 'knowledge transforming' model which displays features that characterise mature writers. Knowledge telling is a way to generate text content, immature writers often generating text without any overall plan or goal in mind and the composing process not being perceived as involving problem-solving procedures. Mature writers can make use of complex knowledge-processing procedures to draw upon, elaborate and refine available knowledge. The models presented by Bereiter and Scardamalia reflect the cognitive processes in the writing both of immature and mature writers.

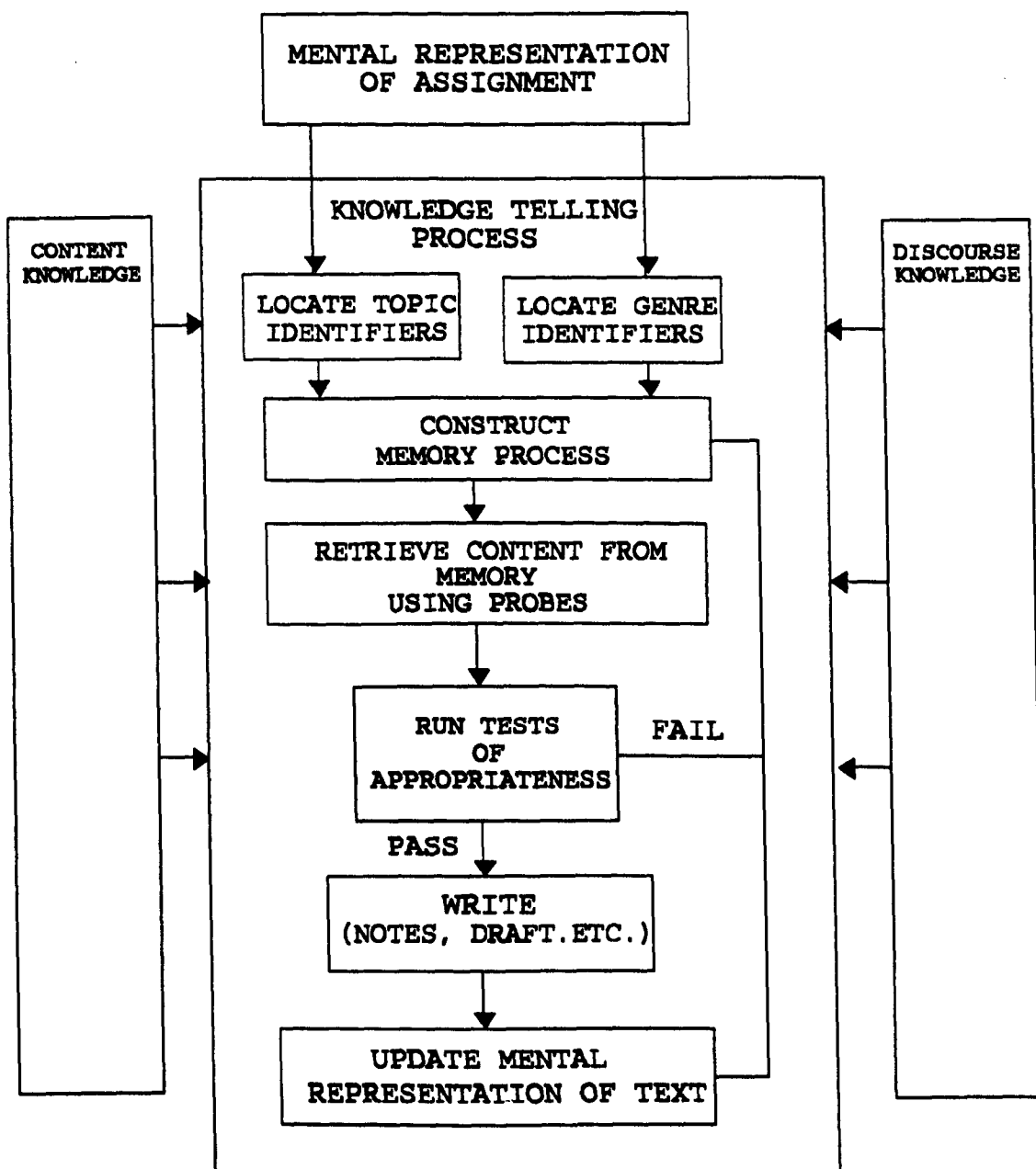


Figure 2.3 Structure of the knowledge-telling model.
(From Bereiter and Scardamalia, 1987, p.8)

The above models, despite their tentativeness, at least provide a framework within which teachers and researchers can operate. The composing process is complicated by the fact that there are endless varieties of composing task; endless varieties of writing situations; endless variations of human dispositions, strengths and weaknesses; an endless range of background experiences among different people; and

an infinite variety of abilities to write in ways which suit the writers' intentions. In other words, it is unlikely that a single model will ever suffice and there is always room for development. Based on the above models, the researcher developed a model specifically to serve as the framework for the present investigation, and this is described in some detail in Chapter Three.

2.2 Studies of the Composing Processes

Following the recommendation of Braddock et al. (1963), researchers set out to find out what is involved in the act of writing and how the system operates. Emig, in her landmark study (1971), established a major direction for research into the composing process. She used a case study approach to examine the composing processes of eight 12th Grade students. The various components of the composing process identified by Emig include the context of writing, the nature of the stimuli for writing, prewriting, planning, starting, composing aloud, stopping, contemplating the product, reformulating and the influence, if any, on writing by teachers of composing.

Inspired by Emig's study, a number of investigations arose. Stallard (1974) studied the writing processes of 30 12th Grade students to find out what behaviours distinguish good writers from average writers; Mischel (1974) reported the results of a case study that investigated in-depth the composing process of one student; Perl (1979) studied the composing processes of five unskilled college writers and devised a research instrument for describing the movements that occur during composing; Pianko (1979) investigated the composing acts of different types of college freshmen writers to analyze various dimensions of composing; Kennedy (1985) identified college students' purposeful behaviours when writing from specified sources, and showed that better readers engaged in more planning than less able readers; Bank (1985) studied high school students and found that progress in writing by such

students is linked to their ability to develop and elaborate ideas during the process of writing, generate English automatically, and rewrite, edit, and revise; Durst (1989) found that both high and average ability secondary school writers employ a wide range of metacognitive strategies in writing, and students vary these strategies both across writing tasks and at different points within the writing process; Smagorinsky (1989) found that certain types of composing tasks require task-specific procedural knowledge; and Stevenson (1990) studied the composing processes of two professional writers and found their processes to be complex and convoluted, reflecting their background, interests and personal beliefs.

Most of the above research was done with older students, but a number of studies have focused on younger children. For example, Sawkins (1971) used an interview technique to investigate what 5th Grade children did when writing compositions, particularly the differences between the writing behaviour of good and poor writers. Through interviews, she found that there were few overt differences between the two categories of students. The most notable difference was the concern of the better writers about the content of their expression and about more sophisticated aspects of mechanics such as sentence structure and paragraphing. Sawkins reported that children tend mainly to consider aspects of content before they begin and while they are actually writing. They seldom write notes or an outline before writing begins, and appear to have no well worked-through plan in mind before they begin writing. Nor do they seem very concerned about such matters as choice of words, paragraphing and revising. Girls write better than boys, according to Sawkins.

Whilst these proposals are interesting, the basic research procedure is interviewing. Sawkins maintains that children are reliable informants, but this begs questions about whether children who seem unable to plan writing can objectively reflect on the overall process and offer valid analyses. Melas (1974) was chiefly

concerned with the themes of compositions written by children in Grades 2, 3 and 4 and found that teachers often assign composition themes that do not correspond to the children's interests. When given a free choice, children wrote about subjects they were rarely assigned by teachers. Melas also found that compositions with descriptive themes were written about more frequently than those with imaginative, narrative or characterization themes.

The work of the New Hampshire research team has considerable value and has inspired a deal of exciting research. Graves (1975), the leader, conducted an extensive investigation into the composing processes of seven-years-olds in order to formulate instructional hypotheses and illuminate research directions. His methods of study included detailed observation of individual children as well as interviewing them and analysing their compositions. Observations of groups of children were carried out while they were writing, both in formal and informal classroom settings. Graves identified those factors that influence the writing development level as being gender and the use of language and problem solving strategies, and went on to identify two distinct types of writers: 'reactive' and 'reflective'. Reactive writers use erratic problem solving strategies: they do not appear to talk to themselves, their writing reflects an action-reaction approach, they lack a sense of audience and seldom contemplate what they have written. Reflective writers, on the other hand, will sometimes rehearse in spoken words before writing, periodically reread and review, and show a growing sense of audience. Graves maintains that the identification of the characteristics of each type is useful in predicting children's writing behaviour.

Another significant finding was that informal classroom environments gave the children greater choice in their writing, helping them produce more writing of an interesting range. Graves found that assigned writing inhibited the range, content and amount of writing done by the children. He also found that boys wrote more than

girls when writing tasks were not specifically assigned, and that boys seldom used the first person in their writing. Graves also concluded that the case study method is a most effective means of studying writing processes. From 1978 to 1981, Graves and his research team studied the writing process of 16 children who were observed very closely. It was found that the most significant subprocesses of writing include topic selection, rehearsing, information access, spelling, handwriting, reading, editing and revising. These ingredients for writing are much the same for six-year-olds as they are for more advanced ten-year-olds. There is no standard template for the writing process, the model appearing to be highly idiosyncratic and to vary within the writer from day to day.

Sower and Calkin were also members of the New Hampshire research team. Sower (1979) analysed the writing process of a six-year-old girl, and offered detailed analyses of the processes of rehearsing, composing and the adjusting of text. Calkin (1983) presented a case study of the girl's growth in writing during 3rd and 4th Grade, documenting the day-to-day changes in her writing in class. She reports that the child gradually grasped the revision process, developed a sense of audience and mastered writing strategies.

On the basis of such research, Graves (1984) outlines four essentials for a successful writing programme: adequate provision of time, giving the child choice of writing topic, responding to the child's meaning and the establishment of a community of learners. However, Smagorinsky (1987) argues that the studies of the composing process in elementary students by Graves and his associates are not rigorous enough for generalizable conclusions to be drawn. In fact, the research approach used by Graves to study young writers is very appropriate and practical, and has allowed him to contribute a great deal of insight into the composing process of children. The implications of his research are extensive and his research methods have inspired others to conduct productive research.

King and Rentel (1981) conducted a longitudinal study of 40 kindergarten and 42 1st Grade children to find out how their text-forming strategies changed as they entered school, and what happened when they shifted from producing mainly oral reports to producing written text. The students were asked to retell or dictate stories, which were then analysed for indications of cohesion and for their structural properties. It was found that the greatest increase in cohesion in the written stories was lexical; the second greatest change in cohesion was the increase in the incidence of conjunctions; the third greatest change was that the children were able to write for a distant audience. King and Rental also found that as the children grew older they were able to write increasingly more ambitious stories containing a wider range and greater number of functions. The significant increases both in number and types of functions for written stories, they claim, are due to an increased knowledge of story schemata and functions, the ability to put them to use, and increased dexterity in getting words down on paper.

Bereiter and Scardamalia's (1987) studies and analyses of the higher mental activities operating when people compose written text mark a high point in research into the composing process. The mental processes discussed include goal setting, planning, memory searching, problem solving, evaluation and diagnosis. The authors introduce two models of the composing process, the 'knowledge-telling' and 'knowledge-transforming' models, and suggest that researchers take a multi-level approach when analysing the composing process. They identify some of the hurdles that children must pass as they proceed from oral communicative competence to competence in writing, and identify basic cognitive factor deficits in composing, including short-term memory loss due to slow rates of writing, interference from the mechanical demands of writing, disruption of discourse production due to the lack of external cuing of the kind provided in conversation, the information processing load of written composition and the processing demand of coordinating ideas in writing.

They uncover the inefficient composing strategies of immature writers in planning, monitoring, and revising and demonstrate empirically that the development of effective composing strategies can be promoted.

In order to establish the nature of the composing process not already intuitively known, Bereiter and Scardamalia (1987) concentrate on comparisons between the composing processes of unskilled writers and those of more expert writers. They propose that there are distinctly different strategies that involve writers in different kinds of thinking when they write. In the foreword, Kintsch (1987) comments on the contribution of Bereiter and Scardamalia's analyses thus:

"Their book makes contributions at three levels. First, it significantly expands the data base upon which our understanding of writing rests. Secondly, the book presents an original theory, or at any rate, the beginning theory of writing and the development of writing skill, emphasizing the control processes in writing. Last but not least, Bereiter and Scardamalia fulfil a very important bridging function between the older literature on writing in educational psychology and the new cognitive approach." (p.10)

Bereiter and Scardamalia set down the foundations of a writing theory used by many researchers who have followed in their footsteps, and a number of people have sought to follow their lead by investigating cognitive aspects of children's writing. Watkin (1986) proposes that writing can be perceived as a useful tool for understanding language acquisition and for acquiring language skill, in that it provides opportunities for immediate feedback and for the monitoring of output. McCutchen (1988) suggests that when children are writing it is metacognition control and not automaticity that directs the processes that characterize skilled writing, such as directed searching, critical examination and revision. Cordeiro (1988) found that 1st and 3rd Graders developed hypotheses that were alternatives to standard placement

rules, hypotheses which were consistent among children and persisted over time. Kroll (1990) carried out a longitudinal study of young children's development and found that they struggled with the same aspects of expressing meaning in writing in different ways over time.

Turning to the study of the composing processes of students writing in Chinese, Tse (1984), the writer of this thesis, studied four Form 4 students and found that, not only did they engage in a common composing process themselves, the process they followed was the same as that for writers writing in English, with slight variations in some dimensions of the model proposed. At the same time, there was evidence that certain elements of the model were being emphasised due to the fact that the children were thinking in Cantonese and writing in MSWC. Tse (1990a) presented a case study of a Primary 6 Cantonese-speaking pupil who wrote one story in English and one in MSWC, and concluded that the elements in the composing processes in MSWC and in English seemed basically the same. There were shades of emphasis which differed in some subprocesses when composing in Chinese and in English, rather than structural differences, especially in the retrieval of information and transformation of ideas.

On the whole, early studies strove to describe all aspects of the composing processes, seeking to discover and describe whatever they could about the nature of composing, especially behaviours appearing to be associated with successful or unsuccessful outcomes in terms of producing good compositions. Later researchers have focused on specific aspects of composing behaviour, specific types of writers and composing strategies, and on features unique to special topics. The theories assembled above set the foundation for the present study and inspired the writer to investigate the composing process of primary school age Chinese-speaking children in Hong Kong who, in theory at least, are in the formative stage of becoming bilingual.

Having reviewed general aspects of the composing process, a synopsis of research into specific sub-processes now follows.

2.3 Generating

2.3.1 Sources of Knowledge and Criteria of Selection

Idea generation is perhaps the most important process in composing and creating written text, and needs to be considered in terms of the way verbal discourse is stored and regenerated from memory. Kintsch (1980) provides an analysis of the ways in which verbal discourse is stored and retrieved in long-term memory, as a huge network that is organized in terms of propositional rather than verbatim representations of perceived information. The structure of each network reflects the extent of comprehension of the phenomena or discourse in question, with hierarchical relationships helping to organise the information. The proximity of one proposition to another, vertically and horizontally within the framework, is a function of their conceptual and linguistic relatedness.

Flowers and Hayes (1981) claim that idea generation is influenced by the ways in which information is stored in the composer's long-term memory as well as by task requirements. Thus, items are retrieved from the writer's memory cued by information available at the time of retrieval, the retrieval process also being constrained by the topic and the intended audience. Bereiter and Scardamalia (1987) suggest two kinds of operations at work in long-term memory during writing. The first is a metamemorial search, a search carried out by each individual aimed at determining the availability of information in memory rather than at retrieving specific information. The other is a goal-directed search. As Bereiter and Scardamalia (1987) state, "A goal-directed search is a top-down search, directed toward some goal such as proving a point, amusing the reader, or preparing an introductory lecture." (p.65)

Caccamise (1987) describes the process of idea generation in writing as follows:

"Individuals produce an idea and, depending on their knowledge base, elaborate on it, develop it in depth, forming a cluster of related ideas. Then they move on to another idea which begins a whole new cluster of closely related ideas. This process is engaged recursively until the subjects decide they have exhausted the topic. However, it is quite likely that subjects have not expressed all they know on the topic. Instead, what they have "exhausted" is the contents of the search set which held all the idea nodes that were activated (i.e. brought into consciousness and short-term memory) by the retrieval cue" (p.242).

Caccamise suggests that the proposition network structure in memory affects idea generation in a very straight-forward manner. The more familiar the subject matter, the greater the number of ideas one can generate. Scardamalia et al. (1980) examined 4th and 6th Grade children to find topics about which the children knew either a lot or a little. The children were able to provide significantly more content matter for familiar than for unfamiliar topics when asked to plan what they would say in their compositions at the preliminary planning stage. However, when the researchers examined the children's actual compositions, they found no difference between those on familiar topics and those on unfamiliar topics. The researchers suggest that the language ability of the children and the ability to convert into print ideas in the head affect the results.

In terms of L2 writing, Cumming (1987) reports that adult subjects tended to use their L1 for generating content for three writing tasks they were given. Cumming observed that, whereas inexperienced writers consistently used the L1 only to generate ideas, more expert writers used the L1 both for generating content and checking style. This implies that the L1 is very important for idea generating in L2 writing.

Previous knowledge is an essential influence on writing. Caccamise (1987) found that both previous experience with the task and knowledge of the topic affect the composing process. Bodkin (1978) examined the types of compositions written by elementary school children and published in journals, and found that girls in the 3rd and 6th Grades wrote more about themselves (their homes, families, personal relationships etc.) than did boys, who wrote more often about sport and metropolitan, national, world, historical and catastrophic events.

Children appear to employ similar strategies for assembling information for writing. Bereiter and Scardamalia (1982) found that many subjects used the "what next?" strategy to generate content. King (1980) examined both oral and written stories by 3rd Graders and found five plot forms, the most commonly occurring of which she claimed to be 'situation plus problem plus solution'. King proposed that these plot forms are also sources of knowledge for writing stories. It would appear that students will spontaneously conduct a memory search when composing, but often need to learn criteria for selecting appropriate material for this task. In beginning writing, children predominantly write simply what comes to mind, but as they advance they begin to write simple stories and structured material more frequently (Sowers, 1981). This form of writing demands more selectivity of information and improves rapidly with practice. Scardamalia et al. (1982) studied children in Grades 4 and 6 and found that they appear to have much more content available than they actually use when composing. They do not put down all the content available and need to be selective, but often find it difficult to exclude content they have recalled. Looking at the ways topics are selected by children for writing, and Schumacher (1989) found that children chose topics they knew more about and found it hard to resist reporting vivid experiences.

A number of writers suggest that it is important to train children to be selective when writing. Sager (1973b) used scales to teach 6th Grade children to judge their

own and others' writing, providing them with the bare bones of narrative events and asking them to generate additional information to 'fill out' the stories. A set of questions was provided to help the students. Sager found that children in the experimental groups wrote better than those in the control group and, after the children had finished the task, it was apparent that they had learned some of the general requirements of written schemata, as well as particular criteria for selecting content. Once children are aware of these criteria, they tend to seek content which "fits", resulting in higher quality writing. Kemp (1979) used sets of questions to help students generate ideas and found that the experimental groups made greater gains than the control group. Coleman (1982) used the Sager scales to help 2nd and 3rd Grade students and found that the experimental groups had better results than the control groups. Anderson et al. (1980) suggest using prewriting activities before students write on a topic, suggesting that such activities can activate memory nodes (in propositional networks) relevant to the topic.

Interesting as these findings might be, teachers of writing are very aware that the ways children write will usually reflect the way they have been taught to write in school. Children encouraged to write creatively and whose efforts are responded to with encouragement will tend to generate imaginative and ambitious scripts (Clegg, 1964). Reflecting a different educational style, Hong Kong students have a different cultural and education background from the subjects in the above studies. Their sources of knowledge and criteria for selection of ideas may be quite different, and they seem ever conscious of the ways in which their teachers will respond to what is written down. Teachers of Chinese, who know that a misplaced stroke in a character can alter the entire meaning of a word, usually focus on accuracy, often at the expense of fluency. In consequence, children tend to avoid words and phrases about which they are not entirely certain, and only to write on familiar topics, or topics about which they know a lot of vocabulary. Such an emphasis tends to transfer to writing English also.

2.3.2 Thought Imagery in Composing

Imagery is a term referring to mental representations of objects, actions or events that are not physically present. Unlike a visual image, a mental image is not produced by stimulation of the sensory receptors (Kosslyn, 1981; Matlin, 1989). Imagery has received close attention in Western thought, and recent years have brought exciting experimental research into the formation and usefulness of mental images in thinking (Matlin, 1989). However as Stevick writes, "recent work on mental imagery has received relatively little attention within our profession (language teaching)" (1986, p.1).

Instructions to subjects in experiments to use imagery mnemonics have been shown to have positive effects on both free recall and recognition (Paivio and Casapo, 1973; Atkinson, 1975; Huang and Liu, 1978). Paivio (1968) emphasizes that high image-evoking words, such as orchestra and lemonade, are recalled better than low image-evoking words, such as paradox and concept. Hargis and Gickling (1978) showed that kindergarten children find low image-evoking words more difficult to recall than high image-evoking words. Huang and Liu (1978) found the imagery value and meaningfulness of Chinese lexical units to be highly correlated, and that lexical units of higher imagery value are more meaningful to readers. They also demonstrated that both high imagery value lexical units and high meaningfulness lexical units can be recalled better. Fan et al. (1985) found the acquisition of a Chinese lexicon by Form 1 to 3 students was significantly affected by the frequency, imagery value and class of the lexical items.

Stevick (1986) presents a seminal study on the role of images in language teaching, arguing that memory and the availability of words in the lexicon depend significantly on mental imagery. Stevick shows how basic concepts in mental imagery apply to language teaching, particularly in relationship to comprehension of text and

discourse. Unfortunately, there is very little discussion on composing. Liu (1986) conducted a study of imagery and composing, his subjects being sixty-one Form 3 and 5 students from Hong Kong, asked to write three times. On the first occasion, subjects were provided with pictures to write about; the second time, pictures and an oral description of the pictures by the teacher were provided; and, on the third occasion, only pictures used the first time were provided. It was found that the oral descriptions actually seemed to restrict the subjects' imagination, most subjects trying to write according to the teacher's description. Liu showed how pictures were able to stimulate the subjects to think, stir the imagination and write, but did not describe the nature of imagery or analyse the function of imagery in writing.

Engle (1970) reported that imagery effectively enhances creative writing, whilst Long and Hibbert (1985) studied the relationship between imagery and creative writing and examined gifted elementary students' compositions before and after imagery practice for a three week period. They found that subjects who had received such practice wrote longer and more original compositions than the control students. Jampole et al. (1991) examined the effects of mental imagery instruction on 37 gifted 4th and 5th Grade students' creative writing and the effects of imagery vividness. It was found that instructed subjects significantly outperformed control subjects in terms of originality and use of sensory descriptions, but not on writing length. Jampole et al. propose that instruction and practice in using imagery significantly enhances aspects of gifted students' creative writing, corroborating the conclusions reached above by Engle and Long and Hibbert that instruction and practice in using imagery have beneficial effects on the composing of gifted children.

Fleckenstein (1991) examined whether writers who can create vivid mental images experience intense emotions as they write, and found that imagery contributes to the intensity of a writer's engagement with his or her evolving text, and that imagery may bridge the cognitive and affective domains of thought. Tse and Chan

(1990) examined thought imagery in composing in Chinese in a study aimed at (a) testing the possibility of guiding subjects to retrieve thought imagery, (b) checking whether retrieved thought imagery had been experienced by subjects, and (c) examining the effect of guided retrieval of past experience in thought imagery on the electroencephalographic activity of primary school pupils composing in Chinese. It was found that subjects can be led to retrieve thought imagery of past experiences, and that this can usefully stimulate ideas for use when composing. Although the sample size was far too small to make generalizations, it appeared that guided retrieval of past information stimulated the visual cortex, suggesting that the signal there had then been transformed into pictorial format.

In the above studies, the research into mental imagery and language teaching has been confined mostly to the word and sentence levels. The research has also shown that mental imagery is a valuable stimulus in the writing of gifted children writing in their mother tongue. The writer was interested in the present study in looking at whether Hong Kong students spontaneously use imagery when writing, both in MSWC and in English. Are past experiences encoded in memory stored with predominantly L1 associations? And how useful are such encodings when generating ideas when composing in English, the L2?

2.4 Transformation

"Shaping at the point of utterance" is the phrase Britton (1980) uses to describe the moment-by-moment invention process that occurs as people speak. This seems also to apply to writing. In most writers' output, it is the potential to transform that allows the process of writing to move forward efficiently. When Hong Kong students write in Chinese, they have to transform the Cantonese dialect into MSWC. When they write in English, they have to transform their Cantonese and Chinese into English.

In addition, language transformation, transformation of ideas, organization and writing strategies are also found in their writing.

2.4.1 The Influence of Cantonese on MSWC

Dialects are not isolated language systems. They are socially and regionally accepted forms of language and may vary according to phonology and grammar and lexicon. There is much concern nowadays among educators and the public at large over the apparent inability of many students to produce "acceptable written standard English" (HKED, 1989). Whiteman (1981) also said,

"If a student's natural dialect is not standard English, there will be some features of his/her oral language which are not going to be acceptable in school writing" (p.154-155)

Whiteman studied spoken and written data from Southern Maryland and concluded that:

"Dialect influence apparently is responsible for some occurrence of nonstandard features in writing, but that it is not solely responsible" (p.158).

He labelled this phenomenon "dialect influence", which "would refer to the use of nonstandard features in writing which are traceable to the oral language competence of the writer." (p.155)

Cronnell (1985) found that a significant proportion of the writing errors made by 3rd and 6th Grade Mexican-American children could be attributed to language influences from Spanish, interlanguage and/or Chicano English. Reed (1981) concludes that:

"Dialect can intrude directly into a student's writing, in the form of vocabulary, verb forms, inflectional and syntactic patterns, and colourful idiomatic expressions which are characteristic of specific speech communities and entirely predictable by the rules of nonstandard English" (p.147).

Putonghua is the official spoken language of the people of China. There are seven principal dialects of Chinese spoken in China today, and many have an unofficial written equivalent (Zhan, 1985). Cantonese is the second-most widely spoken dialect in China and is widely used in southern China and Hong Kong (Bauer, 1984). Cantonese too has a written form, but this is strongly discouraged in schools. Students in Hong Kong learning MSWC thus confront language learning problems due to the fact that their thought (Cantonese) is not congruent with their writing (MSWC).

The differences between spoken Cantonese and Putonghua and MSWC have become the focus of various contrastive analysis studies. Studies of Cantonese provide useful linguistic accounts of the Cantonese dialect, a classic study being offered by Cheung (1972) providing a valuable account of Cantonese grammar. Gao (1980) provides a detailed description of the phonology and syntactic structures of Cantonese, and a list of Cantonese lexical terms with equivalent Putonghua terms for contrastive analysis purposes. Liang (1987) too details the differences between Cantonese and Putonghua, setting out the differences between Cantonese and Putonghua in the use of measure words, pronouns, nouns of locality, auxiliary words, homonyms and near-synonyms.

To help Cantonese-speaking groups of people learn Putonghua, Yiu et al. (1988) prepared a dictionary of the Cantonese dialect, in the preface of which it is claimed that, through contrasting the differences in lexical level between Cantonese and Putonghua, people in the Cantonese dialectal regions can be helped to attain mastery of the correct usage of Putonghua. The information provided, including a detailed analysis of the characteristics of the Cantonese phonology and lexicon, is useful both for students and researchers. It is a pity that some of words currently used in Hong Kong are not included in the dictionary. Zeng (1986), in a contrastive analysis of colloquial Cantonese and Putonghua, provides extensive coverage of colloquial Cantonese lexis, phrase and sentences alongside their respective Putonghua

counterparts. Zeng looks at the divergence of the vocabulary and grammar of colloquial Cantonese and Putonghua, and concludes that Cantonese is strongly influenced by the culture and customs of South China. As a language, Cantonese is quite distinguishable from Putonghua, but there is as yet no official authority responsible for standardizing the use of the Cantonese lexicon or for pronouncing on the forms of new terms, such as the 'futures market' and 'laser printer'. This makes it difficult for teachers of Chinese who cannot decide on which items of Cantonese are acceptable in MSWC.

There are specialist publications intended to help Cantonese speakers learn Putonghua (Zhang, 1987). Wang (1983) clearly explains the differences between Cantonese and Putonghua at phonetic, lexical and syntactic levels, using applied knowledge of contrastive analysis of Cantonese and Putonghua to promote the learning of Putonghua by Cantonese people. Zhang (1987) gives examples of mistakes commonly made by Hong Kong people speaking Putonghua and sets out many contrastive vocabulary pairs and syntactic structures (Cantonese versus Putonghua). The influence of Cantonese on certain directional-verb constructions and aspect markers are clearly explained by Cai (1979).

Contrastive analysis of Cantonese and Putonghua has been very fruitful, and the differences and similarities between Cantonese and Putonghua are well illustrated by the above authors. However, most of these studies are examined from the linguistic point of view and conclusions are drawn from analyses of texts written by adults who are mature Cantonese speakers. The extent to which the conclusions apply to children in the formative stages of mastering Cantonese is as yet uncertain. At the same time, the above researchers were predominantly influenced by the contrastive analysis assumptions that language is a set of habits which, once acquired, is difficult to replace, and that the main barrier to L2 acquisition is interference from the established L1 system. It is also assumed that a scientific, structural analysis of the

two languages in question will produce a taxonomy of linguistic contrasts between the two, enabling the linguist to predict the difficulties a learner may encounter (Lado, 1957).

The strong form of the central contrastive analysis hypothesis still prevails in the academic field in China, where dialects of Chinese abound. The view of scholars from China is that there is interference from spoken dialects of Chinese on MSWC which have to be taken account of when teaching writing. This also affects the teaching of Chinese in Guangdong province (and in Hong Kong), where Cantonese is the dialect of the indigenous population. Chinese scholars suggest that, by learning the differences between Cantonese and MSWC, students can improve their proficiency in writing Chinese. This suggestion is generally accepted in the educational field in Hong Kong. However, the very basis of the theory has been challenged by Chomsky (1965) and by Whitman and Jackson (1972) who found no strong support in their studies for the predictions of contrastive analysis. The nativist view of language rejects the Skinnerian view (1957) that language is simply "verbal behaviour", a set of learned habits. Instead, it is a complex mental process inextricably linked with other mental processes, influencing them and, in turn, being influenced by them. At the same time, the learner is not an "empty vessel" waiting to be filled by life's experiences, but a purposeful learner whose interaction with and deliberate manipulations of language will determine its acquisition (Krashen, 1981).

Nevertheless, many teachers in Hong Kong note that characteristic features of the Cantonese dialect occur quite frequently in the writing of Hong Kong students. A number of researchers have applied error analysis methods to examine the errors made by Cantonese students when writing MSWC. Siu and Ho (1981) found that a significant proportion of the writing errors made by Form 2 and Form 4 students can be attributed to dialect influence from Cantonese, especially at the vocabulary level. Lui (1984) found that Cantonese lexis accounted for 50.9% of the wrong lexis in

secondary school students' writing. Tai (1989) investigated the problem of Cantonese dialect influence on the writing of 145 secondary students in Hong Kong, noting where Cantonese features deviated from the Putonghua norm and identifying where transfer effects seemed strongest. It was found that they were most acute at the lexical-semantic level, accounting for 91.8% of the total Cantonese features identified. Tong (1989) investigated the differences in written Chinese between native Cantonese-speaking teacher trainees in Hong Kong and native Putonghua-speaking teacher trainees in China. Significant differences were found between the two groups in their writing performance in the areas of lexis.

However, although these findings are extremely interesting, they say little about younger Chinese writers in their formative stages of learning writing. At the same time, they mainly focus on the scripts produced, not the composing process itself or on how Cantonese influences MSWC production during composing. Generally speaking, there is little empirical research into the problem of language transfer from Cantonese to MSWC and how this influences the quality of learning in subjects such as Geography and Biology, the comprehension of text, or what happens when children read aloud from MSWC in Cantonese, as happens for example in drama lessons in school. The interplay between Cantonese and MSWC is an under-researched area which is crucial for the improvement of language learning and teaching in Hong Kong.

2.4.2 The Influence of Chinese on Written English

The interdependence of L1 and L2 proficiency is a well researched area. Cummins (1981) strongly believes that there is a close relationship between L1 and L2 proficiency, and suggests that there is an underlying cognitive/academic proficiency that is common across groups of people that allows some people to transfer literacy-related skills across languages. A number of studies which have taken Chinese as

research subjects have supported Cummins's claim. For example, Mace-Matluck et al. (1983) studied English literacy among students of Cantonese language background and found a significant correlation between the literacy level achieved in English and training in Cantonese literacy prior to the English instruction. Leung (1983) investigated the relationship between L1 (Chinese) and L2 (English) students' writing in a Hong Kong secondary school, and found a close relationship between the two types of writing. Some of the students' writing problems in the L2 could clearly be traced to their problems in the L1. It was found that good L2 student writers were generally also good L1 writers, and highly rated essays in the L1 and the L2 shared similar text characteristics. Student writers who could not write coherently in the L1 were predictably unable to do so in the L2 either. In an analysis of Japanese and Chinese students writing essays in their respective first languages and in English, Carson et al. (1990) suggest that literacy prowess seems to transfer across languages. More likely, in the writer's opinion, those intellectual strengths governing and underlying language and writing will emerge whenever they are given the opportunity to do so.

The transfer of literacy skill may have a bad effect on students. For example, Mohan and Lo (1985) compared the composition practices of students in Hong Kong and in British Columbia. They found that the school experience of Hong Kong students in writing English compositions was oriented more toward accuracy at the sentence level than toward the development of appropriate discourse organization. Mohan and Lo suggest that deficiency in writing may be developmental, in that students who have not yet developed good strategies for writing in their L1 are unlikely to be able to acquire them in their L2. Lay (1982) would disagree with Mohan and Lo. Lay studied four Chinese subjects who composed in English and found that they tended to switch to their L1 when writing about topics studied or acquired in their L1 or related to their L1 cultural background. She also reports that their L1 served as an aid and not a hindrance to writing. Lay notes that the greater

the number of switches into the L1, the better the quality of the essays in terms of organization and ideas. Sun (1989) studied four Chinese students who were asked to write two English essays, and also found that code-switching can be profitable in generating content and for developing ideas.

Friedlander (1990) looked at 28 Chinese-speaking subjects and found that the writers benefitted most when they matched the language to the topic, Chinese with Chinese, English with English. In other words, they did best when using Chinese when writing on a topic related to that language background, and English on a topic related to their English experience. At the same time, his findings also suggest that Hong Kong students will be able to produce texts with better content when they are able to plan in the language related to the acquisition of topic-area knowledge. Nevertheless, he does not deny that writers will transfer writing abilities and strategies, whether good or deficient, from their L1 to their L2.

2.4.3 Language Errors due to L1 Interference

A number of studies suggest that, in learning English as an L2, some language errors are due to L1 interference. In a study of the language errors produced by Hong Kong students of English, Webster et al. (1987) remark:

"English is an Indo-European language, while Cantonese belongs to the Sino-Tibetan group. The structure and patterns of the language and its culture are consequently further away from English than those of, for example, French or German. As a result many first-language-induced errors are more marked in the case of Cantonese than in the case of a European first language." (p.63)

In learning English, Chinese children have to learn both a new system of thought and a new language. Thinking at a conceptual level in Chinese, Chinese learners first absorb material in their L1 then translate their responses into English.

This gives rise to problems both with understanding and expression. Jones (1979) recorded a natural tendency of Chinese adolescents to think in Chinese before writing English, which leads to characteristic grammatical errors. Equally, the cultural context of the Chinese language is a major source of language learning problems.

Researchers analysing English text written by Hong Kong students have looked at interference from the L1. For example, Webster et al. (1987) analyzed the written work of Hong Kong students and found that a certain degree of interference from Cantonese takes place, although it is hard to specify how much. There are certain areas in which interference from Cantonese is more marked, for example the verb system and problems involving classifiers and discourse markers. Bunton (1991) examined similarities and differences between a sample of errors in the English writing of Hong Kong students and a sample of writing errors of non-native learners of English from a variety of cultural and linguistic backgrounds internationally. He concluded that Hong Kong students make their own distinctive errors, which are substantially different from those made by international learners of English. There is thus a case to be made that transfer effects from Cantonese account for many of these differences, although intralingual and developmental factors and so on are also undoubtedly present. Bunton found clear evidence of negative transfer effects in a good number of the errors that Hong Kong students make in common with international learners of English.

Chan (1991) examined errors made by Form 6 students in Hong Kong in their written English, particularly with reference to structures involving transitive verbs and passive constructions. She found that interference from the L1 accounted for most of the errors committed by students. Sung (1991) investigated the role of language typology and its relationship to language transfer in Hong Kong Cantonese-speaking learners of English and found that L1 topic-prominence served to produce topic-comment structures in the early stages of L2 acquisition.

The point made above may be repeated here, that contrastive analyses focusing on the product of language expression, rather than the process, would seem incapable of allowing absolutely valid inferences about the processes which have been involved. Skinner (1957) abhorred 'mentalism' and the whole idea of drawing inferences about the mental processes involved in the production of language ("verbal behaviour"). Whilst his proposals have now been overtaken by other more persuasive theories, however, the lessons and findings of contrastive analyses should not be dismissed. Thus, although it is fruitful to study language transfer and interference by analyzing written texts, the processes involved in producing the product also deserve scrutiny. Here, a useful technique developed by the writer is to encourage subjects to think aloud and compose aloud when writing. On-the-spot video recordings of the composing and analyses of the transcripts of the thinking-aloud and composing-aloud utterances can then help illuminate the composing process. Comparison of the protocols with the written texts can reveal discrepancies and successes in the transfer between the two languages. At the same time, reference can be made to the video-taped performance to remind subjects about their processing, when asking them to reflect on particular points in the production of writing.

2.4.4 Communication Strategies

When students write, they use different types of strategies to express themselves. Communication strategies include processes of interlingual and intralingual transfer and the context of learning as writers try to get their message across to the reader. Communication strategies are used when precise linguistic forms are for one reason or another not available to the learner at that point in the communication. In speech, non-verbal signals can instantly be used to convey meanings, Cohen and Aphek (1981) reporting on 'good' and 'bad' communication strategies. In writing, when writers lack the precise language to convey in the L2 what they intend to communicate in the L1,

a number of ploys may be chosen. Faerch and Kasper (1983) define communication strategies as "potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular communicative goal" (p.36).

Chesterfield and Chesterfield (1985) found that children are quite creative in getting across messages in the L2, and summarized 12 strategies used by Mexican-American children learning English as an L2. O'Mally et al. (1985b) studied 24 strategies employed by learners of English as an L2 in the United States, some of which were communication strategies. Tarone (1977) studied 9 subjects from three different language backgrounds, comparing the approach of different learners when producing solutions to specific communication problems. Whilst Tarone's study was unable to uncover all the communication strategies used by subjects, a typology of conscious communication strategies was proposed. Varadi (1980) suggests that communication strategies involve various kinds of message adjustment and he attempted to taxonomise communication strategies. Bialystok (1983, 1990) proposed a communication taxonomy structured around three categories: L1-based, L2-based and paralinguistic strategies. Faerch and Kasper (1983a) suggest an approach aimed at setting out the organizational principles of communication strategies, classifying strategies according to the learners' attempts to avoid difficulties, including choosing a reduction strategy or achievement strategies allowing a solution to be reached. Paribakht (1985) proposes four possible approaches to communication problems: the linguistic approach; the contextual approach; the conceptual approach; and mime. Her taxonomy on strategic and language proficiency is extremely complicated.

All these studies are very important in allowing analysts to infer the communication strategies of language learners. However these communication strategies cannot fully explain the strategies which children will resort to when faced with a problem in communicating through writing in the L2. Again, it would seem

very useful to allow children to compose, to record their efforts as objectively as possible, and use these recordings when recruiting the help of the writers in discussing and analysing their own communication strategies.

2.5 Pausing

Matsuhashi and Cooper (1978) studied four unusually competent higher school writers in an effort to determine the reasons for the varying duration of their pauses whilst writing. They found that the writers paused during writing to rehearse, plan and reformulate, and to make decisions about discourse and syntax. The work of Matsuhashi (1981) convincingly demonstrates how discourse purpose influences text production. She found that short pauses occur when writers plan their next words or phrases, and that longer pauses occur when writers are planning sentences. She also suggests that planning time may vary according to the purpose of the discourse: generalizing and persuading have been shown to require more time than reporting. Her pausal study shows that planning highly abstract superordinate sentences requires more time than planning sentences that add supporting details (subordinates), and that writers pause for less time before superordinate (general) terms than before subordinate (specific) terms.

Flowers and Hayes (1981c) found that longer pauses occur when writers are planning global elements, whilst Caufer (1982) showed that writers pause most frequently before conjunctions. Based on observational data of pause time accompanied by hand and eye movements, Matsuhashi (1982) reported that her research subjects would make long pauses. She was able to show that these long pauses, accompanied by gazing or rereading activity and removing the pen from the page, are activities which indicate that the writer is usually making multiple decisions about global and local issues.

Schumacher et al. (1984) studied pauses made by different types of subjects during writing, presenting the results of an investigation of the activities of beginning and advanced college students during pauses in their writing. It was found that higher class students had shorter average pauses than beginning students, but carried out more cognitive (but not grammatical) activities per pause break. Schumacher et al. (1989) also suggest that news story writers paused more often and carried out more activities per writing session than did editorial writers, suggesting greater monitoring activity among the former.

The above research made use of sophisticated methods and instruments to study pauses in writing, succeeding in providing evidence to show that pauses are very important in the writing process. The research subjects involved were invariably advanced students who, because of their high levels of literacy, would often pause for planning. Tse (1984) studied four secondary school students and found that some of them paused too, sometimes to contemplate what to write next, sometimes simply to relax, and sometimes to count words. In other words, the pauses made during writing may be indicative of the demands of the composing process, but may also reflect the demands of the teacher assigning the writing task and the nature of the task itself. At the same time, it would seem well worthwhile examining the nature of pauses characteristically made by children of different ages, to see whether their behaviour reflects differing levels of intellectual maturity. Having looked at the composing process of older students (Tse, 1984), the researcher turned to the efforts of primary school pupils in the present investigation.

2.6 Revising

Revising is an integral component of the composing process, research into this area dealing with the nature and amount of revising, revising of first and subsequent drafts,

kinds of revision, differences in the revisions of writers having different purposes and varying levels of expertise, and with the cognitive processes involved in revision.

Writers differ greatly in the amount of revising they do, with many skilled writers spending far more time on revision than producing the first draft. In contrast, Bracewell et al. (1978) found that 4th Graders hardly revise at all, while Kamler (1980) found that revisions of seven-year-olds are mainly additions. Cranston (1986) investigated revision during composing of 2nd, 4th and 6th Grade writers and did not find that revisions increased with the age of the writer. Emig (1971) found that 12th Graders engaged in no reformulating (editing and revising) in her experiments, while Panko (1979) reported that first-year college students devoted less than 9% of their composing time to rereading and revising. Hoagland (1984) found that community college students made more total revisions, and more surface changes in particular when writing to a teacher audience than to a counsellor, a high school student or a business audience. Clearly, writers differ widely in the amount they revise and, generally speaking, it appears that expert writers make more revisions than novices (Hayes et al., 1987).

Writers often write more than one draft. They also often make more revisions while writing the first draft than subsequent drafts (Faigley and Witte, 1981). First draft revisions are often premature editing, with concern about surface features causing writers to interrupt the flow of composing (Perl, 1979). They pay less attention to major reorganization of the text or additions to content (Sommers, 1980). Bracewell et al. (1978) found evidence that the revisions made by 8th Graders actually made their composition worse. However, Bridwell (1980) reported that 12th Graders' second drafts were considerably better in "general merit and mechanics" than their first drafts. McNabb (1938) found that four experienced college writers also revised and improved their writing by elaborating upon previous drafts.

During revising, expert and novice writers attend to different aspects of text. Bereiter and Scardamalia (1983) found that, under ordinary circumstances, the CDO (Compare, Diagnose, Operate) revising process is not often engaged in by children. Calkins (1980b) studied the revision strategies of seventeen 3rd Graders and classified them into four groups: random drafting, refining, transition and interacting. These groups reflect developmental stages. Eight of the subjects were refiners who made cosmetic and lexical changes, whereas the last two groups liked to write new drafts. Stallard's research (1974) revealed that only 2.5% of 12th Graders' revisions were focused above the word and sentence level. Bridwell (1980) found that most of the revisions (56%) made by the 12th Graders were at the surface or lexical level. Sommers (1980) studied inexperienced (children) and experienced (adult) writers and found that the inexperienced writers made more word and phrase-level changes than did the adults. The adults, in contrast, made more sentence level and theme level changes.

Faigley and Witte (1981) found that expert writers were more likely to make global revisions and revisions that significantly changed the meaning than inexperienced writers. Hayes et al. (1987) provide confirmation of these observations in a protocol study of college freshmen and of experienced writers. On the whole, young children and even many unskilled college students confine their revisions to cosmetic, lexical and clause levels. Expert writers, in contrast, attended more to global problems. Matsushashi and Copper (1978) were able to demonstrate that their research subjects used different revision strategies for narrative essays than for transactional essays.

The ability to detect text problems and the ability to solve these problems are quite different. Bartlett (1981) compared the ability of 5th Grade students to revise their own and other students' texts, and found that the students were able to detect

more faulty expressions in the texts of other students than in their own work. Bartlett also found that 6th and 7th Graders were able to solve only about half of the problems they detected. Scardamalia and Bereiter (1983) found that 6th to 8th Grade students' output is limited much more by their ability to deal with problems than by their ability to detect them. Epes (1985) found that the scanning techniques favoured by many adult writers hindered their detection of many of their own omitted inflectional suffixes and other errors.

Some researchers have proposed instructional routines for improving the ability to revise. Olson (1990) suggests that peer feedback has positive effects on writing quality, while Bernhardt (1988) notes that time for revision is important, with extra time resulting in more powerful demonstrations of students' writing ability. Roen (1985) found that, when college freshmen revise their writing, keeping in mind the intended audience during revising was an effective strategy. Wallace and Hayes (1991) showed how college freshmen can review globally if taught to do so.

Several researchers have proposed models of the cognitive processes operating during revising. Nold (1982) describes revising as a process which involves evaluating the text against the writer's plans, the intended audience, the meaning to be conveyed, the appropriate syntax and the lay-out of the product. Scardamalia and Bereiter (1983b) in their CDO (Compare, Diagnose, Operate) model suggest that, during writing, two kinds of representations are built up and stored in long-term memory: the intended and the executed representation. The CDO process is induced by a perceived mismatch between the two. Hayes et al. (1987) propose a revision model of composing involving subprocesses which include task definition, evaluation, problem representation, detection, diagnosis and strategy selection. Such models are useful for advancing research into revising and allowing researchers to identify and examine key aspects in the revising process itself.

The above studies provide a theoretical framework for almost all aspects of revising, and would seem quite suitable for studying the revising behaviour of writers of Chinese, children and adults. However, as mentioned earlier, previous research into written Chinese seems preoccupied with studies of error analysis, rather than the composing process itself.

2.7 The Composing Process in a Second Language

Fewer studies have been made of L2 than of L1 composing processes. Although it may be argued that Hong Kong is not the most valid representation of an L2 society (HKED, 1989), it is almost certainly the world's most homogeneous assembly of Chinese speakers with English as their L2. There are hence several studies which use Hong Kong students as research subjects. Nattress (1986) studied 6 Hong Kong tertiary level students in an effort to investigate the composing process of L2 writers, particularly the differences between skilled and unskilled writers and the strategies they use to overcome language-related difficulties when writing. It was found that the differences between skilled and unskilled writers include the amount of planning, the recursiveness of the composing process, the amount of reading, the purposes of revisions, pausing behaviour and the organization of ideas. It was also found that unskilled writers used risk avoidance strategies to minimize errors.

Chan (1989) investigated the types of strategies that bilingual university student writers adopt when they write, and found no significant differences between the basic strategies used when the writers produced text in either language. Arndt (1987) compared the composing processes in Chinese and English of six postgraduate Chinese students and found the composing strategies of individual writers remained consistent across languages. There are no substantial studies, apart from those mentioned earlier in this review, of L2 composing process of Hong Kong children.

Several themes and concepts have been developed in L2 writing process studies. Zamel (1983) studied six university students and found that skilled L2 writers in her study revised more and spent more time on their essays than unskilled writers. Several drafts were written by each skilled writer but, in general, they devoted the greatest proportion of their time to the creation of the first draft. The less skilled writers focused on less global aspects of their essays in their determination not to commit errors. They therefore attended to avoiding all errors from the start and their fluency of expression hence suffered. Jones (1982) studied university student writers and concluded that the poor writers he discovered had never learned how to compose properly. He argued that lack of competence in composing was the main source of difficulty of his subjects in their writing, rather than any specific lack in English competence. In similar vein, a number of researchers (Jacobs, 1982; Jones, 1982; Lay, 1982; Raimes, 1985b; Zamel, 1982, 1983) support the theme that it is the limitation in composing competence which is chiefly responsible for the problems students face when writing in the L2, rather than simply difficulties with or lack of proficiency in the L2 itself. Another general conclusion here is that, whereas the problems of poor L2 writers spring largely from inappropriate writing strategies, the successes of proficient L2 writers result from effective strategies of evaluation and text generation.

From a different perspective, Zamel (1983) found that the composing skills of proficient L2 writers are very similar to those of proficient L1 writers, and that the composing processes of "unskilled" L2 writers are similar to those of "unskilled" L1 writers. Zamel therefore argued that the differences between L1 and L2 writers when composing probably relate more to composing proficiency rather than to the influence of their mother tongue. Edelsky (1982) compared the L1 and L2 writing of bilingual children and supported the notion that the knowledge writers already have about the writing process in their mother tongue is applied to rather than interferes with writing in another language. Schiller (1989) noted that there were no significant differences

between the L1 and L2 composing behaviours for four out of five student writers. In a study of writers generating English texts in the L1 and L2, Jones and Tetroe (1987) found that writing strategies used with the L1 invariably were transferred to L2 writing, and that this transfer took place irrespective of language proficiency. Chelala (1981) conducted a case study of coherence in L2 composing and found that her subjects used the L1 for prewriting and switched back and forth between the L1 and L2. She argued that one's L1 writing process transfers to, or is reflected in, one's L2 writing process, a view strongly endorsed by Leung (1983) and Friedlander (1990). Certain writing tasks, especially those related to culture-bound topics, draw upon the L1 more extensively when writing in an L2 (Lay, 1982; Johnson, 1985).

A number of studies have looked at the differences between the composing processes of L2 writers and of L1 writers. Martin-Betancourt (1986) found that her subjects' writing processing involved solving linguistic problems and that the use of the L1 in L2 writing added to the problems here, especially in vocabulary; Arndt (1987) reported that there are differences in L1 and L2 writing processes especially associated with vocabulary; Raimes (1987) concluded that L2 writers were different from L1 writers in that the former accept without question the need to look over, edit and correct their work whenever they write.

On the whole, the patterns emerging from the above studies seem to suggest that L2 composing is structurally very similar to L1 composing. As most of the research subjects involved have been students who are at least already fairly proficient in the L2, linguistic proficiency is not always reported to be a serious obstacle to L2 writing. As there are very few studies conducted with beginning L2 learners, there is little evidence to infer that the above findings apply without qualification to beginning L2 learners.

2.8 Teaching Writing in Hong Kong

Researching the teaching of Chinese writing in Hong Kong, Ho (1979) compared two methods of responding to and evaluating students' compositions and found that correcting by symbols was preferable to detailed correction of the students' writing. Shum (1990) studied the effectiveness of different methods of evaluating the compositions of 120 senior secondary school students using four methods: meticulous correction, correcting with symbols, self-correcting and peer check-list evaluation. Shum found the peer-check list evaluation method to be the most effective.

Tse and Shum (1989) investigated the effectiveness of using the process approach to teach 40 students to compose in Chinese. An experimental group was taught through the process approach, whilst the conventional traditional method of teaching writing was adopted with the control group. It was found that the experimental group were significantly better in terms of content and discourse than the control group. In follow-up interviews, the students in the experimental group expressed a liking for the process approach to teaching writing.

On the whole, research into teaching writing in Chinese has attracted less attention than the teaching of English writing in Hong Kong. Mohan and Lo (1985) studied a group of Chinese students, comparing their compositions with those by students from British Columbia. They found that organization at the discourse level was stressed in the British Columbian schools, whereas Hong Kong school practice seemed to be directed more toward sentence-level accuracy. Mohan and Lo report that many Hong Kong teachers of English believe that the most serious problem their students have is their incorrect English usage. Hong Kong teachers seem to assume that accuracy must be acquired first before other aspects of writing, such as text organisation, can be attended to and taught. Mohan and Lo argue that this emphasis is partly encouraged by the Hong Kong Certificate of Education Examination

(HKCEE), which allocates a high proportion of marks to accuracy in its marking scheme.

Traditional L2 writing pedagogy is based on product-centred L2 writing instruction with excessive emphasis on form and correctness, usually to the neglect of idea-generation and expression of meaning. The introduction of the Revised Syllabi (CDC, 1981; CDC, 1983) and the recommendation that teachers use the communicative approach to English ought to have changed the trend. However, the Education Department (HKED, 1989) concedes that neither the Syllabi nor the communicative approach have been implemented widely and that traditional methods still prevail.

Chan and Lau (1989) conducted a survey to examine views of primary language teachers towards communicative language teaching and language education in Hong Kong. 209 teachers completed a questionnaire and 20 subjects were selected randomly and interviewed. The researchers claimed that the teachers were fairly representative of Hong Kong primary language teachers. 86% of the respondents said that they frequently used language games in their lessons and 64% said they used group work in their classrooms. The researchers noted that, despite the teachers' apparent enthusiasm and support, as expressed in the questionnaire for what they claimed were 'communicative' activities, they were in fact sceptical and hesitant about bringing innovative changes into their classrooms. The reasons for this offered by the teachers often referred to various constraints they encountered in the school setting. (The teachers also pointed that there were features of the communicative approach they found difficult to import into the classroom. They also admitted that "they were more comfortable with their habitual teaching pattern" (p.75).)

There is certainly much to be gained from the new awareness of what writing actually involves and the current orientation towards process in the teaching of

writing. Research on the effectiveness of the process approach was carried out in Hong Kong by Stewart (1988) in a small class at tertiary level with a parallel class using a more traditional approach for comparison. The process approach was used for teaching writing in the experimental class for fifteen weeks, after which it was found that, among the experimental subjects, there was a significant increase in the information load of content and improvements both in terms of language structures and discourse concerns. The class also gained greater self-confidence in their writing ability and their examination results were better. Such gains were not found in the comparison class.

Tsang and Wong (1992) reported a study of 6 tertiary level students following a 16 hour writing programme on the process of writing. They found that the subjects' early drafts showed changes in content and organization, while later drafts were marked by revisions of language use and mechanics. A comparison of the first and second assignments indicated numerical gains in content and organization scores. Improvement in content and discourse organization was substantial, but improvement at the sentence level was minimal. Tsang and Wong claim that the programme was effective in helping subjects overcome mental blocks and in spotting illogical structures.

Pertinent studies have also been conducted in secondary schools. Cheung (1989) conducted an investigation on 40 Form 1 learners with differing language ability, with 3 subjects from the group chosen for a more detailed study. The process approach was used for teaching English writing over a 13 week period. The results showed that the method was both meaningful and rewarding and that all the subjects considered the approach helped them write and rewrite better. Keh (1989) reports a 30 hour writing course using the process approach with Form 5 students. The evaluation of the course was positive with clear improvements in the students' writing

in terms of content, organization and even grammar. The students' attitudes toward writing were also more positive.

The above research provides evidence that the process approach to teaching writing produces positive results, and all of the researchers concerned urge teachers of writing to experiment with it in their courses. However, almost all of the studies have been conducted with small samples and mostly with senior forms. There are no published reports of the method being validated in primary schools or of studies of the effectiveness of the process approach with beginning writers. Since 90% of primary schools in Hong Kong are Chinese-medium with English taught only as just another subject on the timetable, this is not surprising and this is one of the key reasons why there has been so little concern about studying the composing processes of primary school pupils writing in English.

2.9 Concluding remarks

In the past thirty years, researchers interested in writing have increasingly directed attention to the composing process. Hayes and Flowers (1986) point out that there has been a significant shift of emphasis in research into the teaching of writing, the focus changing from the products of writing to the writing process itself. From the wealth of studies cited above, it seems clear that research into the composing process in the L1 is well developed in the West. However, similar studies of composing in Chinese are sparse and empirical studies of this type seem lacking in China. This may partly be attributed to the closed-door policies of China during the 1960's and 1970's. Throughout this period, research in China, Hong Kong and Taiwan into writing in Chinese was dominated by looking at the product of writing, rather than the composing processes itself.

This is a great pity for, during this period, research in the West was leading to the generation of models of the composing process, writing theories, specific subsystems of L1 composing processes, the composing characteristics of successful and unsuccessful writers, specific types of L1 writers, composing strategies, children's writing preferences and so on. Whilst the findings of such research are clearly pertinent to writing in Chinese, researchers are left to presume that writing in phonemic and ideographic language systems are essentially the same. It was hoped that the present study, in a modest way, might examine this presumption. At the same time, the approaches adopted by previous researchers are very useful references for the framework, theoretical rationale and research methods used in the present study.

Another issue emerging from the present review of literature is the dilemma facing researchers exploring any fairly uncharted area: whether to spread the focus and gather quantitative evidence from a large number of subjects, or whether to focus on a smaller number and conduct more qualitative in-depth analyses. Taking a lead from distinguished researchers in the field, the researcher in the present study decided to opt for the latter. Instantly, this placed him in the position of having to decide whether to focus rather ambitiously on all aspects of the composing process in Chinese and in English in one study, or to concentrate more narrowly on individual subsystems. The researcher decided from the outset to study the generating, transforming, pausing and revising subprocesses and to concentrate on a small sample of children in the formative stages of writing in Hong Kong. It is hoped that the present research helps chart the ground for further research.

One area of composing of personal concern to the writer is the role of mental imagery. This is an important element in thinking, but there are very few studies looking at the role of imagery in composing, especially in Chinese. It is important to consider the sources of knowledge and criteria for selection of writing material if one

is to try to understand the subprocess of generating, and the problems writers experience in generating material. Another area attracting the researcher's interest is that of transformation, including the changes of ideas, language, and expression involved as writers convert thinking into text. As discussed earlier, many Chinese scholars claim that thinking in Cantonese interferes with MSWC, leading to errors in writing. The writer's review of literature reveals that the focus of far too many studies has been on contrastive analysis of Cantonese and MSWC, achieved through analyzing the written products rather than the processes beneath their production.

In the Hong Kong context, where English is so highly valued, there has been a tendency for writing researchers to focus on the influence of Chinese on written English, but, again, the emphasis has tended to be on the product rather than production. The writer set out in this study to see whether an examination of the protocols of Cantonese accounts of what writers said they would write would reveal transformation effects prompted by the rigours of actually writing in MSWC and in English. Such transformations reflect the discrepancies between the intended and executed representations of writers.

The whole area of pausing during composing is interesting but is hard to research objectively, for there is no written evidence to consult or make available for independent scrutiny. At the same time, there are relatively few studies of pausing in child writers. Of the four broad areas selected, research into revision is more prolific, probably because the scripts available can be gathered in large numbers and analysed independently by teams of researchers. Sadly, research into revising strategies has been side-tracked by studies of error analysis, directing attention away from the process of composing to devising instructional routines for overcoming errors. There are hence important unresearched areas in Hong Kong, such as the issue of whether it is better to help students master revising strategies; to encourage expressive and adventurous writing; the teaching of creative poetry, prose and so on.

The above review is also complicated by the need to balance studies of L1 and L2 composing. The weight of evidence suggests that L1 and L2 abilities are interdependent, rather than systems working in separate domains. However, the two systems within any one person are only likely to be entirely congruent in people who are equally competent in both languages. As children in Hong Kong learn English and Chinese, a comparative study of their composing in the two language would seem potentially profitable. The Llewellyn Report (1982) makes it clear that, within a few decades, the largest single ethnic group of people on earth with English as their first foreign language or L2 will be the Chinese. Hence, studies involving these two groups, however modest in scale, should be encouraged.

The present review has also revealed that there have been very few studies of the composing process either in Chinese or in English of beginning writers in Hong Kong. As Graves (1981a) points out, more information on child behaviour and decisions during the process are needed, rather than post hoc speculations on children's activities during writing based on writing products alone. The present study took primary school pupils as research subjects to help fill this gap in the research literature. A clearer picture of the composing process is essential if modern teaching approaches, such as the process approach to teaching writing, are to be introduced successfully into Hong Kong. As Zamel (1983) advocates, teachers will only find out how best to teach if they know how learners learn.

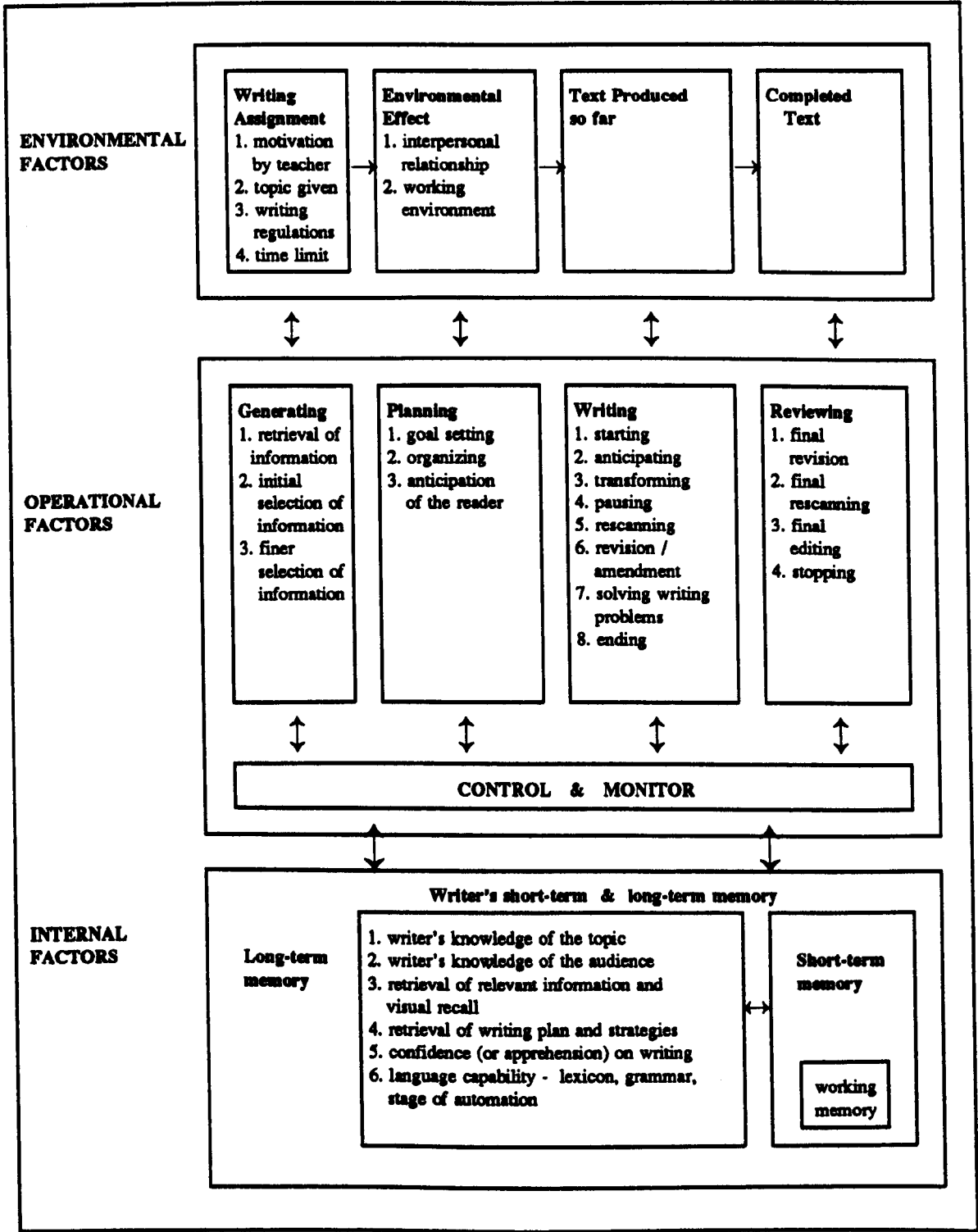
Chapter Three

A Model of the Composing Process

3.1 Introduction

This chapter sets out the model (see Fig. 3.1) representing the composing process of students in Hong Kong drawn up by the writer of this study, upon which much of the discussion in this thesis is based. In three recent research studies of the writing processes of small samples of Hong Kong students writing Chinese compositions (Tse, 1984; 1990a; Tse & Law 1991), the writer found that students generally follow a common sequence of broad stages in their composing: pre-writing, writing and reviewing. The processes and subprocesses which feature within these stages were found generally to be common, with individual variations reflecting the influence of variables external to the model itself. The model of the writing process discussed in this Chapter was developed, partly on the basis of the research carried out by the researcher of this study and described in more detail in Chapter Two and partly on the basis of similar deliberations about the writing process advanced by scholars such as Emig (1971), Hayes and Flowers (1980b) and Bereiter and Scadamalia (1987). It is hoped that, although the model cannot represent in its entirety the composing process of children in Hong Kong, it can serve as a means of advancing the eventual production of a valid model of the processing which takes place when they write. A clearer understanding of the relationship between the various subprocesses and dimensions in the model should be invaluable for theorists, authors of children's text books, curriculum designers and classroom practitioners.

Figure 3.1 A model of the composing process



3.2 Factors Influencing the Composing Process

Whenever a person writes, a number of factors will influence performance. For the purposes of the present study, these have been categorised into three broad groups: cognitive factors, representing the intellectual processes and capabilities possessed by all people but varying in degree and efficiency from person to person; operational factors, representing the learned strategies, procedural and physical, used by individuals to effect writing (the model); and environmental factors, representing those external forces which cue the first two sets of factors and which help determine the nature of their operation.

3.2.1 Cognitive Factors

Whilst immediate decisions taking place during the composing process are made consciously in short-term memory, such decisions are influenced by cognitive systems in long-term store which have been involved during the apprehension, processing and storage of previous experiences, and by routines which have been mastered in the past. The limits of the processing are thus dependent upon three main sets of parameters: first there are the limits of working memory, the number of items which can be usefully kept in mind during on-going processing (Baddeley and Hitch, 1974); then there are the limits of short-term memory, with its finite capacity for isolated and chunked items of information (Miller, 1956; Fodor, Bever and Garrett, 1974); and third there are limits of long-term memory, usually associated with inefficiencies in the initial apprehension, organisation and storage of perceived information, the efficiency of the systems for accessing stored information and retrieving it, and previous experiences and familiarity with the topic in hand (Baddeley, 1990; Bereiter and Scardamalia, 1987).

Although it might appear that limitations in conscious processing seem the most obvious obstacles to smooth composing, it soon becomes apparent that immediate processing is reliant on past experiences and how well these have been understood, and on the efficiency of the systems used in the organisation and comprehension of environmental input. An example will help illustrate the problem. A person setting out to write an account of how to divide one simple fraction by another must first know how to execute this mathematical operation in principle. Knowledge and organisation of the correct routine may have been based upon a thorough understanding of multiplication and inverses, or simply upon learning an algorithm for producing the right answer. Whatever, unless one is familiar with the steps involved one cannot even begin to explain the procedure. If one is familiar with the procedure, and depending on how much practice one has had in applying it successfully in the past, one can then set about recalling it from long-term memory store.

Of course, the initial cuing derives from being assigned the task, which is held in short-term store whilst the necessary searching of filed information in the brain is taking place (Flower and Hayes 1981). Once this has been accessed, its retrieved form may be in the form of an exact replica of a particular experience; based upon a verbally encoded rule ("take the second fraction, turn it upside-down and multiply"); based upon notational imagery; or based upon an awareness of the mathematical principles involved. Whichever, each step must be held in mind (short-term store) whilst the writer occupies the rest of the mind in calling upon knowledge of writing systems and language for putting the mentally held ideas into concrete print. It may be that working memory is large enough to hold the entire set from the start; alternatively, one may be relying on individual steps in the chain to cue the next step in the sequence. If everything is running efficiently and one's language and powers of expression are adequate, then the person will proceed until the printed account is judged to correspond with the mental scheme.

However, imagine the problem of the child from Hong Kong faced with writing such an account in MSWC. The initial experiences have most probably been carried out and executed in spoken Cantonese, but these will now have to be retrieved and translated into MSWC. Depending on how familiar the child is with the routine and the skill of the child in the Cantonese-MSWC conversion routine, then working memory may (a) either be exceeded and the task only be completed by pausing and having to work things out again and again; or (b) be quite adequate and the account be written in an uninterrupted flow. On the other hand, the child may know how to execute the operation in figures but not in words; and may even be in the position of trying to explain an answer which has sprung into mind without any apparent thinking.

Matters are complicated even further if the task is to be performed in English, the L2. Here, working memory which operated smoothly in the L1 may be so taxed by having to expend core capacity space to the act of translation, that overall capacity is exceeded and the operator has to pause several times to rethink and review matters. Failure or excessive time spent on the task may be due to cognitive overload (Biggs, 1987); the absence of language appropriate to the task; an unwillingness to apply oneself; or lack of confidence. It may also be due to sheer carelessness - a familiar experience with troublesome pupils for many teachers.

3.2.2 Environmental Factors

These are factors external to writers that influence their writing performance. These include the nature of the writing assignment and the description of the topic given to the writers, any time limits and whatever writing regulations may have been given. In school, before allowing the children to write, teachers may motivate them to write or provide guidance of some sort. Equally, topics will usually be carefully considered with the pupils' competence and language sophistication in mind. The teacher may also offer an indication of the writer's target audience, the people who may read the

written product. Sometimes the topic itself will indicate the audience so that, from the start the writer is aware of the intended audience.

People are able to write more confidently about things with which they are familiar (Caccamise, 1987). Equally, they are able to picture the eventual shape or gist of their writing if their conceptualisation of the end product is clear. Hence, they are usually happier with a narrative task, or writing a description about a phenomenon they understand well. Sometimes teachers will, depending upon their purpose, assign narrative tasks, sometimes ask children to write in a transactional way about a familiar concept, sometimes ask them to write about ideas which are much more abstract in their eventual form, and sometimes ask the child to write poetically using words which embellish thoughts and ideas in an imaginative way (Perera, 1984). The teachers' instructions to the writer may make it clear whether the writing task is specific or general. Additional instructions may include details about the scope, the language requirements, form of writing, objectives, the length of the composition and the time allowed for the completion of the writing task (Tse & Lam 1992).

To successfully persuade and stimulate children to write, good interpersonal relationships are essential and the teacher must ensure that confidence in the writer's ability to cope with the task in hand is exuded. During the writing process itself, the presence of the task assigner may exert pressure on the writers, especially if they feel that their every word is being scrutinised as it emerges. To alleviate this, it may be necessary to establish mutual confidence and friendly relationships between the writer and the task assigner.

It is crucial for the physical environment in which the assignment is completed to be stress-free and comfortable. Obvious variables in this category include the lighting, room temperature, writing instruments, desk and so on. The environment can

also affect the writer's sense of purpose and the interpersonal relationships with the task assigner can influence the emotional disposition of the writer toward the task. The production of a written text with which the writers are satisfied depends largely on how well they are motivated. As they constantly refer to and rescan "the text produced so far" (Flower and Hayes, 1980b), writers need to be encouraged to persist with the task of shaping their writing, to anticipate the writing which is to come, and to review their efforts to see whether they have managed to convey what they intended to say.

3.3 Operational Stages and Subprocesses in the Composing Process

These can be broadly categorised as generating, planning, writing and reviewing. The generating process is the retrieval of prior knowledge related to the task in hand, and the selection of appropriate information to support the production of written material. Planning is the mental arrangement of the material prior to putting pen to paper which is carried out in order to meet the writer's purposes and objectives. It thus involves goal-setting, anticipating the audience and organization. Writing is the process of actually writing words on paper and involves the following subprocesses: starting, anticipating, transforming, pausing, reviewing, rescanning, solving problems, revising and ending. The operations in the reviewing stage are carried out to refine and improve the written text, and consist of final revising, final rescanning, final editing and stopping (Emig, 1971; Flower & Hayes, 1981a; Bereiter & Scardamalia, 1987). Of course, during the course of writing, writers will often try to correct any errors and make revisions as they go along. This is what Krashen (1981) refers to as "monitoring".

It must be stressed here that the writing process is not a serial-stage, linear and one-way affair. Sometimes it is 'top-down' directed, in the sense that what is being

written is being generated solely from information brought to the act. Sometimes it is 'bottom-up' directed, in the sense that the very words appearing on the page are instrumental in cuing others. And sometimes it is 'interactional', a mixture of the above, with the words cuing the recall of information and the generation of words which otherwise would not have been considered. The research by Hayes and Flowers (1980) makes it clear that the writing process has a recursive nature, with the writing process being able to be conceptualised as a series of 'stages', but rarely operating in a linear fashion, either top-down or bottom-up. Nevertheless, placing the various subprocesses within a structural representation facilitates understanding of the process as a whole. The model of the composing process produced by the present researcher for the purposes of the present study is shown in Figures 3.1.

3.3.1 Orienting Oneself toward Writing, Selecting a Topic, and Generating Ideas

When several topics from which to choose are given to writers, they may delve into their background knowledge and previous experience of the topics before making a choice. Schemata of various kinds underlie one's organization of experience and help one assimilate new information more rapidly as it is encountered (Schank and Abelson, 1977). Thus, on reflecting upon a likely topic to write about, writers are likely to be influenced by the clarity and importance of their mental schemata associated with what they know about the topic. The process of schemata recollection may be facilitated by the process of visualising or thinking about past experiences in the form of images, which may sometimes appear in the form of still or moving pictures (Tse, 1990a). At the same time, writers are increasingly likely with age and experience to be influenced when thinking about writing by their understanding of "content" and "story structure" schemata (Ohlhausen and Roller, 1988). King and Rentel (1981) found that an increase in knowledge of story schemata and text conventions or functions significantly increased the number and type of functions

present in the writing of children. Writing plans and writing strategies learned in the past may also be recollected, and these are often most helpful to novice writers (Flower and Hayes, 1981b).

When selecting topics to write about, experienced writers are usually primarily concerned about content, and less influenced by their general ability to write coherently and adequately. In contrast, many novice writers will instinctively consider whether they have the language capability to write about a prospective topic (Perera, 1984). This is especially so in the case of writing in an L2 (Cummins, 1984; McLaughlin, 1987), for people writing in an L2 will often be swayed in their approach by their confidence in the likely vocabulary, sentence constructions, grammar and syntax involved (Biggs, 1987). Past experience of writing may also have psychological effects on writers, with success in the past positively building up confidence. On the other hand, past failures may stimulate apprehension about writing (Rose, 1984). Daly and Miller (1975) developed a test to measure the writing apprehension of students and found that highly apprehensive writers are conscious about writing failures in the past and expect less of themselves.

Both the Plowden Report (HMSO, 1966) and the Bullock Report (DES, 1975) make it clear that the approach of primary school children to their writing is strongly influenced by the style of teaching they have received, and both Reports recommend that young children be allowed lots of opportunities for free writing before being "disciplined" in formal writing techniques. Children taught how to write through extensive writing, will confidently tackle any topic; those extensively subjected to writing exercises will usually approach a writing task considering whether their writing skill is adequate to the task.

A sense of audience is essential for good writing, but this point is not always obvious to children (Britton, et al., 1979). Children tend to be egocentric in the early stages of their cognitive development, less so as they grow older. Graves (1981a) found that, as children develop as writers, their writing shifts from being egocentric to sociocentric in inclination. Graves suggests that egocentricity prevents young writers from considering the importance of knowledge of the audience and hinders their ability to revise their writing. The writer of this study found that Hong Kong students often take their teachers as their intended audience (Tse, 1984). Most of their writing is done in school, they know that their teacher is going to correct their compositions, and that a grade will be given according to the value judgement of their teacher. They thus tend to write according to the expectations of the particular teacher who is to read what they write.

Writers will usually select topics according to external and personal criteria. Having chosen a topic, they will usually seek to retrieve information relevant to the topic and, in doing so, may retrieve more information than they actually need (Bereiter and Scardamalia, 1987). They then have to sort through the information and select that which may be relevant. The finer selection of information and further narrowing down of information may be influenced by any writing rubric or social convention, any instructions given and by the level of their own confidence in themselves as writers.

3.3.2 Planning and Organizing

Taking due regard of the writing assignment and the intended reading audience, writers will usually set themselves goals for writing. If they are highly motivated, they may set themselves stringent, demanding or ambitious targets. If they regard the writing as routine and transactional, they may complete it in a casual or routine

manner. According to Bereiter and Scardamalia (1987), if the writer is a 'knowledge-telling' type, he or she may not try to reorganize the ideas retrieved to any great extent and may simply put them down in the order in which they occur. On the other hand, if writers are of the 'knowledge-transforming' type, they may try to reorganize and restructure their ideas and knowledge before putting pen to paper in order to suit their purpose. As mentioned above, the sophistication of a writer's planning and organisation prior to writing will also depend upon his or her knowledge of content and text schemata (Ohlhausen and Roller, 1988).

3.3.3 The Actual Process of Writing

This is the process of actually writing words. Hayes and Flowers (1980) refer to this as "translating", the process of taking material from memory under the guidance of the writing plan and transforming it into acceptable written language.

Starting to write is not always easy, for each piece needs an introduction in terms precisely suited to the writer's purposes. The introduction is also usually written with a view to the writing that will follow, according to a plan which might either be fairly well thought through or prescribed, or it may be tentative with the structure of the piece taking shape as further ideas and words are added or assembled. Irrespective of the degree of planned structure, writers will usually add text which is intended to follow on in some way from what has already been written and usually anticipate that which may follow. The degree to which the elements in the script interlock and the way sentences and paragraphs naturally follow on in a thematic progression will determine the cohesiveness of the text (Halliday and Hassan, 1976; Emig, 1971). Students writing in Chinese in schools in Hong Kong have impressed upon them from the start by their teachers the importance of a good beginning (CDC, 1990a), and exercises are often given on how to open a piece of writing. In fact, the repeated emphasis on starting well may often bring psychological stress on students

and cause them to experience great difficulty in starting to write the first sentence (Rose, 1981; Tse, 1984).

When writers are writing, especially novice writers or writers writing in a hurry, they may not write down first time precisely what they want to say. They may not be happy with their choice of words, may change their mind and decide to write something else in the course of writing, or may be experiencing linguistic problems. At the same time, there is often a discrepancy between ideas expressed in speech or partly thought through and the way these can be expressed in print. Dealing with these discrepancies usually calls for some degree of transforming (Tse, 1984). Transformation refers to the modification and altering of ideas in the head for the purposes of writing, and may involve adding new words, deleting others, and the reordering, substitution, combining and embedding of ideas (Emig, 1971; Graves, 1984).

During the process of writing, writers often pause for the purpose of thinking, generating, planning, rescanning, expressing feelings and the like. These intervals of physical inactivity may be of varying duration and be occasions for decision making, planning, problem solving, reflection or simply taking a rest (Matsuhashi, 1981). 'Rescanning' refers to the act of looking over what has been written, and may involve a few words only, sentences, paragraphs or the complete script. However, rescanning does not refer to the careful rereading of the entire script, for this is usually referred to as 'reviewing'. During rescanning, ideas may be generated and revisions made (Tse, 1984).

During the course of writing, writers usually constantly revise their work, reading it through and checking that it makes sense, making improvements or corrections. Murray (1978) proposes that, for accomplished writers, most of their "writing is rewriting", whereas Bracewell et al. (1987) found that 4th Graders hardly

revise at all. Hayes et al. (1987) conclude that writers differ widely in the amount they revise and report that, in general, the more expert the writer, the greater the proportion of writing time the writer will spend on revision.

Right from the first word, some writers are conscious of the style of their writing and will think hard about the effect their writing will have on the reader. For some people, aesthetic aspects of style are all important, as well as the force of the rhetoric in any argument or case put forward. Such considerations are rarely uppermost in the mind of struggling writers, who may have writing blocks (Rose, 1981). Similarly, writers in an L2 often feel constrained or even frustrated, aware that they are rarely able to put exactly into words ideas they have formulated in their mother tongue (Perera, 1984; McLaughlin, 1987).

For many writers, ending a piece of writing is as difficult as starting. Depending on the semantic nature of the text, the end may simply be an account of the final part of the written message, or the writer may feel it necessary to conclude with a statement which brings to a close the line of discussion in the preceding text. It is not always necessary to draw together all the loose strands in the text, and the end may draw the reader's attention to open or unresolved issues. More generally, however, writers usually end the writing in a manner which clearly signals that the writing is complete. Writing in Chinese is in some respects quite similar, but there are common rules for good endings in Chinese writing. The ending must usually be related to the opening, should imply inferences or conclusions, or set out implications (Tse, 1984, 1990a).

3.3.4 Reviewing

During revision, especially once the first draft is complete, the writer may review the entire script to see whether it accurately expresses the intended meaning. There is

usually an intentional element of proof-reading at this stage, and there may also be final revisions and editing. The writer may also check or count the number of words written. Sometimes, the writer may critically read the entire script and it is only when the writing meets his or her satisfaction, or the writer wishes to make no further additions or improvements, that the script is looked upon as 'finished'. Writers stop writing, not when they put the pen down or stop typing, but when they think they have written all they wish to write about the topic at that particular time.

3.3.5 Monitoring

Monitoring usually has two meanings in the field of writing. It may refer to an evaluative, retrospective assessment of what one has written, or may be used in terms of Krashen's (1981) 'Monitor Model' of language acquisition. From the former point of view, the act of monitoring performance may be of a personal nature, but for most children in school it consists of looking at the reactions of the teacher to what has been written to see how critically efforts have been received. Krashen (1981) uses the term 'monitoring' to refer to the way the learner's linguistic expression lacks fluency if the speaker or writer is constantly and consciously aware of making utterances correctly and making them comply with learnt rules. Krashen says that this is the outcome of too much attention to the formal, rather than communicative, aspects of language learning, and suggests that fluency only comes when the speaker or writer is concerned more with getting meaning across than in the form in which it is conveyed. Writers inevitably monitor their language production, paying attention to choice of vocabulary, grammar, phrasing and the clarity of the discourse. Bereiter and Scardamalia (1987) state:

"Writing appears as an activity in which the Monitor plays an unusually large role, compared to most oral language activities - an essential role, in that so many writing conventions must be applied consciously at first, but a role that could be severely constraining on children's generative capabilities." (p.107)

Besides the above factors, there are also performance components (Sternberg, 1980) and production factors (Bereiter and Scardamalia, 1987). These are processes employed whilst carrying out decisions arrived at through the interplay of goals, plans, strategies and so forth. Performance components refer to the writer's intelligence, creativity and mental alertness. Production factors include such subprocesses as searching memory, recognizing relevant information, and evaluating verbal statements (Hillocks, 1986).

3.4 Limitations of the Model

The model presented above is quite clearly not an all-embracing description of the composing process in its entirety. For example, the way a ten-year-old sets about reporting a personal experience to a relative differs greatly from the way a scientist would write a carefully worded research report to learned colleagues. The production of such a general model was beyond the scope of the present study and the capabilities of a single researcher operating within a specific cultural and subject setting. Nor is the purpose of the present study to 'test to destruction' the validity of the model which has been proposed. The model as such serves the purpose of illustrating the composing process in general and the inter-relationship of generating, transforming, pausing and revision against other components and subprocesses. It was hoped that, when the present research had been completed, a clearer idea would be obtained about the next steps in the eventual resolution of a model with wider generality. Equally, it is hoped that the accounts in the chapters which follow of the subjects' performance on various elements within the model will help amplify and clarify the nature of the composing process.

Chapter Four

Research Considerations and Design of the Fieldwork

This chapter reports the procedures used to gather evidence to allow an in-depth study of the subprocesses of generating, transforming, pausing and revising in the composing process of primary school children in Hong Kong. It offers a brief overview of major conventional approaches to studying writing and the composing process, pointing out, where appropriate, why it was decided simultaneously to include a number of different techniques within the present study. After a discussion of the rationale for using a case study approach as the chief research strategy, details of the sample, the research instruments, the experimental tasks, procedure, data collected and methods for the analysis of data are given.

4.1 Common Techniques Used to Investigate Writing

Research into writing has involved different levels or categories of inquiry. Bereiter and Scardamalia (1987) list six such levels, their use of the term 'level' not implying any hierarchical order. The first level is reflective inquiry, which involves reflection on the information the writer or the researcher already has or that which is available from ordinary experience. Elbow (1973) and Moffett (1968) have contributed significantly to studies using this method. At the second level, one may test empirically those variables identified as salient, an approach used by Scardamalia et al. (1980). At the third level, one may use an approach using text analysis of what has been written and making inferences about the putative intellectual processing involved, an approach used by

Halliday and Hasan (1976) and Shaughnessy (1977), who have proffered descriptive rules and principles by studying written texts. Level four inquiry is an interpretive search for systems, patterns and principles in the mental processing of the writer while composing (see Emig, 1971). Level five research aims at testing theoretical constructs by testing their empirical implications, an approach used by Collins and Quillian (1969). Level six research is simulation by computer, which has proved to be a useful method of inquiry for gaining understanding of a variety of mental processes, especially revision (see Scardamalia and Bereiter, 1985a).

In relation to the above, the present study primarily belongs to level four with some text analysis characteristic of level three. As the investigator wanted to engage in an exploratory and detailed observation of the natural writing process used by the subjects, a case-study approach was adopted. A more detailed justification and account of this approach is given in Section 4.3 below.

4.2 Approaches to Investigating the Composing Process

There have been various methods used by researchers to study the composing process. The following are some of those most commonly used.

4.2.1 Observation with Researcher Intervention

In this approach, the researchers situate themselves in the classroom to observe the subjects writing. At appropriate times, the researcher interrupts and questions the writers (Graves, 1975). This approach is very suitable for studying the writing of young children, but it raises the question of the extent to which the interruptions distract the subjects and interfere with or distort the writing process, and also about the capability of young children objectively to articulate their own mental processes.

4.2.2 Observation without Intervention

In this approach, the researchers sit beside the writers and observe their writing behaviour. The researchers may make notes on their observations or may use a video recorder to make recordings. Many researchers have used this method (Graves, 1979; Matsuhashi, 1982; Pianko, 1979; Rose, 1981; Jones, 1981; Zamel, 1982; Jacobs, 1982). The approach may not be as effective as the intervention approach in that the results rely entirely on interpreting the overt behaviour of the subjects. On the other hand, it has the advantage of interfering less with the on-going composing of the writers. In the present study, this approach was used as one of the research techniques.

4.2.3 Clinical-Experimental Interviews

The clinical-experimental interview (Bereiter and Scardamalia, 1987), based on the clinical method used by Piaget (1926), can be used in an effort to monitor the thinking of writers. The writer is given a prescribed task and the experimenter follows progress, intervening to ask the writer to justify decisions. On the basis of the responses, the task may be varied or further questions asked so as to reveal in detail the bases for the decision making processes used by the writer. Bereiter and Scardamalia (1987) describe the approach thus:

"In the clinical-experimental interview, the investigator interacts with the writer and tries to structure a task in which such interaction will be natural, but the investigator tries, nevertheless, to engineer the exchange in such a way that all the thoughts come from the writer and not from the investigator." (p.42)

4.2.4 The Think-Aloud Technique

One of the most commonly used methods of inquiry employed by researchers into

composing is the think-aloud procedure, where writers are asked to articulate their thinking whilst writing (Ericsson and Simon, 1980). Many researchers have used the think-aloud procedure, including Emig (1971), Mischel (1974), Flower and Hayes (1980 1981), Rose (1980), Odell and Goswami (1982) and Tse (1984).

Verbal data, according to Ericsson and Simon (1980) can be collected in two ways: retrospective verbalization, in which a research subject is required to talk about mental processes that have occurred at an earlier time; and concurrent verbalization, in which the subject talks whilst simultaneously performing the task. Hayes and Flower (1983) divide concurrent verbalization into two types: directed reports and think-aloud protocols. In the former, the subject reports only specified behaviours. Hayes and Flower (1980) describe the latter method as follows:

"In a verbal, or 'thinking aloud' protocol, subjects are asked to say aloud everything they think that occurs to them while performing the task. No matter how trivial it may seem.... Subjects may forget and fall silent - completely absorbed in the task. At such times the experimenter will say, 'Remember to tell me everything you are thinking'." (p.4)

There are various advantages to using the think-aloud protocol method. It provides direct evidence about processes; it yields rich data and thus promotes exploration; and it can detect processes that are invisible by using other methods (Hayes and Flower, 1983; Ericson and Simon, 1984). However, it is possible to criticise this method for its fairly obvious shortcomings. Cooper and Holzman (1983) claim that writing is a stream-of-consciousness activity, rather than a problem-solving task. They argue that the protocols obtained cannot possibly reveal the whole processing that has generated the writing because subjects will not utter, and may even not be aware of, all

of their thoughts. Dobrin (1986) contends that writing always takes place at particular points in time, with the composing process being influenced and interfered with by the situation, the environment and whatever else is taking place in the normal course of events. He maintains that a protocol can capture only what happens during one focused session and therefore doubts whether any protocol can in itself provide a full description of the writing process. Verbal reports are also considered to be potentially invalid because people are not always conscious of their own meta-cognitive processes, and the very act of verbalising whilst thinking may actually distort both the thinking and the task in question (Nisbett and Wilson, 1977).

In response to these criticisms, Flower and Hayes (1983) affirm:

"Protocols show us only traces of the rich and complex phenomena of thought. There is much they miss. However, this is true of every observational method. If incompleteness were grounds for rejection of methods, we would have no methods at all. The important fact to notice about protocols is that they do provide some data about some processes." (p.284)

In similar vein, Smagorinsky (1989) affirms that:

"to discount protocol analysis as a method is to ignore the contributions it has already made to our understanding of written communication, and to dismiss the knowledge it is bound to uncover about composing in the future." (p.467)

In the present study, subjects were asked to compose aloud as a preliminary step before writing. They were required to externalize their thinking processes as much as possible by verbalizing whatever they were thinking before writing. The intention of having subjects compose aloud was to make the internal processes of composing as accessible to observation and independent study as possible (see Perl, 1979). After this stage, a transcript of what had been uttered was written down. Such composing-aloud protocols collected can often reveal the thinking of the writer in the pre-writing stage, for

these are representations of the text intended.

Although the present study used the think-aloud procedure, it did not employ the concurrent one (Hayes and Flowers, 1980) described above, for three main reasons. First, many researchers point out that it is hard to get young children to sustain concurrent verbalization, and that this therefore usually requires repeated intervention by the researchers and some external structuring of the task. In doing these things, the researcher is in fact shifting to the clinical-experimental method (Bereiter and Scardamalia, 1987). Second, since in the present study the writing involves two different languages (using Cantonese to compose aloud and English to write), to ask young pupils to think aloud independently whilst actually writing would have been impossibly fraught. Moreover, the writer found in pilot work that, if the concurrent verbal protocol method was used, subjects would tend to write the English text simply by translating from Chinese. Thus, pre-writing verbalization was considered to be a potentially more fruitful source of data. Third, similarly, primary school pupils working in an L2 are not verbally sophisticated enough to manage concurrent verbalization. They do not possess the requisite diagnostic, evaluative, and directive ability and the accompanying language to allow them to think aloud so as to reveal the composing processes whilst they are actually in operation.

The choice of tapping into the subjects' thinking before the writing task was physically undertaken was deliberate. Pilot work revealed that these young subjects engaged in much thought and consideration of what and how they were to write both before and during the act of writing. However, to request verbalization whilst the writing was in progress from writers as young and inexperienced as those used in the present study would, in the writer's view, have hindered and interrupted their concentration. The fact that, in the event, there was potentially much that could be said by the subjects

during writing made the video recording an important feature of the research methodology. This allowed the subjects' spontaneous verbalisation during the writing to be captured, making it available for subsequent analysis.

4.2.5 Stimulated Recall Interviews

The stimulated recall procedure was established in studies of teaching and learning, medical education, psychotherapy and therapeutic counsellor education. Shortly after the writing, the researcher interviews the subjects, basing the interviews on replays of video-taped recordings of the writer at work. Subjects are shown the video tape and, prompted by what they see, are asked to comment on their writing activities. These prompts help writers to make relatively specific observations about their cognitive activity during writing.

Bloom (1953) describes the basic idea of stimulated recall as one in which "a subject may be enabled to relive an original situation with vividness and accuracy if he is presented with a large number of cues which occurred during the original situation." (p. 163)

Stimulated recall typically involves a subject whose thought processes are to be disclosed and an interviewer whose role is to facilitate the disclosure. The video taped or audio taped recording of an event is replayed to assist the subject to recall covert mental activity which accompanied the overt behaviour (Tuckwell, 1980). To ensure accuracy, Bloom (1953) suggests that the stimulated recall procedure should be carried out within 48 hours after the experimental task has been completed.

The value of the stimulated recall procedures as a research, diagnostic and teaching tool has been reported positively, the conclusion being that it is promising in yielding rich data (Tuckwell, 1980; Rose, 1980; Schumacher et al., 1984). However,

Calderhead (1987) and Armour-Thomas (1989) point out that there are two factors which might affect the reliability and validity of the report produced by subjects. The first is that stimulated recall places constraints on the subjects' efforts to retrieve information from long-term memory. Where there is an extensive time lag between the thinking and reporting of the thought, it is inevitably possible that the reported thought is incomplete or reconstructed. The second factor is that some research subjects may find viewing a video tape of their composing processes stressful. Thus specific strategies must be used with stimulated recall so as to anticipate these constraints and maximise its potential strength. In order to facilitate the subjects' attempts to reconstruct their intellectual processes in as much detail as possible, arrangements must be made for stimulated recall interviews to be conducted as soon as possible after the experiment, and the problems presented by anxiety may be reduced by the establishment of rapport between the participant subjects and the researcher and by the subjects' familiarisation with the stimulated recall procedure (Tuckwell, 1980).

The playback session of the stimulated-recall procedure is very important and can be arranged in three ways. The first is to stop the video tape at predetermined intervals and ask the writers what they were thinking about. The second is to wait for natural pauses in the writing process, then stop the video tape and make inquiries of the writer. The third is to replay the video tape and let the writer decide when to stop and to comment and recall what he or she was thinking at specific moments. The third technique was used by Schumacher et al. (1984) and Rose (1980), who required the subject to report unobservable thoughts, like information retrieval and planning as well as observable behaviour such as pauses, revisions, rescanning and so on. The third technique was employed in the present study and, in addition to the video tape, a composing record form and the subject's written product were also presented in order to help him or her recall their writing processes.

4.2.6 Retrospective Reports

After the completion of a piece of writing, writers are interviewed about their writing processes and the decisions made whilst writing, a method also used in the present study. Some researchers (e.g. Schumacher et al., 1984) warn that this approach calls for writers to reconstruct elements of the writing process from memory some time after the completion of the writing, and that such reconstruction may result in generalized rather than specific comments by the writer.

Although retrospective verbalization does not interfere with the actual process itself, both stimulated recall interviews and retrospective reports rely on the writers' ability accurately to remember in detail the processes taking place during their previous activity (Swarts et al., 1980). The subjects in the present study were young primary school pupils, so one might have anticipated problems here. However, their written efforts were relatively short and, in the event, the children usually were able to remember well what was in their mind during composition. As a result, a considerable amount of information was collected. In fact, the subjects were usually able to recount events as they actually occurred and sometimes even pointed out missing points on the record forms.

4.2.7 Text Analysis

As there is a direct link between the written text and the composing process, researchers invariably consult the text actually produced by writer subjects. Although the written text itself cannot directly reveal the composing process lying behind its production, it can provide evidence about this matter. For example, the text can reflect knowledge structures directing the composing process which are vital for its understanding (Bereiter

and Scardamalia, 1987). McCutchen and Perfetti (1982) and Bereiter and Scardamalia (1987) have used this method to infer what features of text children were holding in mind while retrieving text content. In the current study, this approach was also used, with the texts written by the subjects analyzed and compared alongside the composing-aloud protocols.

4.2.8 Summary of the Procedures Used in the Present Study

As there are strengths and shortcomings in each of the above approaches, the writer used a combination of techniques in the present study in order to acquire information. These include observation without intervention, composing-aloud procedures, stimulated-recall interviews, retrospective reports and text analysis. In fact, a major strength of case study data collection is the opportunity to use many different sources of evidence (Lauder and Asher, 1988).

4.3 Rationale for Using the Case Study Approach

The case study of the composing process is a type of qualitative descriptive research approach that closely examines a small number of subjects and their written output, the examination guided by a theoretical rationale. In recent years the approach has been widely used to investigate the writing processes of students (Emig, 1971; Stallard, 1974; Mischel, 1974; Graves, 1975; Pianko, 1979; Perl, 1979; Flower and Hayes, 1981).

The case study is considered an appropriate method for analyzing what is happening while subjects are actually writing (Emig, 1971; Flower and Hayes, 1981). The researcher can see directly the responses of subjects, interpret their behaviour,

estimate their feelings and motivation, look at the total situation and examine many sides of the question. The case study method can give a rich account of the complexity of writing behaviour, a complexity that controlled experiments often fail to capture. Qualitative research can also show the interrelationships among multifaceted dimensions of the writing process by looking closely at writing from various points of view; can help identify important variables; suggest hypotheses for further study; and eliminate areas of research unlikely to be fruitful (Lauer and Asher, 1988). The present study used the approach since there are few studies of the composing processes of Hong Kong primary school pupils and, consequently, no well established research bases upon which to ground a large-scale study.

However, it has to be acknowledged that the case study method has its difficulties, pitfalls and possible deficiencies. Sadler (1981) examines a number of problems in interpreting qualitative data. The first is data overload, for these may be so extensive as to inhibit adequate analysis. A second problem is first impressions: the order in which the information is received may dominate the researcher's judgement. A third problem concerns positive or negative instances. Sadler (1981) states:

"When tentative hypotheses are held ... evidence is unconsciously selected in such a way that it tends to confirm the hypotheses. In other words, what is noticed, or what counts as a fact depends in part on what is to be verified" (p.28).

A fourth problem concerns the internal consistency, redundancy and novelty of the information, for one may overweigh the importance of extreme or novel data. A fifth problem is uneven reliability of information, for one may treat data from poor sources as having the same significance as reliable data (Lauer and Asher, 1988).

With such cautions in mind, a number of tactics were adopted to strengthen the validity of the case study used in the present research. The use of multiple sources of

evidence and establishment of a chain of evidence increased construct validity; analytic techniques of pattern-matching, and explanation building were also ways of addressing internal validity; a multiple case-study design was used as a tactic to enhance external validity. Case study protocols were used and data based on the cases were cross-checked by the researcher and research assistants to ensure internal consistency (see Yin, 1989).

4.4 The Sample

As discussed in Chapter One, there are two types of primary schools in Hong Kong: Chinese-medium and English-medium. Most children in Hong Kong study in Chinese-medium primary schools where all subjects except English are taught in Chinese. In general, English language is considered to be a most difficult subject and many parents employ private tutors to help their children (HKED, 1989). Even so, many pupils still fail this subject in examinations. As also explained in Chapter One, in government and aided primary schools, in Primary One and Two, pupils are not taught English composition, sentence construction only being taught. In Primary Three in some schools, pupils begin to write guided compositions which require them to fill in blanks with words provided in the early stage of the learning programme. At a later stage, questions are provided to help pupils write. This kind of training goes on for two years until Primary Five, when students will be given a topic about which to write. In schools with a high standard of English and in private schools, students may begin to study and write about topics in Primary Three.

The number of subjects featuring in case studies of the composing process varies: 1 for Mischel (1974); 8 for Graves (1975); 4 for Flower and Hayes (1981). Following Emig's (1971) model (8 cases), researchers have generally limited their sample size to

fewer than fifteen subjects because of the complexities of data collection and analysis. In the present study, for comparison purposes, eighteen pupils were selected from Chinese-medium primary schools from different classes: six from Primary Three, Four and Five respectively. Senior primary school pupils were selected because pupils in Chinese-medium schools only begin writing composition in Primary Three. The writer at first tried to recruit subjects studying in Primary Six. However these subjects were reluctant to participate in the experiment as they were too busy preparing to sit for secondary school placement examinations and aptitude tests, understandably considered very important for their future schooling.

The children selected were considered by their parents and teachers as representative of 'normal' children of their age and class. The writer had access to the school records and report cards of the research subjects. Pupils with unusually high intellectual capacity and those with learning or emotional problems were excluded. Some parents requested that the names of the subjects should not be disclosed in this research. Thus the names of the subjects, except for Bosco, whose complete writing profile appears in Chapter Ten, are not disclosed in the thesis.

As children are sensitive to the presence of other individuals while writing and hence their writing might be influenced, the writer established good rapport with all of the subjects and their parents. Hopefully, the friendship and mutual trust between the researcher and subjects helped lessen anxiety and induced better communication. Having established good interpersonal relationships, the writer was able to obtain from the subjects' parents such information as family background, each subject's writing and reading habits and details of previous writing done by the subjects. Although the sample was in no way random, the writer tried to select subjects from different social and economic background. The background information of the subjects is shown in Tab. 4.1.

Table 4.1: Table showing the background information of the research subjects

Subjects	Class	Sex	Age	Types of School	Occupations of Parents
P5A1	p5	F	11	aided	Fa:factory inspector Mo:nurse
P5A2	p5	M	10	aided	Fa:clerk Mo:clerk
P5A3	p5	F	11	government	Fa:factory worker Mo:factory worker
P5B4	p5	M	10	private	Fa:manager Mo:receptionist
P5B5	p5	M	11	aided	Fa:radio programmer Mo:housewife
P5B6	p5	F	10	aided	Fa:executive Mo:saleswoman
P4A1	p4	F	9	aided	Fa:lecturer Mo:housewife
P4A2	p4	M	10	private	Fa:account clerk Mo:teacher
P4A3	p4	M	10	aided	Fa:technician Mo:teacher
P4B4	p4	M	10	private	Fa:clerk Mo:housewife
P4B5	p4	M	10	aided	Fa:technician Mo:teacher
P4B6	p4	F	9	aided	Fa:factory worker Mo:factory worker
P3A1	p3	F	9	aided	Fa:executive Mo:social worker
P3A2	p3	M	9	aided	Fa:salesman Mo:clerk
P3A3	p3	F	9	private	Fa:policeman Mo:housewife
P3B4	p3	F	8	aided	Fa:teacher Mo:clerk
P3B5	p3	F	8	aided	Fa:trader Mo:lecturer
P3B6	p3	F	8	aided	Fa:manual worker Mo:office assistant

Note: P5: Primary 5 A: story writing B: expository writing Fa: father Mo: mother

4.5 Research Instruments and Pilot Work

The research instruments included a video camera to record the writing activities of the subjects; an audio tape recorder to record the voice of the subjects during writing; a stopwatch to time each process during writing; an observation form to record the observable composing behaviours with details on relative precision and insight (see Appendix 4.5); a Writing Behaviour Question Guide for interviewing the subjects to probe for self-awareness and to elicit reasons for and causes of exhibited behaviours (see Appendix 4.1); and a Background Interview Guide for interviewing subjects to collect data concerning their attitudes, past writing experiences, reading habits and educational background (see Appendix 4.2).

The writer's previous research has afforded him considerable expertise in carrying out research into the composing process and using the above research instruments. The research assistants helping the writer undertook comprehensive laboratory training as well as practice using the video-camera to record the composing process of the subjects. As a pilot sample, a small number of subjects not engaged in the final research were also invited to try the composing-aloud procedures. The Writing Behaviour Question Guide and the Background Interview Guide were also tested at this time, as were the other instruments, to see if they were functioning properly. Slight modifications were made at this stage to the procedures to ensure clarity, to avoid ambiguity and to rectify likely sources of difficulty. For instance, the line spacing on the observation form was adjusted to be the same as on the paper used for the writing task, so as to facilitate accurate note making.

4.6 The Experimental Tasks

The subjects were asked to write on two occasions: one in English and the other in Chinese. In the first sessions, nine subjects wrote in Chinese and in the second sessions the same nine subjects wrote in English. The other group of nine subjects wrote in English in the first sessions and in Chinese in the second sessions. The subjects were assigned to the two groups at random by the writer. As the subjects needed time to plan and develop their ideas, write and review their texts, there were no time constraints imposed at any stage. The writer made every attempt to ensure that the subjects were involved and committed to the writing task.

As familiarity with the working environment is a key situational variable, subjects were permitted to select their preferred task environment, so they could write at home, in the writer's home or any place they suggested. The subjects wrote in the presence of a video-camera which did not appear to add any observable stress to them. In fact, they enjoyed watching the play-back to see their own writing behaviour and had the feeling of participating in a television show, a privilege for the sample in question.

There were two types of writing for the subjects: narrative and expository. Narrative or story writing has a significant role to play in beginning-writing development. Children frequently tell stories, both old and new, as they create their first written messages (Rentel and King, 1983). At school, most children soon learn the underlying structure of stories (Mandler and Johnson, 1977; Stein and Glenn, 1979). With regard to expository writing, children are asked to write descriptive but factual reports from beginning writing. These two types are included in the teaching Syllabus of the Chinese Language for Primary Schools (CDC, 1990a). For the narrative exercise, the children were given a free choice. They were simply asked to: "Write me a story." The expository topics proposed were 'My Family' or 'My School'. The assigning of the nine subjects to write stories and expository topics was made at random. A summary of the

experiment in terms of allocation of subjects to tasks is presented in Table 4.2.

Table 4.2: Summary table of the experimental tasks completed by subjects

Group:	A		B	
Subjects:	3(P3), 3(P4), 3(P5)		3(P3), 3(P4), 3(P5)	
Types of writing:	Story writing		Expository writing	
Session:	One	Two	One	Two
Language:	English	Chinese	Chinese	English

4.7 Procedure

In preparation for data-collection, specific procedures and necessary groundwork were considered carefully and practised. Technical competence was acquired and developed by the researcher, and arrangements for working with the subjects were carefully prepared.

4.7.1 Training Session

In the training session, the writer would converse with the research subject informally in order to build up a friendly relationship. After that, the video-camera and cassette recorders were set up. In the presence of the researcher, the subject was asked to compose aloud then to write. The video- recorded tape was played back for the subject, who was then asked to give an account of the ways ideas had been generated, the planning involved and what had been in mind during the writing. The purpose of this session was to familiarize subjects with the procedures and to confirm that they would like to take part in the research. If the answer was positive, three more sessions would

be arranged for them. The researcher used the Background Interview Guide (see Appendix 4.2) to obtain information concerning the writing experience, attitudes and educational background of the subject.

4.7.2 The First Session

Before the experimental task, the cassette tape recorder and the video camera were set up. All experiments took place on an individual basis. The writer played some games with the subject so as to build up rapport and to establish a relaxed atmosphere, after which writing materials were provided for the subject.

The writer informed the subject that there was no time or length limit for the writing. The subject could write drafts, rough plans or even draw pictures on the paper. The researcher told the subject, "Before you write your composition, I want you to say out loud in Cantonese what you think you want to write and anything else in your mind. Just say as much as you wish." The writer then gave the subject the writing assignment. In the first sessions, nine subjects wrote in Chinese and nine in English. Amongst them, nine presented the story and the other nine wrote about "My School" or "My Family" as the expository task. With the cassette tape recorder and the video camera left on, each subject would think for a while then start to compose aloud.

After the subjects had finished the composing aloud part, they were asked to write and reassured that the content of the oral composing need not be followed exactly. While the subject was writing, the writer recorded relevant behaviour on the observation form. The data on the taped audio-cassette and the entire composing aloud protocols (see Appendix 4.3) for each subject were immediately transcribed onto paper by research assistants for comparison with the written text produced (see Appendix 4.4). The

discrepancies between the composing aloud protocols and the written texts were noted and recorded in code form.

After the writing, the recorded video tape of the writing session was replayed for the subject. With reference to the Writing Behaviour Guide (see Appendix 4.1), the subject was asked to comment on the retrieval of images, the sources of knowledge about the topic, the criteria used for ideas selection, any unusual writing behaviour revealed on the tape, and anything which the viewing of the tape had brought back to mind. While subjects were reporting their thoughts, the writer maintained a non-interruptive mode of listening. At the end of a subject's report of a subprocess, the writer might attempt to clarify the essence of the reported thought with further questions.

The observation form would then be shown to the subject, who would be asked to comment on the pauses during the composing. The memory of each subject was also prompted by showing the video tape of his or her writing session. The composing aloud protocols and the written text of the research subject were then shown to the subject, who was asked to comment on any discrepancies between the two documents. After that, the subject was asked to take a short rest. The interview was carefully monitored by the researcher so as to facilitate accurate recall by the subject in a relaxed atmosphere, care being taken to avoid tiring the subject. The written text was then shown to the subject who was asked to comment on the revisions made during composing. The researcher followed the Writing Behaviour Guide to interview the subject and to probe for more information about the composing process.

After the first session, all the data collected were collated and analyzed. The complex procedure adopted in the research for data-organisation and coding during data-collection was considered crucial for ensuring and maintaining a high level of validity for the data. The researcher not only collected the data at first-hand, but also processed them as soon as possible when they were still reasonably fresh in memory, advice strongly given by Miles and Huberman (1984).

4.7.3 The Second Session

The second session took place two weeks after the first. The procedure was similar to that in the first session, but this time the subjects were asked to write in a language different from the language used in the first session. The composing-aloud part was in Cantonese, regardless of the language used for the writing.

Subjects asked to write a story in session one would write a story again but with different contents. Subjects who had written about "My Family" in the first sessions were now asked to write about "My School" this time. Subjects who had written about "My Family" now wrote about "My School".

4.7.4 The Third Session

After the second session, the writer also analyzed the data collected and studied past writing by the subject where it was available. In four families, past exercise books had been kept and were made available for reference, but this was not possible with the remaining families. Nevertheless, informal consultations with the parents of the subjects proved fruitful in helping the writer understand the individual subjects' writing development.

In the third session, the researcher talked with each subject in order to clarify points of uncertainty, to verify interpretations and to ensure that nothing was being mistakenly read into the subjects' behaviour.

4.8 Data Analysis

The general analytic strategy was to develop a descriptive framework for organising the information featuring in the case study (see Yin, 1989, p.107). This strategy underlies the analytic modes of pattern building and explanation building (Yin, 1989, p.105). The first phase of data analysis was data organisation through coding. A matrix of categories was prepared. Then the frequencies of all categories were counted, to permit and enable description of basic patterns. Tables summarizing the relevant elements of subprocesses of composing of individual subjects were prepared. Summary tables of data of subjects from Primary 3, Primary 4 and Primary 5 were prepared respectively. These tables are displayed in the Appendix. The complexity of such tabulations and their relationships were also examined by calculating second-order statistics, such as means and standard deviations. The organized and simplified data are displayed in summary tables, graphs and charts in the results chapters.

4.8.1 Data Collected

The composing sessions and the interviews yielded the written texts, the audio tapes, the video tapes, the responses to the interviews, some notes written by the researcher, the observation forms and previous writing written by some subjects in their schools. There were two sets of data produced: one for the English and the other for the Chinese compositions.

4.8.1.1 The Written Texts

The entire set of scripts for all subjects was numbered and collected as a record of the writing carried out. Photocopies of the scripts were made and the contents analyzed. The words, clauses, sentences, ideas and other features were coded with reference to particular research questions.

4.8.1.2 The Audio Tapes

The composing-aloud procedure was recorded by a high-fidelity audio-cassette recorder. After the composing-aloud procedure, the spoken data were transcribed into composing aloud protocols, which were then used in the comparisons with the written text. Similar data could have been obtained from the video tapes but the audio-recorder's editing facility made it more convenient to work with audio tapes. The composing aloud protocols were segmented according to the pauses made by the subject. The protocols were coded. During the stimulated-recall procedure, the subjects watched the replay of the video tapes and they were asked to give an account of the generating of ideas and any unusual behaviour displayed during the writing. The reports were also recorded by audio cassette-recorder and the oral data were transcribed into written data. Coded themes were drawn up from the written data.

4.8.1.3 The Video Tapes

The video recordings of the on-task writing performance were very useful for capturing the writing behaviour of the subjects. The replays allowed the researcher to examine performance carefully and deliberately, and the recordings were excellent for stimulating

and eliciting recall by the subjects about their thoughts and feelings accompanying the writing process.

4.8.1.4 Qualitative Notes

During the interviews, writing sessions and coding procedure, qualitative notes concerning specific features or aspects of behaviour by each subject whilst composing were jotted down by the researcher. These helped in adding detail to the subsequent analysis.

4.8.1.5 The Observation Forms

During the time when the subjects were writing, the researcher observed them and noted down evidence of any observable writing processes, for instance, pausing and rescanning, keeping recordings in coded form. After the writing, subjects were interviewed and the observation forms helped focus attention on the composing process. This record was useful in helping the researcher monitor the performance of subjects and in helping them refresh their memory and recall decisions and any problems encountered. The interview was taped and the data were transcribed, coded and made available for analysis.

4.8.1.6 Writing Produced Previously in School

Writing produced previously by the subjects in schools was collected. Document summary forms which gave a brief content summary and explained its significance were attached to the previous compositions of the subjects. The writing of the subjects was analyzed as potentially useful background information for this study.

4.8.2 Coding of Data

After data collection, the data were collated and coded. Codes were clearly and operationally defined, so that the researcher and the research assistant could follow the coding system without misinterpretation, and so that the codes could also be consistently interpreted by the researcher over time. A double coding method was used in deciding on the codes, with the researcher and the research assistant coding the same data set independently, then discussing discrepancies until differences were resolved so as to end up with an agreed coding decision. Such double coding enhanced internal consistency.

To arrive at an estimate of inter-coder reliability, some 10% of the total amount of data was coded by a second coder. The separate codings were compared and discrepancies resolved through discussion. Intra-code reliability was also checked, with each coder coding again the first dozen pages of field notes, once right away and again a few days later on an uncoded copy. The original and re-coded data coded by the same researcher were then compared. Such checking enabled the operational definitions of the behaviour and their coding to be specified with accuracy. The procedures boosted intra and inter-coder consistency from over 90% to virtually 100%, using procedures recommended by Miles and Huberman (1984). The laborious procedures used for ensuring coding consistency and coder reliability helped boost the reliability of the data and the performance of the writer and his assistant.

4.9 Foci of Analysis

In this study, the independent variables were Primary 3, Primary 4 and Primary 5 pupils; English language and Chinese language. The dependent variables used to illuminate and

investigate the composing processes of the entire group of subjects were derived from the data and consisted of the measures listed in the sections below.

4.9.1 Global Estimates

- (a) Generating time:** the length of time spent from the moment the assignment was received until the first word was uttered.
- (b) Composing-aloud time:** the length of time for the composing-aloud procedure until the first word was written.
- (c) Writing on paper time:** the length of time from the writing of the first word until the last word was written.
- (d) Final revising time:** the length of time spent revising the final script, including any rereading.
- (e) Total time:** the length of time spent on the whole composing process.
- (f) Total number of words:** total number of words written per script (see Appendix 4.6).
- (g) Rate of composing (minute/per subject):** the mean time spent per subject on writing (see Appendix 4.7).

4.9.2 Data Recorded in Connection with Generating Ideas

- (a) Characteristics of thought imagery, and incidence of retrievals of imagery in writing before and during writing were noted.**
- (b) Types of imagery in writing were described.**
- (c) Functions of the imagery in writing were analyzed.**
- (d) The sources of the ideas generated were noted.**

- (e) Criteria for selecting ideas generated for writing were noted.

4.9.3 Transformations

For the study of transformations of Cantonese utterances to MSWC, the Cantonese utterances were transcribed into written script form then segmented into idea units. In order to allow systematic analysis of the spoken data, the researcher used the same idea units as the units of analysis, allowing one to compare segments of the composing-aloud data with the written data. Chao (1979) defines a sentence as "a section of a discourse between two pauses, the pauses are made by the speaker intentionally." Wu and Kan (1989) add that the section must be "a complete idea unit which is spoken by the speaker with a special tone." Chafe (1979, 1980) segmented the oral data of his research into idea units, whilst Ruth and Murphy (1988) note that, "An idea unit is basically a number of words bounded by measurable pause and/or a change in intonation which serves as indication that the speaker is treating the word group as a conceptual unit. Each idea unit expresses a focus of attention in consciousness through a composite of lexical information corresponding roughly to a simple clause, or syntactically to one verb and its associated noun phrases" (p.159)

Some ideas units could be found in the written text but not in the verbal protocols. An idea unit in the written Chinese text is a group of words marked by punctuation. The topics below were analyzed.

4.9.3.1 Transformation of Sentences

- (a) The Cantonese utterances and MSWC scripts were analyzed and sectioned into units and sentence patterns. The sentence patterns looked for were determined by the structures of Chinese.
- (b) Rank orders were drawn up for the types of sentence patterns in the Cantonese utterances and MSWC scripts.
- (c) The incidence of the patterns in the Cantonese utterances and MSWC scripts was listed to allow a comparison of the Cantonese utterance sentence patterns against the MSWC patterns in an attempt to identify similarities and differences.

4.9.3.2 Transformation of Lexical Items

- (a) The identity and number of Cantonese lexical items found in the written scripts produced by the subjects was noted.
- (b) Putative and reported difficulties encountered by the subjects in terms of lexicon adjustments were noted.

4.9.3.3 Transformation of Particles

- (a) The various types of particles were noted.
- (b) A list of transformations of Cantonese utterance particles was drawn up, together with the incidence of changing or avoidance of Cantonese utterance particles in MSWC.

4.9.3.4 Global Study of Transformation

In the global study of transformation, the variables used to characterize this subprocess in composing were as follows:

- (a) A comparison of the number of idea units in the composing aloud and in the written text.
- (b) The number of idea units found in the composing-aloud protocols but deleted in the writing, and the number of idea units not found in the composing-aloud protocols but added in the written text were noted.
- (c) The number of group idea units fragmented and completed in the written texts were noted.
- (d) Transformation of organization of ideas.

4.9.3.5 Transformational Approaches

- (a) The number of idea units found in the transcribed scripts but avoided in writing, possibly due to linguistic incompetence, was noted.
- (b) The number of idea units found in the composing-aloud scripts but replaced by other idea units, possibly due to linguistic incompetence, was noted.
- (c) The number of idea units or words showing over-generalizations in writing was noted.
- (d) The number of topics changed in the writing was noted.
- (e) In terms of transfers between Chinese and English, a careful note was made of the number of idea units (in English) literally translated from Cantonese and MSWC; examples of transfers of syntactical usage; examples of transfer of Chinese concepts.

4.9.4 Pausing

For the study of pausing, the types and number of pauses characterising the process were as follows:

- (a) Pauses during cognitive activity.
- (b) Pauses related to linguistic phenomena.
- (c) Pauses whilst rescanning.
- (d) Pauses to express personal feelings.

4.9.5 Revising

For the study of revising, the variables characterising this process were identified as follows:

- (a) Types of revisions.
- (b) The overall incidence of revising.
- (c) Mistakes detected but not corrected.
- (d) Causes of mistakes.
- (e) Strategies for revising spelling of English words and Chinese characters.

4.10 Statistical Analyses of the Data

Case study reports usually entail extensive descriptive accounts (Lauer and Asher, 1988). As stressed earlier, the purpose of the present analysis was not to yield a quantifiable set of data in support of the writer's model. Rather, the aim was to assemble a mixture of types of evidence which would illuminate the veracity, validity and working of the model as a whole. Nevertheless, to help estimate the strength of the various variables measured,

the incidence of certain categories of evidence was quantified. The resultant data from the 18 cases were subjected to statistical analysis using programs from the SPSS/PC+ (Version 3.0) package at Hong Kong University.

4.10.1 Descriptive Measures of Dispersal

The statistical analyses involved first calculating the means and standard deviation to summarize average performance and the average spread of the behaviour around the mean for all variables, where informative.

4.10.2 Measures of Differences - Within Groups

Dependent Student's t-testing was employed to test the statistical significance of any differences associated with categories of behaviour measured in the Chinese and English writing performance of the same subjects. Such calculations were never likely to be very informative but are attached in the appendices.

4.10.3 Measures of Differences - Between Groups

One-way analyses of variance were employed to test the differences between group performance when more than two means featured: for example to examine differences among three classes- Primary Three, Four and Five. As the maximum number in any one group is only six, the significance of any calculations yielded needs to be interpreted with great caution. The intention was not to establish trends in terms of quantifiable data, but to provide completeness of the analysis. Again the results are attached in the appendices.

4.10.4 Estimates of Similarity or Relationship

Product moment correlational analyses were applied to examine the relationship between sentence patterns of Cantonese utterances and sentence patterns of MSWC. The relationship between sentence patterns of Cantonese utterances and sentence patterns of MSWC were also examined through applying Spearman's rho procedures to yield a correlation coefficient based upon the rank orders of the sentence patterns for Cantonese and MSWC discourse in speech and writing.

The above analyses are useful for reference and help present a more complete picture of the evidence. However, it has to be pointed out that the numbers of subjects for each analytical procedure were so small that interpretations and conclusions derived from the calculations must be treated with extreme caution. In fact, the intention at no point was to rest a case upon such slender evidence. Nevertheless, to allow the reader to judge matters independently, the outcomes of the statistical analyses are reported and appended, where appropriate.

4.11 Limitations

As stated above, in view of the limited size of the sample and the subjective and inferential nature of some of the data, no attempt whatsoever is made to generalize the findings beyond the present group of primary school writers. At the same time, it must also be acknowledged that during the writing sessions the presence of the researcher, the tape recorder and the audio and video-tape equipment meant that the writing was not produced in classroom conditions. In other words, the ecological validity of the writing session itself, in terms of the kinds of performance witnessed in schools, is open to question. From the start, this was anticipated but is nevertheless a point which will be returned to in some depth later in this study.

Chapter Five

Generating Ideas During the Composing Process

This chapter examines the generating of ideas in the composing process in light of the performance of the subjects in the present research. It focuses on the retrieval of ideas by thought imagery, sources of knowledge about the topic selected for writing and the criteria used for selecting the ideas generated. The characteristics, types and functions of thought imagery are described; the sources of knowledge about the topic covered are traced; and criteria for the selection of ideas generated are identified. Conclusions are then drawn and the implications examined.

5.1 Mental Images as Cues to Writing

5.1.1 Introduction

Some Chinese writers have reported that they actually see things in their mind when they are writing. The famous Chinese novelist, Lu Xun (1921), described this phenomenon:

"At that moment, a picture suddenly appeared in my mind: a golden full moon was hanging in the deep blue sky. There was a big piece of sandy field near the sea. On the field, I could see a lot of green water melons. I could also see a boy aged eleven or twelve, I had not seen him for thirty years." (p.477)

It is interesting to note that Lu Xun was still able to see the place of his upbringing and his old friend in his mind after a period of thirty years. He saw the picture vividly and was able to base his description on this imagery, not a supernatural phenomenon since many writers also have this ability. Another famous Chinese writer, Lao She (1973), commented that, when he was writing the novel "Divorce",

Beijing often appeared in his mind in the form of moving pictures.

Research into the role of mental imagery during the composing process has received relatively little attention, especially by teachers (Stevick, 1986). In previous research carried out by the writer using verbal protocols (Tse, 1984; 1990a), some secondary school students reported that they had pictured something in their mind when they were composing in Chinese. That "something" may be referred to as imagery. In the present study, subjects also reported that they could see and hear things in their mind when composing aloud and writing. This aspect of generating ideas for writing has been singled out for special consideration in the present study.

The term "imagery" has been used widely in the psychological literature, especially in relation to non-verbal thought (Paivio, 1971). In this study, its use is confined to the images appearing in the mind of subjects whilst composing. Stevick (1986) defines imagery thus:

"The totality of reactions that one has to a given word or experience. These reactions are present in many dimensions, only one of which is the visual. An image in this sense may or may not include quasi-sensory perceptions of a visual or other nature. An image can influence behaviour even when it is more or less incomplete. We have images of the spoken or written forms for words, as well as of physical objects and experiences." (p.ix)

Richardson (1969) offers the following working definition of mental imagery:

"Mental imagery refers to all those quasi-sensory or quasi-perceptual experience of which we are self consciously aware and which exist for us in the absence of those stimulus conditions that are known to produce their genuine sensory or perceptual counterparts, and which may be expected to have different consequences from their sensory or perceptual counterparts." (pp.2-3)

Richardson notes that imagery has been the subject of many, often conflicting definitions in the literature and that the classification of types of imagery varies greatly. For expository convenience, Richardson distinguishes four classes or types of imagery: after imagery, eidetic imagery, thought (memory) imagery and imagination imagery. Among these, thought imagery and imagination imagery are especially relevant for the writing process (Holt, 1972).

5.1.2 Thought Imagery

In the writing sessions in the present study, subjects were asked to write either about their family or their school. After writing, the video recording was played back to them, allowing them to see and comment on their writing behaviour. They were then asked what had been in their mind whilst writing. Subject 5B5E replied:

"During composing aloud, I could see the building of my school in my mind. A still picture. The badminton court also appeared. Later I could see the basketball court. The net on the basketball stand has been torn.... Moving pictures appear: my teacher is teaching English in the classroom."

The subject here gave a detailed description of the imagery in his mind: "thought" imagery. Richardson (1969) describes such imagery as:

"The common and relatively familiar imagery of everyday life. It may accompany the recall of events from the past, the on-going thought processes of the present or the anticipatory actions and events of the future. Though it may occur as a spontaneous accompaniment to much everyday thought of this kind, it is far more amenable to voluntary control than all other forms of imagery." (p.43)

In order to differentiate thought imagery from other types of imagery, Richardson (1983) also refers to it negatively as:

"not the type of imagery that can be experienced after fixating a black square or scanning a high contrast picture for 30 seconds" (p.27)

Writing is a very complicated task involving retrieval and selection of information, planning, generating, transforming, revising, rescanning, reviewing, meeting writing requirements and the like. These processes go on recursively until the product is completed. Flower and Hayes (1980b) liken this to an "act of juggling a number of simultaneous constraints" (p.31). When writers are uncertain about what to write about or which wording to use, thought imagery will sometimes appear, almost spontaneously. Writing about the emergence of such imagery, Fox (1914) proposes that, whenever goal-directed thought is blocked or becomes confused and uncertain, imagery will be aroused that may facilitate a solution. Sheehan and Lewis (1974) claim that the greater the confusion (sense of uncertainty, bafflement, or frustration) that is produced in the course of a thought or action sequence, the more likely it is that imagery will be aroused and the more vivid it will be.

Not all thought images appear spontaneously, for it is possible for people to retrieve them deliberately. Subject 3A3E reported that, when given the task in the experiment, a scene of a play appeared in her mind. Two years previously, she had been in the top class of a kindergarten. For a Christmas party, the whole class had participated in the play "Snow White" and the subject had acted as a dwarf. She considered this, but decided not to write about this story. Then another scene appeared in her mind. When she was in Primary Two, she had participated in a drama competition. The story was about seven wood-cutters and she could see herself in her mind dressed as a wood-cutter. Later the pictures in her mind changed to a children's magazine, "White Goat". She could see two pages of coloured pictures accompanying a short biography of Walt Disney, but writing about Walt Disney was also rejected as a possible topic. After this, she thought of her class reader and remembered another

story, about a wood-cutter. She decided to write this story and said she had been able to see in her mind a black and white picture in the book.

In order to verify her report, the writer first looked at the children's magazine, "White Goat", and found the two pages about Walt Disney, then examined her class reader and found the story, "Wood-cutter". Her descriptions were precisely accurate and she indeed seemed consciously to have succeeded in retrieving these mental images one after the other.

Voluntary thought imagery is formed by the deliberate retrieval of images, individually or with the help of other people. This has been widely used in neurolinguistic programming (Bandler, 1985). White et al. (1977) report that self-constructed images, or images produced at the instigation of another person, constitute the basis of most self-reported measures of vividness. Cautela (1977) points out that guided retrieval of thought imagery forms the basis of many behavioral therapy methods.

Subject 3A3C reported that, whilst he was writing his story about a rabbit and a lion, he could see the rabbit leading a group of animals and arguing with the lion. According to Richardson, this is not purely thought imagery for it clearly involved imagination imagery. Richardson (1983) explains that:

"Spontaneous thought imagery and imagination imagery may be on a phenomenological continuum. As one becomes increasingly absorbed into one's inner world, quantitative (e.g. vividness) and qualitative (e.g. novelty) changes may occur in the contents of the imagery that arises. As is suggested in a moment, absorption into one's inner world with increased probability of becoming aware of imagination imagery can occur in the waking state as well as in the hypnagogic state and the dream state." (p.40)

On the same theme, Klinger (1971) suggests that:

"The content of fantasy reflects current concerns...fantasy processes constitute a continuous cycling... elements that are most likely to be relevant to the individual's situation. In the course of fantasy, a person works over, recombines, sometimes reorganizes the information creatively." (p.356)

5.1.3 Characteristics of Thought Imagery

Thought imagery appeared in the mind of the subjects at different times: before and during the composing-aloud stage and whilst writing. Subject 3B5C reported that, when she was given the topic "My Family", the kitchen, her bed, lots of dolls on the bed, the television set, hi-fi set and lots of books in the room appeared in her mind. Receiving the topic was a stimulus instantly causing her to see the images. In fact, all the subjects reported that before the composing aloud procedure they had seen images, but not all could say for certain whether they were spontaneous or voluntary thought images.

Whilst composing aloud, Subject 3B4E reported that when she was talking about the library she could see a guest, a friend of the School Supervisor, cutting the ribbon at the opening ceremony of the new library. Subject 3B6E reported that during composing-aloud she had seen the images summarised in Table 5.1.

Table 5.1: The images appearing to Subject 3A3E whilst composing aloud

Words spoken	Images
我係 *** I am X X X .	the family was walking on the path by the side of a reservoir.
我每天返學 I go to school	on the way to school, talking with school mates
做我嘅嘢 I do my work	supplementary exercises
休息一陣間 I rest for a while	herself skipping at home

During writing, the subjects had plenty of time to think. They also made pauses. Subject 4A2C reported that when he was writing about his home he could see his room and that, when he was talking about his father, his father appeared in his mind. He could also see the family photograph of his family. He also said that, when he was writing the word "father", he could see his father walking. The building where he was living also appeared.

Tables 5.2, 5.3 and 5.4 present a summary of the overall incidence of the images retrieved by subjects at different age levels.

Table 5.2: Incidence of retrieved images appearing before and during writing (reported by Primary 5 subjects)

Subjects	Eng. before writing	Eng. during writing	Chin. before writing	Chin. during writing
5A1	3	1	2	2
5A2	4	1	3	3
5A3	13	1	1	1
5B4	4	2	3	3
5B5	3	1	2	5
5B6	2	1	3	3

Table 5.3: Incidence of retrieved images appearing before and during writing (reported by P4 subjects)

Subjects	Eng. before writing	Eng. during writing	Chin. before writing	Chin. during writing
4A1	2	1	4	6
4A2	1	0	2	2
4A3	5	3	1	2
4B4	6	2	3	3
4B5	4	1	3	3
4B6	1	0	5	6

Table 5.4: Incidence of retrieved images appearing before and during writing (reported by P3 subjects)

Subjects	Eng. before writing	Eng. during writing	Chin. before writing	Chin. during writing
3A1	5	2	4	4
3A2	3	0	3	5
3A3	4	2	4	6
3B4	9	1	6	4
3B5	4	2	3	3
3B6	3	1	4	5

Table 5.5: Summary of the incidence of retrieved images during writing by all 18 subjects

	P3E	P3C	P4E	P4C	P5E	P5C	P3E-5E	P3C-5C
Mean	1.33	4.5	1.17	3.67	1.17	2.83	1.22	3.77
s.d.	0.82	1.1	1.17	1.86	0.41	1.33	0.81	1.53
No.	6	6	6	6	6	6	18	18

From Tables 5.2 to 5.4, it was found that, before writing, the mean number of retrieved images for writing in English was 3.67: for Chinese it was 3.22. These are very similar because, regardless of the end-form of the writing, the subjects thought in Cantonese during both forms of writing. From Table 5.5 referring to the entire sample, it can be seen that the mean number of retrieved images whilst writing in English was 1.22 per child: in Chinese it was 3.77. There were differences between writing in English and in Chinese (the t -value = 5.5, $p < 0.001$). The latter is about 3 times the former, suggesting that, when the subjects were writing in English, they engaged in less retrieval of mental imagery, possibly reflecting their experiences of being taught English and being trained to focus on mechanically learned grammar and spelling. There were differences in the mean number of images retrieved at Primary 3 (4.5), Primary 4 (3.67), Primary 5 (2.83) when writing in Chinese, with the younger subjects retrieved more images. However, there was no clear differences between the mean number of images retrieved by Primary 3 (1.33), Primary 4 (1.17), and Primary 5 (1.17) subjects when writing in English.

The images reported by subjects took different forms, some appearing as moving pictures. Subject 4B6C said that when she was given the topic "My School", the school premises immediately appeared in her mind as a moving coloured picture. On the other hand, some subjects said they saw still pictures. Subject 5A3C reported that she could see pictures from a book in her mind, still pictures, black and white in colour. Subject 4A1E reported that before writing she could see a black and white picture in her mind in which she could see a boy eating sandwiches. It seems that the images took the form either of still pictures or of actual events. If the source stimuli for what was written about were illustrations or photographs in books, these would usually appear as still pictures. If what was written about referred to events happening and things moving, then the source images would be moving. Asked about whether the colours appearing in the images were the same as those in the original source, the subjects said they were not sure.

Most subjects described their imagery as being visual in nature. Subject 3B4C reported that she could also hear sounds in her imagery. When she was composing aloud she could see her sister dressed up as a boy and trying to scare her. She also heard her sister ask their father to dress up as a ghost. In another scene, she saw her sister go to the market with her mother to buy some beef and vegetables. She said she could hear the voice of her sister saying, "The beef and the vegetable can speak." While she was writing about her family, she could hear the voice of her father saying, "If your examination result is good, I shall arrange a tour to go with you to Kweilin."

A report by Subject 3A1C is particularly interesting. She said that when she was writing her story she could see in her mind a lion and a mouse in pictures from a story book she had read. The coloured pictures were stationary but she could hear accompanying sounds. The figures in the book were actually producing the sounds. At first, the researcher was bewildered. How could a picture book produce sounds? Later, the researcher found from her mother that she had a story book in pictures called "The Lion and the Mouse". Accompanying the book was an audio tape, allowing the reader to hear the story and look at the pictures in the story at the same time.

Some subjects reported that they could see themselves featuring in the imagery. Subject 4B4E reported that whilst composing aloud he saw several coloured photographs in his mind: the basketball court, table-tennis tables, the badminton court and his school premises. He said he could see himself standing in front of the sick-room. Subject 3B5E reported that when thinking aloud she could see herself in the classroom. She could also see the library, hall, principal's office and the staff room. She could also hear a lot of noise coming from the playground. A common strand to all such personalised images was that the children recaptured themselves in actual past happenings. They had not invented them. Clearly, some children were using fantasy,

but many more were actually visualising their past history and using their own experiences as stimuli for writing.

Another significant point to note is that the imagery which many of the subjects described was not related to the contents of the written text. Subject 3A2C wrote a story about a lion in which the theme was that a lion was lazy but ate a lot of food and often ate the food of other animals. She said that she could not see a lion in her mind but she could see other images. While she was writing, one of her classmates appeared in her mind in the form of coloured moving pictures. Asked by the writer to describe what her classmate was doing, she said that her classmate was in the playground of the school. She was taller than the others and was bullying other schoolmates, hitting and scolding them. When she was asked to write again in the following session, she again wrote a story about a lion. The ending of both stories involved the lion being punished. Her father reported to the researcher that he had learnt that she hated her classmate very much for she often took food from his daughter's lunch box. She was perhaps writing about her classmate and the lion was an imaginary substitute or symbol for her classmate.

In summary, it seems clear that mental imagery appeared at different stages of the writing: before composing aloud, whilst composing aloud and whilst actually writing. Fewer examples of imagery were reported to be appearing when composing in English than in Chinese. Some images were moving pictures and some were stationary; some were coloured and some black and white. Some subjects could hear sound images and sometimes could see themselves in the images. Sometimes, the images were metaphors. As to the vividness of the imagery, the reports varied. Richardson (1983) reports that this type of imagery varies considerably in vividness and controllability, both from person to person and perhaps within the same person from day to day.

5.1.4 Types of Imagery in Writing

Some subjects retrieved information from images of pictures on book covers and illustrations in books. Subject 4A2C said he could see the cover of the book used for composition clearly in his mind, a coloured picture of a boy talking with a girl. Some words flowed in his mind but he could not identify individual words. Subject 5A2C reported that he could see a sepia picture in a reader in which a girl was being scratched by a cat. There were no words to the picture in the book.

It seems that the subjects usually saw the pictures and pictured the title on the cover of the book, then pictures and illustrations inside the book. Ortony (1975) suggests that illustrations often function like metaphors presenting complex information in ways likely to induce appropriate imagery in the reader. Dolan E. (1988) examined good and poor readers' recall of stories with illustrations at secondary level in the United Kingdom. Her results indicated that congruously illustrated text induced superior recall both of detail and gist; and that text without any illustrations drew the weakest recall both of gist and detail. Texts with illustrations attracted better recall than text without illustration. Dolan T. (1991) found that L2 pupils preferred text with illustrations and were seriously misled by illustrations which were incongruous to the story in the text. Whereas L1 control group subjects attached no great importance to the illustrations, many L2 pupils turned first to the illustrations for information about the text, and those receiving text without illustrations said they felt discouraged.

The above research studies also emphasise the ways in which illustrations on book covers and as part of text have a deep but often unacknowledged impact on young readers' comprehension. It seems reasonable to presume that these images are also available for, and may play an important role in, the composing process.

The writer found that subjects could also quite easily see past events in their imagery. For instance, Subject 5B5C said that before he wrote he had seen himself in his mind playing badminton with a friend on a podium in Tai Koo Shing. He remembered vividly one incident there. A long-haired woman with a pram asked him to take a parcel to a flat. He followed her instructions and he told the researcher that, whenever he thought of this incident, the imagery was very clear. He felt rather anxious because the parcel might have contained drugs and he might have been caught by a policeman. Whilst he was writing, he could also see his younger sister in his mind playing on the bed. His best friend also appeared in his mind. When he wrote about his father, his father appeared in Victoria Park talking with him. These past events were very good topics for writing about, but in his writing the researcher found no mention of the incident involving the "parcel". If he had written on this topic and described his feelings, he might have produced a very good composition, but perhaps he did not wish to make public the fact that he had behaved foolishly.

Subject 3B6C reported that when she was composing aloud she could see the premises of her previous school. She said that while she was writing, the school, the playground during recess, the place for saying prayers and the place for lunch all appeared in her mind. When she was giving the report she was rather sad, and it seemed that recalling such images prompted some emotional reaction.

Subjects often reported that they could see actual words in their mind. Subject 5A2C said that when she was thinking of the strokes in the Chinese character "𠂇" (immediately), the word appeared in her mind. Another subject 5A3E reported that, when she was writing in English, she wanted to write that 'the spider fell into the mouth of the old woman', but did not know the word 'fell'. Suddenly, she could see a Chinese character "𨮑" (fall) in her mind and she then tried to look for an equivalent word to translate into English. Chinese characters are ideographic words which may more easily appear as images than words in English. According to the

reports from the subjects, they could usually see individual words but not complete messages or a passage.

Some subjects reported that they could also see TV programmes in their mind. Subject 4B5E said he had seen the TV programme "The Three Little Pigs" in his mind. It was a moving cartoon in colour and the pictures were vivid but not in a complete story. He could hear several voices as well. It would appear that imagery retrieval in general seems to involve recalling of images from the children's past experiences, including pictures on covers of books and illustrations in books they have read, individual words, TV programmes and past events with significant meanings.

5.1.5 The Functions of Imagery in Writing

Stevick (1986) comments on the role of mental imagery in language learning:

"Learning a language is a matter of holding on to new words, new patterns, new skills, and new meanings. In this broad sense, learning depends on memory. Memory includes "memorization"... which is only one way - and a relatively unimportant way - in which new words, skills, patterns and meanings get into memory and become available for future use... Memory and availability depend on mental imagery." (p.1)

Stevick is here claiming that mental images of information held in memory are essential for helping language learners recall information for communicating in speech and writing. Studies by Sheehan (1972) have shown that the uncertainty and confusion produced in the person who is unexpectedly asked to recall something that he or she has not learned thoroughly may provoke images of the learning situation that facilitate the reconstruction of at least some of the material required.

The capacity to form vivid images is of great benefit to the individual in the incidental learning situation, and this capacity aids recovery of the material if

unexpected recall is requested (Richardson, 1983). As Richardson puts it:

"Spontaneously occurring thought imagery is usually a continually changing phenomenon. As we become aware of it under conditions of puzzlement or uncertainty, concrete sensory-like information is forced into the focus of our attention and provides us with the material from which deliberate choices can be made. It may be relatively vivid or weak, but it seldom seriously distracts us from the goings-on in our physical and social environment." (p.32).

Kosslyn (1981) points out that "Imagery is likely to be used in fact retrieval if the fact is about a visible property of an object a person has seen and it has not been considered frequently in the past." (p.74). That imagery can help the recall of content is well illustrated by the composing behaviour of Subject 3A3C, who reported that when she was given the writing task she could see in her mind the coloured covers of two story books, "Chow Chu Removed the Three Trouble-makers" and "The History of Tao Fa Yuen". She could also see the coloured pictures of a story "A Small Hut in the Forest". The printed words could not be read in her mind, but the pictures were very vivid. When she was composing aloud, she said she actually turned over the pages of the story book in her mind and described the pictures. The researcher tried to verify her report and was able to find the three books in her book case.

It is well documented that the title of a story and illustrations which amplify passage content are sources of encoded information in long-term memory. Dolan T. (1991) showed how the presence of titles and illustrations might not be acknowledged by readers, but that their recall protocols showed that information within them had been stored in memory. Even when the illustrations served only as adjuncts to the text, their details were still lodged in memory. Clearly, authors often deliberately select titles on the grounds that they summarise the theme of what appears in the text, and they use illustrations to embellish, amplify and portray events or phenomena

written about in the text. This is particularly the case with books produced for primary school pupils. In the case of L2 learners, a title or illustration may automatically activate knowledge schemata in long-term memory (Winn, 1987), and it has been shown that L2 learners struggling with a text will seek clues about the content of a text from any illustrations present, and about the structure of the text from theme headings and titling (Dolan T., 1991).

Stevick (1986) claims that;

"a word can produce a wide range of pictorial, auditory, orthographic, visceral, and other items which have been associated with it in the past experiences of a particular hearer." (p.7)

When words have pictorial and orthographic characteristics, as in Chinese, they may more easily be stored in mental imagery form. On the other hand, Stevick also claims that imagery can help people recall the forms of words.

Subject 3A3E reported that when she was thinking of a word to replace the word "out", she could see a door in her mind. There was a word on the door, "exit". She also reported that when she was spelling the word "why", she could see a big "W" on the box of a video-tape. She could also think of the TV programme "Why? Why? Why?", a programme produced in Japan about general knowledge and presented in cartoon form. It was one of her favourites and images of the TV picture appeared in her mind as a coloured moving picture. When she was spelling the word "silver", she could see a pencil with the brand name "Silver" in her mind. She also reported that, when she wanted to spell the word "from", she thought for a while and the word "from" written in a letter from her aunt appeared in her mind.

Several researchers have studied the relationship between imagery and the learning of words. Huang and Liu (1978) found the imagery value and

meaningfulness of Chinese lexical units to be highly correlated, and that lexical units of higher imagery value are more meaningful to readers. They also demonstrated that both high imagery value lexical units and high meaningfulness lexical units can be recalled better. Fan et al. (1985) found that the acquisition of the Chinese lexicon by Form 1 to Form 3 students was significantly affected by the imagery evoking value of the lexical units. Hargis and Gickling (1978) claim that kindergarten children find low image-evoking words more difficult to recall than high image-evoking words.

Mental imagery does not only take the form of visual pictures in the mind, for it is also connected with abstract ideas, emotions and experiences. Ashen (1984) claims that

"to experience an image is not merely to inspect something on a display surface...but also to experience a connective link with an interactive physiological field, namely the body." (p.16)

Stevick (1986) states:

"An image is a composite that we perceive (more or less vividly) as a result of the interaction between what we have in storage and what is going on at the moment. An image includes not only what can be heard, felt, or otherwise experienced." (p.16)

Stevick showed how subjects formed mental pictures as a word list was read and, during recall, simply produced the names of the words from the objects they could still see. Stevick tells of an experimental subject who claimed that each of the words had created some sort of emotional response in her mind. When she was asked to write words, she first recalled the series of feelings and asked herself what word had recently been associated with each. Marks (1984) also suggests that images are never free of associated emotions and thoughts and, like movements of the body, are at the same moment both a stimulus and a response.

In short, imagery can help subjects retrieve information, making it available for generating writing. Images can help subjects recall the strokes of Chinese characters and the letters in English words, and help them re-experience past happenings and emotions.

5.2 Sources of Knowledge and Criteria for Selection

5.2.1 Introduction

Of the 18 subjects in the present study, 9 were asked to write about their family and their school and 9 wrote a story. Each group wrote once in Chinese and once in English. During pilot work it was found that subjects trying to write a story in English had considerable difficulty in writing creatively. Thus, in the substantive study, subjects were allowed to create their own story or retell any story they had read or rewrite any story they had produced before. To write a story, each subject had to generate ideas, which involved searching long-term memory for ideas, items of information relevant to the topic, and ways to express all this for an audience within the constraints of the task and the environment. After writing the story, they were asked where their ideas came from and how they selected them. Such generation of ideas and the decision making involved in selecting appropriate ones are vital components in the composing process. Awareness of these processes and how they have featured in language generation can be referred to as 'metacognition' (Sternberg, 1980). Bereiter and Scardamalia (1987) refer to the sub-processes involved in such metacognition as production factors.

5.2.2 Sources of Knowledge

Caccamise (1987) found that both previous experience with the task and knowledge of the topic affect the composing process. Flower and Hayes (1981a) also claim that

idea generation is influenced by the ways in which information is stored in the composer's long-term memory and by the task requirements. Thus, items are retrieved from the writer's memory cued by information available at the time of retrieval, the retrieval process also being constrained by the topic and the intended audience.

Subject 3A3E reported that, when she was given the topic, she started to think about it and several stories came to her mind. The first was "Snow White", a story which she had been told by her mother several times. She also recalled that it was produced as a play in a Christmas party in the upper kindergarten class when she had played one of the seven dwarves. The play appeared again in her mind like a moving picture, but she said she had decided not to write this story because she did not know the vocabulary for the task. The second story she thought of was "Six Hats", a play in which she had participated in Primary Two, and again a play which she said she could see in her mind. She decided not to write this story because she had watched the play but she had not read it in words, so she had insufficient confidence to write the story. The third idea she thought of was a biography of Walt Disney which she had seen in a children's magazine. She decided not write about Walt Disney because she did not know the spelling of such chgaracters as Donald Duck or the names in English of some other cartoon figures. She then recalled a story, "An Honest Man", which she had learned before from a reader called "Step Up" and had read several times.

She only told the first half of this story because the second part of the story was too difficult for her to express. She said the first part was a simple story so, if she could not spell a word, she could easily find a word to replace it. From her report, one can see that she tried a range of sources in her search for a suitable writing topic and known material. The sources included stories told by her mother, plays in her school, an article in a children's magazine and a story in a reader.

Bereiter and Scardamalia (1987) explain the process of the retrieval of ideas and 'knowledge-telling' for the purposes of writing. They claim that the composing process begins with a writing assignment, which stimulates a mental representation of the task. The representation can be analyzed into identifiers of topic and genre or discourse type, which serve as cues that automatically seem to prime associated concepts, possibly through a process of spreading activation (Anderson, 1983). They point out that this process does not guarantee that the information retrieved will necessarily be relevant, but there is a clear tendency toward relevance. Anderson (1983) explains that spreading activation involved favours the processing of information most clearly related to the context in hand. Bereiter and Scardamalia (1987) argue that the appropriateness of the information retrieved will naturally depend (a) on the cues extracted and (b) on the availability of relevant information in memory. If in fact the writer has the appropriate knowledge stored in memory and it is cued by the task, then retrieval is assumed to take place automatically without the writer having to monitor or plan for the coherence of the information.

Bereiter and Scardamalia (1987) suggest that cues related to discourse type probably function in much the same way, in that discourse elements function as cues for retrieval. Furthermore, it is likely that what is retrieved will not only be relevant to the topic in hand, but also be appropriate to the structure of the writing. Of course, items of content which are retrieved are subjected to tests of appropriateness. Such checks range from minimal testing of whether the items "sound right" in relation (a) to the assignment and (b) to text already produced, to more involved checking of whether they suit the theme, gist or argument, the literary genre and so on. Bereiter and Scardamalia claim that, if items pass these checks, they may be written down in some form and the next cycle of content generation may begin.

Most of the subjects taking part in the present study were 'knowledge-telling' writers, for only three subjects were able to create their own stories in Chinese and

only one in English. The other subjects either retold or rewrote stories which they knew of before. To retell and to write on the basis of previous knowledge is knowledge telling, not in itself a bad writing strategy. Bereiter and Scardamalia (1987) state that knowledge telling provides a natural and efficient solution to the problems immature writers face in generating text content without external support.

Table 5.6: Sources of knowledge used for the stories in the study (9 in English and 9 in Chinese)

	School course book		School reader		Leisure reading		TV recorded stories		Told by adults		Created	
	E	C	E	C	E	C	E	C	E	C	E	C
No. of stories retrieved	3	2	4	3	11	11	5	3	1	2	2	3
No. of stories used	2	0	1	1	3	4*	1	3	1	1	1	3*

* The stories written by the subjects were partly self created with ideas derived partly from leisure reading.

As can be seen in Table 5.6, the majority of the subjects relied on retrieving known stories for retelling and rewriting. The sources of retrieved knowledge for the stories in rank order were: books and magazines in leisure reading (22), TV and recorded stories (8), stories of school readers (7), stories in school course books (5) and stories told by adults (3). Most of the stories were retrieved from books and magazines read for leisure reading. Most of this reading material was published in Chinese (21 out of 22). TV programmes and recorded stories were also produced mostly in Chinese (7 out of 8). The three stories read to the subjects by adults were also in Chinese. However stories retrieved from course books and readers were mostly published in English (English 10 vs. Chinese 2), probably because there are no readers for Chinese Language as a subject. There are also very few stories in Chinese course books. It is understandable therefore for the children to look for stories from English sources when writing in English.

When the subjects wrote their stories in Chinese, 8 out of 9 reported that they selected their stories from Chinese sources, and when they wrote their stories in English they said that they selected their materials mostly from English sources (5 out of 8). These results suggest that the subjects were able to access more information when working in their L1 on an L1 topic, a finding also reported by Friedlander (1990). On the other hand, they tried to retrieve familiar stories from English text books when writing in the L2, for these were able to provide them with language and contents at the same time. For leisure reading, most of the children in the present study read Chinese books. The parents interviewed by the researcher said that they seldom read or told stories to children, and most said they had stopped reading stories to the children when they entered primary school.

Nevertheless, most of the stories produced for the research were related to reading or viewing. The majority of the sources of ideas for writing identified by the children (80%) were from printed material (stories with cassette tapes accompanying picture books might be considered as printed material). Given that the subjects had to recall previously read text from their long-term memory store, one should not overlook the factors governing how well information from text is housed in memory. Dolan T. (1991) demonstrated experimentally with English and Hong Kong children that the type and amount of textual information housed in memory very much depends on the text itself, its content and structure; and on the readers, how well they comprehend the text, the level of sophistication of their language and the knowledge they bring to the task.

Regarding the content schemata (Collins et al., 1975) in the English stories produced by the children, most were from well known fairy tales (for example, Snow White, Cinderella, Sleeping Beauty, Lion and the Mouse), knowledge of which derived both from school and leisure reading, TV programmes, cassette-taped stories and stories told them by adults. The above fairy tales clearly centre on the culture of

European countries. The other main category of source writing stimuli was modern short stories in school course books and school readers with a Hong Kong cultural background.

Regardless of the source of the story, most children in the study seemed to grasp the general text-structure schemata (Meyer, 1975; Taylor, 1980) of the source material. They could recall the theme, gist and structure of the stories and write them down. Inspection of the stories produced showed that the gist of the stories was similar to the original, with some details deleted or changed, in line with Bartlett's (1932) analyses with older subjects. Bartlett showed how people generally remember the gist better than the detail of complex information they encounter, particularly in the case of narrative text, irrespective of the interval between initial and subsequent recall. It is interesting to note that six of the subjects had considered writing about "Snow White", a very popular story for Hong Kong children, confirming Caccamise's (1987) point that topic familiarity is one of the most important text features affecting schemata activation for writing.

Turning to the groups producing the transactional accounts, one in English and one in Chinese, when they were asked about the ideas they had retrieved, the ideas they reported were roughly the same as the ideas present in the composing aloud procedure. Asked where the ideas came from, they reported that the ideas were seen and experienced in their daily lives. Asked whether they had seen thought images in their mind, they said that this was the case and reported and described images associated with their ideas. It is interesting to note that the types of ideas retrieved were to a certain extent quite common. For the topic "My School", the subjects would describe the functional rooms, their teachers, extracurricular activities, facilities, the school environment and recess time. The address was also frequently mentioned (see Table 5.7). For the topic "My Family", subjects usually wrote about their father, mother, brothers and sisters and their leisure activities. Some also mentioned the

number of family members and the address of their flat. Three wrote about things which had happened to their families.

Table 5.7: Common ideas produced for the topic 'My School' (9 subjects)

	Functional room	Teachers	Extra-curricular activities	Address	Facilities	Environment	Recess
No. retrieved in protocols	7	7	6	4	4	4	3
No. used in text	4	6	4	4	4	3	3

Table 5.8: Common ideas produced for the topic 'My Family' (9 subjects)

	Father	Mother	Brother sister	Leisure activities	No. of family members	Address	An episode
No. retrieved in protocols	8	8	8	6	3	3	3
No. used in text	7	6	6	3	3	3	3

It is clear that the subjects' writing belonged to the 'knowledge-telling' type. Topic and discourse schemata are important sources of cues for retrieving content from memory (Bereiter and Scardamalia, 1987) and, since "My School" and "My Family" are familiar topics for the subjects, the children could easily access a wealth of stored ideas about each. Although the subjects in the study came from different social and home backgrounds, they seemed to draw on common background knowledge and arrived at many common ideas in their writing. To a certain extent, the subjects seemed quite stereotyped in their thinking.

5.2.3 Criteria for Selection

There are different stages in the process of generating ideas, the first being the searching through memory to identify and generate ideas about the assigned topic. Bereiter and Scardamalia (1987) point out that this involves two distinct kinds of long-term memory operations, and that their research suggests that children have trouble with both. They write:

"The first is a diffuse, topic-related search of memory directed by a question on the order of "Let's us see, what do I know about this?" The result of this search is not likely to be a complete inventory, but rather a list of major categories with some information concerning the extent of knowledge in each. This may be regarded as a metamemorial search. It does not directly yield content for use in writing, but instead yields knowledge about the availability of contents. The other kind of operation is a top-down search, directed toward some goal such as a proving a point, amusing the reader, or preparing an introductory lecture. These are metamemorial and goal-direct searches." (p.65)

It would appear that most of the subjects in the present study could retrieve the key elements, theme and details of the stories they wrote about. Whilst searching their memory, the subjects clearly engaged in the process of selecting some salient points and rejecting others. Subject 4A1C reported that, when she was given the topic to write, she first thought about the story "The Ugly Duckling", but did not think this very interesting so did not write about it. She then turned to "Snow White", a story whose details she could not remember so decided not to write about this either. She had recently read a book of short stories, one of which was "The Thumb Boy". She liked the story and tried to write about it, but considered the part about the parents of the Thumb Boy too complicated so she abandoned this part. She thus only wrote the part about the adventure of the boy. This example illustrates how subjects conducted a meta-memorial search, retrieved a selection of possible stories, then considered each

to see how easy or difficult it would be to write about. Ease of writing was clearly an important criterion, especially for the English version.

5.2.3.1 Types of Criteria

After generating ideas, writers have to make a selection of ideas, choosing some and rejecting others. Graves (1981a) says:

"There is a process to topic selection, again, conscious or unconscious.When the topics are self-selected, part of the process seems to be "voice-matching" with what feels right today; the child measures intentions against his audience, which may be his classmates, teacher, or even parents. Choice may also involve weeks, months, or it may be a snap judgement based on a whim. More needs to study about topic choice behaviours in writing than we know."
(p. 146)

Table 5.9 summarises the criteria reported by Subject 5A3E, asked to write a story in English. It shows the writing material which she had recalled for possible inclusion and the criteria for its selection.

Table 5.9: Summary of Subject 5A3E’s selection criteria

Stories Retrieved	Considerations
1.Cinderella	needed many vocabulary items to tell the story
2.Ah Lai Egg	a story in a reader, too difficult to write
3.King and Mice	a story in the text book, too difficult
4.Cat and Mice	a story in the reader, needed much vocabulary
5.A Visit to the Zoo	a story in the reader,language too difficult
6.An Old Woman	a story in an exercise book, a rearrangement of the sentences of the story

As can be seen in Table 5.9, Subject 5A3E reported that she had thought about six stories and made various considerations before making up her mind over what to write. From her report, one can see that her main concerns seemed to be access to vocabulary and ease of sentence structure in the English involved. She decided to write about "An Old Woman" because she had previously done an exercise in school which included the arrangement of the sentences in the story. Such behaviour strongly illustrates her lack of confidence in writing freely in English.

Table 5.10 summarises the considerations made by Subject 5A2E, also asked to write a story in English. It offers a summary of his report on the material retrieved and the criteria and possible material considered when selecting a story to write.

Table 5.10: Summary of Subject 5A2E’s selection criteria

Writing Material Retrieved	Considerations
Historical stories in Book of Proverbs	too much dialogue, could not translate
Cinderella	fairy tale, too long, too many vocabulary items
Sorry Bird	a story in a reader, too long, too many vocabulary items needed
The Boy and the Frogs	a fable in a magazine, read two days ago, had vocabulary to write.

As can be seen in Table 5.10, a key consideration expressed by this subject was his knowledge of relevant vocabulary. However, his worries went beyond vocabulary to a consideration of the structure of the language needed to write the stories. As with the earlier example, again featuring a Primary Five pupil, this child also had little confidence in his ability to write in English. Being Primary Five pupils, each had experience in writing stories in English and both were sensitive to their own difficulties in this respect.

Subjects writing Chinese seemed to consider criteria for selection very different from those considered when writing in English. Subject 3A3C reported that she could recall four stories. The first one was "Snow White", but she considered this too long so did not choose it. The second one was "Chow Chu Removes the Three Trouble-Makers", a story she had read in a story book. She had participated in a story telling competition using this story but, since she did not get a prize, she did not care to write this story. Her third possibility was "The History of Tao Fa Yuen", a story whose details she could not remember well so she decided not to write about this either. The fourth possibility was "A Small Hut in the Forest", a story she had read in a story book. She could remember the details and said she saw the pictures of the story in her mind so decided to write this particular story. From her descriptions, it seems clear that the subject considered content to be the most important criterion for selection. Language considerations did not seem to enter the decision-making criteria when writing in the L1.

Subject 4A2C, writing a story in Chinese, reported that he recalled four stories: "Peculiar Noise", "Catching the Burglar", "Vinnie" and "The Cow". He liked "The Cow" most. It was one of the stories in a story book bought for him by his father. He selected this story out of interest, and, like the subject discussed above, did not appear to regard the language of the task as a crucial criterion.

Table 5.11 presents a summary of the criteria for selection of ideas by the 9 subjects writing stories and Table 5.12 summarises the reasons for rejecting stories considered.

Table 5.11: Summary of criteria for selection (9 subjects)

	Studied before		Can write		Interested		More content		Created	
	E	C	E	C	E	C	E	C	E	C
No. of responses	3	1	2	0	2	5*	1	2	1	3

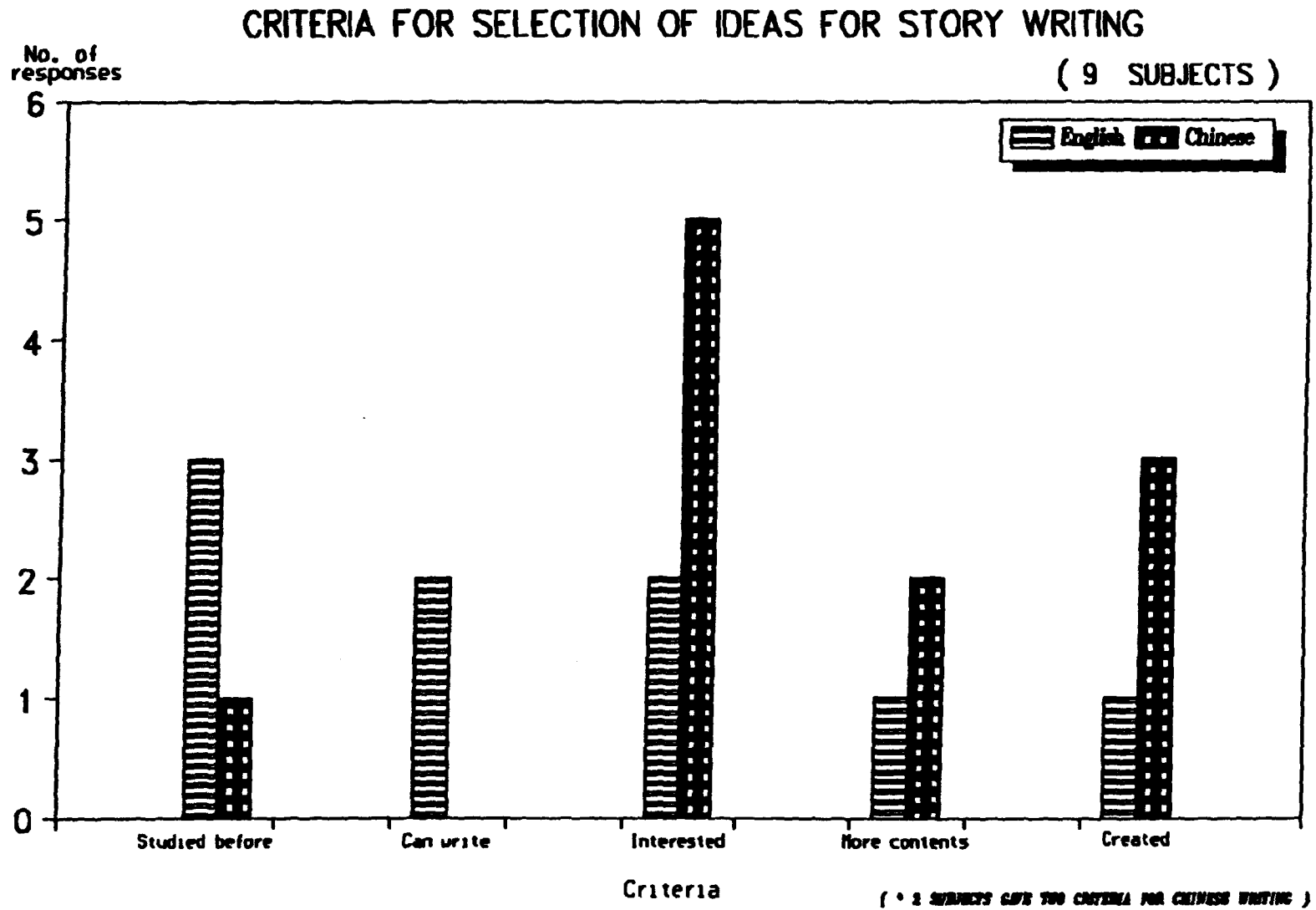
*Two subjects gave more than one criterion for selection.

Table 5.12: Reasons for avoidance (9 subjects)

	No vocabulary		No confidence		Not interested		Insufficient content	
	E	C	E	C	E	C	E	C
No. of responses	6	2	5	0	2	8	1	6

From the above tables (also see Fig. 5.1), it can be seen that the subjects employed different criteria for selecting topics or stories to be executed in the L1 and in the L2. For writing in English, "studied before" and "can write" are two important criteria. In other words, language competence seemed the most important criterion to consider.

Figure 5.1



It is quite possible that the subjects' problems were associated with their prior reading, and Perkins (1983) has noted that poor reading in a foreign language is often due to inadequate knowledge of the target language. Furthermore, imperfect knowledge of the L2 can also cause difficulty in L2 writing. It is interesting to note that, in the present study, two subjects said they had the habit of rote memorisation of vocabulary as a strategy to ensure that they had access to a range of words. In fact, their parents encouraged them to memorize passages in the L2 in order to improve their English.

In contrast, when writing in Chinese, interest and content were the most essential points for consideration. In a study conducted by Bereiter and Scardamalia (1987) in Canada, children reported that their main problems in generating text were problems of finding content, not the language to express themselves. Bereiter and Scardamalia assert that all the evidence they knew of indicated that children's main problem with content is in getting access to, and giving order to, the knowledge they have about it. In L1 writing, language was not the most difficult problem. Rather, the main consideration was the retrieval of content. Studying the selection of topics by children for writing, Gradwohl and Schumacher (1989) found that children chose topics they knew more about and found it hard to resist reporting vivid experiences. These claims would find support from the present study, for the content of the writing produced by the children reflected familiarity with the topic concerned as the most important criterion.

Asked why they had avoided or rejected certain topics to write about, the subjects explained that the problems of finding the right vocabulary and confidence in writing in English were the chief reasons. As can be seen in Table 5.11, when thinking about writing in Chinese, the subjects would avoid topics if they were not interested in them, thought they did not know enough information to write about, or could not remember enough about the topic.

Language difficulty seemed to pose the major problem when writing in English, whereas it was subject matter that seemed all-important when writing in Chinese. Of course, language did sometimes pose a problem for subjects writing in their L1. For example, Subject 4A3C wanted to write about "The Race between the Tortoise and the Rabbit", but was put off because he did not know how to write the word "龜" (tortoise), a very complicated Chinese character. Then he wanted to write about "My Most Favourite Thing". His most favourite possession was a video-cassette but, again, he did not know the relevant character for this so did not write about it. He then wrote "A Story of a School Bag". Such difficulties in language are of a different order to those experienced by the children writing in English however. Choice of wording is always a potential problem for any writer, especially a Cantonese speaker writing in MSWC, but most people develop communicative strategies to avoid such difficulties. This issue will be discussed in more depth in Chapter Seven.

5.3 Summary of Results

The evidence gathered shows how subjects were able to retrieve images voluntarily or seemingly spontaneously to facilitate the generating process when composing. Some images were moving pictures and some were stationary; some in colour and some in black and white. Some subjects could imagine hearing sounds and sometimes could see themselves in the images in their mind. Sometimes the images took the form of metaphors, and emotions too could be imagined strongly. As to the vividness of the imagery, the reports varied, in line with Richardson's (1983) claim that imagery varies considerably in vividness and controllability, both from person to person and even within the same person from one day to the next. The subjects retrieved images of titles, pictures on covers of books and illustrations within them, words, TV programmes and past events. Using such imagery, some subjects were able to retrieve

information as potential content for their writing. At the same time, the images produced sometimes helped in recalling the strokes of the Chinese characters and spellings of English words.

Referring to the model of the composing process advanced in this study, the evidence, slender as it is, would suggest that retrieval of imagery is indeed one of the ways to generate ideas and is an important sub-process of generating.

After being given an assignment, generating things to write down is one of the first processes in composing. For this, subjects can consult the information present before or around them or search their long-term memory for relevant information. Concerning information retrieved which is considered relevant for writing, topic and discourse schema are important sources of content in memory. The young subjects in the present study seem to belong to the knowledge-telling type (Bereiter and Scardamalia, 1987). When asked to write stories in Chinese, most of them retold or rewrote stories based on ones already known from leisure reading, school readers, audio and visual material, school course books and stories told by adults. When trying to write stories in English, the subjects took as their models stories from course books and readers written in English and familiar to them. They thus drew upon familiar fairy tales and short stories written in text books. When writing in expository fashion about a familiar topic, they drew upon common background knowledge and included many common ideas.

In selecting information to write about, the subjects seemed to take different considerations into account when writing in the L1 and in the L2. When writing in English, the main criterion for selection was choosing a topic studied in detail before so that the subjects had confidence in their knowledge of the relevant vocabulary and language involved. Stories and ideas with unfamiliar vocabulary or complicated

English language would be avoided or rejected. In contrast, when writing in Chinese, the criteria for selection were interest and content (familiarity). Interestingly, the reasons for avoidance were similar to those expressed about writing in English in the sense that the subjects avoided writing about unfamiliar phenomena. Language capability and confidence in using English were their most important criteria when choosing what to write about in English; content familiarity and interest were more important criteria when choosing what to write about in Chinese.

5.4 Implications

The present study has shown how the research subjects, Hong Kong primary pupils, use images and first-hand experiences when selecting what to write about. It also highlights their lack of confidence in thinking creatively and using language to explore the world. If methods used for teaching writing are too mechanical and too teacher-guided, students will be conditioned into following the teacher's model when writing and ignoring their own ideas and imagery. Too many guided compositions may also restrict the generating of ideas for writing. Guided compositions are good for helping students organize ideas but not for generating their own ideas. Because guided compositions produce work which looks well constructed and proficient, teachers tend to use them constantly. This should not be the only approach to teaching writing and teachers should interpret advice with care which is articulated in the official Syllabi (CDC, 1981; CDC, 1990a) about the place of guided writing. That the subjects in the present study lacked confidence in writing about unfamiliar topics and thinking creatively is a cause for concern.

Imagery seemed able to help the subjects in the present study generate writing material, recall words, experiences and emotions. Instructions to use imagery mnemonics have been shown to have positive effects on both free recall and recognition (see Atkinson, 1975; Huang and Liu, 1978), raising the question of whether it is possible for teachers to guide students to retrieve imagery. Pope and Singer (1978) suggest that human adults have a continual, night-and-day stream of imagined events going on within them. Given the appropriate conditions, every individual can tune in and watch. Guided imagery advice can help to draw attention to what might be called the imagery channel. If people switch to this channel (attend to it), they may find themselves in touch with a highly influential and motivational source of information about themselves (Leuner, 1977; Sheikh and Panagiotou, 1975).

Training programmes have been organized by researchers to help students retrieve mental imagery. Walsh et al. (1978) organized a training programme to train people to improve their rate of imagery and found it most effective for weak imagers. Richardson and Taylor (1982) demonstrated experimentally that one can construct vivid images and absorb oneself in their content. Tse and Chan (1990) carried out experiments guiding eight Hong Kong students to retrieve thought images and showed how students are able to obtain detailed information from their past experience by retrieval of such thought images. They could also re-experience previous emotions during retrieval of images. Long and Hiebert (1985) examined gifted elementary students' composition before and after imagery practice. It was found that treatment subjects wrote longer, more original compositions than control subjects' compositions before and after imagery practice. Long and Hiebert (1985) examined gifted elementary students' compositions before and after imagery practice, and concluded that imagery training was effective in improving both the quality and quantity of the treatment groups.

Jampole et al.(1991) conducted research to examine the effects of imagery training on gifted elementary subjects' creative writing, and found that guided imagery is an effective method for influencing aspects of their creative writing. Given four instructional lessons, the imagery group became more original and used more sensory descriptions than the control group. These are very encouraging results and language teachers in Hong Kong may introduce such training programmes to help pupils enhance their writing ability.

Regarding sources of knowledge for inspiring writing, the results show that reading is important for building up content schemata. However, this is to no avail if pupils are unwilling to create their own stories. Clearly, pupils in primary schools in Hong Kong are influenced by the instructional methods used for teaching writing, and the truth is that few are encouraged to write creative stories. The children in the present study only rarely retrieved information from leisure reading in English and relied heavily on English textbooks. This may imply that there are too few suitable English books for extensive reading or that the subjects have not been encouraged to read English books. Unless pupils are encouraged to look for material from their own mental imagery and select interesting episodes to write about, the content of their writing will never be really interesting and diverse.

The main criterion for selecting ideas for story writing in English was language, that is to say, vocabulary and knowledge of appropriate grammatical structures. This implies that the subjects in the present study had little confidence in expressing themselves in English and, indeed, the taped evidence showed that the children seemed apprehensive about writing in the L2. Using the English language as a means freely to express themselves seems not to have occurred to them. This may be the effect of the restrictive teaching methods used in writing instruction in English in Hong Kong.

The teaching of writing in Hong Kong does not encourage creativity. Language teachers concentrate on presentation and spelling, so that writing, both for the teacher and for the pupil, is a kind of evaluation, not a means of learning. This is not to say these things are unimportant, for students need one way or another to learn these mechanics. Nevertheless, as suggested in Chapter One when talking about the Plowden Report (HMSO, 1967), children should first be encouraged to write as a means of expressing their own ideas. This will build up their confidence and self-image as writers. There is plenty of time and there are numerous opportunities in general lessons across the curriculum for such learning to be refined and shaped, so it is not necessary to concentrate exclusively on such matters in composition lessons.

Transformations in the Composing Process in Chinese

As pointed out in Chapters One and Three, composing often involves such operations as addition, reordering, substitution and embedding (Emig, 1971; Tse, 1984). On any occasion when one's original intentions 'in the head' have to be altered to accommodate the demands of writing, one can say that a transformation has had to be made. To throw light on this usually hidden processing as it applies to writing, the subjects in the present study were asked to compose aloud, their efforts being interpreted as indications of the intended representations for inclusion in their written output. The researcher then examined the differences between the 'compose aloud' productions and the representations eventually written down on paper, any discrepancy between the two being judged a potential 'transformation'. Discrepancies between the subject's intentions and what was actually produced can help indicate the production difficulties encountered and the strategies used by subjects. Most importantly for this study, they also reflect the subject's facility with the languages used.

This chapter looks at transformations in the composing process associated with writing in Chinese, the mother tongue of the subjects. The next chapter looks more generally at transformations in the composing process. Transformation associated with writing in English, the L2 of the subjects, is also discussed. The writer considers it essential to understand the problems subjects faced in writing in their L1 before looking at how they tackled composing in their L2. The transformations needed for writing Chinese, a task facing all the subjects prior to learning how to write in English, and the instructional experience itself, have a carry-over effect on the ways in which Hong Kong pupils compose in English.

Tian (1987) and Liu (1988) discuss the problems which Hong Kong people face in their writing arising out of the fact that their spoken tongue, Cantonese (CAN), a non-standard dialect of Chinese, differs from the form of their writing, Modern Standard Written Chinese (MSWC), the scripted equivalent of Putonghua. Whenever Hong Kong people write, some transformation of the form of the intended thought message usually has to be made for it to be written in an acceptable format. To master these transformations, throughout their schooling, all Hong Kong pupils are compelled to write in MSWC and forbidden to write in CAN. The strategies teachers feel they need to employ to ensure that pupils write correctly are stringent, and they run the risk of discouraging pupils from expressing fluently and naturally the thoughts they have when writing.

The pages which follow are concerned with the concept of transformations in the composing process, particularly those associated with spoken CAN and MSWC. By examining the sentence patterns in the verbal protocols of the composing aloud process against the written text eventually produced by the subjects, the ways in which spoken CAN has to be transformed to accommodate the demands of MSWC are highlighted and the difficulties Hong Kong primary pupils face when learning to write may be revealed. Such transformations include alterations to sentence patterns, lexicon and particles.

6.1 Transforming CAN to MSWC: Introductory Comments

In pilot work, a small number of subjects were asked to compose aloud in MSWC. The obvious difficulties they were experiencing led to a painfully slow composing speed: CAN is used as their everyday spoken mode, they think in CAN, and found it virtually impossible to 'speak' MSWC. Hence, in order to reveal the true dimensions of the issue, it was decided to use taped evidence to gather more spontaneous

examples where subjects made transformations to accommodate speech-to-writing demands. An examination of the data reveals that the subjects in the present study did indeed transform CAN into MSWC, as the examples below from two of the subjects show.

Example 1

嚟啲人多數都係靠打獵為生嘅

The NOM* people mostly all are depend on hunting for living. (Cantonese utterance-CAN)

村裡的人靠打獵為生

Village NOM people depend hunting for living. (MSWC)

(People living in the village hunt for their living - English translation).

Example 2

狐狸突然跑出嚟

Fox suddenly run out P. (CAN)

那狐狸突然跑出來

That fox suddenly run out come. (MSWC)

(The fox suddenly appeared.)

<hr/>		
*	Abbreviations	
	adv.	adverbs
	ba	ba sentence
	bei	bei sentence
	cl	classifier
	GEN	genitive noun
	modal	modal verb
	NOM	nominatives
	PFV	perfective verb
	3sg	third singular person
	P	particles

Example 3

咁早不如做下早操先啦

So early why not do some morning exercise before P. (CAN)

時間還早呢！我先到那兒 的一個草叢上做早操吧

Time is still too early! I before arrive that NOM one CL grassland do morning
P. (MSWC)

(I still have some time. I'd better go to the grassland to do some morning
exercise.)

Example 4

整醒咗獅子嗎

Make wake P lion P. (CAN)

把獅子弄醒了

{ba} lion make wake P. (MSWC)

(It woke up the lion.)

The above examples confirm and demonstrate the presence of transformations in the writing process. In order to make a closer examination of the dimensions of the differences between the CAN utterances and MSWC script of primary school pupils in Hong Kong, spoken and written output by the subjects during the experimental sessions was studied. Particular attention was paid to sentence patterns, lexicons and particles.

6.2 Transformation of Sentences

6.2.1 The Sentence Patterns of CAN Utterances and MSWC

The researcher examined the sentence structures of (a) all the CAN utterances in the compose-aloud sessions, and (b) all the sentences in the written texts produced in the experiments by all subjects in order to compare the sentences produced in each situation. The researcher employed a method based on the Pedagogic Syntax System of the Secondary School, advocated by the Chinese Government (People's Education Publisher, 1984). All the sentences were analyzed according to five clause elements: subject, verb, object (direct and indirect), predicate and complement (Tian, 1990). Adverbials were not included in the analysis. As Perera (1984) says,

"An adverbial can occur in a variety of positions, unlike all the other clause elements...Adverbials are grammatically optional...There is no theoretical limit on the number of adverbials that can occur in any one clause." (p.29)

Thus it would have complicated matters enormously if adverbials had been included in the analysis, so their consideration was omitted. Concerning adjectives, most have two different functions: as noun modifiers and as predicates. In the present study, attributive adjectives were not analyzed separately and the predicative function of adjectives was included in the category "predicate".

(1) Subject(s)

A subject is the noun or pronoun most closely related to the verb in a sentence. It is generally placed before the verb and represents 'who' or 'what' one is talking about.

e.g.

(a)

佢呢 | , 就唔 番 學 (粵)

S

3 sg P, /then not go school (CAN)

S

(She then does not go to school.)

(b)

鈴聲 | 響了 (書)

S

Bell sound /rings PFV (MSWC)

S

(The bell rings.)

(2) Predicate (P)

The predicate is that part of the sentence which makes a statement about the subject. The predicate in Chinese is not equivalent to that in English, for it is only confined to nouns and adjectives which describe 'how' and 'what' the subject is. It is similar to the term '表語' (subjective complements), but while words like '是' (is) or '為' (become) appear in subjective complements, they do not appear in the predicate.

The following is an example of a subjective complement:

(中環 | 是 | 香港的商業區)

S

C

Central /is Hong Kong GEN commercial area

S

C

(Central is Hong Kong's commercial area.)

The following are examples of predicates:

(a)

今年 | 八歲

S

P

This year / eight years old.

S

P

(He is eight years old this year.)

- (b) 佢 | 好悶喎 (粵)
P

3 sg/ very dull P (CAN)

S P

(He is very dull.)

(3) Object (O)

The object is a word or groups of words forming the complement of the verb. There are direct and indirect objects, usually nouns or pronouns.

e.g.

- (a) 佢呢 | , 叫做 | 小英 (粵)
O

3 sg P, called /Siu Ying (CAN)

O

(She is called Siu Ying.)

- (b)

她 | 看見 | 森林 | 有 | 一間小屋 (書)
O O

3 sg saw/ forest /has /one CL small house (MSWC)

O

O

(She saw a small house in the forest.)

(4) Verb (V)

A verb is a word or phrase that tells what someone or something is, does or experiences.

e.g.

- (a) 狐狸 | 見到 | 佢 | 嚟 (粵)

V V

Fox /saw /3 sg come (CAN)

V

(The fox saw him coming.)

- (b) 他們 | 沒有 | 東西 | 吃 (書)

V V

They /have not /thing eat (MSWC)

V

(They have not got anything to eat.)

(5) Complement (C)

A complement in the Chinese context is the supplementary part of the sentence placed after the verb, adjective or object which makes the sense of the sentence complete. In this sense its function is different from that of English.

e.g.

- (a) 老公公 | 就攞咗 | 佢 | 係一個盒裡便 (粵)

C

Old man then put PFV 3 sg on /one CL box inside (CAN)

C

(The old man then put her in a box.)

- b) 她 | 看見 | 自己 | 在公公裡 (書)

C

3 sg saw myself /at old man place (MSWC)

C

(She saw herself at the old man's place.)

6.2.2 Sentence Patterns in CAN Utterances and MSWC

The following are examples of the range of sentence patterns found in the verbal protocols collected in the compose-aloud session and in the written text produced by the subjects.

(1) subject/verb

e.g.

(a)

佢！就爬囉（粵）

S V

3 sg/ then climb P (CAN)

S **V**

(It then climbed.)

(b)

我！個陣時唔提早溫個啲（粵）

S V

I / that time not make earlier revise P (CAN)

S **V**

(At that time I did not revise my work early enough.)

(c)

鈴聲！響了（書）

S Y

Bell sound / ring PFV (MSWC)

S **V**

(The bell rings.)

(d)

牠！在山洞外午睡（書）

S Y

3rd / at cave outside afternoon sleep (MSWC)

S V

(It had an afternoon nap outside the cave.)

(2) Subject/Verb/Object

e.g.

(a)

佢呢， | 叫做 | 小英 (粵)

S V O

3 sg/ called / Siu Ying (CAN)

S V O

(She was called Siu Ying.)

(b)

佢 | 又覺得 | 好唔好運粒今日 (粵)

S V O

3 sg / adv feel / very not lucky today (CAN)

S V O

(Again he felt that he was unlucky today.)

(c)

今天 | 是 | 小英的生日 (書)

S V O

Today / is / Siu Ying GEN birthday (MSWC)

S V O

(Today is Siu Ying's birthday.)

(d)

她 | 突然想起 | 很久沒有爬過樓下的一棵松樹了 (書)

S V O

3 sg / suddenly realized/ long time had not climbed ground

S V O

floor NOM one CL pine tree PFV (MSWC)

(She suddenly realized that she had not climbed the pine tree on the ground floor for a long time.)

(3) Subject/Verb/Object/Verb

e.g.

- (a) 嗰啲人 | 多數都係靠 | 打獵 | 為生嘅 (粵)
 S V O V

These people / majority adv modal rely/ hunting/make living

S V O V

Nom (CAN)

(The majority of these people make a living by hunting.)

- (b) 狐狸 | 見到 | 佢 | 嚟 (粵)
 S V O V

Fox / saw / 3 sg / come (CAN)

S V O V

(The fox saw him coming.)

- (c) 村裡的人 | 靠 | 打獵 | 來生活 (書)
 S V O V

Village in NOM people/rely/ hunting/living (MSWC)

S V O V

(The people in the village make a living by hunting.)

- (d) 他們 | 沒有 | 東西 | 吃 (書)
 S V O V

They / have not / thing / eat (MSWC)

S V O V

(They have not got anything to eat.)

(4) Subject/Verb/Object/Verb/Object

e.g.

- (a) 佢媽咪呢, | 就問 | 佢 | 鍾意 | 乜嘢 (粵)
 S V O V O

3sg Mummy P / then ask /3 sg / like / what (CAN)

S V O V O

(Her Mummy then asked her what she liked.)

- (b) 皇帝 | 話 | 你 | 要做 | 公主 (粵)
 S V O V O
 King / say/ you / modal become / princess (CAN)
 S V O V O
 (The King said that you would become a princess.)
- (c) 小英的媽媽 | 問 | 她 | 要 | 甚麼生日禮物 (書)
 S V O V O
 Siu Ying GEN mother/ ask / 3 sg / want / what birthday
 S V O V O
 present (MSWC)
 (Siu Ying's mother asked what present she would like for her birthday.)
- (d) 她 | 以為是 | 媽媽 | 買給 | 姊姊 (書)
 S V O V O
 3 sg / think is/ mother / buy for/ elder sister (MSWC)
 S V O V O
 (She thought that her mother had bought it for her sister.)

(5) Subject/Verb/Object/Verb/Object/Verb

e.g.

- (a) 佢 | 帶 | 的柴 | 去 | 廟前建造街市個度 | 賣 (粵)
 S V O V O V
 3 sg / carry/ some wood /go/ the construction market that
 S V O V O
 place/ sell (CAN)
 V
 (She brought the wood to sell in the market for the constructors.)

(b) 佢 | 成日買 | 餸 | 煮飯俾 | 我地 | 食 (粵)
 S V O V O V

3 sg / always buy/ food / cook rice / for us /eat (CAN)

S V O V O V

(She always buys food and cooks rice for us to eat.)

(c) 牠 | 就叫 | 一些可怕的聲音 | 使 | 他 | 更害怕 (書)
 S V O V O V

3 sg / then cry / some horrible sound /make /3 sg /adv

S V O V O V

afraid (MSWC)

(It then made some horrible howling which made him more afraid.)

(6) Subject/Verb/Object/Verb/Object/Verb/Object

e.g.

(a) 爹哋、媽咪 | 成日呢帶 | 我哋 | 去 | 啲餐廳 | 食 | 嘢 (粵)
 S V O V O V O

Daddy Mummy/ always take/ us/ go/ restaurants/ eat/ food (CAN)

S V O V O V O

(Daddy and Mummy always take us to restaurants to eat some food.)

(b) 小矮人 | 帶 | 隻狼 | 去 | 兩個賊仔嘅度 | 食 | 嘢 (粵)
 S V O V O V O

Dwarfs / take / CL wolf / go / two CL thieves that place / eat/ food (CAN)

S V O V O V O

(The dwarfs took the wolf to the place of the two thieves to eat some food.)

(c) 他 | 帶 | 狼 | 去 | 小偷屋 | 吃 | 東西 (書)
 S V O V O V O

3 sg/ take /wolf / go / thieves house / eat / thing (MSWC)

S V O V O V O

(He took the wolf to the house of the thieves to eat something.)

(d)

S V O V O

V O

(7) Subject/Verb/Object/Verb/Object/Verb/Object/Verb

e.g.

(a)

3 sg P / then ask/ 3sg CL daughter/ go / forest place/ saw

S V O V O V

/ have what thing / modal eat (CAN)

O y

(He then asked his daughter to go into the forest to look for food to eat.)

(b)

That man/ ask / elder daughter/ go / forest/ find/things/ eat (MSWC)

S V O V O V O V

(That man asked his elder daughter to go into the forest to find something to eat.)

(8) Subject/Verb/Object/Verb/Object/Verb/Object/Verb/Object

c.g.

- (a) 你 | 幫 | 我 | 叫 | 其他同伴 | 黎幫 | 我 | 解咗 | 個網 (粵)
S V O V O V O V O

You/ help/ me / ask /other friends / come help / me / loosen

S V O V O V O V

PFV/ CL net (CAN)

O

(You help me by asking other friends to come and help me loosen the net.)

(9) Subject/Verb/Complement

e.g.

- (a) 我 | 玩得 | 都好開心 (粵)
S V C
I / play adv /adv very happy (CAN)
S V C
(I played very happily.)

- (b) PE堂 | 成日冷 | 親嘞 (粵)
S V C
PE lesson/always catch /a cold PFV (CAN)
S V C
(It's always easy to catch a cold during the PE lesson.)

- (c) 她 | 哭 | 起來 (書)
S V C
3 sg /cry /starting (MSWC)
S V C
(She started to cry.)

- (d) 我 | 覺得 | 很高興 (書)
S V C
I /feel /very happy (MSWC)
S V C
(I feel very happy.)

(10) Subject/Verb/Object/Complement

e.g.

- (a) 我 | 都鍾意 | PE堂 | 多啲 (粵)
S V O C

I /adv like /PE lesson /more (CAN)

S V O C

(I like the PE lessons more.)

- (b) 老公公 | 就擺咗 | 佢 | 係一個盒裡便 (粵)
S V O C

Old man /then put PFV /3 sg / at one CL box inside (CAN)

S V O C

(The old man then put him inside a box.)

- (c) 老公公 | 又放 | 她 | 在盒裡 (書)
S V O C

Old man /adv put / her /at box inside (MSWC)

S V O C

(The old man put her into the box again.)

- (d) 她 | 看見 | 自己 | 在公公裡 (書)
S V O C

3 sg / saw / herself / at old man place (MSWC)

S V O C

(She saw herself at the old man's house.)

(11) Subject/Verb/Object/Verb/Complement

e.g.

- (a) 小人 | 叫 | 他 | 𨀲 | 了 | 出來 (書)
S V O V C

Dwarfs /ask /3 sg /disgorge PFV/out come (MSWC)

S V O V C

(The dwarfs asked her to disgorge it.)

(12) Subject/Predicate

e.g.

(a)

佢呢， | 原來呢， 今日生日 (粵)

S P

3 sg P /in fact P, today birthday (CAN)

S P

(In fact, today is her birthday.)

(b)

佢 | 好悶喎 (粵)

S P

3 sg / very dull P (CAN)

S P

(She is very dull.)

(c)

她 | 十分不快樂 (書)

S P

3 sg / extremely not happy (MSWC)

S P

(She is extremely unhappy.)

(d)

她 | 十分氣怒 (書)

S P

3 sg / extremely angry (MSWC)

S P

(She is extremely angry.)

(13) Verb/Complement

e.g.

(a)

爬都爬 | 唔到喎 (粵)

V C

Climb adv climb/not reach P (CAN)

V C

(It cannot be reached by climbing.)

(b)

就走 | 開左 (粵)

V C

Then run/ away PFV (CAN)

V C

(Then it ran away.)

(c)

但是找 | 不到 (書)

V C

But find /not (MSWC)

V C

(But it could not be found.)

(d)

便跑 | 過去 (書)

V C

adv run /there (MSWC)

V C

(He ran there)

(14) Verb/Object/Complement

e.g.

(a)

帶俾 | 我地 | 好開心 (粵)

V O C

Give/ us /very happy (CAN)

V O C

(Give us a lot of happiness.)

(b)

唔理 | 幾多錢 | 都好啦 (粵)

V O C

Not care/ how much money/ adv alright PFV (CAN)

V O C

(He does not care how much it costs.)

- (c) 救了 | 獅子 | 出來 (書)
V O C

Save PFV /lion/ out come (MSWC)

V O C

(The lion is saved.)

- (d) 看見 | 獅子 | 被大網困住了 (書)
V O C

Saw /lion /bei big net bound PFV (MSWC)

V O C

(The lion was seen being trapped in a big net.)

(15) Verb/Object/Verb/Complement

e.g.

- (a) 就將 | 的墨 | 倒 | 落去囉嗎 (粵)
V O V C

Then ba/those ink/ pour/ dropping P (CAN)

V O V C

(Then the ink was poured down.)

- (b) 就將 | 自己心愛公仔 | 打 | 爛咗嗎 (粵)
V O V C

Then ba/ myself loved toy/ hit/ broken PFV P (CAN)

V O V C

(Then she broke her beloved toy.)

- (c) 趁 | 媽媽 | 看 | 不見 (書)
V O V C

While/ mother/ saw/ not saw (MSWC)

V O V C

(While mother did not see,)

(d)

有 | 一輛汽車 | 無情地飛快地狂奔 | 過來 (書)

V O V C

Have/ one CL car/ mercilessly fast wild run/ coming (MSWC)

V O V C

(There was a car running mercilessly and wildly towards them.)

(16) Verb/Object

e.g.

(a)

從前有 | 個細路仔 (粵)

V O

Once upon have /CL little boy (CAN)

V O

(Once upon a time, there was a little boy.)

(b)

然後就刪埋 | 度門 (粵)

V O

adv then close /CL door (CAN)

V O

(Then the door was closed.)

(c)

過了 | 很快樂的日子 (書)

V O

Live PFV /very happily Nom days.(MSWC)

V O

(Live a happy life.)

(d)

看見了 | 獅子的頭髮 (書)

V O

Saw PFV/ lion GEN hair (MSWC)

V O

(The lion's hair was seen.)

(17) Verb/Object/Verb

e.g.

- (a) 搵佐 | 佢啲肉 | 嚟食 (粵)
V O V

Get P/ 3 sg GEN meat/ eat (CAN)

V O V

(Get its meat and eat it.)

- (b) 有 | 一個獵人 | 經過 (粵)
V O V

Have/ one CL hunter/pass (CAN)

V O V

(A hunter passed by.)

- (c) 沒有 | 人 | 和她玩 (書)
V O V

Not have/people/with her play (MSWC)

V O V

(No one played with her.)

- (d) 等 | 怕死的獵人 | 來到 (書)
V O V

Wait/ afraid of death hunter/come (MSWC)

V O V

(It waits for the fearful hunter to come.)

(18) Verb/Object/Verb/Object

e.g.

- (a) 就搵 | 兩枝樹枝 | 當係 | 門牙 (粵)
V O V O

Then get/two CL tree branch/take it as /incisor (CAN)

V O V O

(It took two sticks to be its incisors.)

- (b) 就扮 | 的恐怖既聲 | 就係度嚇 | 佢 (粵)
V O V O

Then made/some terrible NOM noise/ then at place horrify/3 sg (CAN)

V O V O

(Then it made terrible noises to horrify him at that place.)

- (c) 等 | 她自己 | 吸取 | 教訓 (書)
V O V O

Wait/3 sg herself/learn/lesson (MSWC)

V O V O

(Let her learn the lessons.)

- (d) 再用 | 黑色的顏色 | 畫 | 一雙眼睛 (書)
V O V O

Again use/ dark NOM colour/draw/one CL eye (MSWC)

V O V O

(It uses dark paint to draw a pair of eyes.)

(19) Verb/Object/Verb/Object/Verb

e.g.

- (a) 送 | 我 | 到 | 一間文具店 | 去出售 (粵)
V O V O V

Send /me/ reach/one CL stationery shop/go sell (CAN)

V O V O V

(They sent me to a stationery shop for sale.)

- (b) 揸起 | 枝槍 | 上 | 山 | 打獵 (粵)
V O V O V

Carry on his back /CL gun /up /hill /hunting (CAN)

V O V O V

(He carried his gun on his back and went into the hills for hunting.)

- (c) 帶 | 我 | 到 | 一間文具店 | 出售 (書)
 V O V O V

Take/me/to/one CL stationery shop /to sell (MSWC)

V O V O V

(They sent me to a stationery shop for sale.)

- (d) 再沒有 | 人 | 敢帶 | 家畜 | 出關 (書)
 V O V O V

Not have /one/ dare bring / animals/ pass customs (MSWC)

V O V O V

(There is no one dare to bring animals to the customs.)

(20) Verb/Object/Verb/Object/Verb/Object

e.g.

- (a) 有 | 飯飛呢 | 就係學校度用 | 飯飛 | 睇買 | 飯 (粵)
 V O V O V O

Have/rice-coupon P/then at school use/rice-coupon/come buy/rice (CAN)

V O V O V O

(Those who have rice-coupons stay in school to get rice.)

- (b) 就 | 畀 | 住去向 | 狼大哥呢 | 就借 | 一塊狼皮 | 睇嚇 | 膽的人 (粵)
 V O V O V O

Then plan to go to/wolf big brother P /then borrow/one CL

V O V

wolf skin/to scare /those people (CAN)

O V O

(Then it planned to go to the wolf to borrow a piece of skin to scare the people.)

(21) {ba} sentence

e.g.

(a)

一人把我送到貨車去 (粵)

One man {ba} me send lorry go (CAN)

(A man took me to the lorry.)

(b)

她爬的時候把自己新買回來的裙子弄破了 (書)

3 sg climb NOM time {ba} herself new buy back NOM skirt torn PFV
(MSWC)

(When she was climbing up the tree, she tore her new dress.)

(c)

把污水濺向我整潔的校服 (書)

{ba} dirty water splash to I clean NOM school uniform (MSWC)

(The dirty water was splashed onto my clean school uniform.)

(22) Subject/Verb/Object/Object

e.g.

(a)

狼 | 便給 | 小人 | 很多金幣 (書)

S V O O

Wolf/ Adv give/dwarf/many gold coins (MSWC)

S V O O

(The wolf gave the dwarf many gold coins.)

The above are examples of the twenty-two sentence patterns present in the written and oral offerings from the sample overall. To assess their relative frequency, they were arranged in rank order according to the relative incidence of their appearance. The results are summarised in Table 6.1 which shows the mean presence per offering, together with the appropriate rank order.

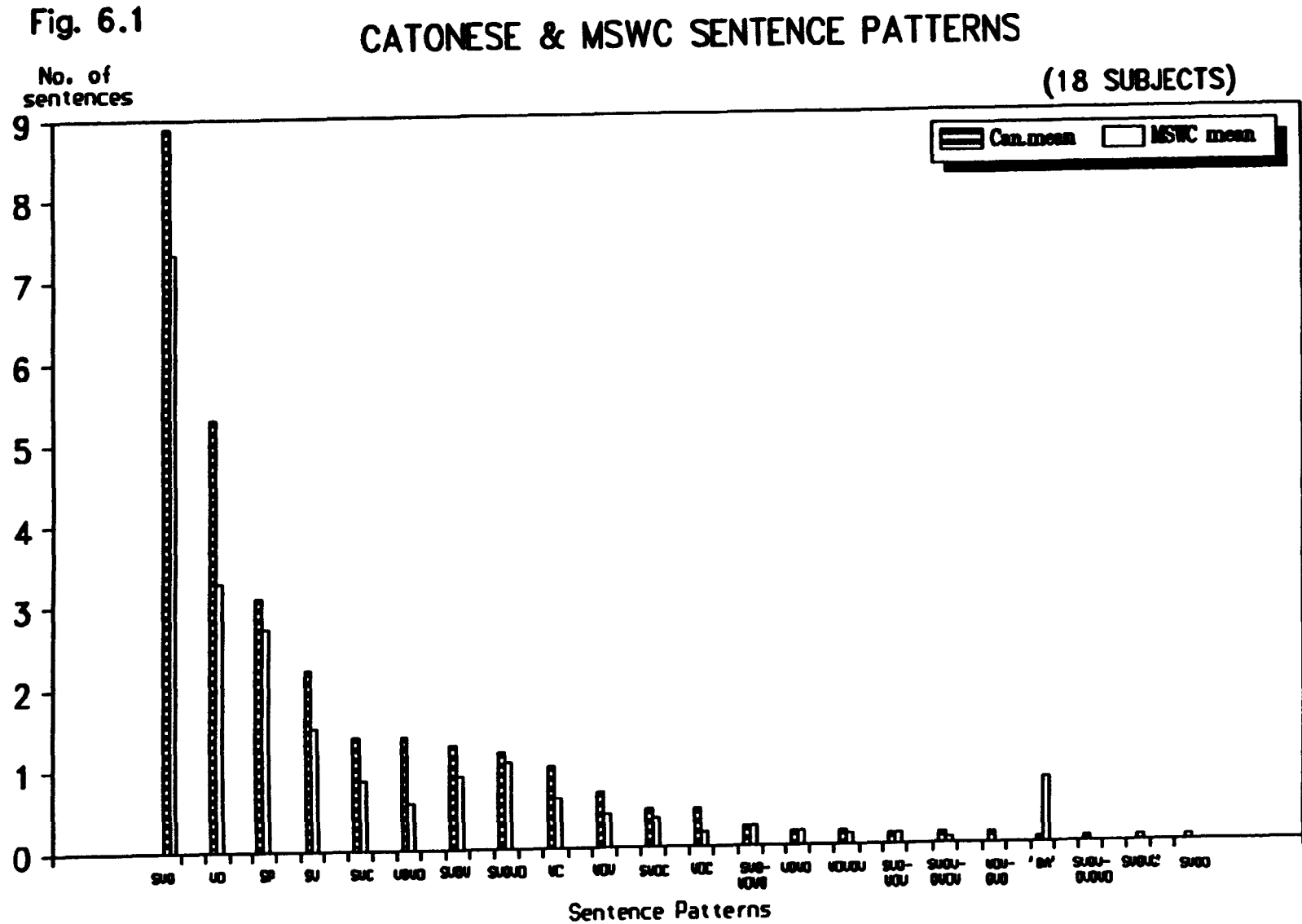
Table 6.1: Sentence patterns identified (arranged in rank order)

Sentence		CAN		MSWC	
Patterns		Utterances			
		(mean)	(order)	(mean)	(order)
(1)	SVO	8.89	1	7.33	1
(2)	VO	5.28	2	3.28	2
(3)	SP	3.11	3	2.72	3
(4)	SV	2.22	4	1.5	4
(5)	SVC	1.39	5	0.83	7
(6)	VOVO	1.38	6	0.56	10
(7)	SVOV	1.28	7	0.89	6
(8)	SVOVO	1.17	8	1.06	5
(9)	VC	1.0	9	0.61	9
(10)	VOV	0.67	10	0.39	11
(11)	SVOC	0.44	11=	0.33	12
(12)	VOC	0.44	11=	0.17	14=
(13)	SVOVOVO	0.22	13	0.22	13
(14)	VOVO	0.17	14=	0.17	14=
(15)	VOVOV	0.17	14=	0.11	16=
(16)	SVOVOV	0.11	16=	0.11	16=
(17)	SVOVOVOV	0.11	16=	0.06	19=
(18)	VOVOVO	0.11	16=	0	22=
(19)	{BA}	0.06	19=	0.78	8
(20)	SVOVOVOVO	0.06	19=	0	22=
(21)	SVOVC	0	21=	0.06	19=
(22)	SVOO	0	21=	0.06	19=
unclassified		0	21=	0.11	16=

Table 6.1 provides a summary of the number of times a particular sentence pattern was found in the protocols and in the scripts, averaged across the number of subjects. It was then possible to order the sentence patterns according to the frequency of their occurrence. For example, SVO is the sentence pattern that occurred the most often in CAN (average occurrence, 8.89), so is assigned the rank of 1. A visual inspection of the ordering between CAN and MSWC indicates that there is high agreement between the relative ordering between CAN and MSWC sentence patterns (Spearman's rho correlation coefficient for the two rank orders = 0.983, highly significant at the <.01 level).

As can be seen from Table 6.1, the most commonly used patterns for both languages were SVO, VO, SP and SV. In fact, the rank order of the first ten most commonly used patterns in CAN and MSWC are roughly the same. This finding would imply (also see Fig. 6.1) that the differences in the usage of sentence patterns in CAN utterances and the MSWC are not as different as one might have expected to find on the basis of the claims of scholars like Tian (1987) and Liu (1988).

Figure 6.1



The correlation coefficient between the relative occurrence of the various sentence patterns in the total number of CAN utterances and MSWC sentences overall is 0.7112 ($p < .01$) (please refer to Appendix 6.1). This implies a statistically strong association between the children's knowledge of Cantonese and their ability to write MSWC, and vice versa. Among the eight most commonly used sentence patterns, the relative occurrence of SVO ($r = .8623$, $p < .01$), SP ($r = .6537$, $p < .05$) and SVOVO ($r = .7378$, $p < .01$) in speech and writing are significantly related in a statistical sense. The four sentence patterns of VO ($r = .4052$), SV ($r = .4042$), VOVO ($r = .4042$) and SVOV ($r = .4128$) are positively correlated in their occurrence pattern, but not statistically significant. Overall, the trend is for the relative usage of sentence patterns to appear in similar scale between CAN and MSWC. This is hardly surprising since the MSWC in question was derived from the CAN utterances in the first place. That the correlation is not perfect is evidence that there are salient differences present. Except for the sentence pattern SVOC in CAN, the differences between the sentence patterns of CAN and MSWC of P3, P4 and P5 subjects are small (one way-analysis of variance not significant; please refer to Appendix 6.2).

As argued above, one ought not to be surprised that the relative incidence of sentence patterns between spoken CAN and MSWC is fairly similar, especially for SVO, VO, SP and SV sentences. In addition, it ought to be noted that Chinese is predominantly a SVO language (Li and Thomson, 1981). Kwong (1990) studied 60 Hong Kong children between 3 to 5 years of age during free play activities. Her data showed that SVO, VO and SV patterns were well mastered and frequently used by the time the children were 3, and the preference for using them thereafter increased with age. One must also remember that, as shown in Chapter Five, the subjects' writing in the present study was rather stereotyped and highly prescribed, possibly as a consequence of the narrowness of the instructional routines used by their teachers. Such speculations clearly invite further research.

The data show that the occurrence of such complicated patterns as SVOVOVOVO, VOVOVO, SVOVOVOV and SVOVO sentences is higher in speech than in writing. This may be taken to imply that the subjects displayed higher linguistic ability in terms of their ability to produce more complicated patterns in speech than in writing. Again, this is hardly surprising given that the children have much more experience and practice speaking Cantonese than writing in MSWC. An interesting feature is that {ba} sentences appear more in MSWC (mean 0.78) than in CAN (mean 0.06). In fact, only one such sentence was used in the spoken utterances, for this kind of sentence pattern is seldom used in daily CAN usage.

6.3 Transformation Associated with the Different Lexicons of Words in CAN and MSWC

In addition to the transformation of CAN to MSWC in sentence patterns, there are transformations associated with the different lexicons for CAN and MSWC. The need for such transformation is a very frequent phenomenon. The following are examples extracted from the texts of two subjects.

Examples from Subject 5A3C:

Cantonese Utterance		Written Lexicon	
恐怖	(horrible)	可怕	(horrible)
耳仔	(ear)	耳朵	(ear)
咁樣	(in this way)	這樣	(in this way)
乜嘢	(what)	甚麼東西	(what objects)
俾	(give)	給	(give)
搵	(take)	用	(use)
兩根	(two pieces)	兩支	(two pieces)
驚	(fear)	害怕	(fear)
震	(tremble)	發抖	(tremble)
佢話	(he said)	他說	(he said)

唔係嘅	(it's not)	不會的	(it's not)
對住	(face)	對着	(face)
咁	(so)	那麼	(so)

Examples from Subject 3A1C

Cantonese Utterance		Written Lexicon	
惡	(fierce)	兇惡	(fierce)
瞓覺	(sleep)	睡	(sleep)
搵	(look for)	找	(look for)
草堆	(turf)	草地	(grassland)
整醒	(wake it up)	弄醒	(wake it up)
肚餓	(hungry)	肚餓	(hungry)
食	(eat)	吃	(eat)
報答	(reward)	報答	(reward)
細隻	(small)	細小	(small)
點	(how)	怎樣	(how)

The evidence showed that every single subject in the sample transformed a number of CAN words to their MSWC lexical equivalents. That such transformations are a frequent phenomenon is generally agreed among Chinese language experts and researchers (Cheung, 1972; Bauer, 1982).

6.3.1 Failure in Transforming CAN Lexicon Words to the MSWC Lexicon

All eighteen subjects in the present study reported that their teachers always emphasise the need to avoid using CAN words in writing. Most of the subjects, following the advice given by their teachers, tried to transform CAN words to their MSWC lexicon equivalent, as the examples below show.

Subject 3B4C made the following transformations:

Cantonese Utterance	MSWC Lexicon
街市 (market)	市集 (market in the village, classical Chinese)
柴 (firewood)	樹木 (trees)
賊 (robber)	小偷 (thief)
擺 (put)	放 (put)
食 (eat)	吃 (eat)
講野 (talk)	說話 (talk)
割 (cut)	殺 (kill)
屋企 (home)	屋 (house)
俾 (give)	給 (give)

During writing, the subject intended to use the word "街市", which literally means "market" as it is used in Hong Kong. This was transformed into "市集", a classical Chinese word which means "a fair". This suggests that the subject may have been confused and/or was unable to recognise the differences between some modern and classical Chinese. She also intended to use the word "柴", which literally means firewood, but transformed this into "樹木", which literally means tree. She also said she was not very sure whether she could use the word "賊" (robber), so she transformed it into "小偷" (thief).

Subject P4A3C made the following lexicon transformations:

Cantonese utterance	MSWC lexicon
外形 (appearance)	體積 (volume)
好大 (very big)	很大 (very big)
載到 (can carry)	盛載 (carry)
送到 (send)	帶到 (take)

肚子	(abdomen)	肚子	(abdomen)
裝入	(put in)	放下了	(put in)
返學	(go to school)	上學	(go to school)
我	(I)	我的身子	(my body)
一樣	(the same)	這樣	(the same)

In this case, "外形", "載到", "送到" and "一樣" are written Chinese and it is not necessary to make any change.

It seems clear that both of the above subjects were very conscious of transformational strategies and that they have developed the habit of directly transforming CAN dialect words into written Chinese. However, there is evidence from the children's own comments that they did not always know how to write some of the things they wanted to say. As a consequence, they tried to avoid writing about some topics and using certain CAN terms. Sometimes they also made unnecessary and even wrong changes, evidence that transformation of items between the two lexicons is a problem for them.

Table 6.2: Cases where subjects failed to transform CAN lexicon words to their MSWC equivalent

Subject	Number of CAN lexicon words used in the text
5A1C	1
5A2C	0
5A3C	0
5B4C	1
5B5C	2
5B6C	3
4A1C	3
4A2C	1
4A3C	5
4B4C	1
4B5C	6
4B6C	2
3A1C	16
3A2C	1
3A3C	12
3B4C	15
3B5C	3
3B6C	9

Table 6.3: Summary of cases where subjects failed to transform Cantonese lexicon words to their MSWC equivalent

	P3C	P4C	P5C	P3-P5C
Mean	9.33	3.0	1.17	4.5
s.d.	6.22	2.1	1.17	5.1
No.	6	6	6	18

As can be seen in Table 6.2, in most of the scripts there were instances where subjects failed to transform CAN words into their MSWC equivalent. From Table 6.3, it can also be seen that the mean number of Cantonese lexicon words in the written texts of the 18 subjects was 4.5. There were differences in the amount of Cantonese lexicons used between P3 (mean = 9.33), P4 (mean = 3.0), and P5 (mean = 1.17) (for reference, the F-value of one-way analysis of variance of 7.44 is significant, $p<.01$,

refer to Appendix 6.3). The statistical analysis would suggest that the transforming ability of subjects increases with their year group and year of study in general, with wider variations in individual differences in the younger groups.

According to Fasold and Shuy (1970), the language development of children whose written language is different from their spoken language will often undergo a transitional period of linguistic adjustment. The adjustment will usually take place in three respects: phonology, grammar and lexicon. Of the three, Keung (1986) claims that lexicon adjustment is the most difficult for pupils in Hong Kong. According to a study analyzing errors of lexicon transformation by secondary school students by Lui (1984), the interference effect of CAN words on the MSWC lexicon accounted for 50.9% of the errors made.

6.3.2 Difficulties Encountered by Subjects in Terms of Lexicon Adjustment

Children in Hong Kong have to learn to differentiate between words in three lexicons: CAN, MSWC and Classical Chinese (and sometimes westernized Chinese). Not surprisingly, it is often difficult for students to learn, remember and differentiate between the words in so many lexicons. An illustration of this confusion can be found in the writing of Subject 4A1C, reported above, who wrote " 市集 " (a classical Chinese word) for " 市 + 易 " market.

Sometimes, there is no directly corresponding word in the MSWC lexicon representing words commonly used in spoken CAN. For example, Subject 3B5C wanted to write about 'Karaoke' but dropped the idea because she thought this was a CAN word only and knew she should not therefore use it in her composition. In addition, in MSWC there may be different meanings for the same word when it is used in Mainland China, Hong Kong and Taiwan. For instance, Subject 4A1C used

the word "街市", which means market in CAN but in Putonghua it denotes "a downtown street" (Zeng, 1986, p.227). Another example known to teachers is the word "自我評估" which in Hong Kong means "self evaluation", a monitoring approach known to most teachers. However, in Mainland China, the same word stands for "self criticise", the activity people are expected to engage in when politically purging themselves.

When the pupils had to search their memory for a MSWC written equivalent word for a word in CAN, they were in fact consulting a lexicon derived mostly from the words in textbooks which they have had to commit to memory in school lessons. However, understandably, there are many words used in their everyday CAN utterances which have not yet been covered in their school books. For example, Subject 3B4C wanted to write the word "餐廳" (restaurant), a word known to almost every child of school age in Hong Kong. Simply because she did not know the written Chinese equivalent for restaurant, she avoided writing about the topic entirely. She also wanted to write about "換燈泡" (changing a light-bulb), which she said she knew how to write in CAN. However, because she was unsure about how to write this in MSWC, she similarly avoided this topic.

Turning to factors which exacerbate the lexicon transformation problem in Hong Kong, a number of points can be advanced to help explain matters. First, the differences between the pronunciation of words in CAN and MSWC are often very marked. Hong Kong children already encounter difficulties with the pronunciation of CAN words in Putonghua (Cheung, 1984). At the same time, there is no agreed standardization of Chinese language use in Hong Kong. People in Mainland China, Taiwan, Singapore, Hong Kong itself and from overseas Chinese communities use different varieties of Chinese. Students in Hong Kong are exposed to and potentially confused by all these varieties. In fact, to reduce possible confusion, most teachers

insist on the Mainland China version of Chinese. In China, the Commission for the Construction of Language and Characters is the highest authority for setting the language policy and overseeing standardization in the use of language. Dictionaries and character lists are published for the reference of scholars, teachers and students. However, it is not always possible to follow the system advocated in China since writers there use simplified Chinese characters which are unfamiliar to the majority of people in Hong Kong.

Arising out of the confusion, there are often controversial arguments over the correct use of certain words, especially 'new' words, in Hong Kong. For instance, the agreed CAN word for "computer" is "電腦", which literally means "electronic brain". However, when it is translated into MSWC, "電子計算機", the term now means "electronic calculator". The Hong Kong version in fact more closely denotes the connotation of the concept, but this is unacceptable in MSWC. To take another example, the word "minibus" introduced by expatriate English speakers in Hong Kong is translated into CAN as "小巴", which literally means "small bus". In China, people use the term "小型公共汽車", which literally means "a small public car". In fact, as with the example of computers, public services using the minibus started in Hong Kong, a practice followed several years later by China. Thus, it is sometimes very difficult for students in Hong Kong to follow the 'lead' given by Mainland China on concepts with which they have been familiar all their life. Nevertheless, the school syllabi insist that all students should use the MSWC lexicon.

Most teachers regularly ask students to look up the definitions of words in dictionaries. Because most of the authoritative dictionaries are edited and published in Mainland China, students have to follow the usage as determined by the people of Mainland China. However, due to differences in cultural, political and economic systems, many words commonly used in Hong Kong cannot be found in the

dictionaries printed in China. For instance, much of the localized vocabulary and technical register used in the stock market and futures market are quite alien to the people of China.

Since Hong Kong is an international financial and communication centre, its people absorb new ideologies and information quickly from every corner of the world. In fact, the people in Hong Kong often coin new words for new ideas and information. Since Hong Kong is the door to China, many new concepts and much new information is introduced into China through Hong Kong. Hong Kong therefore is taking the lead in the formation of many new words in the Chinese lexicon, and her people do not take kindly to having to change words which have been used for years, simply to satisfy the whims of bureaucrats. To elaborate on a point made earlier, there are different kinds of computers today for different purposes, and one finds a variety of terms for computers: "電腦", "電子手貝長", "電子日記", "電腦記事簿". These will have become accepted everyday usage for Hong Kong people long before their official classification is decreed from Beijing, again a state of affairs which many Hong Kong citizens abhor.

Because of the superior economic position of Hong Kong, people in Hong Kong tend to look down on the people in Mainland China. Persons who use terms from the Mainland China lexicon run the risk of being called "表叔" (uncles from China). In any case, the truth is that many people in China are quite willing to use terms coined in Hong Kong, which is considered as a centre of modernism and a bridge between the East and the West. In this situation, it is hard to insist that the lead is inevitably given by China and it is thus difficult for students in Hong Kong always to accept the lexicon used in China.

From the preceding discussion, one can see that, as there is no authority in Hong Kong to centralize language policy and standardize the lexicon, rules for language use are extremely difficult to define. In school, Chinese language teachers find themselves being decision makers who have to set the rules of language use. The different 'rule books' these Chinese teachers follow lead to different standards being presented to students in Hong Kong with regard to transformations associated with the CAN and MSWC lexicons. Since many Chinese language teachers in Hong Kong do not know Putonghua very well, they sometimes make mistakes in teaching the MSWC lexicon (Wong, 1988).

Lau (1984) argued that, in learning MSWC, students in Hong Kong are indeed learning an L2. Whereas in an ideal world they should be 'acquiring' writing skill through using writing to express their inner thoughts (Krashen, 1981), they have no option but to 'learn' an often confusing and daunting form of their own language to express themselves in writing. Instead of gaining the confidence which successful explorations of language can give to the writer, Hong Kong students are forever having their efforts corrected, the only justification or explanation that their original offering is wrong being that 'it is not acceptable in the MSWC convention'.

6.4 Transformation of Particles

Particles have been a focus of study for a long time and sections on this topic are present in almost all Chinese grammar books. Particles are a class of words known as 'empty words' (xuzi), and are defined as 'helping words', 'mood words', 'sentence-final particles' in modern Chinese grammar books. Luke (1989) describes them as:

"These are typically 'form words' with no apparent semantic content, which are attached as bound forms (sometimes in combination) to the end of sentences to indicate their mood, tone of voice, or various and attitudinal meanings." (p.39)

Particles have a pervasive presence in naturally occurring talk. They appear regularly in natural conversation in CAN utterances and rough counts reveal that an utterance particle is on average found in continuous talk every 1.5 seconds. According to Luke (1989), they are one of the hallmarks of natural conversation in CAN. As students are discouraged from including CAN utterances in their writing, Chinese language teachers are very conscious of this hallmark. If they find CAN particles in the writing of their students, they will give them low grades. The presence of particles is also regarded as evidence of the interference of CAN on MSWC.

Below are extracts taken from the script of Subject 4A2C to illustrate the use of CAN particles and written particles. The functions of the particles are also explained:

CAN Utterance	MSWC	Functions of Particles
1. 從前呢	從前	cohesion
2. 咁就有一個好貪 職枉法的大法官啦	有一個大官	indicating something about to happen
3. 佢呢淨係自己顧住	他終日玩樂	emphasis (that person)
4. 享樂 咁呢,就唔理百姓安危	不理政事	thus
5. 咁呢,有一日	不久	cohesion (and then),
6. 發覺自己享樂嘅錢 呢,差不多用晒嘞	他的錢用光 了	a marker for a sentence, completed
7. 咁呢,佢就喺咗條 妙計嘞	他便想了一條 妙計	cohesion, (then) completion and indicating something will happen

From the above extracts, one can see that 7 CAN particles have been deleted and one "嘞" has been transformed into "了". This shows that the subject is aware that

utterance particles should not be written in text and that he therefore tried to delete as many of them as possible.

6.4.1 Types of Particles

The research data reveal two sets of particles used by the subjects of this study, one set for utterances and one for writing. CAN particles found in the utterances of the subjects can be divided two types: monosyllabic and bisyllabic. Monosyllabic particles are:

CAN Particles	Sound
呢	le
ㄟ拉	la
ㄟ阿	oh
ㄟ牙	ah
ㄟ架	ka
ㄟ羅	lor
ㄟ勒	lar
ㄟ喝	wo
ㄟ无	kir

Bisyllabic particles are:

CAN Particles	Sound
ㄟㄟ ㄟ	ko bo
ㄟㄟ ㄟ	ko wo
ㄟ架 ㄟ	ka ma
ㄟ羅 ㄟ	lo wo
ㄟ架 ㄟ	ka la

In the written scripts of the subjects, monosyllabic particles only were included. The following particles were found:

Particles in MSWC	Sound
ㄟ	ma
ㄟ	le
ㄟ	ba
ㄟ阿	oh
ㄟ牙	ah
了	liu

There are in fact two sets of particles, one for the CAN utterances and another for MSWC, and two types of particles for CAN, monosyllabic and bisyllabic, but only monosyllabic particles appeared in the written Chinese of the subjects.

6.4.2 Difficulties in Transforming Particles from CAN to MSWC

The particles used by Subject 3A3C in CAN utterances were:

CAN Particles		count
呀	ah	1
的	d	1
架	ka	7
既	ke	3
个	ko	6
呢	le	29
total = 37		

In the written Chinese, only " } " (liu) (count = 3) was found and the total number of written particles was greatly reduced.

The particles used by Subject 4A2C in CAN utterances were:

CAN Particles		count
拉	la	2
勒	lar	4
呢	le	12
哪	wor	4
Total = 22		

In the written Chinese, only " } " (liu) (count = 1) was found and the total number of written particles was greatly reduced.

In the interviews held with all subjects, they were asked why they had not used particles in their writing when they appeared so often in their speech. 14 subjects reported that they are severely discouraged from writing CAN and, in fact, are not very sure which are CAN particles. They hence only write those they have learned in text books.

The numbers of particles in CAN utterances greatly exceed the particles appearing in the MSWC. As the function of particles is to indicate mood, tone of

voice or various emotive and attitude meanings, CAN utterances are more expressive and communicative than MSWC. The use of CAN particles by the subjects in their speech is to be expected since CAN is their mother tongue. On the other hand, that they use fewer particles in MSWC, may be a measure of their comparative lack of competence in writing in Chinese.

The subjects in the present study seldom included CAN particles in their writing. In actual fact, they knew that there are two sets of particles but not all of them knew the exact meaning of the particles, even though they know that they have to apply different sets when speaking and writing. As observed earlier, many of the children knew the sound of the CAN particles but had not been taught their written form. Never having been taught them, they did not know how to write them.

6.5 Summary of Results

There was plenty of evidence in the present research of subjects transforming CAN to MSWC during the composing process. In the analysis of the sentences used in the CAN utterances and the MSWC produced by the subjects, more than 22 different sentence patterns were used. Differences between the relative incidence of the patterns in CAN sentences and MSWC were not as great as one might expect, and there were marked similarities in the relative incidence of the most commonly used sentence patterns.

It was found that SVO, VO, SP and SV were the most commonly used patterns both in CAN and MSWC by the subjects, reflecting the fact that the MSWC texts of the subjects were derived directly from CAN utterances. The occurrence of some complicated patterns, for example SVOVOVOVO, VOVOVO, SVOVOVOV and SVOVO, was higher in CAN utterances than in MSWC, suggesting that the relative

language competence of the subjects is higher in terms of oracy than literacy. It was also found that the subjects were able to use {ba} sentences, probably through having consciously learnt them in typical sentence patterns for MSWC.

Transformations associated with the different lexicons for CAN and MSWC were found in the subjects' offerings. Some subjects failed to transform CAN words to their equivalent MSWC words, and some made unnecessary transformations. The younger subjects in particular seemed to have encountered difficulties in this subprocess of writing. An examination of their problems in transformations associated with differing lexicons would suggest some confusion between the lexicons for spoken CAN, MSWC and Classical Chinese. It appears that the subjects were sensitive to this problem, for they often had ideas which they expressed in speech which they could not put into writing because they did not know the appropriate MSWC words. At the same time, they would avoid using words for which they had no MSWC equivalents.

The subjects were also sensitive to the fact that they had to avoid using certain particles in their writing. It might appear that the subjects were confident in handling the two sets of particles, one for CAN and one for MSWC. They used a greater number of particles in utterances than in writing and the researcher found no bisyllabic particles in their writing. As the presence of CAN particles in writing is considered an indication by Chinese language teachers of CAN interference in MSWC, it seems that the way they had impressed their avoidance had worked with their students. However, as some of the students pointed out, never having been shown the written forms of CAN particles, they were unaware of them, so their absence from the children's writing should come as no surprise.

If in fact the situation is much more worrying and reflects the fact that many of the children simply do not know how to use particles in writing, then there are grounds for concern. Particles are important for indicating mood, tone of voice and

so on. If the children are avoiding using them out of ignorance or uncertainty, this will have an adverse effect on their writing and in reflecting and conveying shades of meaning that are available to them in their speech.

6.6 Implications

In the writer's experience, many Chinese language teachers often emphasize the enormous difference between CAN and MSWC. From the findings in this study, the emphasis they give to teaching sentence transformations may be excessive, for the children's use of common sentence patterns in CAN was reflected in their MSWC output, almost as a natural association. Perhaps there is a case to be made for junior primary school pupils to be allowed to use a blend of CAN and MSWC in writing Chinese in the early stage. This stage may extend to senior primary or even to junior secondary school in the hope that it will encourage fluency of expression and idea sharing through print. Young writers are inclined to use CAN, their mother tongue, in their writing (Siu, 1980). It may be too early and even counter-productive for Chinese language teachers to demand that their pupils write in pure and standard Chinese in the primary school.

The evidence from the present study showed that some pupils needed some CAN in order to express themselves, and some appeared to have used CAN unconsciously in their writing. Teachers may have to tolerate this mixed language phase in the students' writing for a transitional period. As few primary pupils know Putonghua, it is impossible for them to write pure MSWC. If teachers keep on reminding them not to use CAN, students may adopt avoidance strategies in order not to make mistakes. As a result, they will be reluctant to write anything they are not very sure about, whether in CAN or MSWC. Certainly, much of the written text produced was very fragmented and unconnected. One of the solutions to the problem is to let students express themselves freely and write what they think is correct.

Teachers can delay taking corrective action until pupils have confidence in and a love of their writing. Another possible solution is to encourage students to engage in more leisure reading of MSWC material.

Of late, a number of scholars (e.g. Tian, 1987; Ho, 1991) have advocated that Putonghua should be used as the medium of instruction in Chinese lessons in primary schools, in the belief that this will help stop the negative influence of CAN on MSWC. In fact, students in Hong Kong do not have a very good environment for learning Putonghua. They have no strong incentives to learn the language, and it will be a great burden for them if they are required to learn three spoken languages (their mother tongue, English and Putonghua) and three written languages (English, Pinyin and MSWC).

The present research suggests that the CAN lexicon has some influence on MSWC. Reasons for this have been discussed earlier in this chapter. For the present, suffice it to say that, in the absence of a Hong Kong based authoritative body of experts to pronounce on standardization of the use of everyday CAN words in MSWC, it is unlikely that there will be any very effective change to the present situation. The writer would like to see an official body set up to deal with the problems raised in this chapter and to advise schools. In the short-term, a handbook of CAN words and equivalents in MSWC should be produced for teachers and students. This would be a first step in helping students more successfully to transform CAN speech to MSWC.

Chapter Seven

Transformations in the Composing Process in English and in Chinese

In the last chapter, an examination was made of the spoken Chinese words the research subjects said they might write and the Chinese words they actually wrote. Discrepancies between the two were taken as evidence of transformations in the composing process. This chapter looks at the transformation process in general, and particularly at how it applies to composing in English, the L2 of all the subjects. In the light of evidence from the research, discussion focuses on transformations of ideas; the addition and deletion of ideas; complete and fragmented group idea units; and transformation in the organization of ideas. Transformation approaches like avoidance, replacement, overgeneralization and changing topic are discussed and the influence of Cantonese and MSWC on writing English is also analyzed.

7.1 Introduction: Transposing in General in the Composing Process

Rarely are written messages identical to spoken messages. To satisfy the conventions of print and writing, the words which writers wish to say often need to be changed or transformed (Scardamalia et al., 1982). Writers wishing to communicate a message precisely will carefully choose their words so that they convey the intended meaning, and in doing so will consider a range of possible ways of arranging words so that they represent the message they have in mind. There is evidence that, as people grow older, they will often think hard and long before putting pen to paper, sometimes making notes to guide the format and content of the written message. Comparing the notes taken during planning against the texts eventually produced by children at different age levels, Burtis et al. (1983) found that, by the age of 14, no notes were incorporated into the text without major changes to them. Even at age 10, about half

the notes eventually incorporated into text had been subjected to major changes in content, elaboration, reordering or addition.

Flower and Hayes (1981a) state that writing is one of the most complex of human mental activities. It can be analyzed from a psychological point of view in terms of problem-solving processes, for, in the process of composing, a variety of procedures are used to make the printed expression of thought congruent with the inner thinking guiding it (Flower and Hayes, 1977). Scardamalia and Bereiter (1982) point out that people have two concerns uppermost in mind when writing text: content, the semantic meaning contained in the text; and syntax, the accepted rules governing spelling, grammar and so on, so that the message expressed meets the conventions of the language. Greater sensitivity to syntactical conventions is required in writing than in composing aloud or speaking, for nonverbal messages can amplify and render explicit spoken messages which on paper might seem obscure and even ambiguous. Even accomplished writers often note a discrepancy between their printed expression and their inner thinking, what they are trying to say. Similarly, in terms of L2 writing, people often know what they want to say in the L1 but do not know how to express it in the L2.

Scardamalia and Bereiter (1986) point out that reprocessing is one of the key processes in composing:

"Whatever is produced from an episode of text processing - be it text, notes, or thoughts - can be used as input to a further cycle of processing that does not simply add to what was produced before but transforms it. Reprocessing thus spans everything from editing for mistakes to reformulating goals."
(p.790)

Reprocessing refers to what goes on mentally rather than to differences in surface behaviour, and is an occasion for transformation in the composing process. Murray (1978) explains that revision itself can encompass fundamentally different kinds of

processing, and distinguishes "internal revision", where writers try "to discover and develop what they have to say", from "external revision", where text is shaped toward its intended audience.

In essence, transformation refers to the process of making internal revisions during writing. When actually writing, most writers will have had to modify, reconsider and elaborate the plans and ideas originally developed in the planning stage, linguistically and conceptually. In the first experimental session in the present research, the subjects in one group composed aloud in Cantonese then wrote in MSWC. In the second session, they composed aloud in Cantonese then wrote in English. The subjects in the other group also composed in Cantonese but wrote in English in the first session and in MSWC in the second session. In these cases, data about the transformation process were gathered by an analysis of the discrepancies between what the subjects said as they were composing aloud and what they actually wrote down. Follow-up interviews with the subjects in the light of the video-taped playback and the composing aloud transcriptions were conducted by the researcher to study the transformation sub-process of composing.

It must be noted that the research strategy employed meant that the kind of transformation evidence gathered here differs from that used by some other writers on the subject. Anderson (1985), for example, writes that: "Transformation is applying syntactic rules to transform the meaning into a linguistic message" (p.374), and points out that both writing and rewriting are aspects of the transformation process (p.389). In the present study, rather than looking at variations in successive written scripts, the data were assembled from comparing the verbal protocols in Cantonese against the written texts in MSWC and in English. Thus, as it is used in the present study, the term 'transformation' is different from Anderson's notion. This being the case, as an additional check to boost both the reliability and validity of the data, interviews with the subjects were conducted during which they were asked to elaborate on the

transformations they had made, their attention being focused through seeing themselves writing on the video-taped recordings.

7.2 Transforming Ideas

7.2.1 The Incidence of Idea Units in Composing Aloud and in Writing

An idea unit (IU) in a verbal protocol is basically a number of words bound by pauses and/or a change of intonation which serve as an indication that the speaker is intentionally treating the word group as a conceptual entity (Rugh and Murphy, 1988; Chafe, 1980; Chao, 1989; Wu and Kan, 1989). An IU in a written text is a group of semantically cohesive words, usually but not always marked by punctuation. The subjects' verbal protocols yielded during the composing aloud sessions and in the written scripts were segmented into IUs in the present study. Some IUs were found in the written scripts which were not present in the verbal protocols. The relative distribution of all IUs was inspected for their relevance for the transformation process of composing.

Table 7.1: Summary of the incidence of idea units produced by the 18 subjects composing aloud and in writing

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
1. I.U.(mean) in composing aloud	39.7	54.2	34	22.8	22.2	37.3	31.9	38.1
s.d.	38.9	35.2	25.4	10.3	7.8	29.7	26.6	28.9
2. I.U.(mean) in writing	20	37.7	17.3	20.5	13.3	27.7	16.9	28.6
s.d.	24.5	26.2	11.2	6.32	5.75	13.4	15.2	17.9
Difference bet. 1 and 2	19.7	16.5	16.7	2.3	8.9	9.6	15	9.5
No.	6	6	6	6	6	6	18	18

As can be seen in Table 7.1, the average number of IUs uttered by the entire sample when composing aloud prior to writing in Chinese was 38.1 IUs per text. Individual variations in terms of producing IUs were great ($s.d = 28.78$), one child producing a high of 107 IUs and one a low of 10 IUs. The mean number of IUs produced when composing aloud was 54.2 for Primary Three (P3), 22.8 for Primary Four (P4). That the P3 group produced twice as many IUs as their P4 counterparts would suggest that clear developmental trends were not displayed in the very small sample included here, as confirmed by the non-significant analysis of variance (see Appendix 7.5). On the other hand, one would not wish to argue on the basis of the present research that the generation of IUs is not age/ability related.

The mean number of IUs overall appearing in the Chinese written scripts was 28.61 per text, the high standard deviation of 17.86 reflecting wide variation in individual differences. Again, there were no across age group differences in the analysis of variance (see Appendix 7.5). It is interesting to note that most IUs were written by P3, the youngest group of subjects, but one would not wish to imply on the strength of the small samples in the present study that the generation of idea units is negatively correlated with age.

As can also be seen in Table 7.1, there is a difference in the incidence of IUs in the written and spoken performance and a marked decrease in the number of idea units produced when writing in English compared to writing in Chinese ($p < .001$, see Appendix 7.4). To remind the reader, the subjects composed aloud in Cantonese whether or not they were to compose in Chinese or in English. Of the 18 subjects, 12 produced more IUs when composing aloud than when writing.

The average number of IUs per composing aloud session was 31.9 per subject when writing in English. The large $s.d.$ of 26.6 reflects the fact that individual differences were large. In fact, P3 subjects generated more ideas than the other two

groups. The average number of IUs per written text was 16.9, the s.d. of 15.2 also reflecting wide variance. In fact, two P3 subjects could only produce a few words in the written texts. On average, the number of IUs actually produced in writing amounted to only 53% of those present during the composing aloud stage, an average reduction of 15 IUs per child.

Generally speaking, all subjects were more fluent and productive in terms of ideas generation when composing aloud than when putting pen to paper, regardless of whether the child was writing in English or in MSWC. Clearly, spoken competence outstripped written competence. It is interesting to note that subjects could on average express more ideas in Chinese than in English (English mean= 16.89 vs Chinese mean =28.61, t-test significant at the 0.001 level, see Appendix 7.4). Put simple, subjects were able on average to express in writing 75% of their composing aloud ideas in Chinese, but only 53% in English. An examination of the scripts would suggest that subjects had felt it necessary to simplify or amend 47% of their intended expressions when writing in English, compared to 25% when writing in Chinese, the mother tongue.

7.2.2 Addition and Deletion of Idea Units

After composing aloud, the subjects went on to write their scripts. As they wrote, they sometimes added new ideas and sometimes deleted previous ones. Looking at the verbal protocols and the written texts produced, any ideas found in the written text but not in the verbal protocols were considered additions of new ideas. On the other hand, when there were ideas appearing in the verbal protocols but not in the written texts, the subjects were asked in interview to give an explanation. If their answer was "I didn't want to write this" or "I changed my mind," the spoken IU was considered a deletion.

Table 7.2: An example showing the presence of additions and deletions (Subject 4B6C)

I.U. in Composing Aloud	I.U. in Writing
我叫 × × × I am called X X X.	我的名字叫 × × × My name is X X X.
	我在 × × 學校讀書 I studied in X X primary school. (added)
我間學校在中環 My school is in Central District.	我的學校在中環 My school is in Central District.
環境好美麗 The surrounding is very beautiful.	(deleted)
我學校有兩個操場 There are two play grounds in my school.	(deleted)
	每天上學生校車 I go to school by school bus every day. (added)

Table 7.2 shows in summary form the first paragraph of a script written in Chinese by Subject 4B6C, showing addition and deletion of IUs. As can be seen in this example, the subject added two and deleted two IUs, evidence that she had transformed the contents of the text.

Table 7.3: Summary of addition and deletion of idea units in the scripts

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
IU (Mean) added	3.3	10.8	1	5.3	1	8.5	1.78	8.22
s.d.	7.69	15.1	0.63	5.09	1.67	8.07	4.43	9.96
IU (mean) deleted	7.6	25.8	4.3	7.5	3.5	7.8	5.17	13.72
s.d.	15.5	20.5	3.39	6.89	4.93	6.62	9.24	15.09
No.	6	6	6	6	6	6	18	18

Turning first to the writing in Chinese, 16 of the 18 subjects added new ideas (mean 8.22 IUs per text, s.d. 9.82) into their writing. Of course, the addition of ideas changed the content of the eventual text produced. 17 of the 18 subjects deleted ideas units (mean 13.72 IUs per text, s.d. 15.09). The deletion of ideas usually involved a selecting out of the ideas generated. Most subjects added and deleted ideas in the present study.

The researcher observed two broad types of subject in terms of changing their verbal intentions in the writing eventually produced. One group (12), 'changers', made a large number of additions and deletions, whilst the other group (6), 'non-changers', made few changes in the writing eventually produced. For instance, the incidence of additions and deletions of IUs by Subjects 3A1C, 4B6C and 5B5C (from the first group) was high, whereas for Subjects 3B5C, 4B4C, and 5B4C (the second group) it was low. Table 7.4 presents a summary of the data for these two sets.

Table 7.4: Summary of the idea unit additions and deletions by two sub-groups of subjects: changers and non-changers

	3A1C	4B6C	5B5C	3B5C	4B4C	5B4C
I.U. in composing aloud	57	20	24	13	12	11
I.U. in writing	79	22	25	15	12	11
New I.U. added in writing	40	12	18	3	1	0
I.U. deleted in writing	21	10	17	3	1	0

As writing is a process of discovery, addition of new ideas is common in the composing process. When subjects had new ideas, some would add them into their written text. On the other hand, if they had generated many ideas, they might select some ideas and delete others considered less relevant. Perl (1978) observes that, sometimes, writers mention insights during oral composing which seem to be overlooked or lost when actually writing. The scale of such additions and deletions can be taken as evidence of the rate of transformation. For instance, for Subject 3A1C, the number of IUs produced when composing aloud was 57, 21 of which were deleted and 40 new ones added. Consequently, there was a marked change in content between spoken and written protocols.

The first group, changers, clearly belonged to this category, with considerable discrepancy between the content of their composing aloud protocols and their written text. The implication here is that the incidence of transformations was high. In contrast, for the second group, non-changers, it would appear that the incidence of transformations was much smaller. On the whole, the P3 subjects (mean = 25.8) made more deletions than P4 subjects (mean = 7.5) and P5 subjects (mean = 7.8) when writing in Chinese (one-way analysis of variance, $p < .05$, see Appendix 7.5).

Turning next to writing in English, the L2, adding new ideas when writing was less common, with an average of only 1.78 IUs (s.d. 4.43) per text and only 9 subjects

introducing new ideas in the written text. The average number of IUs deleted per text was 5.17 (s.d. 9.24), with the majority (11) deleting less than 4 IUs. In general, the addition and deletion of ideas was not common and the content of the verbal protocols and written texts did not vary markedly. However, when there was a discrepancy in terms of the number of IUs in the composing aloud protocols and the written texts, this struck the researcher when observing as being related to avoidance strategies. In other words, several IUs revealed in the composing aloud stage were avoided when writing, rather than being deliberately deleted.

From the above, there is evidence that some subjects transformed ideas during the process of writing. When writing, they added and deleted IUs in ways which suggested 'internal transformations', in the sense that they could not always be detected from the recorded data alone. More IUs were added in the Chinese than in the English text (Chinese mean = 8.22 vs English mean = 1.78, 't' value = 4.18, $p < .001$, see Appendix 7.4), and there were also more deletions of ideas when composing in Chinese than in English (Chinese mean = 13.72 vs. English mean = 5.17, 't' value = 2.09, $p < .05$, see Appendix 7.4). In other words, it seems that there were more transformations in Chinese than in English, and more changing of content when subjects wrote in Chinese.

7.2.3 Completing and Fragmenting Group Ideas Units

A 'group idea unit' (GIU) is formed by a number of IUs, usually around a main idea (Tian, 1990). When subjects wrote in Chinese, their ideas articulated in the composing aloud procedure might often be fragmented or broken, whereas the same ideas in the written text were usually more cohesively expressed. The following is an illustration:

Verbal protocol in Cantonese:

咁，突然呢就跌倒呢，就個書包跌落地下喇咁的書，就跌晒喇。

(Suddenly, I fell down. I fell down. The school bag was dropped on the ground. The school books were all dropped.) (Subject 5A1C)

The passage was written in Chinese:

有一輛汽車無情地，飛快地狂奔過來，把污水濺向我整潔的校服，當時我狼狽不堪，像一隻「落湯雞」一樣。一個不小心，給一塊小石絆倒了，跌在泥濘上，把我的小臉蛋弄污了。不但這樣連我的新書包也變得像舊的，課本在泥濘上，變得不成樣子。

(A car was very quickly driven towards me. The driver did not care about me.

The dirty water was spilt onto my clean uniform. At that time, I was in a sorry plight, just like a wet hen. I was careless. I stepped on a stone and fell on the mud. My beautiful face was smudged. My new school bag was soiled and looked tattered. The school books were in the mud. They appeared shabby.) (Subject 5A1C)

Another example can be seen in the following:

The verbal protocol in Cantonese:

佢呢，就唔返學，邊起身。

(She did not go to school.)(Subject 5A3C)

The following appeared in the written text:

今天她不上學，她的媽媽不理她，等她自己汲取教訓。

(That day, she did not go to school. Her mother did not stop her doing that. Her mother expected that she would have troubles which would give her a lesson.) (Subject 5A3C)

As one can see, the background context to the event is more fully communicated in the written form. In short, whereas in the spoken protocols some GIUs were fragmented and incomplete, in the written passage they were better expressed, better explained and more complete.

Table 7.5: Completion and fragmentation of group idea units

	P3E	P3C	P4E	P4C	P5E	P5C	P3-P5E	P3-P5C
GIUs completed in	0	1.17	0	.83	0	1.16	0	1.06
s.d.	0	1.94	0	0.75	0	0.93	0.	1.26
GIUs fragmented	8.17	0.83	5	0.33	3.33	0.17	5.5	0.44
s.d.	5.64	1.17	5.69	0.52	2.5	0.41	5	0.78
No.	6	6	6	6	6	6	18	18

In the study, 19 group IUs were enriched and improved by a total of 11 subjects in writing Chinese, with an average of 1.06 group IUs per text. During the composing aloud stage, subjects had to deal with several composing sub-processes at the same time, for example, generating, planning and organizing. During writing, the subjects had more time to think, revise what had been generated and edit ideas. At the same time, when subjects wrote in Chinese, some complete IUs in the composing aloud phase might be expressed in fragmented ideas which would be incomprehensible if written down. Below is an example.

Verbal protocol in Cantonese:

佢就話：「我嚟呢，想請佢一晚，得唔得呢？」老公公就話：「得，但係你要煮我哋的嘢食，仲有呢啲動物呢，會講嘢個啲，你要好好保護佢地咁話。」

(She said to the old man, "I come here. Can I stay here for one evening?" The old man said, "Yes, on condition that you cook the food for us. The animals here can talk. You must protect them too.")(Subject 3A3C)

The written passage:

大女說：「可不可以給我住一晚呢？老公公說：「可以，那裏有很多動物的。」

(The eldest daughter of the man asked, "Can I stay in your house for one evening?" The old man of the forest said, "Yes, there are a lot of animals.")
(Subject 3A3C)

From the above example, one can see that the verbal protocol provides more information than the written passage. The information in the written passage seems to have been simplified. The part about the animal is important for the gist of the story and is essential for understanding it. Thus the transformation of ideas seems to have fragmented the spoken version.

In the entire data gathered in connection with writing in Chinese in the present study, only 8 GIUs were thus fragmented (mean 0.44 GIUs per text, s.d. 0.78). When the subjects wrote in English, improvement of ideas when expressed in writing was rarely noted. When subjects wrote in English, ideas were generally complete in the composing aloud phase, but sometimes appeared fragmented in the written text eventually produced. Below is an example:

Verbal Protocol in Cantonese:

狼就唸到第二個辦法，對佢話：「聽日六點鐘，我在蘋果樹下等你摘蘋果食。」小豬五點鐘去咗，狼也在五點鐘去，狼見到隻豬。小豬在樹上唸辦法走。佢唸到一個辦法，摘一個蘋果俾狼食，等狼接蘋果時，走人。小豬摘一個蘋果，捉俾隻狼，狼接蘋果，小豬好快跌下來，就返屋企。

(Translated in English) (The wolf had a new plan (to get the little pig). He said to the little pig, "Tomorrow at six o'clock, I shall wait for you below the apple tree. We can get some apples to eat. The little pig went to the tree at five o'clock. The wolf also went there at five. The wolf saw the pig. The pig was on the tree and tried to find a way to flee. He had an idea: he picked an apple for the wolf; when the wolf was trying to get the apple, then it could flee. The pig took an apple and threw it to the wolf. The wolf tried to catch the apple. The pig jumped down from the tree quickly and went home.) (Subject 4A3E)

The above ideas were written in English as follows:

The wolf said "at six o'clock, we will get the apples in the apple tree" and the pig go to the apple tree at five o'clock. Then he saw the wolf and said "I shall throw an apple for you. And you get it." Then he throw the apple and fast away and got home. (Subject 4A3E)

If one compares the above two passages, the protocols for the composing aloud offers fuller and more comprehensible information than the written text. It is very difficult for a reader to understand entirely the written text. The ideas expressed in the composing aloud phase in Cantonese are coherent and comprehensible. However, when these ideas are written down in English, they are transformed into fragmented ideas.

This phenomenon was quite common in the English scripts written by the subjects in the study. Overall, the average number of GIUs fragmented per text was 5.5 (s.d. 5), and the incidence of GIUs fragmented per text seemed to vary systematically with the age/class group involved (P3, 8.2; P4, 5.0; P5, 3.3). The overall trend might suggest that the subjects' English language competence was poorest in P3. It should be noted that individual differences varied considerably. For

instance, Subject 4A1E fragmented 16 group IUs, while Subject 4A2E fragmented only one.

In terms of transformation of ideas, from fragmentation to completion, it was found that there were more transformations in the composing aloud to written text when writing in Chinese, which improved the sense of the composition, than when writing in English. In other words, there were on average 1.1 GIUs per text when writing in Chinese, compared with an average of less than 0.00 GIUs per text when writing in English ('t' value = 3.56, $p < .001$, see Appendix 7.4). In the case of transformations involving a move from completeness to fragmentation, for Chinese there were on average 0.44 GIUs per text, compared with 5.5 GIUs per text in English ('t' value = 4.27, $p < .001$, see Appendix 7.4). These figures clearly reflect the subjects' superior ability in their L1.

7.3 Transforming of Organization of Ideas

A primary requirement of any effective piece of writing is that it is organized according to some recognizable form. Writing that is not ordered is like a scrambled note book: the message is not clear and the reader cannot understand it. According to information theorists, there are three general ways in which information can be organized: randomly, sequentially and hierarchically (Sherman and Johnson, 1975). Random organization shows no clear pattern in the ordering of the ideas produced by the writer. Sequential organization usually involves lists of items arranged so that each idea has some relationship to adjacent items, for example, chronological, alphabetical or numerical. Hierarchical organization involves more complex multi-level relationships, in the sense that some ideas have other ideas subsumed within them. Sherman and Johnson observe that the random method of organization is generally unsuitable for conveying messages to readers, since ideas are disconnected

with no cohesion. In contrast, sequential and hierarchical organization are better for conveying the writer's meaning.

In the present study, the organization of ideas in the verbal protocols and the written texts of the subjects was classified according to Sherman and Johnson's analysis. To identify incidents of transformation of organization of ideas, the organization of the verbal protocol of each subject was compared against the accompanying written text.

When the subjects wrote in Chinese, transformation of the organization of ideas could clearly be detected. First, there were transformations occurring when subjects produced ideas in the composing aloud procedure where knowledge telling strategies were used. Some children would often simply express ideas in an unconnected way, their verbal protocols giving the appearance of being randomly organized. However, in the written text which followed, their ideas were sequentially organized, as can be seen below in the following example from the efforts of Subject 3B6C. The ideas in the verbal protocol were arranged in the following order:

Introducing herself
recess
lunch
activities after lunch
English lessons
Easter holidays
examination
dictations
dolls
dinner
going to school
saying prayers
queuing in the playground
attending class
returning home.

The ideas in the written text were rearranged in the following order:

Introducing herself
in the morning
 go to school
 chat with classmates
 lining up, go to class
lunch
after school
 doing homework
 taking a rest
 packing books
after dinner
 revising for dictation
 going to bed.

A comparison of the verbal protocol and written text reveals that the verbal protocol was randomly organized, whereas the written text was arranged according to the time sequence in the day. In other words, the written text was more sequentially organized. Of the 18 subjects, five cases transformed their work in this way, showing more orderly organization in the writing.

The second type of ideas organization was to try to keep basically the same sequence in writing as was produced when composing aloud. There were minor variations, with some subjects producing a few more ideas when composing aloud than when writing, with elements of detail deleted, and other subjects adding details and a few ideas when writing. However, these deletions and additions of ideas did not fundamentally change the underlying forms of organization. In short, the organization of verbal protocols and written texts was sequentially organized, with only minor changes present. This type of organisation can be seen in the work of Subject 4B5C, below.

Ideas in speech	Ideas in written text in Chinese
Family members	Family members
mother	mother
father	father
younger brother	younger brother
younger sister	younger sister
	activities on Sunday

A third type was where the organization of ideas in the verbal protocols and the written texts were nearly same, both in detail and format. Here, transformation of organization was minimal. The fourth type consisted of subjects who arranged randomly both their verbal protocol and written text, with transformation of ideas in the text. A fifth type saw the verbal protocol arranged in sequential or hierarchical order and those in the text random.

Table 7.6: Types of organisation of ideas in the verbal protocols (VP) and written texts (W), Chinese and English (18 subjects)

Types	P3 E	P3 C	P4 E	P4 C	P5 E	P5 C	P3- 5E	P3- 5C
1. VP random and W sequential	0	3	0	1	0	1	0	5
2. VP sequential, with reduced or added details, and W sequential	1	2	1	3	1	3	3	8
3. VP sequential, with minor changes to W sequence	1	0	2	2	1	2	4	4
4. VP random with reduced detail, W random	2	1	1	0	2	0	5	1
5. VP sequential or hierarchical, W random	2	0	2	0	2	0	6	0
No.	6	6	6	6	6	6	18	18

Table 7.6 summarises the types of organization of ideas for writing in Chinese and English. From the Table it can be seen that, when writing in Chinese, for the first type, five subjects were able to transform the randomly organized ideas in the composing aloud procedure into sequentially organized text. The transformation here was a clear improvement. For the second type, six subjects were able to discard unnecessary details and two were able to add ideas in the text. Both verbal protocol and written text were sequentially organized, with no confusion in the transformation process and the written product remaining organized. For the third type, four subjects made no change of organization in the final text. For the fourth type, the organization of ideas was arranged randomly as was the final product, with no improvements due

to transformation. Overall, 13 out of the 18 subjects made improvements in the final text.

Table 7.6 also summarises the results when the subjects wrote in English, having first composed aloud in Cantonese. Here transformations also occurred, but there was no evidence of the first type of transformation of organization of ideas. Three (out of 18) belonged to the second type, these subjects organizing ideas sequentially, both when composing aloud and writing. In addition, they also discarded some unnecessary details in the final product. The transformations they applied to the organization of ideas led to an improvement. There were four subjects of the third type, where the organization of the ideas in the composing aloud and the writing phases was sequential. There were only minor changes to content, and these did not affect matters very much. For the fourth type, five subjects organized their composing aloud protocols randomly, with some ideas reduced. The written scripts were also randomly organized, with no improvements arising out of transformation of organization. In the fifth type, the ideas in the verbal protocols were logically organized but the text was randomly organized. Below is an example of this, produced by Subject 4B4E.

Main ideas	No. of IUs
A. Ideas in the verbal protocol:	
Name and address of school	3
Two school buildings	6
old school building	
new school building	
new school building	10
number of floors	
facilities and resources	
extra-curricular activities	9
sport competitions	2
The writer participated in the competitions	3

B. Ideas in the text:	
The address of the school and size	2
resources	3
number of floors	1
studies in P5	1
table-tennis competition	1
likes his school	1

Subject 4B4E tried to organize his ideas in the verbal protocols using a mixture of sequential and hierarchial ordering. His ideas were orderly and well organized, but, when he wrote in English the ideas were randomly organized and the number of essential ideas were also reduced.

Altogether, there were 6 subjects whose ideas in the verbal protocols were sequentially organized when thinking about writing in English. However 3 of them wrote their ideas in their texts randomly, and the other 3 did not appear to have enough knowledge of English to express themselves. In general, these 6 subjects made no improvement in the organization of ideas between composing aloud and writing ideas down. This type was typically found in the writing of English, the L2, but not in Chinese.

From the above, one can say that Type 1 subjects made improvements in the organization of ideas, from random to sequential. Three subjects did this when writing in Chinese, but none at all did this when writing in English. Type 2 subjects were able to improve their writing by reducing unnecessary details or adding new information. Eight subjects did this when writing in Chinese, compared to 3 when writing in English. Thirteen of the 18 subjects were able to improve the orderliness of their ideas when writing, when the medium was Chinese, compared to 3 only when the medium was English. Six subjects who delivered their ideas sequentially in the composing aloud process, wrote ideas which were much less orderly when writing in English. None of the children did this when writing in their mother tongue.

In the majority of the pieces of writing produced in the study (25 out of 36), ideas were presented sequentially in the composing aloud procedure in Cantonese. Anderson (1985) proposes that linear discourse organization is typically used when structuring speech. When a speaker describe events, the information is presented in a linear order according to the sequence in which the events happen. In this study, the subjects did not lack ideas needing organization when writing, but many children found it hard to present their ideas in an orderly way when writing, especially when the writing was in English.

Organisation of ideas, both at sentence and full text level, is important for the successful communication of meaning and hence to the quality of the written product (Scardamalia and Bereiter, 1987). When writing in Chinese, 13 out of the 18 subjects were able to improve their ideas between verbally articulating them and writing them down, and 4 kept to the same orderly sequence used in composing aloud when they were writing. This would seem to indicate strongly that they had procedural knowledge about achieving coherence through the structuring and organisation of ideas when composing. However, when writing in English, the L2, only three out of the

18 subjects seemed able to write coherently. Six of the subjects, one-third, showed that they had the appropriate information and procedural knowledge when thinking in Cantonese about writing in English, but, when trying to express these into written form, they only succeeded in writing a disorganised, incoherent set of notes. They gave every indication of struggling at even the sentence level, and of being unable to plan at the full text level in English.

7.4 Transformational Approaches

Communication strategies are needed when the speaker is not able to attain his original communicative goal in the way planned, so is forced to reduce the goal or to seek alternative means to express it. According to Ellis (1990a), communication strategies are often the result of an initial failure to implement a production plan.

Bialystok (1990) proposes that definitions of communicative strategies should include three features: 'problematicity', 'consciousness' and 'intentionality'. Strategies are called upon when the speaker perceives that there is a problem which may interrupt communication; the choice of strategy is a conscious one; and, if the communication strategy used has been consciously arrived at, then it follows that the speaker who employs it is aware of having done so (p.4). Intentionality also refers to the learner's control of a repertoire of strategies, where particular ones are selected from a range of options and deliberately applied to achieve certain effects.

Writing is a monologue. Communicative problems however, occur in monologue just as much as in dialogue (Ellis, 1990a), so writers may sometimes need to use communicative strategies when composing. However, there are marked differences between writing and speaking. In writing, the learner's interlocutor is not present, and there is no overt negotiation of meaning. The writer has time to

anticipate communicative breakdowns and select alternative approaches to achieve communication. Aware that the goal is to write about a given topic, writers can change plan if they realize the inoperability of their initial production plan before actually writing. In short, they can avoid or by-pass problems.

The writer may also deliberately select approaches to transform ideas produced in the composing aloud stage in order to present them in a comprehensible written form for a particular target audience. Such decision making is similar to choosing communication strategies. However, not all such strategies fit into the definition of communication strategies offered by Bialystok (1990), for their choice may not arise out of negotiating a problem. Neither is it certain that the writer has consciously and deliberately used a particular approach. Thus, the term 'transformational approaches' is used instead of 'communication strategies'. The sections below examine more closely descriptions of these approaches.

7.4.1 Avoidance

Avoidance is a common transformational strategy, and may be classified into several subcategories. The most common type is topic avoidance, where writers simply do not talk about concepts when they are unsure about the language involved or about the language structures needed, simply because they expect that communication problems will arise (Bialystok, 1990). Brown (1987) refers to this as avoidance of syntactic or lexical difficulties. Another type of avoidance is message abandonment, witnessed when a writer fails to discuss or abandons topics which they have mentioned in the composing aloud stage. This arises out of a change of intention, not through fearing a linguistic challenge (Bialystok, 1990).

In the present study, topic avoidance was studied in some detail. After the writing session, the verbal protocols of the subjects were compared with the written text, and anything found in the protocol but not in the text was scrutinised immediately. Subjects were usually asked to give reasons for the missing information. If they answered, "I don't know how to write or express it", this was considered 'avoidance'. If they answered, "I don't want to say it, or I forgot to put it down", this was considered 'message abandonment'. As message abandonment is usually a matter of changing one's intentions or forgetting to include something in the text, this aspect was not studied in any great detail.

Table 7.7: Topic avoidance and message avoidance by one subject (3A2C)

Composing Aloud Protocols (in Cantonese)	Written Text (in MSWC)
從前有一個森林 Once upon a time, there was a forest.	從前有一個森林 Once upon a time, there was a forest.
裏面有很多動物 There were many animals.	MA
其中有一隻獅子好驕傲 One of them was a lion. It was very proud.	有一隻獅子是很驕傲的 There was a proud lion.
好像很叻，當自己 The lion believed itself very capable, it always ...	TA
最後從森林中跳出一隻小白兔 At last, a rabbit jumped out from the forest.	MA
牠說：「你這隻大獅子，以為自己好叻。」 It said, "You are a big lion, you think you are very capable."	有一隻小白兔在說，那麼驕傲的獅子，等到我的同胞一起對付，就知味道。 One day, the little rabbit said, "You are so proud you will know the result when my comrades and I challenged you."
最後，獅子好唔順氣 At last, the lion was very unhappy.	TA
就想捉住佢 It tried to catch it.	獅子一聽見，就追小兔 The lion heard this and tried to catch the rabbit.
最後只小白兔一跳，就唔見咗 At last, the little rabbit jumped and disappeared	小兔一跳，就不見了 The little rabbit jumped and disappeared.
最後，全森林的動物都跑出來，包括小白兔 At last, all the animals came out, including the rabbit.	清早，小兔的同胞真是集合起來 In the early morning, the comrades of the rabbits did gather together.
你看獅子好驕傲，你看是你多人支持，抑或是我佢多人支持 "you see, the lion is very proud, we will see you get more support, or I get more support."	MA
獅子就跟它們比過 The lion challenged the rabbit.	MA
最後沒有人投牠的票 At last, no one voted for the lion.	TA
	獅子一看，又見幫小兔的動物，便覺慚愧 The lion saw all the animals support it. He felt ashamed.
牠就輸了 Therefore the lion lost.	MA
從此以後，牠再不敢那麼驕傲 From then on, the lion tried not to be proud.	所以，從今日起，獅子不敢再驕傲了 Therefore, from then on, it tried not to be proud.

(TA = topic avoidance; MA = message abandonment)

Table 7.7 summarises and illustrates topic avoidance and message abandonment by Subject 3A2C. As the subject did not know how to write "很力" (very capable), "唔順氣" (unhappy), "投票" (to vote) in MSWC, she simply avoided expressing these ideas in her written text.

Table 7.8: Summary of avoidance of ideas due to linguistic incompetence in English and Chinese

	P3E	P3C	P4E	P4C	P5E	P5C	P3E-P5E	P3C-P5C
Mean	13.5	1	10.3	0.67	6	0	9.94	0.56
s.d.	9.1	1.1	8.91	1.21	2.45	0	7.71	0.98
No.	6	6	6	6	6	6	18	18

From Table 7.8, it can be seen that the mean number of topic IUs avoided when writing in Chinese was 0.56, a very small figure. As the total number of IUs involving avoidance was small, the difference across the three age levels was also small. The small incidence of topic avoidance is understandable, since subjects were allowed to leave spaces blank if they did not know how to write the word. Naturally, they were quite confident about expressing themselves in Chinese and, if they had difficulties, could use other transformation approaches, for instance selecting similar ideas or words to express the message. However, when writing in English, evidence of avoidance was much more apparent. Table 7.9 summarises the way Subject 5B6E used the avoidance strategy.

Table 7.9: Example of using an avoidance strategy (Subject 5B6E)

Verbal protocol	Written sentences
我係 --- 我讀五年級, 係 ××學校讀書 I am ---. I am studying in primary five. I study in --- school.	My name is -. I am X in primary five in -- school.
今年十一歲 I am eleven years old.	avoided
我間學校係×××道 My school is in X Road.	My school is in X Road.
我每日都準時係十二點搭十 分鐘到去, 五點九打冷鐘, 打 放學冷鐘 I must arrive school by ten to one exactly. A quarter to six, the school bell is rung at the end of the school day.	Every day I go to school before ten minutest two. And everyday at a X to six, I go home by school by bus.
平日三點鐘放小息 There is a recess at three o'clock.	avoided
學校有二個操場, 以前本來有 三個, 不過因為拆咗 There are two playgrounds. There were three in the past. One was demolished.	avoided
學校本來環境好好嘅 The environment of the school was very good.	My school before is very beautiful, but now my school is very X.
而家有地盤, 所以政府要我地 開冷氣, 隔咗D噪音, 每日返學 都要行D好凹凸的路。老 師話, 邊D搬去新校舍, 不過唔 知到幾時 However, there is a construction site now. Therefore the Government advised us to use air- conditioner to prevent sound pollution. Every day we have to walk on the broken road. The teacher said that we would move to a new school premise someday. I do not know when will happen.	avoided

Verbal protocol	Written sentences
裏邊大約有 四十位先生 There are about forty teachers. They are very kind.	My school have about 40 teachers. They are very kind.
大約有 九百個同學 There were about nine hundred school pupils.	avoided
我好鍾意我嘅學校 I like my school very much because my classmates are very good to me.	And my school's X is very helpful. I like my school very much.

As can be seen in Table 7.9, Subject 5B6E tried to avoid 10 IUs because of linguistic difficulties. The content of the verbal protocol was more extensive than that of the written text, many important and interesting details about the school were avoided, and four IUs were abandoned in the sense that they were messages which the subject had forgotten to include in the written passage.

The mean number of IUs with topic avoidance in writing English for the 18 subjects was 9.94 (see Appendix 7.4). If this number is compared with the mean number of IUs in the composing aloud phase (31.94), it would appear that some 31% of the ideas generated were avoided or discarded. In other words, at least one-third of the ideas were avoided or abandoned, possibly due to linguistic difficulties. A slight but statistically non-significant decrease of avoidance was found from P3 to P5 (see Appendix 7.5), the trend weakly indicating that fewer ideas were avoided as the language competence of the subjects improved.

The avoidance strategy was used more often in writing English (mean IUs = 9.94) than in Chinese (mean IUs = 0.56) ('t' value = 5.55, $p < .001$, see Appendix 7.4). It would appear that talking helped release ideas, but the sheer act of talking did not help subjects write them down. For all subjects, talking in Cantonese was easy for

it is the medium they have used all of their life. Thus, they could fluently speak out ideas, but not necessarily write them down. Writing placed them in a situation where they had to literally account for every stroke of every word. At the same time, according to Perl (1978, p.333), the explanatory strategies young children use to communicate in talking are not always available to them when they move to writing.

Clearly, the gap between writing and speaking was narrower when using the L1 than it was when communicating in the L2 for the subjects in the present study. It was quite common for subjects to avoid or abandon a difficult translation task to solve a problem of expression. According to Faerch and Kasper (1983b), such behaviour helps reduce the scope of problem, and Biggs and Telfer (1987) point out that the kind and amount of reduction that occurs in the process of writing depends on the students' general approach to learning, and on their linguistic and rhetorical competence.

7.4.2 Replacement of ideas due to linguistic incompetence

When the subjects could not find the words or sentences to express themselves in the target language, they would sometimes try to avoid the idea or use another to replace the original. Such replacement of ideas was studied by comparing the verbal protocols and the written texts and looking for discrepancies, then following these up in the interviews. Below is an example of replacing an idea by Subject 6B6C:

(Cantonese)

有時呢傾偈個啲

(Sometimes, chat with each other)

Replaced by (MSWC):

有時說話

(Sometimes speak)

The above is an example of approximation: the use of a single target language vocabulary item or structure, which shares enough semantic features in common with the desired item to satisfy the subject (c.f. Tarone 1981, p.286).

Table 7.10: Summary of the incidence of replacement of ideas in English and in Chinese

	P3E	P3C	P4E	P4C	P5E	P5C	P3-P5E	P3-P5C
Mean	0.5	0	1.5	0.17	1.83	1	1.39	0.39
s.d.	1.33	0	1.87	0.41	1.47	0.63	1.54	0.61
No.	6	6	6	6	6	6	18	18

As can be seen in Table 7.10, the mean number of replacement IUs per subject writing in Chinese was relatively small (0.39). This is obviously in part due to the fact that the subjects were allowed to leave blank spaces to show that they did not know how to write the word. In other words, they were not forced to write down their ideas expressed in speech.

Replacement of ideas was also found when they wrote in English, as the evidence below from Subject 3B6C illustrates:

(Cantonese)

食飯之後，休息一陣

(After lunch, I rest for a while.)

(English)

"I rest about fifth (fifteen) minutes." (Subject 3B6C)

The phrase "for a while" was replaced by "fifteen minutes". The subject did not know the first phrase in English so she used another phrase to replace it. "Fifteen minutes" was an explanation of "for a while", an example of paraphrase which is an alternate and acceptable target language construction (c.f. Tarone, 1981). The following is

example:

(Cantonese)

第二天，又係一樣

(I do the same routine.)

(English)

"I go to school. Then I eat things (things). I go to do my work." (Subject 3B6C)

(Next day, I do the same thing: go to school, eat my lunches, and do my work.)

Instead of writing "I do the same routine again", she wrote three sentences to indicate a sense of repetition. This is a circumlocutory approach, where the subject describes the characteristics or elements of the object or action instead of using the appropriate target language items or structures.

Turning to the replacement of ideas in English, the mean number of IUs per subject was only 1.39, again a small number and again reflecting the fact that the subjects were allowed to leave blanks when they could not find the word needed. At the same time, the subjects were probably using avoidance approaches when communicating with an inadequate linguistic system.

7.4.3 Overgeneralization

When subjects cannot find specific expressions to communicate their ideas in writing, they might employ a broader term to generalize or encompass what is in their mind. They might also extend the meaning to include instances where, to the subject, they logically apply, as can be seen in the example below.

(Cantonese)

返屋企冲凉，同埋食餅乾

(I return home, take a bath, and eat some biscuits.)

(I return home, take a bath, and eat some biscuits.)

(MSWC)

我洗澡，然後吃東西。

(I take a bath; then eat something.)(Subject 3B6C)

Here, the word "something" is used as an overgeneralisation which includes the word "biscuits" .

Overgeneralization of expression in writing English was also found, as the examples below demonstrate.

(i) (Cantonese)

牠拾起石頭，將石頭掉進水樽裏。

(It picked up some stones, and dropped the stones into the water bottle.)

(English)

"The clever bird pick up some stones and throw it into the water." (Subject 4B4E)

(ii) (Cantonese)

皇后好靚，但係心地唔好

(The queen was very beautiful, but she was not good at heart.)

(English)

"The queen was beautiful too, but her heart was not beautiful." (Subject 3A1E)

Subject 4B4E reported that he did not know the spelling of "bottle". He used the word "water" to represent "water bottle". Subject 3A1E said she did not know how to express "心地唔好" (not good at heart) in English. She hence used "not beautiful" to represent her idea.

Table 7.11: Summary of the overgeneralisation of ideas in English and in Chinese

	P3E	P3C	P4E	P4C	P5E	P5C	P3-P5E	P3-P5C
Mean	1.83	0.83	1.16	0.5	2	0.67	1.66	0.66
s.d.	2.23	0.75	0.75	0.55	1.1	0.52	1.46	0.59
No.	6	6	6	6	6	6	18	18

The mean number of overgeneralizations of specific expressions when writing in Chinese was small (0.66). Similarly, when writing in English, the mean number of overgeneralizations of expressions per subject was only 1.66, with significantly more overgeneralizations in English than in Chinese ('t' value = 2.77, $p < .01$, see Appendix 7.4). Individual differences were considerable, with some subjects having none and one subject having 6. The latter child was a P3 pupil and her written text was the longest of the 18 subjects. Although the evidence is very slender indeed, due to the small sample and experimental design, it would appear that subjects tended to use overgeneralization more in English than in Chinese. Brown (1987) observes that overgeneralization often involves the incorrect application of previously learned L2 material to a different L2 context, and suggests that all generalizing involves transformation and that all transfers involve generalizing.

7.4.4 Changing Topic

It is common practice for writers to change topic during writing. Sometimes writers have problems in expressing themselves or finding the right words, and this might prompt them to change topic. The subjects in the present study sometimes changed topic during the writing stage if they were unable to think of words equivalent to those they had used when orally composing. Of course, a change of topic is not necessarily linked to language problems for writers will often change their intention and simply switch to alternative or different topics. Below is an example of this phenomenon displayed by Subject 5B4C when writing in Chinese.

(Cantonese)

先生呢，就覺得好嬲㗎，所以呢，就叫小芬罰佢同埋
佢小明道歉。

(The teacher felt very angry. Therefore she punished Siu Fan by standing and Siu Fan
had to say sorry to Siu Ming.)

(MSWC)

老師覺得小明太頑皮，便要她站在講台前。

(The teacher found Siu Fan too naughty; she asked Siu to stand in front of the
podium.)

From the Cantonese, it can be seen that the subject wanted to write about the feeling
of the teacher, but he changed his mind and wrote about Siu Fan.

Table 7.12: Summary of topic changing in English and Chinese

	P3E	P3C	P4E	P4C	P5E	P5C	P3- P5E	P3- P5C
Mean	1.17	1.5	2.16	1.33	1.5	1.5	1.6	1.44
s.d.	1.17	0.55	1.17	0.52	0.84	0.84	1.1	0.62
No.	6	6	6	6	6	6	18	18

Table 7.12 summarises the incidence of topic changes by the sample. The mean
number of topic changes per English text as a transformation approach was 1.6, and
for Chinese it was 1.44. There were no discernable trends across the age groups from
Primary Three to Primary Five. Nevertheless, there were cases of changing topic as
a transformation approach in writing English. Below are examples.

(Cantonese)

不如掙的青蛙，邊個掙死青蛙最多，就贏呢個遊戲。

(We may try to pelt the frogs with stones, anyone who can kill the greatest number
of frogs wins the game.) (Subject P5A2E)

(English)

"One of the children x (suggest) to throw the stone to the x (frog), who threw at the x, that it die, who win."

From the above sentence, it can be seen that the subject tried to change "the number of killing" to "the death of a frog". The topic here changed.

Below is another example:

(Cantonese)

一個老婦人食早餐

(The old woman was eating her breakfast.)

(English)

"The old woman drink (drank) a cup of coffee." (Subject 5A3E)

Here, the subject did not know how to spell the word "breakfast". She reported that she wanted to change this to, "The old woman drank a cup of chocolate." However, this time she did not know the spelling of the word "chocolate". She finally chose the word "coffee", an example of topic transformation being applied twice.

7.4.5 Transfer

Human beings usually approach new problems using existing sets of cognitive structures. Through insight, logical thinking and various forms of hypothesis testing, they will call upon whatever prior experiences they have had and whatever cognitive structures they possess to attempt a solution to new problems (Brown, 1987). In terms of L1 and L2 linguistics, transfer usually refers to the process of using knowledge from the L1 when using the L2 (Cummins, 1981; Ellis, 1990a).

7.4.5.1 Transfers in Literal Translation

Often language users will translate word-for-word from their L1 when performing in the L2 (Tarone, 1981). This is quite common in Hong Kong when Cantonese speakers will write English using a literal translation of their L1. Literal translation involves the replacement of words and sequences of words in the L2 with equivalent words from the L1. In the present study, when writing in English, subjects would sometimes use the sentence structures of Cantonese to accommodate words in English. This approach can easily be detected, for Chinese characters are usually monosyllabic morphemes and sentences consist of morphemic strings. In most cases a single morpheme is a conceptual and semantic "unit", but single units are sometimes combined into compound morphemic and multimorphemic units (Li and Thompson, 1981). When writing in English, the presence of transfer from the subjects' native Chinese was often apparent, as can be seen in the performance of the subjects below.

(i) (Cantonese)

我係×××學校讀書

(English)

"I am in X X School study." (Subject 3B6E)

(I study at X X School.)

(ii) (Cantonese)

好耐好耐以前，有一個皇后啦。

(English)

"Once upon a time had a beautiful queen." (Subject 3A1E)

(Many years ago, there was a queen.)

(iii) (Cantonese)

佢唔記得開窗

(English)

"He not remember open the window." (Subject 4A1E)

(He went to take a bath. He forgot to open the window.)

Table 7.13: Summary of the literal translation of idea units

	P3E	P4E	P5E	P3-P5E
Mean no. of idea units	2.17	2.83	2.7	2.56
s.d.	2.48	1.6	1.75	1.88
No.	6	6	6	18

As can be seen from Table 7.13, summarising the number of IUs literally translated by the sample, about 2.56 IUs per text were literally translated. As there were on average only 16.8 IUs per text, this means that 15% of the IUs in the subjects' writing reflected literal translations from Cantonese. There is no clear pattern of increase or decrease in the incidence of literally translating across the three age groups. As both Cantonese and English involve basic SVO structures, this similarity in sentence pattern structures encourages literal translation.

A literal translation approach can actually help Hong Kong students to communicate in English, but can also have a bad effect on the content of their writing. If the children are holding in memory L1 information about a topic when writing, and are using this as the model against which ideas are translated into English, this act of translation can lead to an overload of short-term memory. Friedlander (1990) reports such a diminishment in the quality of the writing of children who use this strategy.

7.4.5.2 Transfer of Syntax

Syntax refers to the conventions by which words are ordered in a language so as to express meanings unambiguously. The way in which words are arranged in Cantonese, MSWC and English to pass on essentially the same message is far from standard. Difficulties emerge if users of one language transfer its syntax to a different language with different syntactical conventions. In fact, the effect may be to give to

the target language a meaning which is radically different from that intended in the source language. In the present study, the researcher inspected the syntax in the spoken utterances (Cantonese) and MSWC, and compared these against the syntax in written English of the subjects, noting where meanings had been influenced by inappropriate transfers. In this section, examples of errors related to transfer effects are reported.

7.4.5.2.a Word Order Transfer Effects

As noted in Chapter Six, the most common sentence patterns used by the subjects in the present study in Cantonese are SVO and VO. English usually has a SVO order. This difference may cause some subjects to mistakenly transfer the word order of Cantonese to English, as the examples below illustrate.

(Cantonese)

佢六點鐘返學

(English)

"He 6 o'clock xx school." (Subject 4A1E)

(At 6 o'clock, he gets up and goes to school.)

Adverbials (6 o'clock) usually come before the verb (gets up, go) in Cantonese.

7.4.5.2.b Transfer Effects Involving Subjects

Subjects in sentences written in Chinese are not marked by position, agreement or any case marker. In fact, in ordinary conversation, the subject may be missing altogether (Li and Thompson, 1981). The children examined in the present study transferred the use of subjects from Chinese to English, as the examples below illustrate.

(i) (Cantonese)

好耐好耐以前，有一個皇后啦。

(English)

"Once upon a time had a beautiful queen." (Subject 3A1E)

(Once upon a time, there was a beautiful queen.)

(ii) (Cantonese)

呢處有七個小矮人。

(English)

"So here must have seven dwarves." (Subject 4A1E)

(There must be seven dwarves here.)

(iii) (Cantonese)

從前有一個人，佢養咗一隻貓，一隻狗。

(English)

"Once upon a time, there lived a farmer, a cat, and a dog." (Subject 5A1E)

(Once upon a time, there were a farmer, a cat, and a dog.)

In the above examples, "have" is used here instead of "there was/there must be" because the Cantonese equivalent for "have" is used in this way without a subject, especially at the beginning of a sentence. "Here" and "there" are used like nouns in the same way as their equivalents are used in Cantonese.

7.4.5.2.c Transfer Effects Involving Articles

Li and Thompson (1981) point out that Chinese does not have words that correspond to the English articles "the" and "a" and "an". As a result, most Chinese speakers face a daunting task in knowing, or sensing, exactly when to use articles and when to leave them out. Hence, "the" is often used when it is not required, and sometimes, for instance see (ii) in the examples below, no article is present where one is actually

required in English.

(i) Cantonese)

飛到山上搵水飲

(English)

"It wants to drink the water in the mountain." (Subject 4A2E)

(ii) (Cantonese)

我又食 (蘋果) 呀!

(English)

"I (shall) will eat (the) apple with you." (Subject 3A1E)

7.4.5.2.d Transfer effects involving Tense/Aspect

Cantonese differs from English in the way it indicates time, tense and aspect. Time is signalled by an adverbial, like "before". In writing a story, the phrase "Once upon a time" is used to denote a time in the past; verbs are used without any additional marking. Yu and Atkinson (1988) report that even Form 4 secondary school students lack a thorough understanding of the tense system in English.

In the present study, of children in a strongly formative stage of writing, different tenses were used by some children, almost at random, giving rise to confusion over when events actually took place. Below are examples of negative transfer effects involving tense/aspect.

(i) (Cantonese)

學校本來環境好好嘅

(English)

"My school before is very beautiful." (Subject 5B6E)

(The environment of my school was very good.)

(ii) (Cantonese)

從前...就執起舊石頭掙佢地。

(English)

"Once upon a time...He pick up a stone and throw the stone to the boys." (Subject 5B6E)

(He picked up a stone and threw it at the boys.)

Subject 5A3E used the present tense entirely to write her story, whereas the verbs (for instance drink, eat, see, fly and run) usually needed to be in the past tense.

7.4.5.2.e Transfer Effects Involving Verb Forms

Verbs are not inflected in Cantonese, and Chinese possesses no markers of tense. Neither does it use verb affixes to signal the relation between the time of the occurrence of the situation and the time that situation is brought up in the speech (Li and Thompson, 1981). Below are examples of verb form transfer effects used by the subjects.

(i) (Cantonese)

從前有_。三個細路仔

"Once there was three child." (Subjects 5A2E)

(Once upon a time, there were three children.)

(ii) (Cantonese)

有一個好老的女人，佢食_。咗隻蜘蛛落肚裏頭

(English)

"One day the old woman drink a cup of coffee. The spider off her coffee but she not see the spider off her coffee." (Subject 5A3E)

(One day, an old woman was drinking a cup of coffee. A spider fell into the cup of coffee. She did not see the spider in the coffee.)

7.4.5.2.f Transfer Effects Involving Plurality

Cantonese does not have plurality, but regular plural forms occur in personal pronouns like "我哋" (we are), MSWC "我們". Nouns are not inflected to show plurality. Examples of the effects of this phenomenon are shown below.

(i) (Cantonese)

我屋企有四個人

(English)

"My family have four people." (Subject 4B6E)

(My family has four members)

(ii) (Cantonese)

有四層

"It have four floor." (Subject 5B5E)

(It has four floors.)

7.4.5.2.g Transfer Effects Involving Possessive Cases

Cantonese pronouns do not inflect to indicate possession, for example "你細佬" (your brother) (Gao, 1980). This concept was transferred to the English writing by the subjects in the present research.

(i) (Cantonese)

名字叫 X X X 小學

(English)

"It name is X X X Primary School." (Subject 5B5E)

(Its name is X X X Primary School.)

(ii) (Cantonese)

雀走咗入去女人個口食烏蠅

(English)

"The bird fly in the woman mouth to eat the fly." (Subject 5A3E)

(The bird flew into the woman's mouth to eat the fly.)

The subject above wrote 'woman mouth' seven times. In Cantonese, there is no equivalent for 'woman's mouth', and it is common to say "女人個口" in Cantonese.

7.4.5.2.h Transfer Effects Involving Voice

Confusion involving the use of active and passive voices is a common phenomenon among the people of Hong Kong (Yu and Atkinson, 1988). Passive transformation is seen as a very complicated process, involving the addition of an auxiliary verb or the change of a lexical verb. In the first example below, it was not necessary to use the passive voice. In the second example, the active voice should be used.

(i)(Cantonese)

火警囉喝

(English)

"The fire was broke out." (Subject 5A1E)

(The fire broke out)

(ii)(Cantonese)

個頂層起咗三年

(English)

"The top had built three years." (Subject 5B5E)

(The top was built three years ago.)

7.4.5.2.i Transfer Effects Involving Conjunctions

Written Chinese has a series of connectives standing at the head of a paragraph or at the beginning of a sentence which have no equivalent in English. There are two kinds of linking: forward and backward. With forward linking, one must talk about sentences containing at least two clauses because the first clause is always dependent on the second clause for its meaning to be complete. With backward linking, the second clause is dependent on the previous clause for its meaning to be complete. Many sentences are composed of two linked clauses, each of the constituent clauses containing a linking element. Cantonese uses connectives loosely. Below are examples of error transfers involving conjunctions.

(i) (Cantonese)

咁呢 佢個母后好快就死㗎拉嗎。

(English)

"But the queen was dead very young." (Subject 3A1E)

(The queen died very young.)

(ii) (Cantonese)

我好鍾意我嘅學校，因為嘅同學對我好㗎。

(English)

"And my school's X is very helpful. I like my school very much." (Subject 5B6E)

(I like my school very much because my school mates are good to me.)

7.4.5.2.j Transfer Effects Involving Prepositions

The first example below illustrates how "in" and "into" are used differently in English. In Cantonese, "入" can be combined with different verbs, its meaning being the same as "in" and "into".

(i) (Cantonese)

貓走咗入去女人個口去食雀

(English)

"The cat run in the woman mouth to eat the bird." (Subject 5A3E)

(The cat jumped into the woman's mouth to eat the bird).

(ii) (Cantonese)

我間學校係 X 路

(English)

"My school is in X road." (Subject 5B6E)

(My school is on X Road).

7.4.5.2.k Transfer Effects Involving Negatives

Cantonese generally uses "唔" "咪" "未" (not) to indicate negatives. These adverbials are usually put in front of verbs and adjectives (Gao, 1980). Evidence of this was apparent in the transfer effects in the written English of the research subjects.

(i) (Cantonese)

佢唔開心

(English)

"He not happy." (Subject 4A1E)

(He is not happy)

(ii) (Cantonese)

隻豬唔俾隻狼入來

"The little pig not let the wolf came in." (Subject 4A3E)

(The little pig did not let the wolf come in.)

7.4.5.3 Transfer of Chinese Concepts

Some concepts in English have no equivalent in Chinese, and vice versa. Equally, the Chinese and English will often approach an idea from different viewpoints. The subjects in the present study transferred some Chinese viewpoints into their English, as can be seen below.

(i) (Cantonese)

你帶三把斧頭返屋企

(English)

"You get these three axe back home." (Subject 3A3E)

(You take these three axes and go home.)

‘返’ (back) is used as a verb in Cantonese and with other verbs.

(ii) (Cantonese)

我屋企有四個人

(English)

"My family has four people." (Subject 4B6E)

(My family has four members.)

Cantonese use the word ‘people’ very often. The Cantonese use ‘人’ (people) to represent ‘成員’ (members). Thus it is common for Cantonese students to use ‘people’ instead of ‘person’.

Table 7.14: Summary of transfer effects from Cantonese into English

	P3E	s.d.	P4E	s.d.	P5E	s.d.	P3-P5E	s.d.
Tenses (mean)	7.5	11.3	3.5	2.51	5.17	7.81	5.39	7.74
Verb forms (mean)	1	2	1.7	1.94	0.17	0.41	0.78	1.58
Plurals (mean)	2.7	2.16	2	0.89	5	7.85	3.22	4.63
Possessive adj. (mean)	0.3	0.86	0.7	1.63	0.83	0.75	0.61	1.09
Voice (mean)	0.5	0.84	1.3	1.51	0	0	0.61	1.04
Conjunctions (mean)	2	2	1	1.67	0.66	0.82	1.22	1.59
Prepositions (mean)	1.83	2.17	1	1.26	0.5	0.55	1.06	1.77
Articles (mean)	0.7	0.82	1.2	0.75	0.33	0.82	0.61	0.78
Negatives (mean)	0.17	0.84	0.8	1.32	0	0	0.33	0.84
Others (mean)	2.33	1.51	1.83	0.75	1.66	0.56	1.94	1
No.	6		6		6		18	

A summary of the transfer effects noted in the subjects' offerings appears in Table 7.14. From the Table it can be seen that the subjects tried to transfer syntax and concepts from Cantonese and MSWC to English. As outlined above and shown in the Table, the use of tenses, plurals, conjunctions, prepositions, verb forms, possessives and definite articles by the subjects contained evidence of transfer effects in the English of the students arising from their mother tongue, Cantonese, or from MSWC. Amongst these, tenses (on average 5.39 per text), plurals (on average 3.22 per text)

and conjunction (on average 1.22 per text) were clearly affected by Cantonese. Whether they were aware of it or not, the subjects transferred to their written English elements from their L1.

Of course, there were clear individual difference among the sample. As the subjects were at the beginning stages of learning English, their writing also included evidence of a good deal of cross-linguistic transfer and interference. In these early stages, before the system of the L2 is well established, the native language of the children is the only linguistic system or previous experience from which the learner can draw. As can be seen in the examples cited above, some of the subjects' errors are very clearly attributable to negative cross-linguistic transfer. English is an Indo-European language, while Cantonese belongs to the Sino-Tibetan group. The structure and patterns of Chinese and its cultural schemata are much further away from English than other European languages. As a result, one would expect to see more L1-induced errors in the writing of Cantonese speakers than, for instance, speakers of German (Webster, 1987).

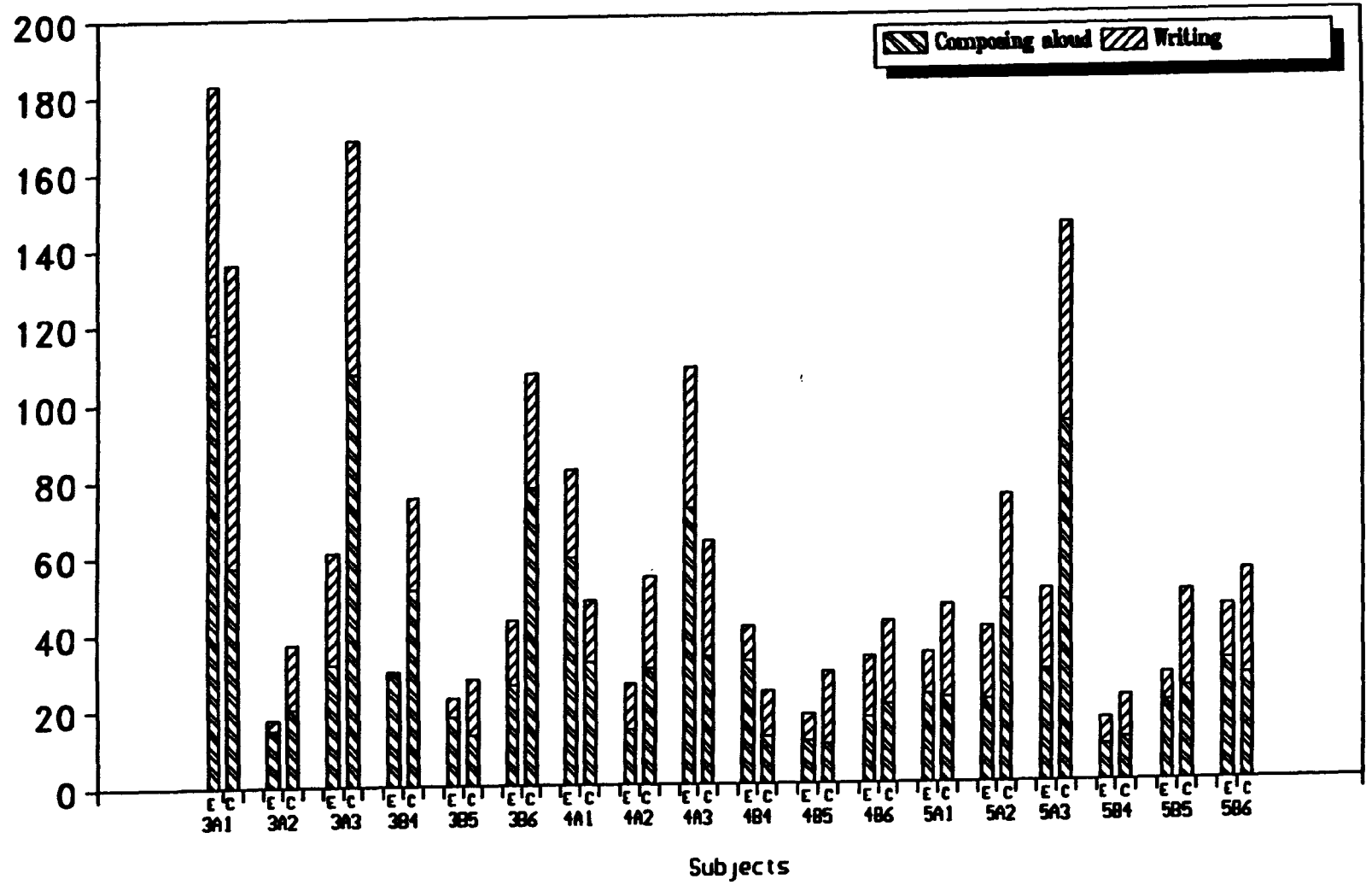
7.5 Summary of Results

The comparison of the composing aloud verbal protocols and the written texts of the 18 subjects in the present study revealed differences reflecting language transformations. These are summarised graphically in Figure 7.1. Transformation is an important process in composing, both in Chinese and in English, and the present study has presented evidence that the subjects of this study are capable of transformations in the form of addition and deletion of ideas, complete and fragmentary groups of ideas and the reorganization of ideas when writing in Chinese and in English, their L2.

Figure 7.1

Fig. 7.1
No. of
idea units

TRANSFORMATION OF IDEA UNITS



More ideas were generated when composing aloud than appeared in the writing, both in the L1 and L2. This reflects the fact that the subjects' spoken competence in Cantonese is stronger than their written competence, both in MSWC and in English. The subjects were able to write about 75% of the composing aloud ideas when writing in Chinese, but only expressed about 53% of these ideas when writing in English. The decrease in IUs in the English texts suggests there was more semantic simplification when writing in English (47%) than when writing in Chinese (25%). This clearly reflects the expected trend for the subjects' Chinese competence to be higher than their English competence.

During the transformational process, the subjects often added and deleted IUs. They added more new ideas when writing in Chinese than in English (8.22 vs 1.78), and also deleted more ideas when writing in Chinese than in English (13.72 vs. 5.17). In other words, more transformations occurred when writing in Chinese than in English. In consequence, there were more changes of content when the subjects wrote in Chinese.

Besides differences in terms of the number of IU transformations, there were also transformations of the organization of GIUs in both languages. Some GIUs were fragmented in the composing aloud stage which were improved (made more complete) in the written texts. On the other hand, some GIUs were complete and comprehensive in the composing aloud stage but were fragmented in the written text. It was found that more fragmented GIUs were improved in Chinese (1.1 GIUs per text) than in English (0.0 GIUs per text). In terms of transformations from completeness to fragmentation, more GIUs were found in English writing (5.5 GIUs per text) than in Chinese (0.44 GIUs per text).

Between composing aloud and planning and actually writing, more subjects were able

to improve the organization of their ideas in Chinese (13) than in English (3). Six subjects delivered their ideas sequentially in Cantonese but expressed them randomly when writing in English. No such cases were found when the children were writing Chinese. They also made improvements generally in the organization of the final product in Chinese, but not in English. In the majority of the compose aloud protocols (25 out of 36), the subjects were able to present their ideas sequentially when composing aloud in Cantonese. This would suggest that, at this stage in their learning, the subjects were familiar with the relevant procedures for presenting knowledge coherently when writing. The subjects who made no improvements in their writing or disorganized their final products when operating in English would appear to be struggling at the whole-text level, and often at the sentence level.

The subjects used different approaches to transform ideas generated in the composing aloud stage to the form in which they appeared in the written text. These approaches are similar to communication strategies, and included topic avoidance, abandoning messages, replacements, generalizations and topic changes. All of these phenomena were apparent both in MSWC and in English. Transfer effects from Cantonese to MSWC, and from Cantonese and MSWC to English were able to be detected in the subjects' written English. In fact, the effects were not able to be revealed on their true scale in the present study, due to the children being permitted to leave blank spaces or to make an 'X' sign to indicate problems. As a result, the extent of transformational processing in the present study is almost certainly an underestimate.

Topic avoidance and message abandoning were found in the subjects' writing in both languages. The use of topic avoidance in writing Chinese was relatively uncommon (mean = 0.56 avoided IUs per text), reflecting the subjects' confidence in operating in their L1. However, the mean number of IUs featuring topic avoidance

for the 18 subjects writing in English was 9.94, a large number compared to the group average of 31.94 IUs generated when composing aloud in Cantonese. The writer estimates that about 31% of the ideas generated in Cantonese were avoided when writing in English, a reflection of the numerous problems the subjects have in writing in English.

When writing down their ideas in English, some subjects avoided some of the content items mentioned when composing aloud. Follow-up discussions invariably revealed that the children were concerned about putting into English writing the words they had in their mind. Although the sample is too small and unrepresentative for a validly generalisable analysis, there is slender evidence that there was a decrease of topic avoidance from P3 to P5, possibly reflecting improvements in L2 competence.

Avoidance featured much more commonly in writing English than in Chinese. On the other hand, subjects used the reduction strategy more in English than in Chinese. Ellis (1990a) points out that,

"The novice second language learner cannot develop all aspects of the planning and production stage simultaneously and therefore selectively uses only those aspects that have already been proceduralized. This results in two basic planning strategies, semantic simplification and linguistic simplification."
(p.180)

The deletion of IUs, fragmenting of ideas and the avoidance of ideas are good illustrations of semantic and linguistic simplifications.

The load on short-term memory during composition is potentially prodigious; writers have to remember the content of what they are saying, what they intend to say, what they have said already as well as all the rules and conventions governing text production (Scardamalia, 1981). As the load on the working memory component of

short-term memory is severe, there are two main ways by which this load might be handled. The first parallels the case of reading, where mechanical aspects of decoding are fairly automatic, thereby freeing working memory for focusing on the main ideas and on the relationship each sentence (and word) has to the idea or argument. It is not difficult to see such a parallel with writing. The second is the separation of the substantive and mechanical writing processes which comes with extensive practice (Perera, 1984).

The subjects used replacement in the transformation process in both languages. The mean number of IUs replaced per text in English was 1.39 and in Chinese 0.39. The subjects also used slightly more overgeneralizations in English (mean = 1.66) than in Chinese (mean = 0.66). Changing topic was also found in English (mean = 1.66) and in Chinese writing (mean = 0.66). The incidence of these transformations are artificially low, however, a reflection of allowing the subjects to leave a space to stand for words they could not produce.

As expected, the subjects' L1 played a significant part in their L2 production (Ellis, 1990a, p.40). Cross-linguistic influences were clearly apparent in the subjects written English. Literal translation featured regularly, a reflection of the fact that Cantonese and English predominantly involve SVO structures. About 15% of the total IUs in writing (16.8 IUs per text vs. 2.56 IUs per text) were literally translated from Cantonese. Some subjects only wrote broken sentences and the literal translation approach could not be seen in their writing, possibly because they did not have the ability to apply it.

The L1 is a knowledge resource which learners will use both consciously and subconsciously to help them sift through L2 data and perform as well as they can in the L2 (Ellis, 1990a). The subjects in the present study displayed evidence of transferring elements of syntax, and concepts from Cantonese and MSWC to English.

Tenses, plurals, conjunctions, prepositions, verb forms, possessives and articles in the written English of the subjects were affected to an extent by Cantonese and MSWC. Tenses and plurals were particularly affected by transfers from Cantonese.

The use of transformations is not specific to writing in the L2, and it featured on a lesser scale when the subjects were writing in Chinese. What distinguished the writing in Chinese from the writing in English was the frequency with which the same approaches were called upon. Mohan and Lo (1985) show how writers will transfer writing abilities and strategies, good or deficient, from their L1 to L2. Edelsky (1982) studied 1st, 2nd and 3rd graders in a bilingual programme and showed that writing knowledge transfers across languages, with writers using L1 strategies and knowledge to aid their L2 writing. However, she argues that writers mainly apply their knowledge about writing from their L1 to writing in their L2 in order to form hypotheses about writing in the latter.

Writing can be viewed as a source of discovery. Murray (1982) argues that writing should be taught as a process of self-discovery, in the sense that one writes to discover what one is thinking about. Murray urges teachers not to forget that, through writing, children develop ideas. The subjects in the present study showed evidence of exploring their thinking during the composing process, regarding writing as a form of problem solving. The transformations which operated allowed the product of the thinking to be displayed in written form.

7.6 Implications

Eliminating errors is an important strategy for increasing language proficiency. English teachers in Hong Kong pay a lot of attention to the errors made by students, and will correct meticulously every error in the assignments of their students. The

teachers are expected by the students, parents and often the principal of the school to spot every error committed by the pupil. They are also expected to write comments on the scripts of the students, according to the Chinese Language Syllabus (CDC, 1990a, 1990b).

However, it is felt by many people that English teachers in Hong Kong may be wasting energy pointing out errors, when they should be praising children for their successes. After all, the most important goal of learning is expression, not absence of errors. Corder (1967) states that:

"A learner's errors ... are significant in [that] they provide to the researcher evidence of how language is learned or acquired, what strategies or procedures the learner is employing in the discovery ... of the language." (p.167)

Brown (1987) points out that:

"There is a danger in too much attention to learners' errors. While errors are indeed revealing of a system at work, the classroom foreign language teacher can become so preoccupied with noticing errors that correct utterances in the second language go unnoticed... we must not lose sight of the value of positive reinforcement of clear, free communication. The ultimate goal of second language learning is the attainment of communicative fluency in a language." (p.171)

Schachter (1974) and others (e.g. Kleinemann, 1977) have shown that error analysis fails to account for the strategy of avoidance. A learner who for one reason or another avoids a particular word or structure may be assumed (often incorrectly) to have had some difficulty. At the same time, the absence of errors does not necessarily suggest that the children have L2 competence since they may be avoiding the very structures that pose difficulty for them. In fact, teachers in Hong Kong pay little attention to this kind of difficulty in their students. On the contrary, in order to

avoid errors, many Hong Kong English teachers will go so far as to suggest that students use simple English to express themselves and only use English known to be perfect. Teachers mark exercises meticulously and no error is tolerated.

The effect is that students are encouraged to pay attention to grammar and discouraged from expressing themselves freely and creatively in writing. Rose (1984) warns that writing is hampered when writers are too concerned with rhetorical concerns (how-to say-it) rather than with substantive concerns (what-to-say). In the present research, the subjects appeared to apply the avoidance strategy to by-pass blocks in their writing. Perhaps the way the children wrote reflected the way they had been indirectly encouraged to write in order to avoid the danger of making errors.

Faerch and Kasper (1983a) note that, if the learner's behaviour is motivated by avoidance and a reduction strategy is chosen, then the result is that the learner will often change or modify the original communicative goal. They note two kinds of reduction: formal reduction, in which parts of the linguistic system are avoided; and functional reduction, in which the speaker's communicative intentions are abandoned or reduced. If students in Hong Kong are discouraged from expressing themselves and the reduction strategy is encouraged, they may be motivated by avoidance and may choose to apply both formal and functional reduction. If they elect for functional reduction, their writing is likely to be unorganized; if they elect for formal reduction, their sentences are likely to be broken; if they elect for both, then their writing generally will be poor.

Brown (1987) suggests that "correct" production yields little information about the actual interlanguage progress made by learners. It only presents information about the language they prefer to use. Topic avoidance is a serious writing block and teachers must try to find out the reasons for topic avoidance by their pupils in order to help them overcome their difficulties. Teachers should stress to pupils that writing

is both a means to express oneself and a vehicle for enjoyment. Unfortunately, children in Hong Kong often regard writing as a sort of game in which the teacher is out to catch them making errors and they are trying to avoid being caught. If, in order to do this, they avoid confronting new challenges, then progress is most unlikely.

Turning more specifically to cross-linguistic language use, traditionally, English teachers have emphasized the need for ESL writers to think and write as completely as possible in English. They believe that if the learners resort to their L1, this will inhibit acquisition of the L2 and bring a danger of errors associated with L1 transfer effects (Friedlander, 1990). To a certain extent, English teachers in Hong Kong primary schools try to maintain the practice of using English only and will remind students not to write "Chinglish", a mixture of Chinese and English.

The results of the present study confirm the suspicion that primary school pupils are producing writing which is a close reflection of the way they speak Cantonese, and that Chinese concepts are being transferred into their written English. "Chinglish" is a form of language that combines Chinese and English in ways which suggest that users are forming their own self-contained linguistic system. This is neither the system of the native language nor the system of the target language. Instead it falls between the two (Selinker, 1972). It is a system reflecting the attempts of learners to provide order and structure to the linguistic stimuli surrounding them (Brown, 1987). Of course, teachers will tolerate pupils writing with this form of language as a temporary transitional phenomenon, for such tolerance encourages students to write more freely. However, following this transient phase, Hong Kong teachers will often try to refine children's written English by controlling it rigidly. Thus, guided compositions are practised regularly up to P6. Such teacher-dominated instruction tends to dull free communication and expression. Some of the children in the present study said their composition lessons were similar to dictation periods and

that they were not encouraged to express themselves.

Edelsky (1982) shows how writing knowledge transfers across languages, with writers using L1 strategies and knowledge to aid their L2 efforts. She found that often the poorer writers' failure to use efficient L2 strategies was based on their failure to use these strategies in their L1. In other words, strategies which have not been acquired in the L1 cannot be transferred (Jones and Tetroe, 1987). Of course, ESL writers should be encouraged to use their L1 while composing initial drafts (Friedlander, 1990), and the children in the present study indeed showed plenty of evidence of being able to generate more ideas when working in their L1 on a Chinese topic. In Hong Kong, however, few teachers strategically use the mother tongue as an important resource to assist children's writing in English. Middle-class parents will often send their children to learn a third language, for instance French, in an international school instead of building up their Chinese. At the same time, the time allocated to learning English in most secondary schools is usually double that of Chinese language (HKED, 1989).

Many English teachers in Hong Kong seem to emphasize only the negative influence of Chinese on English. Although a proportion of the errors a learner makes are indeed attributable to the L1, all errors are indiscriminately dealt with in identical fashion. In other words, no attempt is made to capitalise on the similarities between the L1 and the L2. Sridhar (1981) points out that the learner's L1 knowledge can serve as input to the process of hypothesis generation, and Corder (1981) suggests that the learners' L1 may facilitate the developmental process of learning an L2 by helping them to progress more rapidly along the 'universal' route when the L1 is similar to L2. Krashen (1981) notes that the L1 can be used as a resource by learners to overcome difficulties in communicating ideas. The wiser use by teachers of the children's knowledge and proficiency in Chinese in the teaching and learning of English in Hong Kong is an area deserving much more research attention.

In the present study, it was found that the subjects used transformational approaches to help them write. Tarone (1977) states that, "strategy preference and second language proficiency level may prove to be related." (p.202) Bialystok (1983) found that advanced L2 students used proportionally more L2-based strategies (like approximation, circumlocution and word coinage), in contrast with weaker L2 students who relied more on the L1-based strategies (like language switching and transliteration). In these circumstances, the performance of the primary school pupils in the present study was not exceptional. However, this raises the issue of whether or not transformational techniques can or should be taught. Corder (1983) supports this idea, saying that:

"If one wishes at this stage of the art to consider the pedagogical implications of studying communicative strategies, then clearly it is part of good language teaching to encourage resource expansion strategies and, as we have seen, successful strategies of communication may eventually lead to language learning." (p.17)

However, Bialystok (1990) does not favour the teaching of transformational techniques and strategies. She writes:

"The more language the learner knows, the more possibilities exist for the system to be flexible and to adjust itself to meet the demands of the learner. What one must teach students of a language is not strategy, but language." (p.147)

Finally, it is worth noting that the research method used in this study can help teachers diagnose the transformational approaches used by pupils. This method has been effective in highlighting discrepancies between the product of the composing aloud stage and writing. By analyzing particular discrepancies, teachers can diagnose strengths and weaknesses, capitalising on strengths and framing remedial teaching to overcome weaknesses. This too is an area worthy of further research.

Chapter Eight

Pausing in the Composing Process

This chapter focuses on the subprocess of pausing in the composing process. Pausing between periods of putting pen to paper is often observed when people are writing, the pauses varying in duration and usually being taken as a sign that the writer is breaking off writing to think, plan, revise, review, reconsider, choose words and so on. Of course, it may also be the case that the writer is merely taking a rest. The behaviour of the subjects in the present study was observed as they were writing and their pauses were investigated, tallied and categorized. Data about the pauses when writing in Chinese were then compared against those for writing in English.

8.1 Introduction

Pauses are moments of physical inactivity during writing, offering observable clues about the hidden cognitive processes operating and contributing to discourse production (Matsuhashi, 1981, p.114). Flower and Hayes (1981c) point out that planning activities, whether global or local, usually occur when writers pause, while Perl (1978) observes that writers frequently reread the script before them, pause, then write more. Pianko (1979) found that (a) the great majority of the pauses made by the freshman subjects in her research were for planning ahead as they were considering what to write next, and (b) most of their rescanning was to reorient themselves to what they had just written for the purpose of deciding what to write next.

Matsuhashi (1979, 1981) produces evidence that the length of the pauses writers produce before significant units of text increases as the text increases in

complexity. When subjects are arguing a point or generalizing, they pause an average of 5 seconds more per text unit than when simply reporting or narrating. Pauses are also related to the level of abstraction of the thinking involved, with pauses before superordinate text units lasting significantly longer than pauses before subordinate ones. Matsuhashi also found that writers pause an average of 6 seconds longer before transcribing the beginning sentence of a paragraph than before other sentences. Schumacher et al. (1984) found that college students on an advanced communications course appeared to make more or less the same number of pauses associated with selecting or modifying items of grammar as students on a lower-level communications course, but that the former made many more pauses addressed to decisions about content.

It is evident from the above research that writers spend large amounts of time pausing when composing and, indeed, pausing is an important subprocess in the composing process (Gould, 1981; Flower and Hayes, 1981c). However, the research subjects featuring in the above studies were mainly adults or university students working in their L1. As a result, questions may be raised about the generality of the conclusions reached. During the present investigation, the writer was particularly interested in exploring and analyzing the pausing of Hong Kong primary school pupils whilst they were writing, and in seeing whether the pattern and nature of their pauses differed when they were operating in their L1 and L2. In addition, the writer was particularly interested in examining the pausing behaviour of the subjects when composing in MSWC and relating this to when they were operating in English.

The 18 subjects were videotaped by a research assistant when composing, and the researcher also logged their pauses on a specially designed record form which helped locate precisely when the pauses were made (see Appendix 4.5). Immediately after the writing session, the subjects were asked about the pauses they had made, and their memory was jogged by showing them the videotape of their writing session. The

data on the record form were also used to prompt subjects to reflect on and elaborate on the mental activity they thought had been taking place whilst pausing. When subjects were asked what mental activity had been happening during the pausal breaks, the researcher pointed at the videotape or the pauses on the record form and asked, "What are you thinking here?" Such specific prompts allowed subjects to make relatively specific observations about their mental activities during writing with a high degree of certainty, a technique also used by Tuckwell (1980), Rose (1980) and Schumacher et al. (1984). The categories of pauses were tallied and classified by the researcher after considering the responses offered by the subjects.

Writing is a thinking process and can be very demanding and complicated, especially for inexperienced writers. The various demands made on the subjects in the present study were grouped into four categories: cognitive activities, linguistic activities, personal feelings and 'others' (adapted and modified from Raimes (1983) and from Schumacher et al. (1984)). These categories served as a theoretical frame for classifying the various pauses observed during the present study.

8.2 Pauses during Cognitive Activity

Writing involves various cognitive activities, such as retrieving and selecting information, planning and logical thinking. In the analyses which follow, various comparisons are reported which indicate just how complicated the entire process becomes, especially when the language of thought differs from the language of writing.

8.2.1 Pauses to Retrieve Information

If during the writing the subjects made pausal breaks and, when asked what they were thinking at that time, offered responses such as "I am thinking about the content" or

"I am thinking about something to write" or "I am thinking what to write", these pausal breaks were classified as retrieving information from memory during writing. The following example is an illustration (P = Pause):

(in Chinese)

有一天，牠在山洞外午睡 (P)。
(One day, it was sleeping outside the cave (P).) (Subject 3A1C)

The subject paused at P and, when asked what he was thinking at that time, he said he was trying to think about the story and remember what to write in the next sentence.

Table 8.1: Summary of pausing for retrieval of information in English and in Chinese (18 subjects)

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	0.3	2	0	1.5	0.67	3	0.33	2.17
s.d.	0.51	0.63	0	1.04	0.81	1.78	0.59	1.34
No.	6	6	6	6	6	6	18	18

When subjects were writing in Chinese, 94% (17 out 18) said they were retrieving information during pauses. From Table 8.1, it can be seen that the mean number of pauses for the 18 subjects was 2.17 each. The differences between the mean of the three groups P3 (2), P4 (1.2), P5 (3) were minimal. The highest counts for pausing were 6 (Subject P5A3C) and the lowest was 0 (Subject P4A1C). Individual differences were not great (s.d.= 1.34).

When they wrote in English, some subjects also made pauses to retrieve information. Below is an example:

"My school (P) got a lot of flowers and trees, teachers, teachers' room, music room."
(Subject 3B4E)

During the pause, the subject tried to think of and describe the special features of her school. She thought of the classrooms, library, music room, the head-mistress's office, the teachers' room and the playground.

For writing in English, generally, it was found that only 28% (5 out of 18) of the subjects paused to retrieve information. The mean count for the 18 subjects was also very small (0.33). None of the 6 children in Primary 4 reported they had stopped to retrieve information when writing. The highest count was 2 and the smallest was 0. On the whole, therefore, more subjects appeared to pause more to retrieve information when writing in Chinese (94%) than in English (28%). The mean for the 18 subjects was also higher in Chinese (2.17) than in English (0.33) ('t' value = .531, $p < .001$, see Appendix 8.4), indicating that the subjects probably thought more about content during the pausal breaks in writing Chinese than in English. However, it must be remembered that the composing aloud prior to writing was a sort of memory searching exercise, and that the composing aloud was in Cantonese for both items of writing. At the same time, the subjects had been so selective in their choice of what to write in English that they were writing on familiar themes and topics.

8.2.2 Pauses to Select Information

Whilst writing, subjects might retrieve more information than they needed and, if so, might have to select certain information and discard items considered irrelevant. Responses like "I was choosing something" and "I am thinking which one is better" were classified in this category, as can be seen in the following example.

(in Chinese)

牠看見了有一隻燒豬(P)在削面,便跑過去。

(It saw a roasted pig (P) in front of it. It ran towards the pig.) (Subject 3A1C)

The subject paused and later said that, at that time, she had two phrases in mind, '燒豬' (roasted pig) and '肥豬' (fat pig). She was trying to select one and said she chose the former because the lion usually liked roasted pig more.

Table 8.2: Summary of pausing to select information in English and in Chinese (18 subjects)

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-P5C
Mean	0.3	1.67	0.33	2.3	.33	1.83	0.33	2.06
s.d.	0.51	0.81	0.51	1.63	0.51	1.16	0.49	1.21
No.	6	6	6	6	6	6	18	18

It was found that when the subjects were writing in Chinese, 94% (17 out of 18) tried to select information during pauses. As can be seen from Table 8.2, the mean count for the 18 subjects was small (2.06). The differences between mean counts for Primary 3 (1.7), Primary 4 (2.3), Primary 5 (1.8) were minimal, with the highest count 4 (4A1C, 4A3C, 5A1C) and the lowest 0 (4B5C). Individual differences were very small.

The subjects also made pauses to select information when writing in English. The following is an example:

"But the queen was dead very (P) young." (Subject 3A1E)

The subject paused, during which time, she later reported, she had at first wanted to write that the queen died 'fast' (soon). Then she changed her mind and wrote the word 'young'. The reason for this was that, according to her estimation, the age of the queen should be around 30. As she thought that, to be in one's 30's is still considered young, she decided to use the word 'young'.

When they wrote in English, it was found that only 33% of the subjects (6 out of 18) paused to select information. The mean number of pauses for this activity was also very small (0.33). The differences for the mean counts for the three groups, P3 (0.3), P4 (0.33) and P5 (0.33), were very small, the highest count being only 1. This indicates that few of subjects appeared specifically to pause to select information. On the whole, more subjects paused to select information when they were writing in Chinese (94%) than in English (33%). The mean count for pauses to select information was higher in Chinese than in English (2.06 vs 0.33) ('t' value = 5.95, $p < .001$, see Appendix 8.4).

8.2.3 Pauses in Order to Plan

Whilst composing, writers sometimes pause to engage in global and immediate planning. Global planning is long-range planning of what to say, reaching over most or all of the piece of writing. Immediate planning is short-term planning to present the next ideas (Schumacher et al., 1984). In the present research, almost all of the observable planning identified belonged to the category of immediate planning. Responses like "I am thinking how to write the next idea", "I am thinking how to continue" and "I am thinking how to write the next paragraph (or how to begin a new paragraph)" were classified as immediate planning.

When the subjects wrote in Chinese, they paused to plan. The following is an illustration:

(in Chinese)

有一天，媽媽在睡，說了一個很好聽的故事。
我試試說給大家聽(P)，好嗎？

(One day, before sleeping, my mother told me a very interesting story. Should I tell you the story? (P)) (Subject 3A1C)

The subject paused and said later that she was considering ending the first paragraph there. She decided to end the paragraph since she felt she had written sufficient for the start of the story.

The same subject continued to write and pause again as can be seen in the example below.

(in Chinese)

故事的内容是这样的：(P)

(The content of the story was as the following:... (P).) (Subject 3A1C)

The subject paused and later said that she was trying to find a way to introduce the story.

Table 8.3: Summary of the incidence of pauses for planning in English and in Chinese.

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	1	1.67	1	83	0.33	2	0.78	1.83
s.d.	1.27	1.63	2.45	0.75	0.56	1.1	1.56	1.15
No.	6	6	6	6	6	6	18	18

Table 8.3 summarizes the average number of pauses in Chinese made by the 89% (16 out of 18) of subjects who paused to plan. Seven subjects paused twice and 4 subjects paused 3 times. The average was 1.83. The number of pauses for planning was relatively small and differences between Primary 3, Primary 4 and Primary 5 groups (means were 1.7 vs 1.83 vs 2) were very small. The biggest number of pauses was 4 and the lowest was 0. Most of the subjects paused at the end of each paragraph to plan ahead. Eleven subjects (out of 18) wrote more than two paragraphs in their script and 9 paused at least twice for this activity. This suggests that pausal breaks are clearly related to the number of paragraphs appearing in the writing.

When the subjects wrote in English, they also sometimes paused for planning.

Below are examples:

"The queen go to the house and give the apple to Snow White (P)." (Subject 3A1E)

During the pause, the subject asked the researcher of this study whether she could skip some ideas which she had expressed in the composing aloud stage.

"When I am (P) little, I liked a very lovely story. I will tell you that story." (Subject 3A1E)

The subject reported that during the pause she thought how to start the story. She wanted to write "When my cousin was little, she liked the story 'Snow White'. I am going to tell you the story" (Translated from the protocols in Cantonese). She was not very sure of the spelling of the word 'cousin', however, so changed the beginning of the story.

It was found that only 33% of the subjects (6 out of 18) paused for the purpose of planning when they wrote in English. The number of pauses in order to plan appears insignificantly small. There was however one exception. Subject 3A1E wrote a rather long composition (5 paragraphs and 398 words) and had made the most pauses (6).

It was found that the sample seemed to make no pauses for global planning during the writing. As hinted at in the preceding section, they might have carried out such planning before or during the composing aloud procedure. In any case, they only displayed immediate planning during the actual writing. More subjects paused for immediate planning when they were writing in Chinese (89%) than in English (33%).

The average number of pauses for planning was also slightly higher (Chinese 1.80 vs English 0.78) ('t' value = 2.96, $p < 0.001$, see Appendix 8.4). One explanation for this might be that there were more paragraphs in the Chinese writing than in the English writing produced by the subjects. It was found that 28% (5 out of 18) of the subjects wrote only 1 paragraph when writing in Chinese, compared to 67% of the subjects (12 out of 18) who wrote just 1 paragraph in English. It may be that the subjects had spent more time planning paragraphs when writing in Chinese, and hence produced more pauses.

8.2.4 Pausing to Think of Logical Problems

During writing, the subjects sometimes paused to consider logical problems. Below are examples:

(i) (in Chinese)

(P) 時間一年又一年的過去,已經過去了三年,小老鼠長大了。

((P) One year after another, time passed away. Three years had gone.) (Subject 3A1C)

The subject at first wanted to write "after a long time", but said that she had changed this to "one year after another" because she considered three years was not too long.

(ii) (in Chinese)

獅子也不例外,老了,我們叫牠 (P) 老獅子, 好嗎?

(The old lion was not an exception. It was old. Shall we call it (P) 'Old Lion'?)

(Subject 3A1C)

This subject paused to think of the name of the lion. She said she did not give a name to the lion because the lion lived in the forest and it was not a domestic animal, so should not have a name. Furthermore, if a name was given to the lion, the

audience would not believe it was a true story. Such a pause is evidence that the subject was reasoning during the pausal break, considering whether what she was writing was logical.

Table 8.4: Summary of pauses to consider logical problems when writing in English and in Chinese

	P3E	P3C	P4E	P4C	P5E	P5C	P3-P5E	P3-P5C
Mean	0	1.17	0	1.5	.33	2	0.11	1.56
s.d.	0	1.94	0	1.38	0.52	1.1	0.32	1.46
No.	6	6	6	6	6	6	18	18

It was found that, when the subjects were writing in Chinese, 72% of them (13 out of 18) paused to think of logical problems. From Table 8.4, it can be seen that the average number of pauses by the 18 subjects for this kind of problem was small (1.56). The mean number of pauses for the Primary 5 group was 2; 1.5 for Primary 4; and for Primary 3 it was 1.17. The trend, such as it is, was for the higher the larger number of pauses in this kind of activity to be associated with older writers. There were two exceptional subjects: Subject 3A1C made 5 such pauses and Subject 5A1C made 8. Subject 5A1C liked writing and had attended writing courses organized by a tutorial institute, so said she had invested more effort on logical and rhetorical issues in her writing as a result.

In writing English, some subjects also paused to think of logical problems, as can be seen in the example below.

"The farmer loved the cat very much. But the cat was (P) too lazy." (Subject 5A1E)

The subject reported that during the pause she was considering whether the word "too" was unfair to the cat. She said she wanted to use the word "very", but decided

to use the word "too" because it was more reasonable for the development of the story.

In writing English, only 11% of the subjects (2 out of 18) paused to consider rhetorical or logical problems, and both of these were Primary 5 pupils. The total number of pauses (2) was very small. On the whole, more subjects paused to think about logical problems when they were writing in Chinese (56%) than in English (11%). They also paused more in writing Chinese (mean number: Chinese 1.56 vs English 0.11) ('t' value = 4.19. $p < 0.001$, see Appendix 8.4). Subject 5A1C paused more in Chinese than in English (Chinese 8 times vs English 1) to think of this type of problem; Subject 3A1C only paused for this type of problem when writing Chinese (Chinese 5 times vs English 0 times). Slender as it is, the trend seems to be for subjects to pause more to tackle higher order problems, like logical decisions, when writing in Chinese than in English, their L2.

8.3 Pauses Related to Linguistic Phenomena

Primary school learners in Hong Kong are inexperienced writers with limited knowledge of specific language features and can be expected to pause to consider problems and issues of a linguistic nature.

8.3.1 Pausing to Select Appropriate Words

When the subjects were writing, they sometimes paused to choose words. The subjects might have several words in mind and needed to select the most appropriate. They also paused to consider whether words had the desired meaning. Responses like: "I am thinking of a better word", "I am thinking whether this is the right word" and "I have several words in mind, I want to choose one" were classified in this category.

The following is an illustration:

(in Chinese)

於是小老鼠跳上獅子的頭髮上做早操，不斷地(P)跳。

(Then, the little mouse jumped on the hair of the lion and had some exercise. It kept on (P) jumping.) (Subject 3A1C)

The subject made a pause and later said she had three phrases in mind: ‘不斷地’ (kept on), ‘跳一次’ (jumped once), and ‘隔一會兒’ (jumped at intervals). She chose ‘kept on jumping’ for she said that was “more reasonable”.

Table 8.5: Summary of pausing to select appropriate words in English and in Chinese.

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Means	0.33	1.67	0.33	1.83	0.33	2.83	0.33	2.11
s.d.	0.52	1.97	0.82	2.14	0.52	1.94	0.59	1.97
No.	6	6	6	6	6	6	18	18

When the subjects were writing in Chinese, 72% of them (13 out of 18) paused to select appropriate words. From Table 8.5, it can be seen that the number of pauses made by the 18 subjects (mean = 2.11) for this purpose was small. The differences between the means of three groups Primary 3 (1.67), Primary 4 (1.83), Primary 5 (2.83) were small. Amongst the 18 subjects, Subject 4A2C made the most pauses (6 times) for this purpose. From his background information, it was found that his mother was a teacher who often corrected his compositions. She often asked him to replace words he had written with alternatives. He was also frequently asked by her to recite model Chinese essays. Selecting words was thus one of his established and favoured writing strategies.

Some subjects also paused to select appropriate words while they were writing in English, as can be seen in the following example.

"Once upon a time there was a (P) beautiful queen." (Subject 3A1E)

The subject reported that during the pause she had to make a choice between two words - 'pretty' and 'beautiful'. She chose 'beautiful' because she considered that it was a better word.

When writing in English, 28% (5 out of 18) of the subjects paused to select appropriate words. The number of pauses made by the subjects for this purpose was very small (the mean for the 18 subjects is 0.33 pauses). There were insufficient data to report any between-groups trend across Primary 3, Primary 4 and Primary 5. Subject 3A3E made the most pauses (3) for this activity. In contrast, more subjects paused to select appropriate words when they were writing in Chinese (72%) than in English (28%). The incidence of pausing to select appropriate words was higher in Chinese (mean for the 18 subjects 2.06) than in English (mean for the 18 subjects 0.33) ('t' value = 4.97 $p < 0.0001$). As the subjects could usually consider more than one word for a language item when writing in Chinese, they could also probably select more appropriate words to express the content of the text.

8.3.2 Pauses whilst 'Looking for Words'

When the subjects were writing, they sometimes would pause to look for words to represent meanings in the script. They usually put Xs or left blanks for all the words they did not know. Responses like "I am thinking of a word (or words)" and "I cannot find a word for what I mean" were put into this category. Below is an example:

(in Chinese)

小人叫他 (P) X 出来。

(The dwarf asked the wolf X {to disgorge} him out. (Subject P4A1C)

The subject paused to look for the word ‘ $p_{10/12}^p$ ’ (disgorge), but could only articulate its sound and not write the word.

Table 8.6: Summary of pausing to look for words in English and in Chinese.

	P3E	P3C	P4E	P4C	P5E	P5C	P3-P5E	P3-5C
Mean	35.2	0.5	14.8	0.33	6.5	0.17	18.83	0.33
s.d.	47.4	0.84	25.7	0.82	2.74	0.41	31.78	0.69
No.	6	6	6	6	6	6	18	18

It was found that only 22% (4 out of 18) of the subjects paused in connection with this activity. The total number pauses for this activity was 6, which was quite small (mean = 0.33). With Cantonese being the spoken language of the subjects, they had learnt Cantonese words and sometimes could not find MSWC equivalents to represent them.

When the subjects wrote in English, they paused very often to look for words.

Below is an example:

"The king X a queen again. She is beautiful, too. But her heart is not beautiful. She had a magic X." (Subject 3A1E)

During the pauses, the subject said she wanted to look for the words for the Xs. The first X was ‘married’ and the second word was ‘mirror’. She knew the meaning of the words in her mother tongue but not the symbols to represent these meanings in English. All 18 subjects made this kind of pause to look for words and said they

could express the meaning in Cantonese, but did not know English words to represent the same meaning. From Table 8.6, it can be seen that the mean number (18.83 pauses) for the 18 subjects is very large. There were also differences between the means for Primary 3 (35.2), Primary 4 (14.8) and Primary 5 (6.5). The downward trend of the number of pauses, suggests that the higher the class of the subjects, the more extensive is their English lexicon.

Individual differences were very marked (s.d. = 31.78). Five subjects made more than 10 pauses to look for words; Subject 3B4E made 124 pauses for this activity; Subject 4A1E made 67; Subject 3A2E made 50; and Subject 3A3E made 11. The large quantity of pauses for this activity is evidence of the weakness of these subjects in their L2. Length of the text was predictably associated in some children with a larger number of pauses. Subject 3A1E, a P3 pupil, made 27 pauses and wrote the longest English composition (503 words). However, subjects who wrote shorter passages also made many pauses associated with trying to think of appropriate vocabulary items.

8.3.3 Pauses in Constructing Sentences

Besides thinking of appropriate words, subjects also paused when constructing sentences. Sentence-level linguistic planning is a major constituent of the writing process, for sentences do not simply emerge once one has a general idea. When a subject responded that he was thinking of ways to construct a sentence, these pauses were put into the 'sentence pause' category. Examples of this phenomenon in Chinese writing are shown below.:

(in MSWC)

獅子說 (P): 「真是謝謝你」。

(The lion said (P): 'Thank you very much.') (Subject 3A1C)

She said that during the pause she wanted to write:

(The protocol in Cantonese)

我報答了你，估不到你真的報答了我。

(I have helped you. (You are a small mouse.) I do not expect you can help me. However you have saved me.) (Subject 3A1C)

Table 8.7: Summary of pausing whilst constructing sentences in English and in Chinese

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	6.17	1	1.5	0.16	2	0.17	3.22	0.44
s.d.	7.36	1.1	1.05	0.41	1.67	0.48	4.66	0.78
No.	6	6	6	6	6	6	18	18

When they wrote in Chinese, 33% of the subjects (6 out of 18) reported that they paused in connection with constructing sentences. From Table 8.7, it can be seen that the mean number of the pauses for this activity for the sample as a whole was small (0.44). The largest number of pauses for this activity was 3, suggesting that the subjects did not pause often whilst constructing sentences in Chinese.

While they were writing in English, however, many subjects paused in connection with constructing sentences, as can be seen below:

(The protocols in Cantonese)

我沒有力將桶和水扯上來

(I do not have energy to pull the bucket of water). (Subject 3A1E)

In the subject's written text, she put down xxxxx. Since she could compose aloud, this indicates that she had the meaning in mind in Cantonese but lacked suitable English words to form a complete sentence.

It was found that 83% of the subjects (15 out of 18) paused for this activity whilst writing in their L2. The mean number of the 18 subjects was 3.22, and the mean for subjects in P3 was 6.17; 1.5 for P4; and 2 for P5. Two P3 subjects were exceptions here, with Subject 3B4E pausing 16 times and Subject 3A2E pausing 15 times. These two paused much more than the other subjects since their English proficiency was low and they could not even write one complete sentence. As already indicated, more subjects paused to construct sentences when they wrote in English (83%, mean = 3.22) than in Chinese (33%, mean = 0.44) ('t' value = 2.48, $p < .02$, see Appendix 8.4), an indication of the difficulties of the sample in writing in English.

8.3.4 Pausing whilst Transforming Cantonese to MSWC

As the subjects were Cantonese, when they wrote in MSWC they sometimes wondered whether what they were writing was permitted. Comments like "I am considering whether what I want to write is Cantonese" were put in this category.

The following is an example:

我又肚餓(P),我要吃掉你。
(I am hungry (P). I must eat you.) (Subject 3A1C)

The subject paused and considered the word '肚餓'(hungry), then tried to remember whether the word was Cantonese or MSWC. She wanted to write '餓餓', but could not remember the strokes of the word '餓', so she used '肚'.

Table 8.8: Summary of pausing whilst transforming Cantonese into MSWC.

	P3C	P4C	P5C	P3-P5C
Mean	1.5	1.67	2.33	1.83
s.d.	1.38	0.82	0.86	1.04
No.	6	6	6	18

It was found that when the subjects were writing in Chinese, 94% (17 out of 18 subjects) paused to think about the problem of transforming Cantonese to MSWC, showing their consciousness about the difference between spoken Cantonese and written Chinese. This also suggests that their Chinese language teachers had frequently instructed them not to write Cantonese in their compositions. From Table 8.8, it can be seen that the mean number of pauses for this activity for the 18 subjects was 1.83. There was also a slight difference in the mean number of pauses for this activity between Primary 3 (1.5), Primary 4 (1.67) and Primary 5 (2.33). The slender upward trend (statistically non-significant) suggests that the higher the class of the subjects, the more conscious they seemed to be of this rule. Individual differences were present, with two subjects (3A1C and 4A2C) pausing 4 times and Subject 3B6C not at all. The researcher asked the former about the use of Cantonese in writing and received the reply that her Chinese teachers had told her not to use spoken language (Cantonese) when writing. The subjects generally reported that they assumed they should not write any Cantonese in their composition and that this caused them some uncertainty, for sometimes they were unsure whether what they were writing was standard or not.

8.3.5 Pauses to Think about Grammar

The subjects had acquired some grammatical knowledge in their English lessons and, whilst writing, would sometimes pause to think of grammatical rules, even though they did not always know the technical terminology for the grammar in question. The subjects also reported thinking about this kind of activity during their pauses. Responses like "I am thinking of using 'go' or 'went'", "I am considering the word 'going' and 'went'", "I am wondering whether I should add an 's' to that word" and the like were put into this category by the researcher.

Table 8.9: Summary of pausing associated with thinking about grammar in English.

	P3E	P4E	P5E	P3-P5E
Basic Tense mean	0.83	1.83	1.33	1.33
s.d.	1.33	2.64	1.97	1.97
Verb Form mean	1.83	0.83	1.83	1.5
s.d.	2.79	1.33	1.72	1.98
Singular/Plural mean	0.67	0.67	1	0.78
s.d.	0.82	1.21	0.63	0.88
Conjunction mean	2	1.5	1.	1.5
s.d.	2.68	2.34	1.26	2.09
Subject/pronoun	0.83	0.83	0.5	0.72
s.d.	1.33	0.98	0.84	1.02
Preposition/articles	1.33	0.83	0.83	1
s.d.	2.42	1.17	1.33	1.65
No.	6	6	6	18

As shown in Table 8.9, there were six types of grammatical items with which the subjects had most problems during writing. These are discussed separately below.

8.3.5.1 Basic Tense Formation

The example below illustrates the pausing of a subject to think about basic tense formation.

"This time, the farmer know the dog is (P) honest." (Subject 5A1E)

During the pause, the subject reported she considered whether to use 'is' or 'was'. She decided to use 'is' because she thought that 'this time' should be in the present tense.

It was found that 50% (9 out of 18) of the subjects paused to think about tenses. The mean number of pauses for the 18 subjects were 1.33. The differences between P3 (mean number of pauses 0.83), P4 (1.83) and P5 (1.33) were not great. Individual variations were noted, however. Seven subjects made no pauses for this activity but Subject 4A3E paused 7 times to think of tenses. In further conversation it became clear that he had done a lot of exercises on tenses in P4 English classes.

8.3.5.2 Verb forms

Below is an example which illustrates the pausing of a subject to think about a verb form.

"He went (P) to forest and sees Snow White." (Subject 3A1E)

The subject paused to think about using the word 'goes'. She said 'goes' did not sound right so she chose the word 'went' instead.

It was found that 56% of the subjects (10 out of 18) paused to think about verb forms during writing. The mean number of pauses for the entire 18 subjects for this activity was 1.5. P5 subjects (mean number 1.83) and P3 subjects (1.83) paused slightly more than P4 subjects (0.83). Individual differences were marked. Eight subjects made no apparent pauses whatever for this activity, whereas Subject 3A1E paused 7 times and Subject 5A1E paused 5 times. The subjects were generally quite conscious about verb forms, had been reminded by their teachers to pay attention to various verb forms and had learned numerous verb forms by rote.

8.3.5.3 Singular or Plural?

The example below illustrates the pausing of a subject related to the above issue.

"In my school, there are many of X in my school, example, X, stories (P) land and swimming pool." (Subject 4B5E)

The subject paused to think whether he should use 'story' or 'stories'.

50% of the subjects (9 out of 18) paused to think of whether to put a noun in its singular or plural form, although the mean number for the 18 subjects was small (0.78). The differences between P3 (mean number 0.67), P4 (0.67) and P5 (1) were also small. 5 out of 6 of P5 subjects paused for this activity, suggesting they were more aware of plurality in grammar.

8.3.5.4 Conjunctions

Below is an example which illustrates the pausing of a subject to think about this aspect of grammar.

"Then he saw the wolf and said "I will throw an apple for you. And (P) you get it."
(Subject 4A3E)

During the pause, he said he was considering whether he should use the word 'and'.

56% (10 out of 18) of the subjects paused to think about conjunctions in their writing. The mean number of pauses for the 18 subjects was only 1.56, but individual differences were notable, with 8 making no such pauses and Subject 4A3E pausing 7 times. He was aware of the importance of conjunctions and his composition was rather long (383 words). Another subject (3A3E) also paused 7 times, and she assumed that all sentences should begin with a conjunction.

8.3.5.5 Pronouns

Below is an example which illustrates the pausing of a subject for this activity.

"One day, Mother Pig asked her three little pigs each to make a house. But (P) they must not let the wolf to catch (P) them." (Subject 4A3E)

During the pause, the subject thought about the use of pronouns. At first he wanted to use 'you' instead of 'they' and 'them', but decided to use 'they' and 'them'. He said, "This is not spoken language" and said this was why he could not use 'you'.

39% of the subjects (7 out of 18) paused to consider the use of pronouns. The mean number of pauses for the 18 subjects were small (0.72) and the difference between P3 (0.83), P4 (0.83) and P5 (0.5) was minimal.

8.3.5.6 Prepositions/Articles

Below is an example which illustrates the pausing of a subject for this consideration.

"Then the wolf said, 'let me in, or I will blow your house in (P).'" (Subject 4A3E)

The subject paused to examine whether the word 'in' was correct here.

33% (6 out of 18) subjects paused to think of prepositions and articles. The mean number of pauses of the 18 subjects was small (1). Subject P3A1E was an exception, pausing 6 times for this purpose. The difference between the three age groups was small and individual differences were minimal.

Unlike the case with English writing, in Chinese writing only 3 subjects (3B6C, 5A3C, 5B5C) reported that they had paused to think about conjunctions. As there is no formal grammar teaching in Chinese lessons, the subjects were not familiar with Chinese grammar or consciously thought about it. Thus, they made very few pauses here.

Overall, there were 6 subjects who paused more than 10 times to think of grammar in English writing; they were Subject 3A1E (29 pauses), Subject 3A3E (16 pauses), Subject 4A2E (11 pauses), Subject 4A3E (27 pauses), Subject 5A1E (12 pauses) and Subject 5A3E (13 pauses). The researcher is familiar with the teaching style of their English teachers and can report that these six subjects had completed a lot of exercises on usage of tenses, verb forms, singular and plurality, conjunctions, articles, prepositions and the like. The subjects themselves were hence very conscious of these grammatical points.

Subjects also paused for other grammatical considerations, like comparisons, possessive adjectives, word inflection and so on, but the incidence of pauses for these was very low. Consequently, they were not categorized in the present research.

8.3.5.7 Pauses Associated with the Mechanics of Writing

8.3.5.7a Spelling and Recalling Strokes in Chinese Characters

When the subjects were writing, they often paused to think of the spelling of English words or the writing of strokes of Chinese characters. Responses from subjects like, "I was thinking of the spelling of the word", "I don't know whether the spelling is correct" and "I am thinking of the strokes of the character" were put in this category. It was easy to observe this kind of pause. The subjects sometimes tried to write the

words on the rough work sheet, sometimes used their fingers to write in the air, or wrote part of the English word or Chinese character on their composition paper. Below is an example of this phenomenon:

(in Chinese)

有一隻頑皮的小老鼠(P) 鼠在找食物。

(There was a naughty little (P) mouse looking for food.) (Subject 3A1C)

During the pause, the subject tried to think the strokes of the character ‘鼠’ (mouse).

Table 8.10: Summary of pausing for spelling in English and thinking of the strokes in Chinese characters

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-P5C
Mean	9.67	14.5	6.33	8.9	7.83	8	7.94	10.44
s.d.	8.71	9.97	3.98	4.96	3.54	6.9	5.17	7.7
No.	6	6	6	6	6	6	18	18

It was found that all 18 subjects paused to think of the strokes in characters when they were writing in Chinese. From Table 8.10 it can be seen that the average number of pauses for this activity for the 18 subjects was 10.44. This was the activity for which subjects paused the most during writing. There are differences between the three levels, with a mean of 14.5 for P3, 8.9 for P4, and 8 for P5. These indicate a downward trend for the higher classes and that higher class subjects had more confidence in writing the strokes of characters. Individual differences were marked (s.d. = 7.7), with 3 subjects (3A1C, 3A3C, 5A3C) making more than 20 pauses for this activity, mainly because their scripts were long (634 words, 582 words, 445 words) and they had to use more characters than the others. Two subjects (4B5C, 5B4C) made fewer than 2 pauses for this activity. Their texts were relatively short (146 words; 81 words).

When the subjects wrote in English, they paused to think of the spelling of words. Below is an example:

"(P) Tomorrow, the queen has a baby." (Subject 3A1E)

The subject made a pause and said that during the pause she was thinking of the spelling of the words 'next week'. As she could not spell the word 'next', she used the word 'tomorrow' as a substitute.

It was found that all 18 subjects reported that they had paused to think of the spelling of words. The average number of pauses for this activity was 7.95 (s.d. = 5.17). This category of pauses was the second largest in frequency. There were non-statistically significant differences between the mean number of pauses for P3 (9.67), P4 (6.33) and P5 (7.83). P3 subjects made most pauses for spelling, but the subjects of P5 paused more than the subjects of P4 for this activity. It may seem that the spelling ability of P4 subjects was better than their P5 counterparts, but this category should be considered together with the category "looking for words", which affected the frequency of pauses for spelling. For instance, a P4 Subject (4A1E) paused 5 times for this activity but she made 64 pauses to look for words. This is evidence that she could not find the words to express her meaning and that this was a bigger problem than actually spelling the words.

Individual differences were considerable for this category. Two subjects made more than 14 pauses (Subject 3A1E, 23 pauses; Subject 3A3E, 14 pauses) here, but their scripts were quite long. Subject 3B4E made only 3 pauses for spelling but 124 pauses to look for words. Subject 3B5E made only two pauses for spelling, for her text was very short (39 words).

Generally speaking, all subjects paused to think about spelling English words and the strokes of Chinese characters. The average number of pauses (all 18 subjects) for thinking of strokes of Chinese characters was 10.44, and for spelling of English words 7.94. The subjects paused more to think of the strokes of Chinese characters. Subjects were allowed to leave blanks when they could not find the word needed, with fewer blanks in the Chinese writing, suggesting that the subjects might have tried to pause more to solve the problems in writing Chinese characters.

8.3.5.7b Punctuation and Capitalization

During the writing, subjects sometimes paused to consider the insertion of appropriate punctuation marks. When a subject responded "I am thinking of punctuation" and "I want to insert a comma or a full stop", these responses were put into this category. Below is an example in Chinese writing:

(In Chinese)
 小老鼠十分高興,連忙道謝,(P)頭也不回地跑回家。
 (The little mouse was very happy, it thanked the lion, (P) and it ran home without looking back.) (Subject 3A1C)

The subject paused and thought about punctuation. She used a full stop at first, then changed her mind and used a comma. She said there was a continuation and it was better to use a comma.

Table 8.11: Summary of pauses for punctuation in English and in Chinese

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	3.5	3.	1.67	1.17	1	1.83	2.06	2
s.d.	4.46	2.19	2.73	1.33	1.55	2.14	3.15	1.97
No.	6	6	6	6	6	6	18	18

72% of the subjects (13 out of 18) paused to think about punctuation when they wrote in Chinese. From Table 8.11 it can be seen that the average number of pauses was 2. The mean for P3 subjects (3.5) was higher than those of P4 (1.17) and P5 (1.83) respectively. Individual difference was notable. One P3 Subject (3B6C) made 7 pauses for this activity, and later told the researcher that her teacher often emphasized punctuation. In contrast, 5 subjects made no pauses whatever for this activity.

When the subjects wrote in English, they paused to think of punctuation and capitalization. Below is an example:

"Once upon a time had a beautiful (P) queen." (Subject 3A1E)

The subject paused to think whether the word 'queen' should be capitalized.

56% of the subjects (10 out of 18) paused to think about punctuation, the average number of pauses for this activity being 2.06. There were differences between the mean number of pauses for P3 (3.5), P4 (1.67) and P5 groups (1), with a downward trend for the higher classes. Individual differences were notable, with Subject 3A1E pausing 12 times and Subject (4A3E) pausing 7 times to ponder punctuation and capitalization issues. Eight subjects made no pauses here.

In general, the subjects paused for punctuation when they wrote both in Chinese and in English. More subjects paused for punctuation when they wrote in Chinese (72%) than in English (56%), but the average pauses for the two languages (Chinese 2 vs English 2.06) were similar.

8.4 Pauses whilst Rescanning

When the subjects were writing, they sometimes rescanned to read what they had written. There were three types of rescanning: rescanning one to several sentences; from the beginning to the end of the text produced so far; and of the whole text. Rescanning could be detected by the movement of the head, movement of fingers along the written words, movement of eyelids and the reading aloud of some sentences.

Table 8.12: Summary of pausing for rescanning

	P3E	P3C	P4E	P4C	P5E	P5C	P3-P5E	P3-P5C
Mean	6.67	5.83	7	4.33	5.83	7.5	6.5	5.89
s.d.	3.44	2.48	4.47	1.37	2.23	7.18	3.33	4.39
No.	6	6	6	6	6	6	18	18

It was found that all 18 subjects paused to rescan the text when writing in Chinese. From Table 8.12, it can be seen that the average number of pauses for the 18 subjects was 5.89, quite a high frequency. There were differences between the average pauses for P3 (5.83), P4 (4.33) and P5 (7.76) groups. The subjects of P5 had the highest frequency amongst the three groups, and individual differences were marked. For example, Subject 5A3C paused 22 times; Subjects (3B6C, 4A2C and 5B4C) made only three such pauses for this activity.

All subjects made pauses when rescanning texts written in English. The average number of pauses for the 18 subjects was 6.5, quite a high frequency. The between-group differences were not great (the mean number of Primary 3 was 6.67, Primary 4 was 7, Primary 5 was 5.83) and the one-way analysis of variance was not statistically significant, see Appendix 8.5). Individual differences were marked (s.d.

= 3.33), with Subjects 3A3E and 4A3E pausing more than 12 times each. Six subjects paused less than 5 times. The difference between the mean number of pauses for writing in Chinese (5.94) and English (6.5) was small, indicating that subjects engaged in rescanning in similar degrees for the two languages.

8.5 Pausing to Express Personal Feelings

During the writing, some subjects paused and articulated their feelings. Typical comments such as were "I don't want to write", "I am very tired ", "Can I go to the toilet?" and "I want a drink" were placed in this category. The following is an illustration from a subject writing in Chinese:

(in Chinese)
突然，一個很大，很大的網網住了(P)。
(Suddenly, it was captured by a very, very big net (P).) (Subject 3A1C)

During the pause, she said, "My hands are sweating, I want to take a rest." (Subject 3A1C)

Table 8.13: Summary of pauses for expression of feelings

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	0.83	0.33	0.67	1.33	0.5	0.67	0.67	0.78
s.d.	1.33	0.52	0.82	1.21	0.84	0.82	0.97	0.94
No.	6	6	6	6	6	6	18	18

50% of the subjects (9 out of 18) paused to express their feelings when they were writing in Chinese. From Table 8.13 it can be seen that the average number of pauses for this activity was small (0.78). P4 subjects paused more than the other two groups. Individual differences were not great, with Subject 4B5C pausing 3 times but

9 subjects making no pauses to express their personal feelings. 39% of the subjects (7 out of 18) paused to express their feelings when writing English. From Table 8.13 one can see that the average number of pauses for this activity was small (0.72). Differences between the groups were also very small (P3, 0.83 per text; P4, 1.67; P5, 0.5). Subject 3A1E made the most pauses here (3 times).

8.6 Miscellaneous Pauses

Eight subjects paused to count the words written when they were writing in Chinese and one subject paused to count the words in the English text. One subject (3A1C) paused to think about the person who would be reading her work. When she was writing the story in Chinese, she paused at the end of the first paragraph, and said that during the pause she pictured how the reader might react.

8.7 Summary of Results

Pausing is a subprocess of the composing process, irrespective of whether Chinese or English is the medium, and the young subjects in the present study paused whilst writing for a variety of reasons (see Figure 8.1). They sometimes paused to retrieve information from long-term memory, with more subjects pausing to retrieve such information when writing in Chinese (94%) than in English (28%). Having retrieved such information, the subjects sometimes then needed to pause to select information they considered most useful. 94% of the subjects paused to select information when writing in Chinese but only 33% did so when writing in English. These figures clearly reflect the total numbers of pauses made during writing in the two languages.

Fig. 8.1

TYPES OF PAUSES

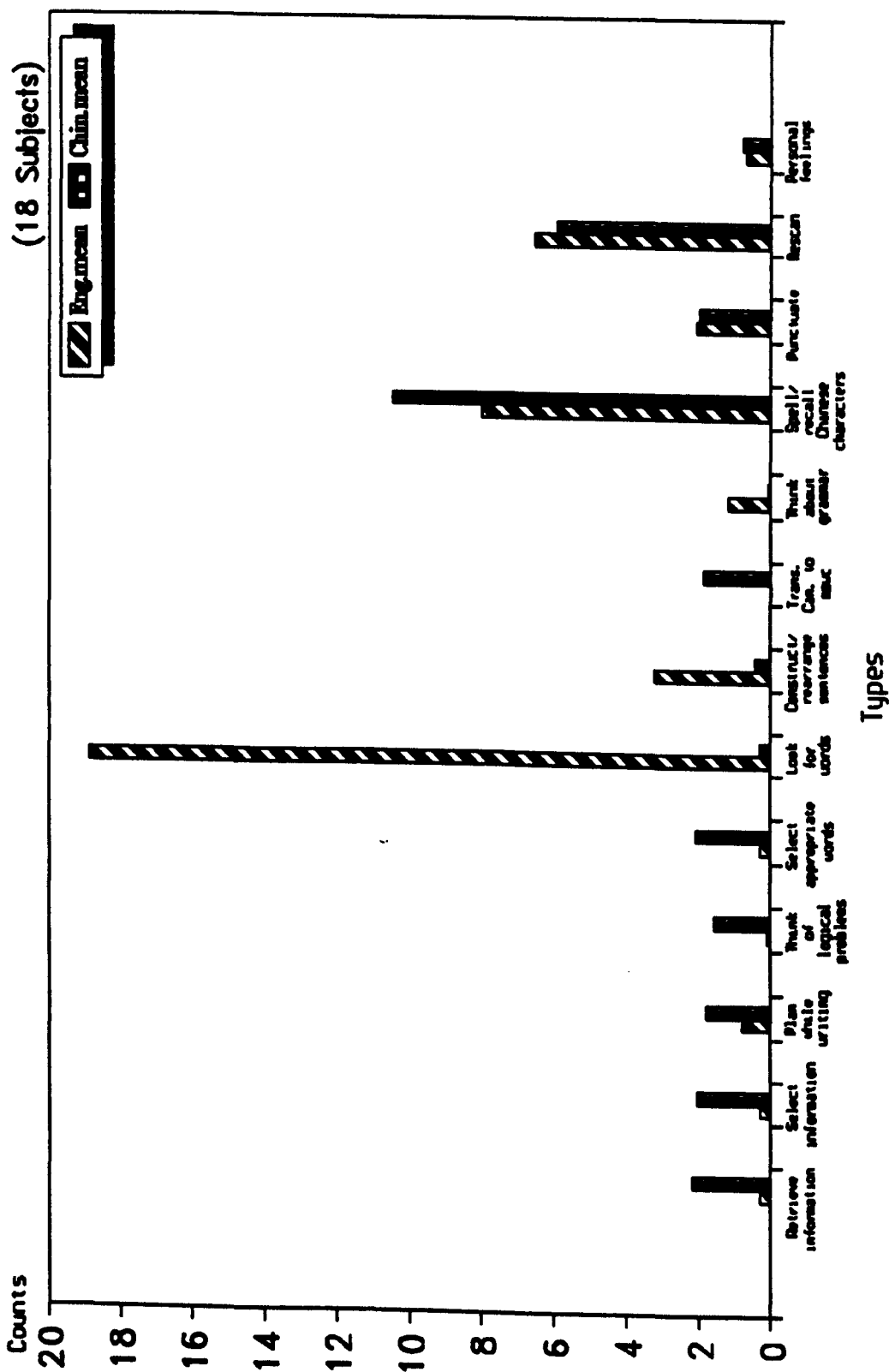


Figure 8.1

As they wrote, some subjects paused to think about immediate planning, of the type described by Schumacher et al., (1984). However, in the present research, they made no pauses for global planning as they had already gone through this stage during the composing aloud procedure. More subjects paused for immediate planning when they were writing in Chinese (89%) than in English (33%), these figures reflecting the actual amount of writing produced. For example, 72% of the subjects wrote more than 1 paragraph when they wrote in Chinese but only 33% did so when composing in English. Flower and Hayes (1981b) claim that planning activities are a special and important part of the writing process, but the results of the present study suggest that the beginning writers of this study, having composed aloud, engaged in little further planning. Nevertheless, they did pause to reflect on logical problems, especially when writing in Chinese (72% of the subjects).

Although the average number of pauses to think of logical problems was small (1.76), individual subjects displayed behaviour which was very revealing. Subject 5A1C made 8 such pauses, was an outstanding writer and her writing in Chinese was better than all the others. On the other hand, she only paused once for this purpose when she writing in English. Only two P5 subjects paused to consider logical issues when writing in English, again reflecting the actual amount written. Thus, for instance, there were more of these pauses when subjects were writing in Chinese than in English, but the differences were quite small. Having articulated their writing during the composing aloud stage, predictably there were few pauses to consider the logic of what was being written.

The most frequently displayed pauses associated with cognition were in connection with retrieving and selecting information. This finding reflects the findings reported in the previous chapter: that subjects transform ideas, especially adding and deleting many ideas, during the process of writing. However, the overall picture is

that, on the experimental tasks in the present study, the young subjects in the present study paused relatively infrequently as a result of cognitive factors. The evidence and follow-up interviews revealed that the subjects had more practice in writing in Chinese and that their competence in writing in Chinese was better than in English, their L2. However, these effects were masked partially by the composing aloud experience.

On the other hand, subjects did need to pause to consider linguistic issues. When writing in Chinese, there were more pauses undertaken by the subjects to select appropriate words (Chinese 72% vs English 28%). Besides writing more, the subjects had a wider range of vocabulary (lexicon) to choose from, and were more sensitive to the meanings of words. Thus, when pausing to look for words to represent the meanings they had in mind, only 22% of the subjects paused to look for words in Chinese. Significantly, they paused most frequently in search of words which they knew in their spoken language (Cantonese) but not in MSWC. All 18 subjects had to pause to look for words when writing English. Again this is partly an effect of the experimental design in that the subjects composed aloud in Cantonese but wrote in English. Thus they could express themselves in Cantonese, but often could not find the appropriate English words to represent their meaning. In contrast, thinking in Cantonese and writing in MSWC reduced this problem somewhat. Nevertheless, having a smaller English than Chinese lexicon must have had an effect, reflected in the relatively large average number of pauses per subject (18.83). There was a trend for the problem to be most apparent with the P3 (mean = 35.2) children, compared to the P4 (mean = 14.8) and P5 (mean = 6.5) groups.

A problem prompting pauses was apparent in terms of the efforts by the sample to construct correct sentences syntactically and semantically, especially when they wrote in English. In the case of writing in Chinese, fewer subjects (Chinese 33% vs English 83%) reported that they paused to think about matters of grammar. On the

other hand, since all the subjects were Cantonese speakers, when they were writing in Chinese, 94% paused to think about transforming Cantonese to MSWC. All were sensitive to the strictly enforced school rule that they should never write Cantonese in their compositions. This made them write with uncertainty in Chinese, but the group as a whole were not worried about their knowledge of grammar in MSWC. In contrast, they all paused to think of grammatical issues when writing in English. The children had received extensive training on English grammar in school from their teachers, and sometimes at home from their parents. Even so, 50% of the subjects paused to think of tenses; 56% paused to think of verb forms; 56% paused to think about conjunctions; 50% paused to think about singular or plural nouns, with P5 pupils more aware of plurality in grammar; 39% paused to consider the use of subjects and pronouns; and 33% paused to think about prepositions and articles. It was found that the 6 subjects who paused more than 10 times to think about grammar had done numerous exercises on grammar and were very aware of grammatical rules.

Most subjects paused the most over mechanical aspects of writing, the spelling of English words and the writing of strokes of Chinese characters. The mean number of pauses for the 18 subjects to think about Chinese strokes was 10.44, and there was a downward trend here with increasing age, with subjects in higher classes pausing less to think about strokes in Chinese characters. On the other hand, when writing in English, all subjects paused to think over the spelling of words (mean = 7.94 per subject). The number of pauses related to this activity was second only to the category of 'looking for words', with the younger subjects making more pauses than the older subjects. The subjects paused slightly more with Chinese characters, for the mean number for pauses for the sample (18 subjects) for thinking of strokes of Chinese characters was higher than for spelling English words (Chinese 10.44 vs English 7.94). Generally, all subjects struggled hard to write Chinese characters and to spell English words. Perhaps this reflects the obsession of Hong Kong primary

teachers with marking every single error in pupils' writing (HKED, 1989).

The subjects paused to consider punctuation when writing in Chinese and English, with slightly more pauses for Chinese (72%) than for English (56%). The average number of pauses of the two languages (Chinese 2 vs English 2.06) were similar. Rose (1984) points out that beginning writers frequently believe they should monitor the mechanics and punctuation during the act of writing, often with the result that blocking occurs. To a great extent, the pausal activities reflected the focus of thinking of the subjects, and they appeared at times to be 'surface' writers as they mainly processed words and ideas at the sentence level when writing (c.f. Biggs, 1988). The subjects also paused much more over items of language than over cognitive problems. Biggs points out that writers when producing text have essentially two major concerns: content, referring to the semantic meaning of the text (what to say), and language use, referring to the formal rules governing spelling, grammar and so on (how to say it).

In the present research, the subjects seemed concerned more over language items when writing in English than in Chinese. Shaughnessy (1977) points out that basic writers are preoccupied with local problems and have a fear of producing errors, are reluctant to play with ideas or return to central points, and are less concerned about the flow of words and sentences. Opposing this view, some scholars contend that lack of competence in writing in English results more from a lack of composing competence than linguistic competence (Jones, 1982; Zamel, 1982; Raimes, 1985a). Certainly, when all of the subjects in the present study were writing, they paused to rescan their writing in Chinese and in English, reading over the text both for its sense and accuracy. Interestingly, 8 subjects paused to count the words written when they were writing in Chinese. As the number of characters is often an important requirement for assignments and compositions, subjects are conscious about the

number of words written. However, there was only one subject who paused to count the words when writing in English, reflecting the fact that on average they wrote far less in this language. Only one subject paused to think of the target reader, suggesting that few of the subjects had any strong sense of audience when writing.

As implied above, the research technique influenced the nature and pattern of the data to an extent. For example, having the children compose aloud in Cantonese might advantage the writing of Chinese. Although it may seem a little odd that the children were allowed by the researcher to speak in Cantonese (rather than in English) during the 'compose aloud' stage of writing in English, this in fact is a valid reflection of what actually happens in real life as the children write in English. In other words, they think in Cantonese even when writing in the L2. The techniques used in the research to study the pausal activities were carefully applied and they did not interfere with or interrupt the ongoing nature of the composing process. The observation record forms and videotape enabled the subjects to recall their pausal activities with a high degree of certainty. Hence, a fair measure of validity too is claimed for the data.

8.8 Implications

In Hong Kong, studying to pass examinations is usual and the teaching of writing is very examination orientated. Almost all compositions are done in the classroom and, in many respects, are considered tests. In most primary schools, the marks for all the compositions written are included in the final year examination results. Composition lessons are mostly treated as test periods, and the composition session is usually conducted as if a test is being given. Thus, language teachers give a topic, set a time limit and the number of words to be written. Some teachers brief students on how to write and strict rules are laid down. Sometimes, in Hong Kong schools, discipline is considered to be more important than teaching and the teacher must not allow students

to disturb other classes. Students must finish the assignment within a set time limit and are discouraged from writing at home because the teachers do not want the students to get help from family members. This would make the results of the composition written test profile unreliable.

From the research, it is clear that pausing is an integral subprocess of composing. This being so, teachers should help learners use these pauses to good effect, giving pupils sufficient time for pausing. However, under the present system, even primary pupils write under time constraints and examination pressure and hence have little time for pausing. The fieldwork showed that the subjects paused most frequently over linguistic matters. They have difficulties in selecting the right words to use, the right sentence structures, the right Chinese characters and the correct spelling. It would be very helpful here if the teacher was available to help them. However, Hong Kong teachers feel it is not possible for the teacher to answer all questions from students, since they feel the class size (about 40 students per class) is too large to manage. The teacher cannot give individual attention to students and, in any case, when writing is a form of testing it is unfair to help one child and not the rest. The situation would improve, of course, if writing was not considered primarily as a means of testing. At the same time, compositions could be written at home and family members could help students deal with language problems.

Research has shown that, when English teachers who have not been trained as raters are asked to rate compositions, they tend to focus attention on and base their rating on 'correctness' rather than content, logic and other features of writing (Diederich, 1964; Hillocks, 1986). The teachers in Hong Kong also focus on language elements, especially mistakes and errors made by the students in their writing. After correcting the compositions of the students, some teachers do try to analyze the errors made by the students. However, this analysis is addressed to deciding which common

grammatical and mechanical errors need whole-class remediation. The teachers ignore the significance of cognitive aspects and style and, consequently, the students too tend not to focus on these either.

Scardamalia (1981) points out that writers have to remember a large number of things to do, as well as what they are going to say and have said when composing. The present research confirms that the research subjects also have to attend to a wide range of cognitive, linguistic, review, evaluation and mechanical decisions when writing. Accomplished authors will often plan for hours, days and even years for an intended piece of writing. And as they write, they will pause to check how the next words to be written cohere within the overall plan. Before putting pen to paper, they need to hold these decisions in mind, working memory limitations severely restricting the amount of information which can be held in conscious memory. They thus make notes to assist memory, quickly scribble down draft versions of ideas, and work at their own pace and in the comfort of their preferred writing environment. All these elements are usually unacceptable to Hong Kong primary school teachers. Their target is to get their pupils to write a piece of writing on a topic assigned by the panel chairman. The pupils are expected write well organized text in fluent, error-free Chinese or English and to show some imagination. Furthermore, this is usually 'one-shot writing', in the sense that there is only time to write one version. Add to this the restriction of aiming to hit a specified word length target, and one can appreciate that attractive, personalised and expressive writing is beyond the ability of most Hong Kong pupils at primary level.

As Flower and Hayes (1980b) have pointed out, one of the most damaging habits for novice writers is to focus on text structure constraints and to allow these to restrict or influence ideas manipulation. These experiences accumulate so that young writers are soon unable to express what is in mind, believe that this is their own fault,

and self-impose a restricted vision of the scope and purpose of their writing (Collins and Gentner, 1980).

Graves (1984) found that children who have difficulty with spelling and who draft, change their spellings from draft to draft until more accurate spellings are reached in the final draft form. He supports teachers who encourage emphasis on content in early drafts, with surface features polished up in the final draft. Graves also suggests that elements of linguistic competence need separate and focused treatment. Teachers should allow students to focus on content when composing, ignoring spellings, word choice and grammar, for these can be dealt with subsequently (Biggs, 1988a). However, there must be a well designed curriculum and writing syllabus to guide the teacher; 100% cooperation between staff and school management; pupils and their parents should be informed of the strategy; and the child must not be expected to produce perfection in writing every time. All these points are foreign to the Hong Kong context and are all areas for fruitful research. The official syllabi for primary and secondary schools of Chinese language (CDC 1990) are, in fact, most commendable. However, when schools are allowed to write their own syllabus (HKED, 1989), there is a narrowing of educational objectives. Teachers in Hong Kong need a professionally planned, flexible syllabus which all schools should take account of, and they should be given clear educational objectives to address.

In the present research, the subjects paused a lot to ponder over strokes of Chinese characters and the spelling of English words. Having to try to master two languages (three if one counts the Pinyin version of Putonghua) simultaneously, is a considerable burden for the young Hong Kong learner. Cross-linguistic interference does not ease matters; the contrasting approaches used by teachers to teach Chinese and English have negative transfer effects; and the restricted opportunities outside the classroom to brush up and develop English in Hong Kong narrow the kinds of

activities teachers can select.

After studying the teaching methods of the Chinese and English language teachers of the pupils and the text books used, the present researcher found that the teaching of writing in their schools is quite limited in scope, and the principal instructional objective is to pass a test. Students in Hong Kong are given dictations from text books once or twice weekly, and are asked to prepare by learning the meaning of all the words. This form of rote learning is considered by students to be boring, and their parents spend hours revising the passages with their children.

In fact, there are other methods to extend the children's lexicon. In Mainland China, children are provided with intensive instruction in Chinese vocabulary. By means of the 'Pinyin' system, character structure analyses, and the 'word chain' approach, or combinations of the three methods, pupils are taught to master 2500 commonly used words within the first two years of schooling. In Taiwan, in some schools, pupils of lower primary levels are helped to acquire 3,000 commonly used words through reading basic readers (Siu et al., 1986). This approach could be considered for the Hong Kong context.

Chapter Nine

Revising

During the process of writing itself or when reviewing what has been written so far, writers may revise their output. Similarly, the subjects in the present study would seem to alter tactic as they revised their strategies and plans in an attempt to ensure that their writing said what they wanted to say. This chapter looks at the types of revisions made by the subjects, tallying their incidence and studying the way the students appeared to detect and correct mistakes. An attempt is made to explain why the mistakes arose, based on the subjects' own accounts of the matter. The strategies used to revise the spelling of English words and writing of Chinese characters are also described.

9.1 Introduction

Revision is an important subprocess of the composing process. Graves (1983) suggests that there is a major breakthrough in children's writing when they see

"the words as temporary, the information as manipulable...Until the children see information as primary and the details as essential to good communication, they are unable to see information, words or syntax as manipulable." (p.159)

Urzua (1987) found that children seemed to develop a sense of the power of language through the revision of writing, recognising that language can be manipulated and rearranged, and that sections of a composition can be deleted or added.

Hayes et al. (1987) define revising as the writer's attempt to improve a plan or text, while Sudol (1982) states that revising is the exercise of critical thinking to

induce fresh discovery, a dynamic and recursive action. Bereiter and Scardamalia (1987) regard revising as a problem-solving cognitive process. During the course of writing a composition, two distinct main classes of mental representations are built up and stored in long-term memory: representations of the text written so far; and a representation of the text intended, which includes the whole text, not just parts already written. Revision involves the perception of some mismatch between these two representations, the decisions taken about how to make desired changes, and, finally, actually making the desired changes.

In the present research, the changes made on the written paper and obvious correction marks are considered to be evidence of revision. Of course, besides such revision, there is also the kind of revision in the head which may not always or even be reflected in the written text (Bereiter and Scardamalia, 1987, p.297). At the same time, before writers put down any words they may sometimes need to modify their intentions and, as a result, the actual text in the head will differ from the text on the paper. This is usually considered a type of transformation, a subprocess discussed in Chapters Six and Seven. This type of revising will not be discussed in detail in this chapter. Instead, the focus is on types of revisions, the amount of revising, causes of mistakes and the strategies employed to revise English words and Chinese characters. The writer looked in particular at the types of revisions made by the subjects during writing and in the final review subprocess.

9.2 Types of Revisions

Most writers make revisions at different points in their writing: before pen meets paper, during writing and after the first draft. They also make different types of revisions. Kamler (1980) found that the revisions of the seven-year-old are mainly addition, and Bereiter and Scardamalia (1987) report that, under "ordinary circumstances", the "Compare, Diagnose, Operate" revising process is not often

applied by children (p.282). In similar vein, Bracewell et al. (1978) report that 4th graders hardly revise at all; 8th graders' revisions harm more than they help; and the 12th graders' helpful revisions narrowly outnumber their harmful ones. These findings would suggest that the younger the children, the less eager they are to make revisions or the less it occurs to them to do so, or that they are not very proficient at doing so.

Students in senior secondary classes do seem to make more revisions of their compositions, and various studies report the kinds of revision they make. Emig (1971) found that 12th graders "engage in no reformulating" (p.97); Stallard (1974) found that only 2.5% of 12th graders' revisions were focused above the word and sentence level; whilst Bridwell (1980) found that only 11% of revisions made by 12th graders were above the sentence level. Research evidence about revising by college students is not always very revealing. The five writers in Perl's (1979) research averaged nearly thirty-one revisions per paper, but few if any of those revisions appeared to be beyond the level of individual words and sentences. Pianko (1979) claims that first-year college students made no "major reformulations" (p.10), her data indicating an average of only two to four revisions per paper. Sommers (1980) studied first-year college students and found that the greatest numbers of revisions were at the word and phrase levels, with lexical deletions and substitutions the most frequent operations. Hayes et al. (1987) also found that, during revision, freshmen tend to focus on changing individual words and sentences within the text.

Of course, much of the above research begs the question of how seriously the writers were committed to ensuring that the end product really matched the intentions. Serious authors and writers of technical papers might agonize for hours over a single word or phrase, and a paper being prepared for publication may need to be revised repeatedly to meet a word-length regulation. In contrast, students in school may see the purpose of the writing as merely being to satisfy the teacher's demands, not their own personal ones, and may thus invest less effort. No matter, it has been found

generally that students as writers are notorious for their avoidance of revision (The National Assessment of Educational Progress, 1977). Many researchers have found that inexperienced writers, like student writers, typically treat revision as a local task, confined to changing words and sentences rather than modifying goals and the organization of the text (Wallace and Hayes, 1991). These points were kept in mind throughout the present research. Thus, whilst no attempt was made to induce the young students in the present study to behave uncharacteristically, a careful watch was made during the writing to detect revisions.

9.2.1 Correction of Misspelt English Words and Strokes of Chinese Characters

Whilst writing, or in the final reviewing subprocess, subjects often tried to correct misspelt English words or wrong Chinese characters. Below are examples (the underlined word was crossed out by the child):

(in Chinese)

我 ~~是~~ 就放下書包

(I then put down my school bag.) (Subject 3B6C)

(in English)

"One day, the free fire is was broke out." (Subject 5A1E)

Table 9.1: Summary of revisions correcting misspelt English words and wrong Chinese characters

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-C
Mean	6.5	9.67	5	4.5	3	5.33	4.83	6.5
s.d.	5.72	7.39	3.29	2.59	2.37	4.03	4.08	5.32
No.	6	6	6	6	6	6	18	18

As can be seen from Table 9.1, when the subjects wrote in Chinese, 95% of them (17 out of 18) tried to correct wrong Chinese characters. It can also be seen that the mean

number of revisions for this activity (18 subjects) was quite large (6.5 characters, s.d. 5.32). The difference between the mean for P4 (4.5 characters) and P5 (5.33 characters) was small, but the mean score for P3 was twice the scores for P4 and P5 (9.67 vs 4.5 vs. 5.33). The trend was for the P3 subjects in the present study to make much more revision to Chinese characters than their counterparts in higher classes. Subject 3A1C revised 24 Chinese characters; 5 subjects revised more than eight characters; and 2 subjects less than two. As can be seen from the relatively large s.d.s, individual differences within the groups were rather large.

Turning to writing in English, 89% of the subjects (16 out 18) revised spellings of English words (mean = 4.83 words). The differences between the three groups P3 (mean = 6.5), P4 (mean = 5) and P5 (mean = 3) were not great. However, there is some evidence of a decreasing trend for subjects to revise spelling with age. Perhaps the higher the class of the subjects, the more confident they are at spelling and the fewer revisions made: perhaps they are simply better at spelling in the first place. Three subjects revised more than eight words to try to correct spelling errors, and 3 subjects revised less than two words. Individual differences were rather large (s.d. = 4.08).

Generally speaking, the subjects tried to correct Chinese characters (95%) and English words (89%) which they thought were wrongly written. The mean number of revisions of English spellings (4.83) is slightly smaller than for revision of Chinese characters (6.5) ('t' value not significant, see Appendix 9.4).

9.2.2 Revision of Words

During writing, subjects occasionally revised words (in this Section, 'word' means 'character' in the case of the Chinese text). There are five types of revision of words:

replacing words by more appropriate ones, modifying words, changing Cantonese words to MSWC, deleting words and adding words. These are discussed below.

9.2.2.1 Replacing Words by More Appropriate Ones

During writing or in final reviewing, some subjects decided to replace words with more appropriate ones. The examples below illustrate this kind of revision.

(in Chinese)

有一位仁慈的伯伯帶我~~上~~回到學校去
(A kind old man took me back to school.) (Subject 5A1C)

(in English)

"But the queen was dead very fast young." (Subject 3A1E)

Thirty-nine per cent of the subjects (7 out of 18) replaced Chinese words with more appropriate ones; 17% of the subjects (3 out of 18) did so for English. On the whole, the mean scores for the 18 subjects for replacing words by more appropriate ones were quite small, both for Chinese (0.79) and English (0.17) ('t' value = 2.09, $p < .05$, see Appendix 9.4).

9.2.2.2 Modifying Words by Adding Adjectives or Adverbs or Changing Tense

The subjects sometimes modified words when revising their scripts by adding adjectives to nouns or adverbs to verbs or adjusting the tense. Below are examples which illustrate this kind of revision.

(in Chinese)

因為她所有同學都³~~上~~學
(It was because all her classmates had gone went to school. (Subject 5A2C)

(in English)

"Once upon a time had a beautiful queen." (Subject 3A1E)

A greater proportion of the subjects modified words when writing in Chinese than in English (Chinese 28% vs. English 5.5%). However, generally speaking, the mean incidence for this kind of revision among the 18 subjects when writing in Chinese (mean = 0.56) and in English (mean = 0.06) was small.

9.2.2.3 Changing Cantonese Words to MSWC

As reported in earlier chapters, as the research subjects are all Hong Kong Cantonese, they have been repeatedly ordered in school not to write Cantonese in their compositions. When they were writing, they thus tried to revise any Cantonese words included. The following is an example:

(in Chinese)

他有一幅慈祥的面臉孔

(He has a kind face.) (Subject 4B4C)

Subject 4B4C put down '面' and revised it to '臉'. He said later that he thought the word '面' was Cantonese so he replaced it with a MSWC equivalent. In fact, both words are acceptable in MSWC. Only 22% (4 out of 18) attempted to revise Cantonese words. The mean for the 18 subjects overall was quite small (0.28), indicating that the subjects were unable to convert Cantonese words into MSWC.

9.2.2.4 Deleting Words

During the writing, some subjects deleted words, as can be seen below:

(in Chinese)

會是否會給同學們嘲笑呢?

(Will the school mates laugh at me?) (Subject 5A1C)

(in English)

"And The third little pig do not let the wolf came in and the wolf blew and blew the house X." (Subject 4B4E)

Thirty-three per cent of the subjects (6 out of 18) deleted Chinese and English words respectively, but again the mean difference between the performance for this activity for the two languages was quite small (Chinese 0.57 vs. English 0.33).

9.2.2.5 Addition of Words

When subjects are writing or reviewing, they might sometimes add words to their script. Below are examples of this activity:

(in Chinese)

令 路人 我 感到 走路 時 很不 方便
(This made passerby me uncomfortable while I was walking.) (Subject 5A1C)

(in English)

"She say goodbye to the dwarfs." (Subject 4B4C)

Thirty-nine per cent of the subjects added words to the text when writing in Chinese, and 11% of the subjects (2 out of 18) when writing in English. Again, the mean difference for the two languages here was quite small (Chinese, mean = 0.56 vs English, mean = 0.11.)

Table 9.2: Summary of revision of words written in Chinese and in English (18 subjects)

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	0.5	1.67	0.83	0.83	0.67	4.5	0.67	2.33
s.d.	0.84	2.25	0.98	0.98	0.82	4.84	0.84	3.36
No.	6	6	6	6	6	6	18	18

Table 9.2 summarizes revisions of words by the subjects writing in English and in Chinese. Sixty-seven per cent (12 out of 18) of the subjects revised words when writing in Chinese. From the table it can also be seen that the mean for the 18 subjects was 2.33 (s.d = 3.36). The differences between the means for the three groups, P3 (mean = 1.67), P4 (mean = 0.83) and P5 (mean = 4.5), were small. P5 subjects made more revisions on this activity than the other two groups and individual differences were rather large. Subject 5A3C and Subject 5A3C made more than 9 revisions each, while 6 subjects made no revision whatever to the Chinese words.

Fifty per cent of the subjects (9 out of 18) made revisions to words written in English, but the mean number for the 18 subjects was small (0.84). The differences between P3, P4 and P5 groups (mean 0.5 vs. 0.83 vs 0.67) were very small. Individual differences were not great (s.d. = 0.84), and the highest count for any one subject was only two.

On the whole, more subjects made revisions to words when writing in Chinese (67%) than in English (50%), and the mean number of words revised by the 18 subjects writing in Chinese (mean = 2.33) was higher than in English (mean = 0.67), evidence that the subjects revised more words when writing in Chinese than in English ('t' value = 2.1, $p < .05$, see Appendix 9.4).

9.2.3 Revision of Phrases

As the subjects were writing or when finally reviewing, some made revisions to phrases, replacing some with more appropriate ones, deleting and inserting phrases. These are discussed below.

9.2.3.1 Replacing Phrases by More Appropriate Ones

Some subjects clearly attempted to replace phrases with more appropriate ones. The following are illustrations:

(in Chinese)

過去了三年，小老鼠^{長大了}~~長成~~。

(After three years, the mouse grew (was grown up)). (Subject 3A1C)

(in English)

"It found a jar (a bottle of water)." (Subject 4A2E)

Three subjects (out of 18) tried to replace phrases with more appropriate ones when writing in Chinese and English respectively (mean for the 18 subjects: Chinese = 0.28 vs English = 0.11.)

9.2.3.2 Deletion of Phrases

During the writing and reviewing stages, some subjects deleted phrases as can be seen in the following illustrations:

(in Chinese)

~~十分很不高興~~，她她哭起來了。

(Being very unhappy, she began to cry.) (Subject 5A2C)

(in English)

"Once X a time, in the village, there were (lived) a farmer, a cat and a dog." (Subject 5A1E)

Subject 5A1E said that her teacher had told her not to use too many commas, so she deleted the phrase.

Five subjects (out of 18) deleted phrases when writing in Chinese, and 3 subjects when writing in English. The mean for all 18 subjects was 0.39 for Chinese and 0.17 for English (difference not statistically significant, see Appendix 9.4).

9.2.3.3 Inserting Phrases

一時之氣，把自己心愛的洋娃娃弄破。

As the subjects were writing, some inserted phrases as can be seen in the following examples:

(in Chinese)

(Because of emotional disturbance, she tore her beloved doll.) (Subject 5A2C)

(in English)

"It went to drink the water in the mountain, it could not because the neck of the bottle is too X." (Subject 4A2E)

Twenty-eight per cent of the subjects inserted phrases when writing in Chinese and 22% when writing in English. The means for the 18 subjects for this activity were the same (0.22) when writing in Chinese and in English.

Table 9.3: Summary of revision of phrases in English and in Chinese for the 18 subjects

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	0.33	1.17	0.5	0.17	0.67	1.17	0.5	0.83
s.d.	0.52	1.42	0.84	0.41	1.03	1.6	0.78	1.3
No.	6	6	6	6	6	6	18	18

As can be seen from Table 9.3, 44% (8 out of 18) of the subjects made revisions of phrases while they were writing or reviewing in Chinese. From Table 9.3, it can be

seen that the mean for the 18 subjects was 0.83. There were insufficient data reliably to check for between-group differences across P3 (mean = 1.17), P4 (mean = 0.17) and P5 (mean = 1.17). When they wrote in English, 33% (6 out of 18) of the subjects made revisions of phrases. The mean for the 18 subjects was 0.5 counts, and differences between the mean of the three groups P3 (0.33), P4 (0.5) and P5 (0.67) were minimal statistically.

On the whole, slightly more subjects made revisions to phrases when writing in Chinese (44%) than in English (33%). The mean count for the 18 subjects for this activity was also slightly higher in Chinese (0.83) than in English (0.5). However, in general, the subjects did not make many revisions at the phrase level.

9.2.4 Revision of Clauses and Sentences

When writing, some of the subjects inserted and some deleted clauses and sentences.

9.2.4.1 Inserting Clauses/Sentences to Present More Information

Examples of subjects revising their scripts by inserting new sentences can be seen in the following illustrations:

(in Chinese)

我是×××，我今年八歲，我在×××學校讀書。

(I am ---. I am eight x this year. I am studying in --- Primary School.) (Subject 3B6C)

(in English)

"Mummy and daddy come back and we have our lunch." (Subject 3B6E)

Twenty-two per cent of the subjects revised clauses and sentences when writing in

Chinese and in English respectively, a relatively small number. The mean for the 18 subjects for this activity for Chinese was 0.22, and for English it was 0.17.

9.2.4.2 Deleting Clauses/Sentences

In the course of writing, some subjects deleted clauses and sentences, as can be seen in the following examples:

(in Chinese)

~~可是媽媽卻要我帶雨衣，我真不明白。~~

(But my mother insist me to take a rain coat, I do not understand her.) (Subject 5A1C)

(in English)

"The cow walk in woman mouth to the dog and play." (Subject 5B6E)

Only 2 subjects deleted clauses and sentences when writing in Chinese and in English. The mean for the 18 subjects for this activity for each language was 0.17 in each case.

Table 9.4: Summary of revisions of clauses and sentences in English and in Chinese for the 18 subjects

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	0.5	0.67	0	0	0.5	0.5	0.33	0.39
s.d.	0.84	1.2	0	0	0.84	0.84	0.69	0.85
No.	6	6	6	6	6	6	18	18

Twenty-two per cent (4 out of 18) of the subjects revised clauses and sentences when writing or reviewing in Chinese. From Table 9.4, one can see that the mean for this activity for the Chinese compositions was 0.39. The differences between the means

of the three groups, P3 (0.67), P4 (0), P5 (0.5), were small, and, in fact the P4 subjects made no revisions of this type. Twenty-two per cent of the subjects revised clauses and sentences during writing and reviewing in English. The mean for the 18 subjects was small (0.33), and differences between the three groups, P3 (0.5), P4 (0) and P5 (0.5) were minimal.

On the whole, few subjects made revisions to clauses and sentences in either language. The mean for the 18 subjects for this activity was 0.39 in Chinese and 0.33 in English, quite a small and statistically non-significant difference.

9.2.5 Punctuation

Punctuation is an important element in the structuring of writing. Bereiter and Scardamalia (1987) suggest that the overall influence of seeking to make writing mechanically correct, in the sense of being punctuated properly, appears to be a factor which affects the quality of the text produced, not the quantity. The subjects in the present study made several revisions to punctuation. The following are examples:

(in Chinese)

我對我的家庭充滿信心。○

(I have full confidence on my family __.) (Subject 4B4C)

(In English)

"Then the first little pig made a house of sticks __. (Subject 4A3E)

Table 9.5: Summary of revisions of punctuation for the 18 subjects

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	2.5	2.17	1	0.5	0.67	0.67	1.39	1.11
s.d.	2.81	1.6	1.55	0.84	0.52	0.82	1.95	1.32
No.	6	6	6	6	6	6	18	18

Fifty per cent of the subjects revised punctuation when writing in Chinese. From Table 9.5, one can see that the mean for the 18 subjects for this activity was 1.11 revisions per subject. There were differences between the three groups, P3 (mean = 2.17), P4 (mean = 0.5) and P5 (mean = 0.67) (one-way analysis of variance, f-ratio value = 3.86, $p < 0.05$ level, see Appendix 9.5). Individual variability was relatively large (s.d. = 1.32). Fifty per cent of the subjects also revised punctuation when writing in English. The mean for the 18 subjects for this activity was 1.39. The mean for the three groups was 2.5 for P3, 1 for P4 and 0.67 for P5, a slender downward trend associated with the age of the subjects. Subjects 3A1E and 3A3E each made more than 5 revisions of this type, while 9 subjects made no revisions at all. Individual variability was relatively large (s.d. = 1.95).

Whilst it appeared that the younger subjects seemed slightly more sensitive to mistakes in punctuation and revised them accordingly, one would not wish to interpret this as a natural trend associated with the composing process for it might equally well be associated with the kind of instruction presented in schools. Equal numbers of subjects revised their punctuation when writing in Chinese and English, with slightly more revisions to the English than Chinese scripts.

9.2.6 Grammar

When the subjects wrote in Chinese, they made few revisions to the grammar in the scripts, only 2 subjects revising pronouns and 2 subjects conjunctions. The subjects reported little direct teaching of formal Chinese grammar taught in their schools. However, they did make revisions to grammar when writing in English, the L2, trying to correct grammatical mistakes or to make the meaning clearer. Below are examples in their English writing:

(i) Revision to verb forms:

"Then the wolf said, 'Let me come in ,or I will blew blow your house in.'" (Subject 4A3E)

(ii) Revision to possessive cases:

"Then he came to the third little pigs pig's house." (Subject 4A3E)

(iii) Revision to the tense used:

"It is look looking for water." (Subject 4A2E)

(iv) Revision to conjunctions:

"The clever bird pick up some stones and throw it into the water." (Subject 4A2E)

(v) Revisions to pronouns:

"But you (they) must not let the wolf to catch you (them)." (Subject 4A3E)

Table 9.6 Summary of revisions to the grammar of the English scripts

	P3E	P4E	P5E	P3-5E
Mean	4.33	4.5	4.17	4.33
s.d.	7.31	6.15	2.32	5.34
No.	6	6	6	18

Sixty-one per cent of the subjects (11 out of 18) revised the grammar when writing in English. From Table 9.6, it can be seen that the mean tally for the 18 subjects of this activity was 4.33 each. There was little difference between the three groups, with P3 having a mean of 4.33, P4 a mean of 4.5 and P5 a mean of 4.17. Individual differences were quite large (s.d. = 5.34). Seven subjects made no revisions of grammar while Subject 3A1E made 19 revisions and Subject 4A3E made 16. In the retrospective interviews, these 2 subjects said that their teachers provided them with lots of exercises on grammar, so they were very conscious about the importance of grammar.

9.2.7 Revising Paragraphs

Subjects 3A1E, 336C and 4A3C revised their work by making new paragraphs, crossing out the last word at the end of a piece of writing and starting a new paragraph. However, they only did this in Chinese, and no such revision was made by any subject writing in English. This suggests that these subjects had not globally planned their script from the start. The three subjects above said later that they had suddenly realized that they should have started a new paragraph at the points where they made the revision.

9.2.8 Correcting Careless Mistakes

Whilst writing, most people can make a careless mistake because of a slip of the pen or a momentary lapse of attention. Such errors are usually signs of inattentiveness or a lack of application, rather than being symptomatic of errors reflecting a faulty strategy or lack of knowledge. Below are examples of careless mistakes made by the subjects.

(in Chinese)

100 但 我 是 找 不 到 。

(But I cannot find one.) (Subject 5A1C)

(in English)

"We played games, be toys." (Subject 5B4E)

9.2.9 Summary of Revisions

Table 9.7: Summary of revising concerned with correcting careless mistakes in English and in Chinese

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P53-5C
Mean	2.33	2.33	2.17	2.17	1.33	2.17	1.94	2.22
s.d.	3.33	2.5	1.33	1.47	1.21	2.56	2.1	2.1
No.	6	6	6	6	6	6	18	18

Eighty-nine per cent of the subjects (16 out of 18) revised their work to correct careless mistakes in their Chinese. From Table 9.7, it can be seen that the mean number of careless mistake rectifications made by the 18 subjects was 2.22, the relatively large s.d (2.1) suggesting considerable variability among the subjects. The differences between the means for P3 (2.33), P4 (2.17) and P5 (2.17) were small. The highest counts for this activity were 7 (Subjects 5A3C and 3A1C), and the lowest was 0. Seventy-eight per cent of the subjects (14 out of 18) corrected careless mistakes in their English. From Table 9.7, it can also be seen that the mean for the 18 subjects was 1.94, the differences between the means for the P3, P4 and P5 groups (2.33 vs 2.17 vs 1.33) being rather small and statistically non-significant (see Appendix 9.5). Again, the relatively large s.d. for careless mistake correction in English (2.1) suggests considerable variability.

On the whole, the number of subjects revising their work by correcting careless mistakes in Chinese was only slightly larger than in English (English 78% vs. Chinese 89%). The difference between the mean number of careless errors corrected for the two languages was small (Chinese, 2.22 vs. English, 1.94). It seems that the number of careless errors made reflected the length of script produced rather than any significant trend associated with writing in the L1 versus writing in the L2.

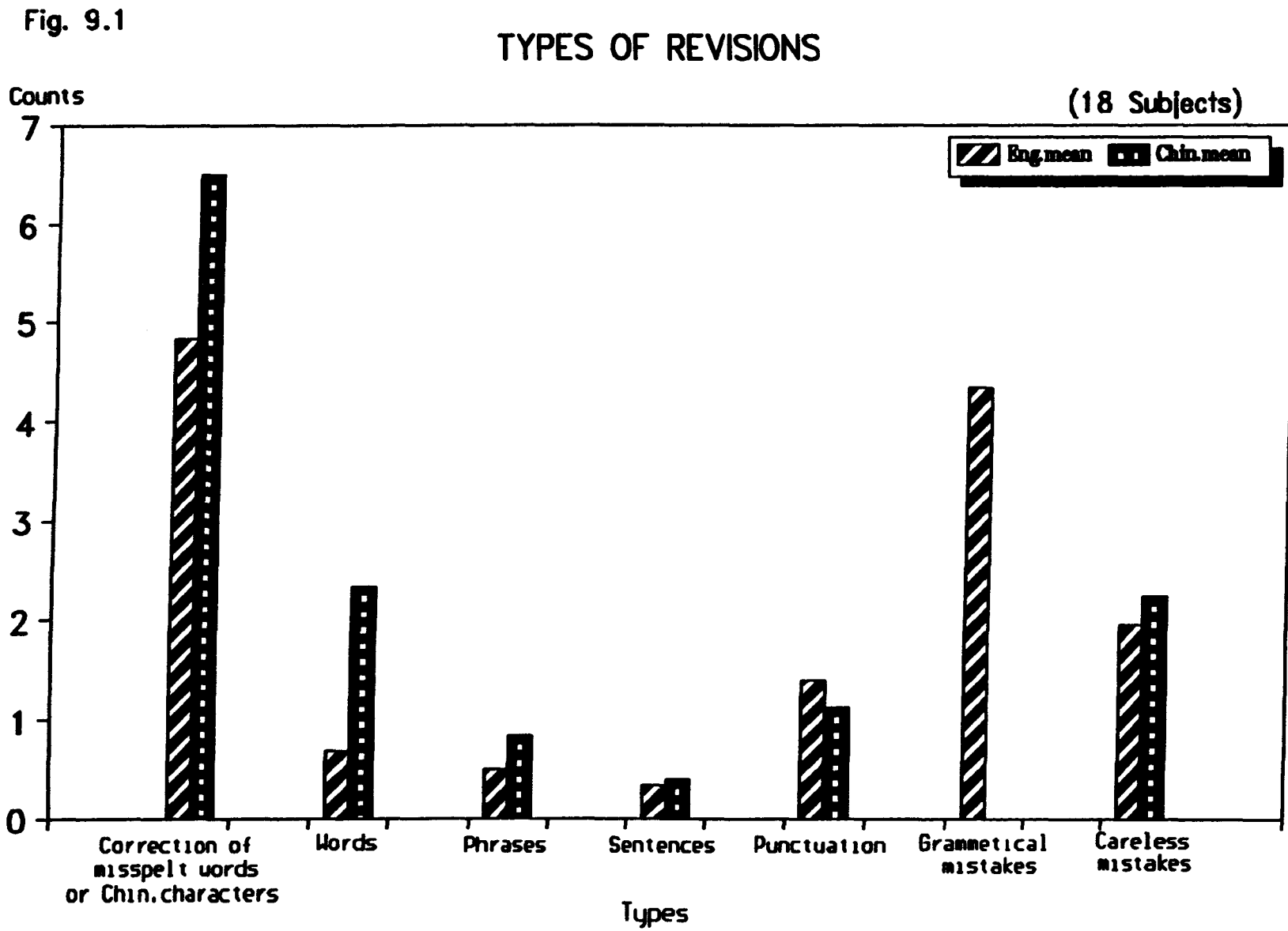
Table 9.8: Summary of types of revision in English and in Chinese.

Types of revising	P3-5E	%age	P3-5C	%age
	mean		mean	
Misspelt words and wrong characters	4.83	35	6.5	45
Words	0.67	4.9	2.33	16.3
Phrases	0.5	3.6	0.83	2.9
Clauses and sentences	0.33	2.4	0.39	2.7
Punctuation	1.39	10	1.11	8.3
Grammar	4.33	3.1		
Careless mistakes	1.94	14	2.22	16.7
Total	13.89		14.28	
No.	18		18	

From Table 9.8, summarising the types of revision made, one can see that the revisions made by the subjects in the present study were mostly correcting misspelt words and wrong characters and careless mistakes (see Figure 9.1), which together make up about half of the total revisions (English 49 % vs Chinese 61.7%). The other revisions were of punctuation, words, phrases and clauses. Paragraph level and text level changes appeared to be practically non-existent. The subjects appeared to approach the task of revision at a local level, responding to particulars rather than to overall global text features. This type of revision is in line with findings reported by

Bereiter and Scardamalia (1987), who claim that the knowledge-telling strategy of beginning writers takes account of semantic and structural constraints, but does not involve operating upon representations of goals for the text. This therefore leads beginning writers to reduce writing to a routine, their primary concerns being 'what to say next' and how to put it into appropriate language. The focus is on fairly local considerations that allow the writer to deal with problems, singly or in small units, rather than needing to work out the implications of multiple constraints simultaneously.

Figure 9.1



9.3 The Overall Incidence of Revising

In this section, the incidence of revising during the final reviewing subprocess is reported, together with a comparison of such revision against the revisions carried out overall. The overall incidence of revising is then considered.

9.3.1 Revising in the Final Review Stage

After writing the first draft, some subjects looked over their script, some simply browsing quickly over their work and making no attempt to revise, whereas others made specific amendments to the script.

Table 9.9: Summary of revisions made by the subjects in the final reviewing

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	1.5	3.5	0.67	0.5	1.18	2.33	1.11	2.11
s.d.	2.07	3.08	1.21	0.84	1.33	1.51	1.53	2.98
No.	6	6	6	6	6	6	18	18

After the subjects had written the first draft in Chinese, 72% (13 out of 18) made revisions. From Table 9.9 it can be seen that the mean number of revisions for the 18 subjects at this stage was 2.11 each. Differences between the three age groups were present (P3 mean = 3.5, P4 mean = 0.5, and P5 mean = 2.33) but the analysis of variance revealed no statistically significant outcome (see Appendix 9.5). Subject 3A2C produced the highest number of final revisions (9) and 5 subjects made no revisions at all. Thus, the individual variability was large (s.d. = 2.98). From Appendix 4.6, it can be seen that the subjects spent on average only a short time on the final revision, a period of only 1.83 minutes. Ten of the subjects (56%) spent only about 1 minute on the final revision.

Turning to the English compositions, 44% (8 out of 18) of the subjects made revisions in the final review stage. From Table 9.9, it can be seen that the mean for the 18 subjects for this activity was 1.11, and variability across the three primary age groups was small (P3 mean = 1.5; P4 mean = 0.68; P5 mean = 1.17). Individual differences overall were comparatively larger (s.d. = 1.53). From Appendix 4.6, it can be seen that 11 subjects spent about 1 minute in the final revision stage and the mean duration spent on revision for the entire group was 1.56 minutes.

Returning to a point made earlier, due largely to the fact that the subjects wrote more when writing in the mother tongue, more revisions were made on average when the subjects wrote in Chinese (72%) than in English (44%). The mean number of revisions for the Chinese scripts was 2.11 and it was 1.11 for the English texts. However, regardless of how much text had been produced, the subjects were not prepared to spend a long time looking over their final draft.

Comparatively speaking, when writing in Chinese, out of the mean number of revisions by the 18 subjects, 12.17, an average of 2.11 were produced at the review stage. In other words, most were made whilst the subject's mind was addressing the process of putting pen to paper. The same applied to writing in English, where, out of the mean number of total revisions made during writing, 12.78, only 1.11 were made at the final review stage. These facts would seem to support the view expressed by Bereiter and Scardamalia (1987) that young writers make most of their revisions during writing, and they seldom evaluate and revise what they have written as a whole. Daiute (1981, 1984) argues that short-term memory limits affect writers as they compose, and that revisions occur most as the writing is being produced. It is only when the mature writer looks over the final product, that glaring omissions and errors are apparent, and the writer decides whether what has been written reflects what the writer wanted to say. At this stage the mature writer may make drastic or

wholesale changes. Writers in a formative stage of development in terms of composing, in contrast, make most of their revisions during composing. Their prime concern seems to be whether what they are writing reflects what is immediately in the mind, the actual, not whether what has been produced might have been expressed better, the possible. Furthermore, writing in an L1 or L2 did not seem to influence this strategy in any significantly noticeable way.

9.3.2 The Overall Incidence of Revising

All the revisions were tallied and are summarized in Table 9.10, from which it can be seen the mean number of revisions made by the 18 subjects was 14.28 when they were writing in Chinese and 13.98 when writing in English.

Table 9.10: Summary of total number of revisions made by the subjects in English and in Chinese.

	P3E	P3C	P4E	P4C	P5E	P5C	P3-P5E	P3-P5C
Mean	17.33	18.67	14	9.67	10.33	14.5	13.89	14.28
s.d.	16.38	13.63	11.52	4.46	3.39	10.52	11.4	10.36
No.	6	6	6	6	6	6	18	18

From Table 9.10 it can be seen that, for writing in Chinese, the differences between the three groups in terms of total mean number of revisions made are not great (P3 mean = 18.67; P4 mean = 9.67; P5 mean = 14.5) and the analysis of variance was not statistically significant (see Appendix 9.5). It is thus unwise to try to read trends into the data, especially when the sample is so small. However, P3 students made more revisions than the other two groups. There was considerable variability among the students, with Subject 3A1C making 45 revisions and Subject 5A3C 33 revisions. In contrast, Subject 5A4C made only 2 revisions and Subject 4B5C made only 4. The high s.d. of 10.36 is evidence of the overall variability.

When the subjects wrote in English, the mean incidence of revisions per child was 13.89. The mean number of revisions for the P3 group was 17.33; 14 for P4; and 10.33 for P5. It is tempting to claim that the trend is for the higher the grade, the lesser the number of revisions and to claim that older subjects make less revisions, but a larger sample and more extensive evidence would be needed to justify this conclusion. There was great variability, s.d. = 11.4, with 2 subjects making many revisions, Subject 3A1E 37 revisions and Subject 4A3E 33. To again sound a warning about the interpretation, one needs to point out that these two subjects made more revisions, but they also wrote longer scripts than the other subjects. Much less speculative is the fact that the subjects made pretty much the same number of revisions when writing in Chinese (14.28) as they did when writing in English (13.89), and one might presume that the children's habitual stance vis a vis revising is more pervasive than any influences associated with writing in the L1 or L2.

9.4 Mistakes Detected but not Corrected

Detecting problems and correcting problems are two stages in revising and they appear to be separate mental subsystems. Bartlette (1982) pointed out that

"Success in correcting a text problem depends on adequate detection and identification processes. However, good detection and identification need not necessarily lead to an appropriate correction." (p355)

Bartlett (1981) found that primary school children revising their own texts were able to identify 56% of the missing subjects or predicates, but only 10% of faulty expressions. She concludes that young children have difficulty detecting such faults in their own text. In her studies of 6th and 7th graders, she found that the children were able to solve only about half of the problems they detected and they seemed to be limited in their ability to deal with problems, even when they recognised that the script was unclear or ambiguous. Similarly, Scardamalia and Bereiter (1987) have also suggested that 6th to 8th graders' ability to revise is limited much more by their

ability to solve problems than by their ability to detect them. Hayes et al. (1987) conclude that the ability to detect problems and to solve them once detected seem to be separate mental subsystems, each developing at a different rate.

In the present study, from the in-context observations and post-session interviews, it was apparent that some subjects in the present study also detected mistakes they were unable to correct. They thus crossed out some words but were unable to make suitable corrections. When they had such problems, some children made marks to show that they were unable to revise the script at that point, even though they thought something was wrong. These were tallied to make up this category of data. Below are examples.

(in Chinese)

從前有 個小 矮 人

(Once upon a time, there is a dwarf.) (Subject 3A2C)

(in English)

"The dog was X." (Subject 5A1E)

9.11: Summary of the mistakes detected by the subjects which they were unable to correct

	P3E	P3C	P4E	P4C	P5E	P5C	P3-5E	P3-5C
Mean	35.33	8.5	2.33	1.5	4.17	1	13.94	3.67
s.d.	47.71	9.07	2.42	1.52	3.19	1.27	30.28	6.15
No.	6	6	6	6	6	6	18	18

When writing in Chinese, 72% of the subjects (13 out of 18) appeared to be aware of mistakes and problems but were unable to make suitable revisions to rectify matters. From Table 9.11, it can be seen that the mean for the 18 subjects for this activity was 3.67. There were great differences between the mean of the three groups: P3 mean

= 8.5), P4 mean = 1.5, P5 mean = 1. (one-way analysis of variance significant at the $<.05$ level, see Appendix 9.5). The trend may be evidence of a threshold, after which young subjects are better able to operate on the mistakes and problems of expression they detect. On the other hand, it may simply reflect the instruction received in school at this stage of education. One subject, Subject 3A3C, seemed exceptional in that she said that she had no experience of writing long compositions. When she wrote, she then identified 26 mistakes that she was unable to correct. The picture does seem unclear for, although the s.d. overall is 6.15, indicating considerable variability, 5 subjects apparently had no such difficulties.

When they wrote in English, 83% of the sample (15 out of 18) were able to detect mistakes they were unable to correct. The mean for the 18 subjects for this activity was 13.94, for P3 it was 35.33, for P4 it was 2.33, and for P5 it was 4.17. Individual variations here were quite large (overall s.d. = 30.28) but the analysis of variance yielded a statistically non-significant outcome, see Appendix 9.5). Again, as in the case in writing Chinese, subjects in P3 had the highest counts, the figures boosted by two exceptional cases. Subject 3B4E had 125 counts and Subject 3A2E had 50 counts. Post-session interviews revealed that these subjects knew the intended meaning in Cantonese but could not express themselves in English.

On the whole, there were more subjects who had this problem when writing in English (83%) than in Chinese (72%), the mean for writing in English (13.94, s.d. = 30.28) was much higher than for writing in Chinese (3.67, s.d. = 6.15), but the between-group testing yielded a statistically non-significant 't' value (see Appendix 9.4). As is typical in research looking at a small sample and trying to include both quantitative and qualitative analyses, the data from individual exceptional subjects can skew the figures. Nevertheless, there does seem to be evidence that the younger children in the sample seemed more prone to being unable to correct some mistakes

they had detected. Fitzgerald and Stamm (1990) analyzed the underlying causes of the lack of revisions by student writers and concluded:

"When viewed from the perspective of the cognitive problem-solving model of revision, several factors may account for writers' (especially young writers) lack of revision. They may not clearly establish goals or intentions for their texts to begin with; they may not read their own problem spots: they may be aware of problems, but have difficulty knowing how to make desired changes; and/or the mental executive control needed to coordinate the entire process of revision may not be well developed." (p.98)

9.5 Causes of Mistakes

After the subjects had written the compositions, they were asked why they made the mistakes they had detected or tried to correct. Many of the children frankly admitted they were "not clear" why a mistake had been made or detected, or they simply said, "I cannot remember." However, some of the children could recall the causes of making mistakes and their comments are reported in this section.

As reported in earlier sections of this chapter, students were generally alert to wrong spellings and improperly written Chinese characters. Chinese characters are arranged by radicals in traditional dictionaries, and primary school pupils are often taught to identify radicals before they learn how to use Chinese dictionaries properly. Subject 3A2C tried to correct the character '兔' (rabbit). In the post-session interview, she said that her teacher had told the class about radicals. Whenever she wrote the radicle 'ㄣ' or '刀', she hence looked to see if it needed to be revised because she was often confused by radicals which were so similar. The similar shapes of some radicals might clearly cause confusion to other children when revising.

Previous experience seemed also to have influenced the subjects when revising. Subject 5B6C said she had a bad habit. Whenever she wanted to write the word '太', she wrote '大' (big) instead, so she often checked these two characters. Subject 3A2C had written the word '驕' (proud of), which she wrote correctly. She said she had crossed it out because she had once written the word wrongly in a dictation. Whenever she wrote the word, she had no confidence in herself and would often change it.

Some subjects reported that when they were writing some words, they experienced interference from other words. Subject 3A3C described such an incident. She wanted to write the phrase '從前' (long long ago) but wrote the word '前' for '從'. She said when she thought of the word '從', the word '前' immediately appeared in her mind. Another subject (4B6C) reported that, whenever she wrote '校車' (school bus), she often wrote '學校' (school). These examples are evidence that the association between common words can cause interference in writing. In the same vein, Chinese characters of similar shape and sound are sometimes confused. Subject 5B5C said he wanted to write the character '床' (bed), but he wrote the word '壯' (strong) instead, and said he often made such mistakes. Subject 3B4C told the researcher that she wanted to write the word '檯' (lamp), but she could only think of the word '橙' (orange), evidence that Chinese characters of similar shape and sound might be confused.

'Ci' (詞) is a Chinese language unit which is made up of two or three or four characters, two being the most common. Subject 4B4C reported that when he wanted to write the ci '辛苦' (hard working), he had written the second character before the first. He said this was common practice for him when he was writing Chinese. This interesting perception is evidence of the point that some Chinese writers think faster than they can write, and the hand cannot keep up with the brain.

Another subject (5A2E) said he wanted to write two characters ci '漂亮' (pretty). He had written the first character '漂' but when he wrote the second character, the first character was still in his mind, so he wrote the radicle of the character again. Then he discovered that he had written the radicle '氵' (water) and realized he had made a mistake. He crossed out the word and revised the second character '亮'. This phenomenon is an interesting area for further research. On the other hand, Subject 4A2C simply said that, whilst writing, he would sometimes suddenly change his mind and, as he had already written part of the phrase or sentence, he had to make revisions.

Associating one word with another word may lead writers to make mistakes. Subject 5B4E said that, when he wanted to write the word 'toy', he immediately thought of 'Barbie', a doll. He wrote down 'ba' and later revised it to 'toy'. Subject 4A4C reported that, when he wanted to write the word '副', a similar word, '幅', appeared in his mind. Gregory (1982), writing about this phenomenon, suggests that:

"When we read over our own work ... we realize that unconscious material is present as well, most visibly in the form of one type of the Freudian parapraxes, the slip of the pen ... the slip is not the appearance of abnormality but the collision of two normal expressions, one consciously intended and one unconsciously intended." (p.127)

9.6 Strategies for Revising Spellings of English Words and Chinese Characters

Revision is initiated by the discovery of dissonance between intention and execution (Bridwell, 1980; Sommer, 1980; Scardamalia and Bereiter, 1983b). Hayes et al. (1987) suggest that revisers may engage in evaluation of three kinds. First, they may evaluate the text against general criteria for texts, such as standards of spelling, grammar and clarity. Second, revisers may evaluate the text against their original

intention. Third, they may evaluate the plan against criteria which they consider plans should meet.

Daiute (1986) points out that young children have trouble decentring and taking an objective point of view about themselves, their thinking and their writing. The writer of this study tried to discover phenomena which prompted revisions by the subjects, and all the children were asked how they set about trying to detect mistakes. In general, the subjects were not usually objectively analytical in their reflections. Subject 3A1E seemed to voice a general strategy, when she said she would read through the sentence, and if it did not sound right to her ear, she would look to see if there might be a mistake. Fourteen of the subjects said they used this or a similar strategy to detect mistakes. The researcher watched the playback of the video tapes of the subjects and found that, when they were writing, their mouths were often moving and sometimes their voices were clearly audible. It appeared that when the students were reading through what they had written, they listened to the message being articulated and, on detecting a feeling of dissonance, would immediately stop and reflect. When they thought they had recognized an incongruity between intention and execution, they would seek to revise the writing. For example, Subject 5A1C said she tried to read the sentences and, if they were not euphonic ‘*川頁耳*’ to her ear, she would try to make revisions. This sort of revision is also reported by Sommer (1980, p.385).

Although the subjects were on the whole rather vague about strategies for revision, some of them were able to report exactly how they had gone about the revision process. After they had completed their compositions, the researcher asked them how one should look over a script to spot mistakes, and how they themselves set about revising. Most of the responses given were connected with revising words and phrases whilst actually writing, rather than considering the text as a whole or what

'had been written' against what 'might have been written' after the script had been produced.

When the subjects were actually writing, they would usually seek to use words they had used before. When they wanted to use a word they were unsure about, they would try to remember situations or places where they had seen the word used before. For example, Subject 3A1E said she did not know how to spell the word 'beautiful', so she tried to think of places where she had seen the word before. Eventually, she remembered a mirror with the words 'I am beautiful' at the back, and took the spelling of the word from here. Subject 3A1E said she did not know how to write the word '餓' (hungry). She tried to think of the word and she could see in her mind the image of the cover of a book with this word on it she had seen in a bookshop. She said this was a strategy she often used to look for words which she had learnt before.

Some subjects were able to check on Chinese characters with reference to the special features of Chinese. Chinese characters are ideographs and some of the subjects said they tried to recall the image of the thing the word stood for, or a character with a similar sound. This sometimes reminded them of the shape of the Chinese characters. Subject 3A1E said she sometimes tried to think of a word of a similar shape, for example '老' (old) and '走' (run). Subject 5A3C wanted to write the word '槍' (gun), but had forgotten the strokes of the character. She tried to think of a character of similar sound '搶' (seize), and on finding part of the radicle of the character, gained useful clues. She thought this was quite an effective strategy.

Some subjects had knowledge of the structure of Chinese characters. Subject 3B6C forgot the Chinese word '休' (rest), but was later able to recall it. She said

that her father often explained to her the structure of Chinese characters, and that he had said that the character was about "a person at rest on a bed of wood". Thinking about this helped her to recall the character. Subject 4B6C wanted to write the character '辯' (debate) but wrote another character '辦' (deal with). She said she tried to analyze the structure of the character and worked out that debating must involve 'speak' (言). She could then recall the strokes of the characters.

Chinese is a language where, generally speaking, if one has not been shown a character, one does not know how to write it. One may have a good idea, but one can never be absolutely sure about one's guess. In contrast, English is a phonic language and it is usual for readers of English to be able to attempt to write words they know how to say, even if they do not know how to spell them. Subject 3A3E was able to make use of this strategy when she wanted to write the word 'falls' in her script. She did not know the spelling but worked it out by building it up letter by letter, blending the letters into phonemes and eventually into the morpheme 'falls'. She said she had learned this strategy in the kindergarten and used it regularly. Some subjects said they were not always certain about a word and its spelling but, once they had seen it written down, could recognise if it was correct. Thus, Subject 3A1E did not know the spelling of the word 'likes', so wrote it on the rough work sheet in two versions. She said this helped her to find the right word.

Research on procedural facilitation by Bereiter and Scardamalia (1982) has indicated that developing writers are not always aware of the rationale of the strategies they use when revising, and the above case seems to be a good example of this. On the other hand, there was clear evidence that the subjects' behaviour reflected instructional input from their teachers. For example, on reading through her script, Subject 3B5E saw that she had used the word 'got'. Later she changed this to 'obtained', as she had been asked to do so many times before by her class teacher.

9.7 Summary of Results

As the subjects revised their scripts, 95% corrected strokes in Chinese characters and 85% corrected the spelling of English words. The older subjects seemed to have less need to correct this type of error. During the writing and in final reviewing, some subjects revised words, replacing words with more appropriate ones, modifying words, changing Cantonese words to MSWC, deleting words and adding words. However, the actual incidence of such revisions was small, with slightly more subjects revising words when writing in Chinese than in English, with an average of 2.33 word revisions per subject for the L1 and 0.67 for the L2. Subjects also made revisions of phrases, replacing, deleting and inserting phrases where necessary. Again, the incidence of such revisions was low, with slightly more revisions to the Chinese than English scripts. A few subjects attempted to insert clauses and sentences to amplify their scripts and some deleted clauses and sentences to make the meaning more clear, both in the L1 and the L2. Only three subjects made paragraph revisions, and then only in the case of Chinese. Thus, in summary, it appeared that, as the subjects wrote and looked back over their work, their attention was directed at improving the text at a surface rather than structural level (see Figure 9.1).

The almost total absence of fundamental structural revisions is in line with the findings of previous research with L1 subjects. The in-depth study of five college students by Perl (1979) reports that, although many revisions were made, most of these were at the individual word or sentence revision level. Kamler (1980), Bereiter and Scardamalia (1983) and Bracewell et al. (1978) report that children of primary school age do not make many fundamental revisions, and that when they do so they are not very proficient at it. In fact, even with older children, Emig found little evidence of fundamental reformulation, a view supported by Stallard (1974) and Bridwell (1980).

Most teachers of writing emphasize the importance of punctuation for adding sense to script. Half of the subjects accordingly made punctuation alterations to the text when writing in Chinese, and the same proportion changed the punctuation of their English compositions. Irrespective of the language involved, punctuation revisions needed to be made the most by the younger children and the older children seemed much more assured at this aspect of writing. In terms of other grammatical phenomena, over half of the subjects made revisions of such grammatical errors as incorrect tenses and verb forms when writing in English. In contrast, hardly any of the children needed to make revisions of grammar when writing in Chinese. As mentioned in previous chapters, teachers rarely mention grammar when teaching Chinese in primary schools, but often mention grammar when teaching English.

Revisions made by the subjects were mostly to correct misspelt English words (35%) and wrong Chinese characters (45%). Whilst writing, 9 out of 10 subjects corrected careless mistakes because of slips of the pen when writing in Chinese, and 8 out of 10 when writing in English. In terms of making revisions after the first draft had been completed, whereas 7 out of 10 subjects amended the Chinese text, only 4 out of 10 did the same to the English scripts. Although many of the above errors spotted during revision reflect the fact that the children produced longer scripts in Chinese than in English, the children spent very little more time on average revising the longer Chinese scripts than they did the shorter English scripts.

The in-context observation and post session interviews suggested that, once a script had been written, the children were more concerned with eliminating minor errors than checking whether it needed drastic revision. And the work carried out principally focused on the word and phrase level. Very many more errors were corrected during the initial writing stage than the final review stage. For every six errors detected and attended to in the Chinese writing, only one was detected at the

final review stage. In contrast, ten times as many errors were noticed whilst the English text was being produced than the errors corrected afterwards. Of course, it could be that the subjects had been able to think out their writing more when composing in Chinese. In the same vein, perhaps the subjects could more quickly express themselves accurately in Chinese. On the other hand, it seems that the children needed to make on-going amendments when writing in English, but that once they had completed their first draft, they were either reluctant or unable to improve on their efforts.

On the whole, however, the total number of revisions on average per subject was 14.28 for Chinese, and 13.89 for English, despite the fact that most children wrote more words for the Chinese than the English scripts they produced. When writing in Chinese, the P3 subjects made many more revisions than subjects in the other two groups, both in English and Chinese. These younger subjects also seemed to have more problems with words they thought were wrong, but did not know how to make correct. On the whole, the phenomenon of being able to detect but not correct errors appeared both for English (83%) and Chinese (72%).

Some subjects were able to report that the similarity of shapes of some Chinese radicals confused them, and previous experience led some to be confused over certain words. Some reported that Chinese characters of similar shapes and sound might cause interference in writing. Writing 'Ci', Chinese language units, was a problem for two subjects, and two subjects reported that they often wrote the second character before the first. On the other hand, the sample as a whole were not very good at reflecting on the reasons why they made mistakes and how they had spotted that they needed to make amendments. The most commonly used strategy by the subject was to sub-vocalise the text to themselves as they read it back and even whilst writing. On the basis of how it sounded, they were prepared to say whether it was probably incorrect.

At a micro-text level, most subjects tried to avoid words which they either did not know or were unsure about. When they felt they had no alternative but to use a word about which they were not certain, they used visual imagery to mentally picture Chinese words as ideographs. Some made use of their knowledge of the features of some characters to guess at new words, and some tried to guess at a word by thinking about Chinese characters of similar sound and form. Phonic analysis was used by the subjects to guess at the spelling of English words. Both for Chinese and English, a few subjects would write down alternative versions of the words under scrutiny in an effort to see if their visual memory would be jogged and they would recognise the one most likely to be correct.

9.8 Implications

The present research has revealed that the capability of a sample of Hong Kong primary school children to revise their writing, as an on-going and post first-draft process, was fairly limited. Furthermore, this was found to apply when the subjects were writing both in their L1 and L2. Clearly, on common sense grounds alone, this implies either poor teaching or poor processing or both. An inspection of the Primary Syllabus for Chinese (CDC, 1990a) and Primary Syllabus for English (CDC, 1981), reveals that the advice given to teachers in this respect is rather vague. The Chinese Syllabus goes little further than giving advice about the stage at which to commence teaching narrative, expository, descriptive and argumentative writing and the number of words expected or required. The learning objectives are not identified, nor the processes. As there are no clear targets or landmarks for mastery of writing, there are no such targets for teaching writing and no advice offered about what teachers should aim at in terms of teaching pupils to review and revise their written work. The English Syllabus lists an inventory of communicative functions and language items for each year group. However, without more concrete advice, few primary school English

teachers know how to integrate these into their teaching. Instead, most English teachers find clearer direction in the school-based rather than official syllabus, and they focus on the surface features of written English when teaching composition.

Young children learning to write a language they are simultaneously learning to read are in many respects similar in many places in the world. Successful writing for them is primarily the act of putting inner thoughts in the head onto paper in such a form that what is written accurately corresponds to what is in the mind. Teachers will frequently give young children practice in retelling stories, writing simple narrative tales and accurately describing transactional tasks. For the child, the task appears to be one of delivering onto the page that which is in the mind in a logical and readable form. In other words, young children are not usually asked to engage in the kind of drafting and redrafting which an academic paper written by a mature writer might demand. In the United Kingdom, Clegg (1964) was amongst the first to recommend that children will naturally turn to more advanced revising if they are encouraged to write communicatively for an audience, free from the restrictions imposed by traditional approaches to the teaching of writing. In other words, children can be taught to map out a composition, make a first sketchy draft then more complete drafts until they are personally satisfied with what they have written. Furthermore, given the freedom and practice to evaluate their writing, children can be taught to attend to macro- rather than micro-aspects of their own writing.

Equally true, given less enlightened teaching, students can easily be persuaded to write in a prosaic style, restraining imagination and creativity and drawing upon a limited set of language items which they know from past experience can be put down on paper in a form which will not attract the critical comment of the teacher. This latter approach exactly describes the teaching and learning of writing in Hong Kong. The teaching of writing is generally considered a thankless task by language teachers,

especially Chinese language teachers. It involves giving structured assignments intended to expose children to examples of 'good' writing. Through repeated exposure to such 'good' writing, it is hoped that the children will absorb the features of such writing and make them their own. In other words, their writing will become like that of the 'masters'. Individuality and originality of style are suppressed and compliance to an idealised format is praised and valued. For students, learning to write is a very monotonous task and they are expected to learn from their mistakes, doing corrections and eliminating errors until they can write 'perfectly'. 'Perfection' here means error-free script.

Teachers thus give highly structured 'writing-by-numbers' instructions, then spend hours marking compositions carefully and meticulously. The way they mark is a form of assessment, not just of the student, but of themselves as well. The Principal of the school, the Panel Head, Education Department Inspectors and parents will all check the composition scripts of students to check that language teachers have done their duty 'properly'. Every single mistake must be signalled and corrected for it is the task and duty of the language teachers to seek directly to eradicate errors from children's writing. As all compositions are assessed and the results usually included in the examination profile, students are concerned about the grades given by the teacher. High grades are awarded for accurate writing featuring long words and correct forms, whether or not the piece of writing is inspirational or enjoyable to read. Children know this, so they confine their efforts to anticipating what teachers want to read, not what they themselves want to say about particular topics.

For the Hong Kong teacher, revision is usually perceived as the process of thinking very carefully about what one is to write down prior to writing, then writing this down very carefully and accurately. Reviewing is the process of reading through what has been written to ensure that no careless errors have inadvertently been

included. Thus extensive crossing out and 'fast-writing' are banned, and a child would be accused of carelessness and losing concentration if he or she was to express the wish to completely restructure a piece of writing because it did not accurately reflect his or her intentions. Peer group consultations and group writing and editing are not allowed, and, as compositions are considered as assessments, pupils soon learn how to avoid low marks. They soon acquire the narrow views of writing held by most of their teachers and fail to envisage the act of writing as an act of discovery (Hodges, 1982). Instead of motivating students toward effective revising, creative thinking and thinking in the manner described by Sudol (1982), teachers place students in a 'straight-jacket' which completely restricts their freedom to write.

Language teachers in Hong Kong are required to mark each composition meticulously and highlight all mistakes, regardless of the stage of the learner or the effort invested. There is an implied assumption that the most hard-working and responsible teachers are those who put down the most red marks on composition scripts. As writing a composition is an assessment, teachers often follow school-produced marking schemes which give low marks for work containing errors of any type. In fact, it is quite difficult to gain a high mark with many teachers. Thus, students gain little pleasure from writing, and some have had the painful experience of having to copy out again and again their entire composition once it has been marked by the teacher, and to keep on doing so until not a single error is present. Calkins (1980b), Daiute (1984, 1986) and Levin et al. (1985) all attest to the fact that recopying discourages students from writing. Their observations and interviews with writers indicate that recopying is so tedious and unproductive, that, far from encouraging students to monitor and revise their writing in future, it leads many children to dislike writing and to give up trying.

Thus, if the children's on-task behaviour is set against such a background, the reluctance or even inability of the subjects in the present study to revise their writing

can perhaps be understood by the reader. Hong Kong is a Chinese society and it is traditional for language teachers to instruct children to write in such a way that meaning is expressed without error in a straight-forward and 'culturally acceptable' way. This, in fact, means that the revising of children's compositions is mostly the teacher's work. Students do review their efforts, but this consists mainly of checking to see that no obvious errors are present. They are also expected to concentrate hard when writing and to avoid all occasions where mistakes might conceivably be made. This rule applies to all writing, whether in the L1 or the L2. In the L1, the children's task is complicated by having to write MSWC when they think in Cantonese; for the L2, the target language is so different from the L1, that it is a daunting task to write it freely.

Thus, the subjects in the present research, inexperienced writers, seemed to regard revision as a micro-text activity concerned with eliminating misspelt words and changing words and phrases which were inappropriate or written incorrectly. It was not addressed to modifying the goals or organization of the text to meet the criteria of the rhetorical situation. The results of a series of studies by members of the Toronto Writing Research group (Bereiter and Scardamalia, 1987) suggest that the lack of an executive procedure for reprocessing is a contributory factor in young writers' problems with revision. The Canadian group recommend that teachers help students master these executive procedures rather than limit revising to the correction of surface mistakes. The post-session interviews with the subjects in the present study did, in fact, reveal that some subjects had utilised revision strategies when correcting Chinese characters and English spelling and that these certainly helped them in their writing. Hong Kong teachers should introduce or offer these strategies to all students more systematically. Graves (1983b) found that the revisions that children make as a result of conferring with a neighbour in class or with the teacher can be at a much higher level than those made when the child is working and reading alone. Shum

(1990) showed how the peer checklist evaluation method can help students to revise their composition globally and develop executive procedures in revising.

Until language teachers in Hong Kong concern themselves with fostering writing growth within the student at a personal level with the same vigour with which they concentrate on the written product, little real progress will be made. It is natural for writers in a formative and early stage of development to direct their attention chiefly to the production of error-free writing which is congruent with the intended message they hold in the mind. It is also natural for children of primary school age to be more comfortable intellectually with mental phenomena which they have experienced before or can imagine, and to be less sure about abstractions. Thus, they can be taught to engage in concrete routines which lead them to review and revise tasks more globally. In fact, experience elsewhere suggests that students can be encouraged to revise in this way. It was found that, with certain kinds of external support, children in primary grades could make substantial revisions of their compositions (Calkins, 1979; Graves, 1978). Graves suggests that the task of the teacher in providing this support is to try to imagine "what the kid is about, what he has in mind", and help the young writer to clarify mental intentions and messages until they are clear. This is best brought about, not by telling children what to say, but by asking questions, a view shared by Brandt (1982).

Bernhardt (1988) studied the changes basic writers made to an essay produced in class when the essays were taken home and revised. The students' revisions showed significant improvements at all levels, from such micro-level features of punctuation and spelling to such macro-level features as organization and development. Bernhardt is convinced that beginning writers naturally possess the ingredients for quite sophisticated revising, but that these will not develop with insensitive assessment on the part of the teacher. Teaching input and feedback directed at leading students to develop global revision and giving opportunities to

demonstrate and develop revision techniques can be most helpful. It is absolutely essential that young writers have the opportunity, not simply to sub-vocalise as they write, but to read out their writing to others. This act can give the feedback which allows them instantly to assess whether what they have written corresponds with what they wanted to say.

Facing the problem of doing this with the large average class size in Hong Kong, teachers should recruit the parents of students to help in this task. Parents might then appreciate the problems their children have and take a hand in helping them, rather than destructively criticising teachers if an unmarked error is detected. However, this will not occur until Hong Kong teachers allow students to compose at home. At present, compositions are usually considered tests which should be invigilated by teachers and should be completed quite unaided.

Language teachers in Hong Kong work very hard but their efforts seem not always to be productive and to be beneficial for the students. Insensitive and indiscriminate marking of children's writing will discourage students from expressing themselves and, in fact, encourage the use of strategies directed simply at avoiding errors (Tse and Law, 1992). This means that teachers should carefully note all errors and decide (a) whether they need to be drawn to the attention of the writer and (b) the best way to do this. Hendrickson (1984) suggests that teachers should study writers' errors and their frequency, find out the stage development of each student in their care, prepare a master error chart which can help them diagnose the weaknesses of students and design appropriate prescriptive teaching. Hendrickson suggests that teachers need the chance to refer to clear hierarchies of learning targets for writing and to lists of developmental errors which students can be expected to make at various stages of writing growth. The hope is that students will eventually learn how to correct their own mistakes and errors and accept the responsibility of ensuring that their writing satisfies the communicative objectives they have in mind.

General Conclusions

The results of the study have been presented and discussed in detail in the previous chapters. In this chapter, the major findings of the study are recapitulated and drawn together to provide an overview, and conclusions are offered about the composing process of primary school pupils in Hong Kong. Special reference is made to the four key subprocesses: generating, transforming, pausing and revising, using evidence yielded in the on-task behaviour of the 18 primary school pupils. The implications of the findings and suggestions for curriculum development, writing instruction and further research have been discussed in previous chapters, but are also summarized here.

11.1 Summary of Major Findings

The following conclusions are based upon data collected whilst the subjects were composing and on interviews held with them to explicate their decisions and intentions. The inferences presented apply principally to the particular pupils participating in the present research, and no claims are made that the findings can be generalized to all pupils in Hong Kong or to L2 learners in general. The outcomes of the present study are capable only of reflecting and suggesting the nature of the composing processes of this particular group of Hong Kong primary school pupils writing English and Chinese. They also give pointers to further research. The major outcomes are presented below under headings roughly corresponding to the research questions that guided the study.

11.1.1 The Composing Process

It was found that, both in English and Chinese writing, the subjects went through the same four subprocesses, generating, transforming, pausing and revising, with variations in the dimensions and magnitude of these elements. The four subprocesses seem clearly interrelated, reflecting the notion that writing knowledge transfers across languages, with subjects using L1 strategies and knowledge to aid and facilitate their L2 writing. There is also general support for the structure of the hypothetical model proposed in earlier chapters.

11.1.1.1 Generating

When the subjects were given topics to write about, before writing a word they engaged in the generation of ideas. A major strategy widely used here was to delve into the mind and retrieve information from store in the form of 'picture images'. According to the descriptions given by the subjects, some images were in colour and some in black and white; some were moving and some were stationary. Sometimes sound accompanied the images and associated emotions were also felt simultaneously.

The subjects said that, on being given the writing topic, ideas and images instantly sprang into mind consisting of scenes of past events, television programmes, words, pictures, illustrations and titles of books, Chinese characters and so on. With the help of such imagery, the subjects were able to retrieve information to serve as content, recall the spelling of English words and strokes of Chinese characters. According to the reports given by the subjects, it would appear that such mental imagery is an important characteristic of the composing process of the primary school pupils sampled.

The subjects also reported on the inspiration for the material and information included in the composition. When asked to write stories, most of them retold or rewrote stories based on ones they already knew from their leisure reading, school readers, audio and visual material, school course books or stories told to them by adults. When they wrote stories in Chinese, eight out of nine subjects reported that they selected information from a wide range of Chinese sources, implying that their reservoir of L1 information was larger than the corresponding L2 pool, and that the two sources did not readily overlap. When writing stories in English, the subjects used 'model' stories from English course books and readers familiar to them, with every indication that these were perceived as important sources of ideas. In writing in expository fashion in both the L1 and L2 about a familiar topic, they drew upon familiar background knowledge and included a wider range of personally inspired ideas.

After the subjects had generated information which they might possibly write upon, they then had to select information. In selecting the information to write about, the subjects seemed to take different considerations into account when considering writing in English and writing in Chinese. When writing in Chinese, the criteria for selection were interest and content (familiarity), the subjects seeming deliberately to avoid unfamiliar topics. When they wrote their composition in English, the main criterion for selection was choosing a topic studied in detail in class before so that they were confident about their knowledge of the relevant vocabulary and language involved. Stories and ideas with unfamiliar vocabulary or complicated English language would be avoided or rejected.

It seemed that confidence in using English and whether the requisite language was known were their most important criteria for choosing what to write about in English; content familiarity and interest were more important criteria when choosing what to write about in Chinese.

11.1.1.2 Transforming

Whilst writing in both the L1 and L2, the subjects sometimes altered their original intentions 'in the head' to accommodate the on-going demands of the writing. These were reflected in the discrepancies between what they said they were going to write and the actual text produced. This readjustment constitutes an important subprocess of writing, transformation.

11.1.1.2.a The Influence of Cantonese on MSWC

It was apparent that the subjects had transformed Cantonese-framed thoughts to MSWC written output. In schools, pupils are forbidden to write in Cantonese when composing and required to write MSWC only (CDC, 1990a, 1990b). By examining the sentence patterns in the verbal protocols of the composing aloud process and those in the written text, the researcher found that the subjects used 22 distinct sentence patterns. In fact, the differences between the sentence patterns of Cantonese and MSWC are not great. SVO, VO, SP and SV were the most commonly used patterns, both in Cantonese and MSWC. The subjects were able to use the 'ba' sentence (MSWC sentence pattern) without difficulty. It seemed that grammatical adjustment was not considered the most difficult aspect by the subjects when writing MSWC.

Transformation of lexicons was also found, and here there was some confusion of Cantonese, MSWC and classical Chinese lexicons. The influence of the Cantonese lexicon on the MSWC lexicon was clear and the subjects themselves seemed sensitive to this problem. They were clearly aware of the fact that they were not allowed to write down Cantonese utterances, but often admitted to not knowing the appropriate MSWC equivalent words. Consequently, they had less confidence in expressing themselves in MSWC than in spoken Cantonese. In fact, making adjustments to

accommodate the words in the various lexicons seemed most difficult for the subjects writing in MSWC.

The subjects used two sets of particles, Cantonese particles for composing aloud and MSWC particles for writing, using a greater number of particles in their utterances than in their writing. Particles are important for indicating mood, tone of voice and meaning. There was evidence that subjects had difficulty in expressing themselves fully since they only knew a limited number of MSWC particles.

It was very evident that the subjects were aware that they should avoid using Cantonese when composing. However, the interviews revealed that the subjects had received no formal advice in school on how to transform Cantonese into MSWC.

11.1.1.2.b Transformation in General

Transformation applied to ideas, the organization of ideas and writing strategies. It was found that more ideas were generated when composing aloud than when writing, both in the L1 and L2. This reflects the fact that the subjects' spoken competence in Cantonese is higher than their written competence, both in MSWC and in English. The subjects were able to express 75% of their output in idea units in the composing aloud stage in Chinese. It was found that when writing in English, only 53% of the ideas generated when composing aloud in Cantonese appeared on paper. More semantic simplification was apparent when writing in English than when writing in Chinese. This also reflects the rather obvious fact that the subjects' competence in MSWC was much higher than their competence in English.

During the transformational process, the subjects often added and deleted idea units, adding and deleting more of these when writing in Chinese than in English. In other words, more transformations occurred when writing in Chinese than in English, clearly reflecting the fact that their reservoir of Chinese was much greater than their pool of English. Consequently, there were many more adjustments to content when the subjects wrote in Chinese.

There were also transformations of groups of idea units in both languages. However, more fragmented group idea units were completed during the process of writing in Chinese than in English. There were more instances of transformation of complete ideas into fragmented ideas, in English writing than in Chinese writing.

The subjects also transformed the organization of ideas, with more subjects able to improve the organization of their ideas in Chinese than in English. They made improvements generally in the organization of the final product in Chinese, but not in English. In the majority of the composing aloud protocols, it was found that the subjects were able to present their ideas sequentially when composing aloud in Cantonese. This suggests that, at this stage, the subjects were familiar with relevant procedures for presenting knowledge coherently when speaking and writing. However, in their English writing, few subjects made any improvements in their written version compared with their spoken effort, and some produced quite disorganized final products in English. There was every indication, both from the product and the on-task behaviour, that the subjects were struggling hard both at the whole-text and sentence level when writing.

The subjects used different approaches to transform ideas generated in the composing aloud stage to the form in which they appeared in the written text. These approaches or communication strategies included topic avoidance, abandoning

messages, replacements, generalizations and topic changes. All of these phenomena were apparent both in MSWC and the written English. Transfer effects from Cantonese to MSWC and from Cantonese and MSWC to English were detected in the subjects' written English.

Topic avoidance and message abandoning were found in the subjects' writing in both languages. The incidence of topic avoidance when writing Chinese was relatively less common than in English, reflecting the idea that subjects were more confident operating in their L1. It was found that 31% of the ideas generated in Cantonese were avoided when writing in English, a reflection of the numerous problems the subjects had in writing in English. Although the sample is too small and unrepresentative for a generalizable analysis, there is slender evidence that there was a decrease of topic avoidance from P3 to P5, possibly reflecting improvements in L2 competence.

Avoidance featured much more commonly when writing in English than in Chinese, suggesting subjects used the reduction strategy more in English than in Chinese. The avoidance of ideas, the deletion of idea units and the fragmenting of ideas are good illustrations of semantic and linguistic simplifications in producing written English.

The subjects used replacements and overgeneralization and topic changes in the transformation processes in both languages. The incidence of these transformations in the present sample seems artificially low, however, which is a reflection of the researcher's decision to allow subjects to leave a space to stand for words they could not produce. This is an acknowledged weakness in the study, but was one of the prices to pay for seeking to stimulate fluency and sustained writing.

When writing in English, the subjects regularly used a literal translation approach. Some 15% of the total idea units in writing English were literally translated from Cantonese. Some subjects did not have the linguistic ability to carry out literal translation and only managed to write broken sentences.

The subjects' L1 played a significant part in their L2 production, cross-linguistic influences being clearly apparent in the subjects' English scripts. The L1 is a knowledge resource which learners use both consciously and subconsciously to help them sift through L2 data, and to perform as well as they can in the L2. The subjects in the present study displayed evidence of transferring elements of syntax and concepts from Cantonese and MSWC to English. Tenses, plurals, conjunctions, prepositions, verb forms, possessives and articles in the written English of the subjects were affected to an extent by Cantonese and MSWC. Tenses and plurals were particularly affected by transfers from Cantonese.

The use of transformation is not specific to writing in the L2 and it also featured, but on a lesser scale, when the subjects were writing in MSWC. What distinguished the writing in Chinese from the writing in English was the frequency with which the same approaches were called upon. This suggests that writing techniques transfer across languages, with subjects using L1 strategies and knowledge to aid their L2 writing. The subjects in the present study showed some evidence of exploring their thinking during the composing process and of regarding writing as a form of problem solving. The transformations which operated allowed the product of the thinking to be displayed in written form.

11.1.1.3 Pausing

Pauses are moments of physical inactivity during writing, and pausing is a key subprocess of composing. One of the chief advantages of the research technique of having video-playback to prompt recall was the ability to ask the subjects to elaborate on why they had paused whilst writing, as normally researchers have to speculate on the thinking behind such pauses. The subjects in the present study paused whilst writing in English and in Chinese for a variety of reasons. They sometimes paused to retrieve information from long-term memory, with more subjects pausing to retrieve such information when writing in Chinese than in English. Having retrieved such information, they then needed to pause to select information they considered most useful. More subjects paused to select information when writing in Chinese than in English.

As they wrote, some subjects paused to think about immediate planning. However, it was not apparent that the subjects in the present study paused often for global planning as they had probably already gone through this stage during the composing aloud procedure. More subjects paused for immediate planning when they were writing in Chinese than in English. They also paused to reflect on logical problems, especially when writing in Chinese.

When they were writing in Chinese, the most frequently displayed pauses associated with cognition were in connection with retrieving and selecting information. However, in English writing, pauses of this nature were relatively infrequent. It was found that there seemed to be more pauses for cognitive activities when they were writing in Chinese. The evidence and follow-up interviews revealed that the subjects had more practice in writing in Chinese and that their competence in writing in Chinese was vastly better than in English, their L2.

On the other hand, subjects did need to pause to consider linguistic issues. When writing in Chinese, there were more pauses undertaken by the subjects associated with selecting appropriate words. Besides writing more, the subjects had a wider range of vocabulary (lexicon) to choose from, and were more sensitive to the meanings of words. Thus, when pausing to look for words to represent the meanings they had in mind, only a small number of the subjects paused to look for words in Chinese. These subjects paused in search of words which they knew in their spoken language (Cantonese) but not in MSWC. All 18 subjects had to pause often to search for words when writing English. The subjects were clearly able to compose aloud in Cantonese, but often could not find the appropriate English words to represent their meaning when writing in the L2. In contrast, they found it easier to think in Cantonese and write in MSWC, a reflection of the bigger size of their Chinese lexicons compared with their English lexicon. There was a clear downward trend in the number of pauses to look for words when writing English from the P3 to P5 groups, reflecting the fact subjects who had been learning English longer had to pause less to think of words.

One aspect of composing prompting pauses was apparent in terms of the efforts by the subjects to construct correct sentences, syntactically and semantically, especially in English. In the case of writing in Chinese, fewer subjects reported that they paused to think about matters of grammar. On the other hand, since all the subjects were Cantonese speakers, when they were writing in Chinese, most of them paused occasionally to think about transforming Cantonese to MSWC. All were sensitive to the strictly enforced school rule that they should never write Cantonese in their compositions. This caused them to write with a degree of uncertainty in Chinese, but the group as a whole were not actually worried about aspects of grammar in MSWC. In contrast, they all paused to think of grammatical issues when writing in English. Extensive training on English grammar is given in school by their teachers

and sometimes at home by their parents. About half of the subjects paused to think of tenses, verb forms, conjunctions and singular or plural nouns. A smaller number of subjects paused to consider the use of subjects and pronouns, and to think about prepositions and articles. It was found that the six subjects who paused more than 10 times to think about grammar, had done many exercises on grammar and were very conscious of grammatical rules. The subjects seemed generally much more concerned over language items when writing in English than in Chinese.

Most subjects paused regularly over mechanical aspects of writing, for instance the spelling of English words and the writing of strokes in Chinese characters. There appeared to be evidence of a downward trend with increasing age in pausing to think about the strokes of characters. On the other hand, when writing in English, all of the subjects paused to think over the spelling of words. The number of pauses associated with this activity was second only to the category of 'looking for words', with the younger subjects making more pauses than the older subjects. All 18 subjects paused more to think about the strokes of Chinese characters than the spelling of English words. Generally, all subjects struggled hard to write Chinese characters and to spell English words, possibly reflecting the intense stress by Hong Kong primary schools teachers on correcting every single error (HKED, 1989).

The subjects paused to consider punctuation both when writing in Chinese and in English, with slightly more pauses for Chinese than for English. The subjects generally paid a lot of attention to mechanical aspects of writing and to punctuation whilst writing. To a great extent, the pausal activities reflect the focus of thinking of the subjects, and their attention seemed directed at 'surface' features of the writing, at the word and sentence level of writing rather than the deeper gist structural element. The subjects also paused much more over items of language than over logical issues. They did not seem to pause much to rearrange or develop the content of the composition.

When subjects were writing, they all paused to rescan their writing in Chinese and in English, reading over the text both for its sense and accuracy. When writing in Chinese, they were very conscious about the number of words written. However there was only one subject who paused to count the words when writing in English, possibly due to the fact that they are required to write far fewer words in English composition in school and that compositions are controlled rather than freely written. In addition, they seldom paused to think of the intended audience. Sadly, the interviews revealed that few subjects had any strong sense of audience when writing, both in English and in Chinese.

11.1.1.4 Revising

During writing or in the final reviewing, the subjects revised their compositions, changing words or making corrections to the written text. Revision is an important subprocess of composing, a dynamic, recursive and cognitive problem-solving activity. Most of the subjects made corrections to the strokes of Chinese characters and revised the spelling of English words. The largest amount of revisions were of this type, with only a slight difference between the amounts of correction of words in the two languages. This reflects that, in the mind of the subjects, producing error-free compositions is a key objective in both languages. It was found that there was evidence of a trend for older subjects to revise spellings and characters slightly less.

Whilst writing and in the final reviewing, the subjects made five types of revision of words: replacing words by more appropriate ones, modifying words, changing Cantonese words to MSWC, deleting words and adding words. The amount of revising on each of these five types was small and revision of Cantonese words was confined to writing in Chinese. In general, more subjects revised words when writing in Chinese than in English. Besides revising individual words, they also revised phrases, replacing phrases by more appropriate ones, deleting some and inserting

others. Although it must be stressed that the incidence of each of these activities was very small, more subjects made revisions of phrases in Chinese than in English, with slightly fewer revisions of English than Chinese.

Very few subjects attempted to insert clauses and sentences to add more information, or to delete clauses and sentences during writing. The amount of revising connected with this activity was minimal for either written language. Only three subjects tried to make revisions at the paragraph level when writing the first draft in Chinese, the incidence of paragraph revision being very small indeed. However, 50% of the subjects in the present study made revisions to punctuation when writing in English and Chinese. The amount of revision was about the same for both the L1 and L2. In English writing, there was evidence of a slight downward trend in the incidence of such revision associated with increasing age. The fact that the subjects in lower classes made more revisions to the punctuation may indicate that subjects in higher classes were more confident over matters of punctuation.

When the subjects wrote in English, 61% made revisions to grammatical mistakes including verb forms, tense formation, conjunctions and pronouns. When they wrote in Chinese, they made very few revisions of grammar, possibly indicating a surer grasp of Chinese grammar. This might also be due to the fact that there is little formal grammar taught in Chinese language lessons in primary schools. However, 89% of the subjects made careless mistakes because of slips of the pen in Chinese and 78% in English. About 16% of the revisions in Chinese and 14% in English involved rectifying careless mistakes.

Generally speaking, the subjects' revisions were addressed to minor errors, such as correcting misspelt words, wrong characters and careless mistakes. These made up about half of the total revisions. They also made revisions to punctuation,

words, phrases, clauses and sentences. Revision at the paragraph level was limited to three counts. This could be due to the fact that the subjects had not yet acquired the skill necessary for handling global text problems.

The subjects also made revisions during final reviewing, with more subjects making final revisions of the Chinese than the English text. They spent a very short time on final reviewing, both in Chinese and in English. Possibly due to the experimental conditions and procedures, it was found that the major revising completed by subjects had been done during the writing itself rather than in the final reviewing stage, both in English and in Chinese. On the other hand, it might very well be that the small amount of revising in the final reviewing stage is an indication that the subjects have the habit of avoiding such revisions at this point.

On the whole, the revisions carried out by the 18 subjects when writing Chinese and English were on roughly the same scale. Perhaps the quantity of revisions is about the same, irrespective of whether the subjects are writing in Chinese or in English. When they were writing in Chinese, P3 subjects made many more revisions than subjects in the older groups. When writing in English, there was a downward trend in terms of total number of revisions made by subjects associated with age. On the other hand, it was found that not all the mistakes detected by the subjects could be corrected by them, and more subjects seemed to have this problem when writing in English than in Chinese. This suggests that the subjects have less difficulty in amending the L1 than the L2. It was also found that subjects in the higher classes had more experience and success in correcting their problems, especially in Chinese.

Some subjects were able to report the reasons why they had made mistakes when writing in Chinese. The similarity of shapes of some Chinese radicals seemed

to have caused some confusion. When writing Chinese words, some subjects also reported that Chinese characters of similar shape and sound were likely to be confused. Two subjects reported that, when they wrote a Ci, a Chinese language unit, they often wrote the second character before the first. This area is clearly a field for further research. It was apparent that most of the subjects were prompted to make revisions by reading the text aloud or by sub-vocalising the text to themselves. Subjects reported that they were able to sense that something was wrong from reading the text in this way.

Some subjects were able to describe how they revised Chinese characters and English words, some referring to words they had seen before. As Chinese characters are ideographs, some subjects were able to resort to visual imagery to help them revise characters. Some tried to analyze the structure of Chinese characters or looked for the radicles of the characters, and some tried to recall the global shape and the sound of English words and Chinese characters to help them when revising.

From the above, it was found that the main criteria used by the subjects for selecting ideas for story writing in English appeared to be known language. During pausing, they also focused on linguistic aspects, concentrating on correcting spelling and mistakes at the word level. The subjects were clearly conscious of vocabulary and grammatical structures and, in the transformation subprocess, topic avoidance was a commonly used strategy to avoid making errors. The subject's on-task behaviour and follow-up interviews suggest that they had little confidence in expressing themselves freely in English. When writers are apprehensive about expressing themselves, the reduction strategy is likely to be adopted, and the subjects in the present sample might have been motivated by avoidance or might have chosen to apply both formal and functional reduction. If they opt for functional reduction, their writing is liable to appear disorganized; if they choose formal reduction, their sentences are likely to appear to be broken; if they opt for both, then their writing

normally will be poor (Faerch and Kasper 1983a).

Even when writing in Chinese, their mother tongue, the subjects were also very cautious, only opting to write on topics with which they were very familiar. Although the subjects had generated a range of ideas and images during the generation stage, they did not always write about the most prominent or vivid of these images, or even to write about the most outstanding points known about the topic. Instead, they seemed more anxious to produce writing they knew to be correct and they were clearly reluctant to experiment. Even though Cantonese and MSWC share many similar features, the subjects were still inclined to put themselves in positions where mistakes would not be made. They paused most over mechanical aspects of writing, particularly the writing of Chinese characters. In their revising, most subjects were quite concerned to correct such details as punctuation and strokes of characters. They seemed not to have been encouraged in school to express themselves freely and to attempt uncertain forms of expression.

In the follow-up interviews, none of the subjects said they enjoyed writing compositions in school. It seems that the instructional methods favoured by their language teachers had a negative effect on the subject's willingness and ability to manipulate ideas during writing.

Turning specifically to cross-linguistic aspects of language use, English teachers in Hong Kong traditionally have emphasized the need for pupils to think and write as completely as possible in English. They believe that if the learners resort to their L1, this will inhibit acquisition of the L2 and will bring a danger of errors associated with L1 transfer effects. To an extent, some English teachers in primary schools try to maintain the practice of using English only and remind pupils not to use "Chinglish", a mixture of Chinese and English. However, it is now apparent that far

too few English lessons in primary schools are conducted in English, and that when children transfer to English-medium secondary schools only 30% can cope with a curriculum delivered in English (HKED, 1989).

Edelsky (1982) has demonstrated how writing knowledge transfers across languages, with composers using L1 strategies and knowledge to aid their L2 efforts. She found that the writers' failure to use efficient L2 strategies was often based on their failure to use such strategies in their L1. In other words, as Jones and Tetroe (1987) argue, strategies which have not been acquired in the L1 cannot be transferred. Of course, writers should be encouraged to use their L1 while composing initial drafts, and the subjects in the present study indeed showed plenty of evidence of being able to generate more ideas when working in their L1, especially on a Chinese topic. In Hong Kong, however, few English teachers strategically use Cantonese as an important resource to assist children's writing in English.

11.1.2 Research Techniques: Advantages and Disadvantages

As with others who have engaged in studying the composing process, the present researcher was faced with the alternatives of (a) assigning the task, leaving the subjects alone and inspecting their product subsequently, in which case a large sample could have been studied; (b) involving a smaller number of subjects, allowing them to write entirely privately from start to finish whilst being recorded on video-tape, interviewing them only after the writing was handed in then extrapolating from the subjects' reflections on what had motivated them; or (c) encouraging a small number of subjects to compose in such a way that the key stages were explicitly overt, making detailed recordings and using these as memory aids to help the subject recollect what had prompted them to behave in certain ways. The writer chose the last one, taking great care to establish rapport with the subjects in order to ensure they would be open

and forthcoming about their thinking during the composing process.

However, it has to be faced that the technique employed to allow the researcher to observe and monitor the subjects' writing clearly had an influence on the nature and pattern of the subjects' output. For example, having the children compose aloud in Cantonese might unfairly advantage their writing of Chinese over their writing in English. The subjects were allowed by the researcher to speak in Cantonese (rather than in English) during the 'compose aloud' stage of writing in English because this is the most effective medium through which the subjects could express their intended mental representation of their writing. This in fact is also a valid reflection of what actually happens as Hong Kong children write in English. In other words, they think in Cantonese even when writing in the L2. At the same time, the serial stages in Hong Kong primary school children's writing in English is not (i) thinking in Cantonese, (ii) composing mentally in MSWC, then (iii) translating from this into English. The evidence is that the intermediate stage is usually missed out, or considered only briefly when it seems appropriate.

The precautions taken to allow the researcher to access the intended representations of the child writers were very successful in that, for example, the playing back of the video-tape helped subjects precisely to recall their writing activities and the processing in their mind at particular stages. The data collected were carefully double checked by the writer's research assistants and the levels of agreement indicate acceptable reliability. The verbal protocols of the Cantonese utterances and inspection of the written scripts helped the subjects to recall most of their transformational activities completed whilst writing. The techniques used in the research to study the pausal activities were carefully applied and did not seem to interfere with or interrupt the ongoing nature of the composing process. The observation record forms and videotape enabled the subjects to recall their pausal

activities with a high degree of certainty. Hence, the data gathered are also valid. In short, the use of multiple sources of evidence increases the validity of the data, even though, the writer cannot claim that the composing observed is an ecologically perfect representation of natural writing in all its possible settings.

11.2 Summary of Implications

One of the values of basic research lies in its generative capacity. The writer investigated a relatively unexplored area and it would probably be over-ambitious and involve a great deal of speculative hypothesising to attempt to discuss all the areas addressed in one way or another during the research. Similarly, one would not wish to speculate strongly on far-reaching educational implications on the basis of what in effect was an exploratory study. Thus the following discussion is confined to three major areas only: the implications for curriculum development, for writing instruction and suggestions for further research.

11.2.1 Implications for Curriculum Development

From the evidence yielded by the fieldwork, there would appear to be a clear mismatch between the composing processes of the subjects and the teaching methods employed by their teachers. In Hong Kong, Chinese language teachers of writing in primary schools refer to the Syllabus for Primary Schools for Teaching Chinese Language (CDC, 1990a). If one examines the previous edition of the Syllabus (CDC, 1975) and the present Syllabus, one finds little change in the section on writing. The present Syllabus seems very product- rather than process-oriented. The aim in teaching writing is to enable students to write coherently on topics given by the teacher, and to be able to produce narrative, expository, descriptive and argumentative texts.

There are several orthodoxies, some prescribed in the Syllabus for Primary schools (CDC, 1990a), and the Syllabus for Secondary Schools (CDC 1990b), and some enshrined in tradition, which imprison the pupils' learning to write and the teachers' approaches to teaching writing. The following are some of these traditional orthodoxies:

1. There are rigid requirements in terms of the number of words for different levels of writing (CDC, 1990a, p.25).
2. Most composition scripts are given marks which are included in the school's examination profile (CDC, 1990a, p.50).
3. Correcting the writing of strokes in Chinese characters, the structure of sentences and punctuation is considered supremely important. The ultimate composition is error-free (CDC, 1990a, p.50).
4. Students are expected to write well organized text in fluent Chinese (CDC, 1990a, p.23).
5. All marked composition scripts should be recopied (CDC, 1990a, p.50).
6. Cantonese is not tolerated in students' writing (CDC, 1990a, p.51).
7. Pupils are usually not encouraged to write on their own choice of topics (CDC, 1990b, p.24).
8. Language teaching should reflect moral and ethical teaching (CDC, 1990a, p.13).
9. Failure in composition will always result in rewriting (CDC, 1990b, p.25), regarded as a form of discipline by teachers.

These traditional orthodoxies have been discussed in detail in the previous chapters, and some of the above requirements are clearly beyond primary school pupils in Hong Kong. The general tone of the requirements is regulatory and negative, emphasising what children should not do rather than what they should do. The overall effect is to impose a sort of 'mental set' about what is expected by the teacher (Rose, 1984), and pupils are strongly discouraged from expressing spontaneously what might be in the

mind. For most pupils, the objective of writing is to do assignments which earn high marks. And to do this, one must comply with what is expected.

The official Syllabus itself allows principals and Panel Chairpersons to interpret it in ways which suit their particular intake of pupils. This licence is abused, and teachers tend to interpret matters entirely in ways which suit themselves and to erect a school-based version of the Syllabus, which invariably is product-based and outdated. There is no strict central enforcement of official policy and, so long as pupils are passing school-based examinations, teachers are allowed to interpret the Syllabus as they think fit.

In many English-speaking countries, the 'process approach' to writing movement has been responsible for a new vitality, both in writing and in education (Graves, 1984). It is time that Hong Kong joined this movement with enthusiasm. To make the teaching of writing more effective, a clearly stated objective must be to help pupils appreciate writing as a key source of human expression, allowing them creatively to explore their own ideas and convey their deliberations to others in ways which are mutually satisfying both to the writer and the reader. Teachers should help pupils master the processes of writing, especially the processes and writing strategies used by good writers of the age group in question. In addition, instead of focusing feedback on telling students how not to make mistakes in their future writing, or just correcting mistakes for them, it is better for teachers to help pupils learn the strategies of revising and making their meanings clearer (Bereiter and Scardamalia, 1983b; Perl, 1978). It is also insufficient for teachers simply to tell pupils not to write Cantonese. All pupils know this regulation. Instead, teachers should find ways to train children into routines for finding MSWC alternatives for Cantonese expressions. This is such an urgent matter that there should be some central authority to deal with the whole problem and who might produce a handbook of Cantonese words and the equivalents in MSWC. This could be made available both to students and their teachers.

When one studies the official Syllabi, one finds that in fact the section on Chinese language writing is rather vague. It goes little further than stating the stages for starting to write narrative, expository, descriptive and argumentative types of composition and the number of words required. The Chinese Syllabus lists a lot of regulations and problems which should be considered by teachers. But it does not tell teachers how to teach effectively and how to overcome the problems identified. The aims and objectives of learning writing are set out in some detail, but advice is not given about teaching and assessment being interrelated responsibilities of each teacher.

As there are no precisely specified objectives for learning or teaching writing, neither is there any specific advice offered on the elements of the composing process covered in this dissertation. In fact, the teaching of writing is often ineffective and neither the students nor their teachers regard composition lessons as occasions for fun and satisfaction. The introduction of the Target and Target Related Assessment (1992b) does not improve the situation, as the part on writing is similar to the Syllabus (CDC, 1990a). The targets are still quite vague and not hierarchial.

The present research showed very clearly that the subjects had no confidence in writing in English. Faced with the slightest chance of failing, their instinctive reaction was to avoid particular items of language, and even entire topics. If one looks at the English Syllabus for Primary Schools (CDC, 1981), one finds that it does not encourage free communication in writing from the start:

"When the pupils are at the early stages of writing, it is advisable to limit what they write to items which they know well from their oral work and reading. At these stages, all written work should be done in class under the close supervision of the teacher who may walk around the class and correct any errors on the spot." (p.63)

The Syllabus is explicitly advising teachers to limit the children's expression instead of helping them to explore written expression as an art form in itself. It is almost impossible for teachers to know the background knowledge of each pupil when there are 42 pupils on average in each class, or for a teacher to give individual attention and to correct all errors on the spot with classes of this size in small classrooms.

The Primary English Syllabus (CDC, 1981) also emphasises controlled and guided writing:

"The word 'control' here means that the choices which the learners have to make in producing a continuous piece of writing in English are limited to those which they are capable of making successfully at a very early stage of their learning, in other words, exercises which are designed to ensure that few errors are likely to occur." (p.67)

Too much guidance and emphasis on language correctness may discourage pupils from freely expressing themselves and may even induce a degree of dependency and even apprehension about writing. In the present research, the subjects had little confidence about expressing themselves freely in English and, in order not to make mistakes, all of them used the avoidance strategy. Teachers should reflect hard on the reasons for this avoidance and look at their own teaching strategies to see whether they are in fact contributing to its spread. The English Syllabi clearly recommend the communicative approach to language teaching and learning, but certain contradictions within it seem to discourage free communication. It would seem that curriculum designers need to reconsider the Syllabi and to take into consideration the cognitive processing involved in writing. In fact, the process approach to teaching writing in English as an L2 can be successfully introduced in Hong Kong (Stewart, 1989).

The present study found that writing knowledge and strategies seem to transfer across languages, with subjects using L1 strategies and knowledge to aid their L2 efforts. Pupils should not be discouraged from using their knowledge of writing in Chinese when writing in English for there is no evidence from the study that the model of the composing process presented in earlier chapters differs at a fundamental structural level when applied to L1 and L2 writing. Teachers should seek ways to induce pupils to draw upon L1 strategies to facilitate L2 writing and overcome linguistic barriers. Clearly, it is a mistake to ignore the fact that most Hong Kong children can all write in Chinese before they can write in English, and the English Syllabus should take account of this. Many L2 teachers suggest that pupils think in English as much as possible when writing in English, otherwise interference from the L1 will harm their L2 efforts. This seems unrealistically demanding. Most Chinese pupils in the primary school, where the medium of instruction is Cantonese, instinctively think in the L1 when writing, and this state of affairs should be accepted.

It is time for the Curriculum Development Council to revise both the English and Chinese syllabi. There should be an effort to marry research, the best of classroom practice, the aims of society and a knowledge of child development. Teachers need to refer to clear hierarchies of learning objectives when teaching writing and to be familiar with the sequence of developmental errors which pupils make at various stages of writing growth. Such information should be made public, for writing in English and in Chinese.

11.2.2 Implications for the Teaching of Writing

Methods of teaching writing directly affect the way it is learnt by pupils. According to the Primary Syllabus for Chinese (CDC, 1990a), the foci of instruction are drilling of sentence patterns, constructing sentences, writing paragraphs and studying model

compositions to identify features of good writing. The Syllabus for English (CDC, 1981) does not stress the teaching of grammar in isolation (p.85). However, as pointed out several times in this dissertation, in many primary schools the official Syllabus is ignored and the foci of instruction for English are grammar, mechanics and guided writing. It seems that teachers believe that 'What is good enough for teaching Chinese is also good enough for teaching English!' Chinese and English language teachers both accept without question that all errors must be corrected, regardless of whether any notice is taken by pupils of the effort invested or whether the correction is having any impact on future efforts. In fact, teachers regard correcting students' writing as one of the most important elements of their work. However, this investment is not very successful, otherwise standards would be rising and pupils' written work would be error-free in a short time.

The mode of instruction of most of Chinese language teachers is of the 'transmission' or 'presentation' type (Hillocks, 1986). Lessons are dominated by teacher-talk, lectures and diatribes about the features of good writing. Teachers also use this traditional mode in teaching writing and apply intense drilling methods to guide writing. All such methods are product-oriented and do not build up pupils' confidence to express themselves freely and independently. Simply focusing on the product of writing is insufficient: the cognitive aspects of writing, especially the composing processes and composing strategies, should also play a very important role in writing instruction.

The evidence from the present research would suggest that pupils engage in a common composing process when writing about narrative and transactional prose, both in the L1 and L2, with variations in the dimensions of the subprocesses and the magnitude of their involvement, depending on the nature of the task. Teachers need to study the composing process and the writing strategies used by good writers in

order to help pupils master effective composing. At the same time, when pupils have difficulties in writing, teachers should be able to diagnose these difficulties with reference to models of the type offered in this thesis to help pinpoint where composing is either breaking down or failing to develop.

At least three modes of instruction are related to the 'process approach' to writing instruction. The first is the natural mode of instruction, in which teachers take the role of facilitators helping pupils to find their own meanings and the means through which to express them. Here, pupils write according to their own interests. Peer group feedback is encouraged and students are given plenty of opportunities to revise or redraft their work. The second is an environmental mode of instruction, characterized by clear and specific objectives. Teachers organize peer-group activities which involve highly structured problem-solving tasks which involve students in manipulating specific strategies, parallel to those they will encounter in writing (Hillock, 1986, p.194). The third is a composing process mode of instruction. As in the present research, writing is envisaged as largely a cognitive activity with most of the composing process taking place in the writer's head. Here, writing activities should be designed to develop the mental processes and thinking strategies that lead to good writing. The activities should seek to foster thinking, require students to use their mind in the ways that good writers do, and to solve the problems that good writers manage to solve (Scardamalia et al., 1981; Stewart, 1989).

In the present research it was found that the subjects did not enjoy writing. They reported that the writing they did in school is usually 'one-shot writing' in the sense that there is time to write one version only. In addition, the pupils must meet a specific word length target. Most language teachers seem to treat writing as a form of testing, so primary pupils are usually set to write under time constraints and examination pressure. They have insufficient time for pausing and revising, crossing

out and redrafting is discouraged, and making alterations late in the composing stage is inviting trouble. The subjects in the present research had all experienced this form of training. The whole purpose of writing, they said, is to get high marks, and achieving high marks is only possible through producing work which contains no errors. The pupils are not engaged in purposeful, real-life and relevant writing tasks and the class teacher is the only audience. Furthermore, he or she is regarded as an examiner not a mentor. The pupils are not encouraged to write compositions at home in case help is given and the marks profile becomes unreliable.

In fact, writing in school should be regarded as using one language subsystem in conjunction with others for the purpose of learning and self-expression. Students should be given opportunities and positive reinforcement to learn and to use their own thinking as an ideas resource. In contrast, the subjects in the present study said they were discouraged from letting their imagination 'run away', only rarely were they encouraged to write about information read during their leisure, and their attention was rigidly focused on the sequence of instruction presented in the English textbook. In fact, since compositions are written as a form of test, pupils are not encouraged to read just before writing.

As there has been little research into the relationship between spoken Cantonese and MSWC, few scholars and teachers have any clear picture of the influence of Cantonese on MSWC in the primary school stage and of the implications for children's learning. Many Chinese language teachers emphasize the enormous difference between Cantonese and MSWC. The findings of this study would suggest that the emphasis they give is too narrowly focused on the differences between the sentence patterns in the two languages. Teachers should help pupils to see where there is overlap between the lexicons of Cantonese and MSWC and to appreciate the differences. In order to encourage fluency and early confidence in writing, teachers

should allow primary school pupils in lower forms to write using a blend of Cantonese and MSWC, gradually weaning them off Cantonese as they grow older or are capable of appreciating the differences between the two.

In order to encourage children to give free rein to their expression, particularly when generating content, the children should be allowed to use Cantonese in their writing in the very early stages. Although there is a strong case that children should not be encouraged to learn one system only to try to lose the habit later, it is probably counter-productive for Chinese language teachers to insist that pupils write in pure and standard MSWC from the first day of writing. The effects of constantly reminding pupils not to use Cantonese can lead them into adopting avoidance strategies in order not to make mistakes. It is better for teachers to allow pupils to express themselves first in Cantonese, then to help them refine their efforts into producing MSWC. In fact, in view of the approach of 1997, some Chinese teachers advocate that primary pupils should learn more Putonghua and 'pin-yin' (the phonetic symbols of Putonghua) to reduce even further the influence of Cantonese on MSWC. However, this suggestion is rather unrealistic as few teachers in Hong Kong are fluent in Putonghua. Furthermore, it would be very burdensome to expect primary school children to master three spoken languages (Cantonese, Putonghua and English) and three written languages (MSWC, English, and pin-yin) at the same time.

The present research confirmed that pausing is an integral subprocess of composing. Teachers should help learners use these pauses to good effect, giving pupils sufficient time for pausing. The fieldwork showed that the subjects paused most frequently over linguistic matters. They had difficulties in selecting the right words to use, the right sentence structures, the right characters and the correct spelling. It would be very helpful here if the teacher was available to help them. However, Hong Kong teachers say this is too difficult since they feel the average class size is

too large and consequently unwieldy. This seems a weak excuse for not trying the procedure on any scale whatever. The teacher could quite easily allow pupils to draw pictures to represent their ideas, or to write down the appropriate Chinese character, or to make a mark to indicate the location of their problems. These are the areas on which feedback from the teacher should focus, not the indiscriminate error correction so commonly applied. None of these practices are permitted or encouraged at present. Perhaps teachers are too rigid in their teaching and resistant to innovation. Whatever the reason, the fact remains that the interests and needs of the pupils are usually ignored, in defiance of the official Syllabus (CDC, 1981).

The present research also indicated that the ability of the research sample to revise their writing was fairly limited. They seemed to regard revision as a local task, confining it to checking spellings and characters, and slightly changing words and phrases rather than modifying the goals or fundamental organization of the text to meet the criteria of the rhetorical situation. They were also very reluctant to review and radically revise their written work. This may be the result of the teaching style favoured by language teachers in Hong Kong, who take upon themselves the task of marking each composition meticulously and highlighting all 'mistakes', which include the pupils' own crossings out and revisions. They disregard the ability of the learner and the effort invested, and put a lot of red marks on scripts to show that they have 'properly corrected' the pupils' work. In fact, revision of the pupils' compositions is thus mostly the teacher's work, with pupils required to copy out corrected compositions carefully. Sadly, many pupils are not even told why they have been requested to rewrite their work.

Clearly it would be much better and more effective if teachers were to help pupils detect and correct their own mistakes. In other words, revision should be an acceptable part of writing. It is very important that teachers help young writers clarify

their mental intentions and messages until they clearly and unambiguously express their intended ideas in the target language. Bereiter and Scardamalia (1987) suggest that teachers should help pupils to master executive procedures for revising, rather than confining their corrections to surface mistakes only.

The present research suggests a number of innovations which can be introduced to the teaching of writing. It has shown that the subjects were able spontaneously to use imagery to help them to generate ideas, inspiring them to write. If pupils in school are encouraged to look for material to write about using mental imagery as a source of inspiration and to use these to select interesting episodes to write on, their writing is likely to be more interesting and diverse. At present, the methods used for teaching writing in Hong Kong primary schools are too mechanical and teacher reliant. If pupils can make use of such imagery when unrestrained from the school context, as they most certainly can, then the writer feels sure that such prowess can profitably be used by pupils in the classroom as the inspirational force behind the generation of ideas, creativity and the production of the content of text.

The research methodology used in this study has proved very useful for diagnosing the problems in writing experienced by pupils. The composing aloud process gives particularly useful insights into the ways students plan their mental representations and aspirations for the text, and whether execution was as intended. The discrepancies between what was intended and what is actually produced can often indicate the problems experienced by the writer, including reduction phenomena, reduction strategies and transformational strategies. The diagnostic procedures are easy to operate and only a cassette recorder is needed as the research instrument. In fact, most students in Hong Kong own a cassette recorder and, before they write, can be asked to compose aloud, then write their composition. The teacher can then listen to the taped composition, inspect the students' intentions and help them revise their

written work. In view of the present group of subjects' difficulties in writing English, it may be wise for teachers to encourage students to emphasise content in early drafts, then to polish up surface features in the final draft, all the time checking to ensure that the text as a whole represents the message intended. Graves (1978) suggests that elements of linguistic competence identified as being in need of attention can then be given focused treatment.

However, many of the above suggestions cannot be implemented without some retraining of serving primary schools language teachers. The Fifth Education Commission Report (ECR5, 1992) notes that:

"Our primary schools face major challenges: to implement TTRAs; improve language teaching; tackle behavioural problems; reform school management; extend the Activity Approach to more classes; and in general lay a firmer foundation for the later stages of education. To meet these challenges successfully, they need instructional and managerial skills of a higher order than they have been able to provide up to now" (p.43).

In-service courses should urgently be provided for language teachers to improve their approaches to and methods of teaching writing.

11.2.3 Suggestions for Further Research

Whilst the findings of the present research have limited generality for children of the same age as the subjects used in the present study, the subjects' behaviour suggests questions and areas for further research. As Siu (1983) asserts:

"Progress in the study of the Chinese language has been slow in Hong Kong and the knowledge accumulated in this respect has been scarce. The deficiency of research data about Chinese language precludes a clear understanding of the language phenomenon and thus retards the process of Chinese acquisition and instruction, especially at the elementary level" (p.85)

Research into composing in English in Hong Kong as the L2 in the primary school suffers from the same need for clarity and elaboration. There needs to be much more research into ways to lead Chinese-speakers to write freely, with expression and from the heart. Otherwise, traditional orthodoxies will continue to dominate the entire scene.

The composing process has proved to be a fertile field for inquiry in Western countries. In Hong Kong, research into the composing process is in its infancy. The present research has focused in an exploratory fashion on four sub-processes only. There are other sub-processes like planning, starting, reviewing, ending, thinking about audience, solving problems, monitoring and so on which need in-depth study as well. More detailed investigations into the various behaviours and strategies pupils use, or ought to use, are needed to assemble a more complete picture of the composing process. In particular, studies need to be conducted to examine the composing strategies of proficient and inefficient student writers. The differences in writing strategies between these two groups of writers may throw light on areas in need of attention.

Longitudinal case studies of a given sample of pupils would be an interesting approach, with investigators monitoring subjects from the time they begin to write, the progress they make through the primary school stage, the impact of secondary education and whether what has been learnt is effective in tertiary or further education

sectors. Such an approach would permit investigators to observe directly and objectively the route taken by learners in their progression toward skilled writing and allow developmental dimensions of writing to be mapped.

Another topic for further research is the extent to which it is possible to capture and dissect the transfer process and translation process of L2 writers of varying L1 and L2 proficiency. It is also interesting to compare and contrast the composing processes of writers when they think and write in their mother tongue and when they think and write in an L2. It may also be worthwhile studying the composing processes of language teachers themselves, to check whether their own behaviour is serving as a model, and whether their own deficiencies are being passed on to the learners in their care.

The possibilities for future research seem endless. Replication studies with students of varying ages, from varying types of school, and from various districts of Hong Kong and China would also be of value. From a study of the scale of the present one, there are many limitations affecting the reliability, validity and generalizability of the data. Readers are advised to interpret the present study with caution, but not to shrink from going down the same path and exploring in an open and enquiring way the composing process of children, both in their mother-tongue and second or foreign languages. Only when teachers are better informed can they then take the appropriate action for improving the teaching and learning of writing.

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Appendices



Appendix 4.1

Questionnaire For Investigating Writing Behaviour of the Research Subjects

Introduction

This questionnaire was designed by the researcher to gather information from the subjects during the stimulated recall and retrospective recall interviews. The order of the questions was determined with reference to the responses of each subject to meet the objectives of the research. Not all the questions listed below were asked and some were repeated if necessary. One aim was to assist the subjects to think aloud.

1. *Writing Environment*

- 1.1** Are you feeling comfortable here?
- 1.2** How do you feel writing in the presence of me or in front of a video camera?

2. *Reaction on the title*

- 2.1** Do you like this title?
- 2.2** Before writing, were you aware of the scope of the topic, the length of the composition and time limit?
- 2.3** When you read the title, did you think about whom should be your reader?
- 2.4** Why did you write this composition?

3. *Information retrieval*

3.1 *Imagery and Sound*

- 3.1.1** Could you see anything in your mind when you saw the title?
- 3.1.2** Did you see any pictures in your mind?
- 3.1.3** Have you seen these pictures before?
- 3.1.4** If yes, what was the colour of the pictures?
- 3.1.5** Were the pictures static or moving?
- 3.1.6** Could you see yourself 'inside' the pictures?
- 3.1.7** Could you describe the pictures?
- 3.1.8** Could you hear anything in your mind when the pictures appeared in your mind?
- 3.1.9** If yes, please describe the sounds.

3.2 *Sources and Selection of Information*

- 3.2.1** How do you get the ideas for your writing?
- 3.2.2** Did your information come from your own imagination or were they part of your own previous experience?
- 3.2.3** (for those who wrote stories)
- 3.2.3.1** Before writing, how many stories appeared in your mind?
- 3.2.3.2** What were the sources of these stories?

- 3.2.3.3 Why did you choose to write this particular story?
- 3.2.3.4 Why did you give up the others?
- 3.3.4 (for those who wrote 'My Family' or 'My School')
- 3.3.4.1 Before writing, what was the information that appeared in your mind?
- 3.3.4.2 How did you select the information? What rules did your selection you follow?
- 3.3.4.3 Why did you give up some of the information retrieved?

4. *Planning*

- 4.1 Did you make drafts? Why?
- 4.2 How did you make drafts? (Did you make drafts mentally or in written form? Did you write a detailed draft or just the main points of each paragraph? Did you just jot down some important words?)
- 4.3 Did you decide on the length of the essay?
- 4.4 Did you decide on the genre of the essay?
- 4.5 Did you decide on which kind of figurative language to use?
- 4.6 How many paragraphs did you plan to write?
- 4.7 Did you plan while writing?
- 4.8 What was the difference between planning at school and at home?

5. *The Writing on Paper*

- 5.1 How did you write your first sentence? Have you written this sentence before?
- 5.2 Did your teacher teach you how to begin the first sentence?
- 5.3 Did you find it very difficult to write the first sentence?
- 5.4 Did you read the title once again before you started writing?

6. *Anticipation*

- 6.1 How did you develop your next sentence or next paragraph?

7. *Transformation*

- 7.1 In the verbal protocols, this idea has certain detailed information. You have simplified the detailed information in your mind when you wrote. Why?
- 7.2 In the verbal protocols, this idea unit is very simple. You have developed the simple idea unit in your mind and have made it more complicated. Why?
- 7.3 This idea units are present in the verbal protocols. You have deleted some of them when you wrote. Why?
- 7.4 When you wrote, you added some new ideas that did not appear in the verbal protocols. Why?
- 7.5 When you wrote this point, you transformed some of the ideas/words in your mind, why?
- 7.6 What you wrote these idea units, they did not match your original ideas. Why?
- 7.7 Can you tell me where you got the original idea of this English sentence?

- 7.8 Do you know what is style?
- 7.9 What is good writing?
- 7.10 Do your Chinese language teachers permit you to use Cantonese in writing?
- 7.11 Do you speak Putonghua?
- 7.12 In this composition, are there any words or sentences which you cannot express in written language?
- 7.13 Can you tell me some Cantonese words and sentences which should not be used in written Chinese?
- 7.14 In your verbal protocols, some of the words like '㗎', '㗎', '㗎', '㗎' (Cantonese particles) etc... cannot be found in your writing, why?

8. *Pausing*

- 8.1 Why did you pause here?
- 8.2 What did you think when you paused?
- 8.3 You paused for quite a long period here. Why?
- 8.4 Why did you do this when you paused?
- 8.5 When you paused here, you rescanned these sentences. Why?

9. *Revising During Writing*

- 9.1 Why did you make a mark here? What does it stand for?
- 9.2 You left some spaces here. What does this mean?
- 9.3 What did you intend to write? Why didn't you put it down?
- 9.4 Why did you make this amendment here?
- 9.5 How did you know that there was a mistake?
- 9.6 How did you amend the mistake?
- 9.7 How did you correct the wrong word?
- 9.8 Did you know the reason for making this mistake?
- 9.9 You found a mistake here, why did you make a correction?

10. *Problem Solving*

- 10.1 How did you feel while you were writing?
- 10.2 Did you find anything difficult during the writing process?
- 10.3 How did you solve this/these difficulties?

11. *Final Rescanning and Final Revising/Editing*

- 11.1 What did you do immediately after writing?
- 11.2 Why did/didn't you rescan the whole passage? If you rescanned your essay, how many times did you rescan?
- 11.3 Do you have the habit of revising your compositions?
- 11.4 Why did you make such revisions here?
- 11.5 How did you know that you needed revisions here?

12. *Monitoring*

- 12.1 Has your teacher pointed out any mistakes that you usually made in writing composition? What are these mistakes?**
- 12.2 Did you know what rules to follow in writing? What are the rules that you could not break?**

13. *Stopping*

- 13.1 How did you decide to stop?**
- 13.2 Did you hand in your essay before packing up your things? Did you rescan your essay?**
- 13.3 How did you feel when you handed in your essay?**

寫作行為調查問卷

簡介 這份問卷，是讓研究者觀察學生的寫作行為後，加以發問的。研究者不必依本問卷的題目順序發問，亦不必提問本問卷的所有項目，應依研究者的調查目標及學生的反應而處理，一些問題亦可重複發問。研究者應協助學生「大聲想」。

(1) 寫作環境

- 1.1 你覺得在這裡寫作舒服嗎？為甚麼？
- 1.2 你寫作時，對在場的人有何感覺？

(2) 對題目的反應

- 2.1 你喜歡這題目嗎？
- 2.2 你有沒有注意到題目的範圍、文章的長度及寫作的時限？
- 2.3 閱讀題目時，你有注意這篇文章是寫給誰的嗎？
- 2.4 你為甚麼要作這篇文章呢？

(3) 提取資料

- 3.1 影象及聲音
 - 3.1.1 你看到題目時，內心有沒有像看到一些東西或人物？
 - 3.1.2 腦裡會否湧現出圖象來？
 - 3.1.3 你以前有見過這圖象嗎？
 - 3.1.4 這圖象有沒有色彩？
 - 3.1.5 圖象是否靜止的呢？
 - 3.1.6 你自己是否在圖象裡？
 - 3.1.7 可否把圖象具體描述出來？
 - 3.1.8 看到題目時，你腦裡會否湧現一些聲音？
 - 3.1.9 如果會，可否描述這些聲音？
- 3.2 資料來源及選擇
 - 3.2.1 你如何聯想到／獲得這些寫作概念？
 - 3.2.2 你寫的資料是源於想象、幻想或是親身經歷？
 - 3.2.3 (向寫故事者提問)
 - 3.2.3.1 你寫作前，腦中出現了多少個故事？
 - 3.2.3.2 這些故事的來源是甚麼？
 - 3.2.3.3 為甚麼你選擇寫這一個故事呢？

- 3.2.3.4 為甚麼你不選其他故事呢？
- 3.2.4 （向寫‘我的家庭’或‘我的學校’者提問）
 - 3.2.4.1 你寫作前，腦中出現了哪幾項資料？
 - 3.2.4.2 你為甚麼選那些資料用來寫作？
 - 3.2.4.3 為甚麼有些資料在你腦中出現後，你不加採用？

(4) 設計

- 4.1 你會起草稿嗎？為甚麼？
- 4.2 你起稿的形式如何？（起「腹稿」寫下每段的大意？寫一個完整大綱？只寫幾個重要的名詞？）
- 4.3 你會想到要用多少字完成這篇文章嗎？
- 4.4 你會想到要用哪種文體嗎？
- 4.5 你會想到用哪些修辭技巧嗎？
- 4.6 你打算寫多少段？
- 4.7 你會否一邊寫作一邊構想？
- 4.8 你覺得在學校構想文章和在家寫作有甚麼不同？

(5) 動筆

- 5.1 你如何動筆寫第一句？以前有沒有寫過這一句？
- 5.2 你的老師有沒有教你如何開始寫首句呢？
- 5.3 你覺得寫第一句難嗎？
- 5.4 開始寫作前你有再閱題目一次嗎？

(6) 預期

- 6.1 你用甚麼方法寫下一句／下一段？

(7) 轉換

- 7.1 你口述腦中所想的資料時，這點本來較為詳盡，下筆時卻簡化了，為甚麼？
- 7.2 你口述腦中所想的資料時，這點本來十分簡單，下筆時卻變得詳盡及複雜，為甚麼？
- 7.3 你下筆時，刪去了原先口述的這些內容，為甚麼？
- 7.4 你口述內容時，本來沒有這一點，下筆時卻增添了，為甚麼？
- 7.5 你寫這一點時，改動了原本口述的概念／字詞，為甚麼？

- 11.3 你有修改自己文章的習慣嗎？
- 11.4 你為甚麼在這裡修改？
- 11.5 你怎知道你自己的文章有錯漏？

(1 2) 文章質素審查及檢定

- 12.1 你以前寫作，老師曾否指出你的文章有甚麼常犯的毛病？
- 12.2 寫作時，你認為有甚麼規則要遵守？
有甚麼規則是不可違反的？

(1 3) 停筆

- 13.1 你在何種情況下停筆？
- 13.2 你在收拾東西前交文，為甚麼？
- 13.3 交文時，你的感覺怎樣？

Appendix 4.2

Background Interview Guide

1. *Learning background*

- 1.1 When did you begin to learn sentence construction?
 When did you learn composition writing?**
- 1.2 How many Chinese teachers have taught you before?**
- 1.3 How do your teachers teach you to write?
 (Do they give you detailed instructions? Do they just explain the title
 briefly? Do they provide sample essays? Do they set a regular writing
 formats?)**
- 1.4 How do these teaching methods affect you? Do you like these teaching
 methods?**
- 1.5 Do your teachers require you to finish your essay at school?**
- 1.6 How many marks do you normally get?**
- 1.7 Do the results of your composition exert any pressure on you?**
- 1.8 Do you write some topics to please your teachers in order to get high marks
 for your composition?**
- 1.9 Do your teachers give you comments? Do you read the comments of your
 teachers thoroughly after you have received back your composition? How
 do you usually feel when you are reading them?**
- 1.10 What is your opinion on doing composition correction by copying the
 whole passage? Does this practice affect the number of words you want to
 write?**
- 1.11 Will good compositions be shown to the class by your teachers? Do you
 admire those classmates who can write well?**

2. *Influence of family*

- 2.1 Do your family members have the habit of writing and reading?**
- 2.2 Do your parents encourage you to write?**
- 2.3 Do your parents help you to revise your essays?**
- 2.4 Did your parents read stories to you when you were small?**

2.5 Do you often write letters to your relatives?

3. *Sources of writing experience*

3.1 Do your parents buy you a lot of books? What kind of books do they buy? Do you read those books?

3.2 Do you borrow books from the library? Do you buy your own books? What kind of book do you like reading?

3.3 Can you name the magazines and newspaper/s that you like to read? What are your favourite articles?

3.4 Do you like pop-songs? Do you understand the contents of these songs?

3.5 Do you watch TV programmes? How much time do you spend on watching TV every day? What are your favourite programmes?

3.6 Which of the following affect your writing most?

- a) books at home
- b) books that you borrow
- c) magazines and newspapers
- d) pop-songs
- e) TV programmes and films
- f) radio programmes
- g) others (please specify)

4. *Writing habits and Writing attitude*

4.1 Do you like writing? Why?

4.2 Do you have the habit of writing? Are you self-motivated to write? What kind of essays do you write? How many times per month?

4.3 What contents do you like to write most? What genre do you like to write most? Give reasons.

4.4 Referring to 4.3, do you think your interest changes with age?

4.5 Do you write for practical reasons, e.g. writing letters, dairy, memos or jotting down ideas as they come to you? How often do you do these?

4.6 Do you prefer writing on a topic of your own or a topic assigned by your teacher?

4.7 To whom do you like to write? To yourself or to others?

4.8 Do you write on your own or on a group basis?

- 4.9 How much time do you spend on writing at school and at home for a piece of writing? (If there is a difference,) why?
- 4.10 How much time do you spend on planning to write a piece of writing at school / at home?
- 4.11 What do you think is a perfect writing environment? Where? With what facilities? With whom?
- 4.12 How do you feel after you have finished your writing?
- 4.13 How do you feel when you hand in your essay?
- 4.14 Do you like to participate in open competition which is related to writing? eg. drama, writing competition?

寫作背景問卷

(1) 學習背景

- 1.1 你在那一年級開始學習作句？何時開始學作文？
- 1.2 有幾位中文老師教過你呢？
- 1.3 老師教作文的方法是怎樣的？（如：有沒有詳盡的寫前指導？或只簡略講解文題？有沒有提供範文？有沒有規定寫作模式？）
- 1.4 這種教學方法對你有甚麼影響？你喜歡這種教學方法嗎？
- 1.5 老師是否要求你在堂上完成作文？或讓你回家寫作？
- 1.6 老師大多給你作文多少分？
- 1.7 作文分數會否對你構成壓力？
- 1.8 你會為求得高分而寫些取悅老師／易受老師接受的內容？
- 1.9 你會否細閱老師的批改及評語？你對此通常有甚麼感受？
- 1.10 你對騰文有甚麼意見？「騰文制度」會否影響你文章的字數？
- 1.11 老師會否把好文章向全班展示？你會羨慕文章寫得好的同學嗎？

(2) 家庭影響

- 2.1 你的父母、兄弟姊妹有寫作及閱讀的習慣嗎？
- 2.2 父母有鼓勵你寫作嗎？
- 2.3 父母會否替你批閱作文？
- 2.4 小時候，父母會否拿著課外書向你講故事？
- 2.5 你是否需要常與親友通信？

(3) 經驗來源

- 3.1 你家中藏書是否豐富？大多是哪一類書？你會閱讀這些書嗎？
- 3.2 你會否自行借閱購買課外書？你喜歡看哪一類書呢？
- 3.3 你愛看哪種報章雜誌？哪類專欄？
- 3.4 你愛聽流行曲嗎？你會否留意歌詞？
- 3.5 你每天看電視的時間是多少？你愛看哪些節目？
- 3.6 你寫作的內容及修辭用語等，會否受下列各項影響哪一項影響較深？哪一項影響較深？
 - a. 家中藏書
 - b. 自行借閱的課外書
 - c. 流行曲
 - d. 電視／電影

e.報章、雜誌
g.其他（請列明）

f.電台節目

（4）寫作習慣及寫作態度

- 4.1 你喜歡寫作嗎？為甚麼？
- 4.2 你有自動寫作的習慣嗎？（種類？每月次數？）
- 4.3 你最喜歡寫甚麼內容及文體的文章？為甚麼？
- 4.4 你覺得自己的寫作喜好有沒有隨年齡而有不同階段的轉變？
- 4.5 你有沒有為實際生活需要而寫作？（如寫信、寫日記、寫備忘、整理筆記、記下某些意念等）這類情況是普遍？
- 4.6 你覺得（4.5）項所述的寫作與創作文章有甚麼不同？你喜歡哪一種？
- 4.7 你喜歡寫文章給自己看還是喜歡有別的讀者？
- 4.8 你喜歡自己寫作還是集體寫作？
- 4.9 你在家作文要多少時間？和在校作文比較怎樣？
- 4.10 在家作文構思時間要多少？在校要多少？
- 4.11 你認為甚麼是理想的寫作環境？（甚麼地方？有甚麼設備？有甚麼人？）
- 4.12 寫完一篇文章時，你心裡有甚麼感受？
- 4.13 交文時，你的感覺如何？
- 4.14 你是否喜歡比賽及結合活動形式的寫作？
（如徵文比賽劇本創作等）

Verbal Protocols of Subject 3B6C

我的學校

1. 我嘅名
2. 就係叫做 T H Y
3. 今年八歲
4. 我係聖保祿學校讀書
5. 我係學校係二年班
6. 我係學校呢
7. 就小息呢同埋同學一齊玩
8. 但係呢，個個同學都玩
9. 我就唔係嘅
10. 我同埋同學傾偈嘅
11. 咁樣呢，有陣時呢，晏晝呢
12. 我就冇飯飛就食面包
13. 冇飯飛就食飯
14. 冇飯飛呢
15. 就係學校度
16. 用飯飛黎買飯
17. 咁樣呢，我小息呢
18. 就同埋同學傾偈
19. 咁，同埋同學傾偈
20. 點樣嘅呢
21. 同埋同學傾偈一係講鬼古
22. 同埋一係就講自己嘅生活
23. 有陣時呢就講嗰啲同學好唔好
24. 咁呢，晏晝我都係同埋同學玩
25. 有陣時呢就玩「掂牆」
26. 有陣時呢就玩「紅綠燈」
27. 有陣時呢傾偈㗎
28. 咁樣呢，我最鍾意上呢
29. 就係中文堂
30. 英文堂都幾好
31. 但係多啲功課做
32. 我嘅英文先生呢
33. 佢呢就好多日告假
34. 咁樣呢，我地就少啲功課做勒
35. 但係冇告假㗎日

36. 就要做多啲功課
37. 一條四五樣功課嘅
38. 咁樣呢，而家呢就放緊復活節假
39. 我呢唔使返學校
40. 但係呢，我都要溫書
41. 因為呢一返到學校
42. 就有考試勒
43. 但考試唔係一返到學校第一日
44. 就考試㗎
45. 一返到學校呢
46. 第一日唔使考
47. 第二日都唔使考
48. 第三日就要考勒
49. 咁樣呢，我幾時溫書呢
50. 我就等Daddy
51. 媽咪唔係度㗎，一條Daddy、媽咪唔得閒㗎陣時
52. 我都有溫書
53. 默書呢，我㗎陣時唔提早溫
54. 有陣時呢，我就留翻星期日夜晚先溫
55. 咁樣呢，我有陣時晏晝同埋啲公仔玩
56. 玩完之後呢
57. 又溫翻書㗎㗎
58. 溫完書呢就休息一陣間呢
59. 媽咪、Daddy返黎就食晚飯勒
60. 咁聽日又要返學呢
61. 返到學校呢，咁朝早就放低書包
62. 就同埋同學傾偈勒
63. 同埋同學傾偈後呢，就打lang鐘落堂
64. 就背翻書包呢就排隊唸經
65. 唸完經之後呢，就排隊上課室
66. 上課室呢，第一堂都係班主任堂㗎
67. 然後呢，第二堂呢就好多時就英文堂
68. 有陣時Science堂，有陣時PE堂
69. 咁樣呢，我玩得都好開心
70. 我都鍾意PE堂多
71. 但係PE堂成日冷親勒，整傷呀
72. 咁樣呢，我放學後呢
73. 我就返屋企

- 74. 返屋企沖涼同埋食餅干
- 75. 咁就做功課勒
- 76. 做完功課呢，就休息一陣間
- 77. 就執書包，一條溫吓書
- 78. 咁樣，媽咪返黎呢，咁完勒

我日一——，我今年八，我在——
書回。

- 1 我的學校
- 2 每天回到學校，我就放下書回。然後，
- 3 我都和同學說話。X鈴聲響了，我背上書回，
- 4 然後X。X後，我排隊上課室，然後，
- 5 我上課了。放小息了，我和同學說話，有時
- 6 我們說鬼古，有時說~~同學~~的情人。
- 7 午飯後，我和~~同學~~有時玩耍，有時說話
- 8 。
- 9 放學後，我洗澡，然後的東西。我做過
- 10 功課後，我^休息一下，然後我X書回，我~~書~~書
- 11 媽^給爸回家後，我~~吃~~過飯休息一下，我就~~要~~要
- 12 媽媽看我~~日~~書，我玩一下，X睡~~着~~了。
- 13
- 14
- 15

於

Appendix 4.5

The Observation Form for Subject 3B6C

12	11	10	9	8	7	6	5	4	3	2	1
-	OP	-		OP		-	-	-	-		
-	-	-				-	P	-	-		
-	-	-	-		P	-	RR	XP	-	-	
-	-	,	-		-	-	-	XP	-	-	
-	-	-	P		-	-	0	0	-	-	
-	-	XP	,		,	,	-	XP	-	-	
-	,	-	-		-	-	-	XP	-	-	
,	-	-	-		-	-	-	XP	0 RR	-	
-	-	-	-		-	-	-	-	XP	,	
-	-	,	,		-	P	,	,	-	-	
-	-	-	-		-	-	-	-	-	P	
-	-	-	-		-	-	-	-	-	-	
-	-	-	-		-	-	-	-	-	-	
PP	-	-	-		-	-	-	-	-	-	
P	-	XP	-		-	XP	-	-	,	-	
-	-	-	-		,	OP	-	-	-	-	
-	,	-	OP		-	-	-	-	-	-	
-	-	,	-		-	-	,	PP	-	0	
0	-	-	-		P		P	-	-	P	
	RR	P	-		-		-	-	-	-	
-	-	-	XP		-		-	,	,	-	

Note:

-	Chinese characters
P	pause
RR	rescan
, P	pausing for punctuation
XP	pausing to think of strokes of characters

Appendix 4.6

TIMING FOR COMPOSING												
SUBJ/MIN	SUB-PROCESSES											
	GENERATING IDEAS		COMPOSING ALOUD		WRITING		FINAL REVISION		TOTAL		NO. OF WORDS	
	E	C	E	C	E	C	E	C	E	C	E	C
1. 5A1	2	1	8	5	14	30	3	3	27	39	85	336
2. 5A2	3	1	4	3	14	24	1	2	25	32	144	271
3. 5A3	2	3	18	6	16	50	2	4	38	63	173	582
4. 5B4	5	1	5	5	18	15	0	0	28	21	58	81
5. 5B5	2	1	6	8	7	17	1	4	16	30	64	249
6. 5B6	2	4	11	2	8	15	2	4	23	25	100	227
1. 4A1	4	1	4	2	19	12	1	1	28	16	163	124
2. 4A2	1	2	3	3	12	32	1	1	17	38	86	186
3. 4A3	3	5	10	10	18	29	2	1	33	45	398	253
4. 4B4	1	1	3	2	6	6	1	1	11	13	64	108
5. 4B5	7	2	5	14	6	24	1	1	19	41	36	146
6. 4B6	1	1	2	2	8	8	2	1	13	12	100	104
1. 3A1	2	1	24	1	70	42	3	1	99	45	503	634
2. 3A2	3	1	3	3	18	9	1	1	25	14	66	124
3. 3A3	3	1	3	7	18	38	1	1	25	47	167	445
4. 3B4	1	1	9	3	11	15	1	3	23	22	126	227
5. 3B5	1	1	2	4	6	8	1	2	10	15	39	69
6. 3B6	1	1	5	7	16	18	4	2	26	28	96	208

E: Writing in English
C: Writing in Chinese

Appendix 4.7

COMPARISON OF TIMING FOR THE SUBPROCESES OF COMPOSING IN ENGLISH AND IN CHINESE (18 SUBJECTS)						
	E.MEAN	E.STD.	C.MEAN	C.STD.	T-TEST*	PROB.
Generating ideas	2.44	1.62	1.61	1.20	1.84	0.08
Composing aloud	6.94	5.87	4.83	3.37	1.28	0.22
Writing	15.83	14.35	21.78	12.75	-1.83	0.08
Final revision	1.56	0.98	1.83	1.25	-0.86	0.40
Total	26.78	19.47	30.06	14.69	-0.76	0.46

Time in minutes.

*T-value of the difference between E-mean (English) and C-mean (Chinese)

Appendix 4.8

COMPARISON OF TIMING OF THE SUB-PROCESSES OF COMPOSING IN ENGLISH AND IN CHINESE FOR P3, P4 AND P5 SUBJECTS				
	ENGLISH	ENGLISH	CHINESE	CHINESE
	F-VALUE	PROB.	F-VALUE	PROB.
Generating ideas	0.63	0.55	1.24	0.32
Composing aloud	0.81	0.47	0.21	0.81
Writing	1.22	0.32	0.38	0.69
Final revision	0.37	0.70	4.79	0.03
TOTAL	0.81	0.46	0.43	0.66

Primary 3: 6 subjects
Primary 4: 6 subjects
Primary 5: 6 subjects

Appendix 5.1

COMPARISON OF RETRIVAL OF IMAGES DURING WRITING FOR ENGLISH AND CHINESE (18 SUBJECTS)						
	E-MEAN	E.STD	C-MEAN	C.STD	T-TEST	PROB.
No. of Retrievals	1.22	0.81	3.67	1.53	-5.5	0.000
No.	18		18			

Appendix 5.2

COMPARISON OF THE DIFFERENCE IN RETRIVAL OF IMAGES DURING WRITING FOR P3, P4 AND P5 SUBJECTS				
	ENGLISH	ENGLISH	CHINESE	CHINESE
No. of Retrivals	F-VALUE	PROB.	F-VALUE	PROB.
	0.08	0.927	1.97	0.173

Appendix 6.1

TRANSFORMATION: THE RELATIONSHIP BETWEEN THE INCIDENCE OF CANTONESE & MSWC SENTENCE PATTERNS (18 SUBJECTS)							
	SENTENCE PATTERN		MEAN	STD.DEV.	T-TEST	PROB.	CORR
1	SVO	CAN	8.89	7.00	1.76	0.10	0.86
		MSWC	7.33	4.81			
2	VO	CAN	5.28	5.03	1.82	0.09	0.41
		MSWC	3.28	2.76			
3	SP	CAN	3.11	2.68	0.80	0.44	0.65
		MSWC	2.72	2.14			
4	SV	CAN	2.22	3.06	1.07	0.30	0.40
		MSWC	1.50	1.86			
5	SVC	CAN	1.39	1.72	1.32	0.21	0.24
		MSWC	0.83	1.04			
6	VOVO	CAN	1.39	1.72	2.24	0.04	0.40
		MSWC	0.56	0.86			
7	SVOV	CAN	1.28	1.64	1.10	0.29	0.41
		MSWC	0.89	0.83			
8	SVOVO	CAN	1.17	1.43	0.49	0.63	0.74
		MSWC	1.06	1.11			
9	VC	CAN	1.00	1.50	1.51	0.15	0.68
		MSWC	0.61	1.04			
10	VOV	CAN	0.67	1.19	1.10	0.29	0.44
		MSWC	0.39	0.61			
11	SVOC	CAN	0.44	0.71	0.52	0.61	0.16
		MSWC	0.33	0.69			
12	VOC	CAN	0.44	0.86	1.00	0.33	-0.13
		MSWC	0.17	0.71			
13	SVOVOVO	CAN	0.22	0.43	0.00	1.00	0.36
		MSWC	0.22	0.43			
14	VOVO	CAN	0.17	0.51	0.00	1.00	-0.11
		MSWC	0.17	0.51			
15	VOVOV	CAN	0.17	0.38	0.57	0.58	0.32
		MSWC	0.11	0.32			
16	SVOVOV	CAN	0.11	0.32	0.00	1.00	-0.13
		MSWC	0.11	0.32			
17	SVOVOVOV	CAN	0.11	0.32	1.00	0.33	0.69
		MSWC	0.06	0.24			
18	VOVOVO	CAN	0.11	0.32	1.46	0.16	0.00
		MSWC	0.00	0.00			
19	'BA'	CAN	0.06	0.24	-3.20	0.01	0.06
		MSWC	0.78	0.94			
20	SVOVOVOVO	CAN	0.06	0.24	1.00	0.33	0.00
		MSWC	0.00	0.00			
21	SVOVC	CAN	0.00	0.00	-1.00	0.33	0.00
		MSWC	0.06	0.24			
22	SVOO	CAN	0.00	0.00	-1.00	0.33	0.00
		MSWC	0.06	0.24			
	TOTAL	CAN	28.28	19.96	2.12	0.049	0.711
	TOTAL	MSWC	21.33	13.07			

Appendix 6.2

TRANSFORMATION: COMPARISON OF THE CANTONESE & OF THE MSWC SENTENCE PATTERNS FOR P3, P4 AND P5 SUBJECTS				
	SENTENCE PATTERN		F-VALUE	PROB.
1	SVO	CAN	0.78	0.48
		MSWC	0.57	0.58
2	VO	CAN	3.48	0.06
		MSWC	0.64	0.54
3	SP	CAN	1.63	0.23
		MSWC	0.49	0.62
4	SV	CAN	1.17	0.34
		MSWC	1.36	0.29
5	SVC	CAN	3.76	0.05
		MSWC	1.45	0.27
6	VOVO	CAN	0.02	0.98
		MSWC	0.50	0.62
7	SVOV	CAN	0.55	0.59
		MSWC	0.53	0.60
8	SVOVO	CAN	0.22	0.80
		MSWC	0.56	0.59
9	VC	CAN	0.27	0.77
		MSWC	0.64	0.54
10	VOV	CAN	0.44	0.65
		MSWC	2.96	0.08
11	SVOC	CAN	9.77	0.00
		MSWC	1.07	0.37
12	VOC	CAN	0.50	0.62
		MSWC	1.00	0.39
13	SVOVOVO	CAN	0.28	0.76
		MSWC	2.50	0.12
14	VOVO	CAN	0.60	0.56
		MSWC	2.14	0.15
15	VOVOV	CAN	1.15	0.34
		MSWC	2.50	0.12
16	SVOVOV	CAN	0.50	0.62
		MSWC	0.50	0.62
17	SVOVOVOV	CAN	2.50	0.12
		MSWC	1.00	0.39
18	VOVOVO	CAN	0.50	0.62
		MSWC		
19	'BA'	CAN	1.00	0.39
		MSWC	1.22	0.32
20	SVOVOVOVO	CAN	1.00	0.39
		MSWC		
21	SVOVO	CAN		
		MSWC	1.00	0.39
22	SVOO	CAN		
		MSWC	1.00	0.39
	TOTAL	CAN	2.01	0.168
	TOTAL	MSWC	0.56	0.588

Appendix 6.3

COMPARISON OF CASES WHERE P3, P4 AND P5 SUBJECTS FAILED TO TRANSFORM THEIR CANTONESE LEXICON TO ITS MSWC EQUIVALENT		
	F-VALUE	PROB.
Cantonese words in the written text	7.44	0.006

Appendix 7.1

TYPES OF TRANSFORMATIONS FOR PRIMARY 3 SUBJECTS												
SUBJECTS	3A1 E	3A1 C	3A2 E	3A2 C	3A3 E	3A3 C	3B4 E	3B4 C	3B5 E	3B5 C	3B6 E	3B6 C
TYPES	NUMBERS											
1. Idea units in composing aloud	118	57	15	20	32	107	29	51	18	13	26	77
2. Idea units in writing	65	79	3	17	29	61	1	24	5	15	17	30
3. New idea units added in writing	19	40	0	1	0	1	0	14	0	3	1	6
4. Idea units deleted in writing	39	21	0	6	0	32	0	35	3	3	4	58
5. Uncompleted idea units in composing aloud but completed in writing	0	5	0	1	0	0	0	1	0	0	0	0
6. Completed idea units in composing aloud but incompletely expressed in writing	10	1	15	0	5	3	14	0	2	0	3	1
7. Idea units avoided due to linguistic incompetence	21	1	12	3	8	1	28	1	7	0	5	0
8. Idea units replaced by another idea in writing due to linguistic incompetence	3	0	0	0	0	0	0	0	0	0	2	0
9. Over generalization (in no. of times)	6	1	0	0	2	0	0	1	1	1	2	2
10. Changing topics	1	1	0	1	1	2	0	2	2	1	3	2
11. Transfer												
11.1 Idea units (in Eng.) literally translated from Chinese	7	0	1	0	2	0	0	0	1	0	2	0
11.2 Tense/aspect (in no. of times)	30	0	4	0	7	0	1	0	1	0	2	0
11.3 Verb forms	5	0	0	0	0	0	0	0	0	0	1	0
11.4 Plural	6	0	3	0	4	0	1	0	2	0	0	0
11.5 Possible adjectives	2	0	0	0	0	0	0	0	0	0	0	0
11.6 Voice	1	0	0	0	2	0	0	0	0	0	0	0
11.7 Conjunction	3	0	0	0	5	0	0	0	1	0	3	0
11.8 Preposition	7	0	0	0	2	0	0	0	0	0	2	0
11.9 Article	2	0	1	0	1	0	0	0	0	0	0	0
11.10 Negative	1	0	0	0	0	0	0	0	0	0	0	0
11.11 Others	5	0	1	0	2	0	1	0	2	0	3	0

Appendix 7.2

TYPES OF TRANSFORMATIONS FOR PRIMARY 4 SUBJECTS													
SUBJECTS	4A1 E	4A1 C	4A2 E	4A2 C	4A3 E	4A3 C	4B4 E	4B4 C	4B5 E	4B5 C	4B6 E	4B6 C	
TYPES	NUMBERS												
1. Idea units in composing aloud	59	32	14	30	71	33	32	12	11	10	17	20	
2. Idea units in writing	23	16	12	24	37	30	9	12	7	19	16	22	
3. New idea units added in writing	0	5	2	3	1	0	1	1	1	11	1	12	
4. Idea units deleted in writing	3	19	0	10	9	3	8	1	6	2	0	10	
5. Uncompleted idea units in composing aloud but completed in writing	0	1	0	1	0	0	0	1	0	2	0	0	
6. Completed idea units in composing aloud but incompletely expressed in writing	16	1	1	1	6	0	3	0	3	0	1	1	
7. Idea units avoided due to linguistic incompetence	26	3	5	1	14	0	11	0	4	0	2	0	
8. Idea units replaced by another idea in writing due to linguistic incompetence	1	0	2	1	5	0	0	0	0	0	1	0	
9. Over generalization (in no. of times)	1	1	0	1	1	1	2	0	1	0	2	0	
10. Changing topics	4	2	1	1	2	1	1	1	2	2	3	1	
11. Transfer													
11.1 Idea units (in Eng.) literally translated from Chinese	4	0	3	0	5	0	1	0	1	0	3	0	
11.2 Tense/aspect (in no. of times)	6	0	6	0	5	0	2	0	0	0	2	0	
11.3 Verb forms	1	0	0	0	5	0	0	0	0	0	1	0	
11.4 Plural	3	0	1	0	2	0	2	0	1	0	3	0	
11.5 Possible adjectives	0	0	0	0	4	0	0	0	0	0	0	0	
11.6 Voice	2	0	3	0	3	0	0	0	0	0	0	0	
11.7 Conjunction	0	0	0	0	4	0	2	0	0	0	0	0	
11.8 Preposition	0	0	0	0	3	0	0	0	1	0	2	0	
11.9 Article	1	0	2	0	1	0	1	0	2	0	0	0	
11.10 Negative	2	0	0	0	3	0	0	0	0	0	0	0	
11.11 Others	2	0	1	0	3	0	2	0	1	0	2	0	

Appendix 7.3

TYPES OF TRANSFORMATIONS FOR PRIMARY 5 SUBJECTS												
SUBJECTS	5A1 E	5A1 C	5A2 E	5A2 C	5A3 E	5A3 C	5B4 E	5B4 C	5B5 E	5B5 C	5B6 E	5B6 C
TYPES	NUMBERS											
1. Idea units in composing aloud	23	22	21	47	29	93	9	11	20	24	31	27
2. Idea units in writing	11	24	19	27	21	52	7	11	8	25	14	27
3. New idea units added in writing	4	19	0	4	0	7	0	0	2	18	0	3
4. Idea units deleted in writing	12	5	1	10	1	13	0	0	7	17	0	2
5. Uncompleted idea units in composing aloud but completed in writing	0	2	0	2	0	0	0	0	0	2	0	1
6. Completed idea units in composing aloud but incompletely expressed in writing	2	0	2	1	8	0	1	0	3	0	4	0
7. Idea units avoided due to linguistic incompetence	5	0	4	0	8	0	4	0	5	0	10	0
8. Idea units replaced by another idea in writing due to linguistic incompetence	4	1	2	1	3	2	1	1	1	1	0	0
9. Over generalization (in no. of times)	2	0	1	1	4	1	2	0	1	1	2	1
10. Changing topics	1	1	1	1	3	3	1	1	2	2	1	1
11. Transfer												
11.1 Idea units (in Eng.) literally translated from Chinese	2	0	5	0	3	0	0	0	2	0	4	0
11.2 Tense/aspect (in no. of times)	3	0	3	0	21	0	2	0	1	0	1	0
11.3 Verb forms	0	0	1	0	0	0	0	0	0	0	0	0
11.4 Plural	1	0	2	0	21	0	2	0	2	0	2	0
11.5 Possible adjectives	0	0	1	0	2	0	0	0	1	0	1	0
11.6 Voice	0	0	0	0	0	0	0	0	0	0	0	0
11.7 Conjunction	1	0	0	0	0	0	0	0	1	0	2	0
11.8 Preposition	0	0	0	0	0	0	0	0	1	0	1	0
11.9 Article	0	0	0	0	2	0	0	0	0	0	0	0
11.10 Negative	0	0	0	0	0	0	0	0	0	0	0	0
11.11 Others	1	0	2	0	2	0	1	0	2	0	2	0

Appendix 7.4

COMPARISON OF TYPES OF TRANSFORMATIONS FOR WRITING IN ENGLISH AND IN CHINESE (18 SUBJECTS)						
TYPES	E.MEAN	E.STD.	C.MEAN	C.STD.	T.TEST	PROB.
1. Idea units in composing aloud	31.94	26.63	38.11	28.78	-0.77	0.45
2. Idea units in writing	16.89	15.18	28.61	17.86	-4.78	0.00
3. New idea units added in writing	1.78	4.43	8.22	9.96	-4.18	0.00
4. Idea units deleted in writing	5.17	9.24	13.72	15.09	-2.09	0.05
5. Uncompleted idea units in composing aloud but completed in writing	0.00	0.00	1.06	1.26	-3.56	0.00
6. Completed idea units in composing aloud but incompletely expressed in writing	5.50	5.00	0.44	0.78	4.27	0.00
7. Idea units avoided due to linguistic incompetence	9.94	7.71	0.56	0.98	5.55	0.00
8. Idea units replaced by another idea in writing due to linguistic incompetence	1.39	1.54	0.39	0.61	3.00	0.00
9. Over generalization (in no. of times)	1.67	1.45	0.67	0.59	2.77	0.013
10. Changing topics	1.6	1.1	1.44	0.62	0.72	0.48
11. Transfer						
11.1 Idea units (in Eng.) literally translated from Chinese	2.56	1.87				
11.2 Tense/aspect (in no. of times)	5.39	7.74				
11.3 Verb forms	0.78	1.58				
11.4 Plural	3.22	4.63				
11.5 Possible adjectives	0.61	1.09				
11.6 Voice	0.61	1.1				
11.7 Conjunction	1.22	1.59				
11.8 Preposition	1.11	1.74				
11.9 Article	0.72	0.82				
11.10 Negative	0.33	0.84				
11.11 Others	1.94	1.00				

Appendix 7.5

COMPARISON OF TYPES OF TRANSFORMATIONS FOR P3, P4 AND P5 SUBJECTS				
TYPES	ENGLISH	ENGLISH	CHINESE	CHINESE
	F-VALUE	PROB.	F-VALUE	PROB.
1. Idea units in composing aloud	0.65	0.54	1.99	0.17
2. Ideas units in writing	0.27	0.77	1.48	0.26
3. New idea units added in writing	0.52	0.60	0.43	0.65
4. Idea units deleted in writing	0.31	0.74	3.88	0.04
5. Uncompleted idea units in composing aloud but completed in writing	0.00	0.00	0.13	0.88
6. Completed idea units in composing aloud but incompletely expressed in writing	1.54	0.25	1.20	0.33
7. Idea units avoided due to linguistic incompetence	1.52	0.25	1.75	0.20
8. Idea units replaced by another idea in writing due to linguistic incompetence	0.63	0.55	9.12	0.00
9. Over generalization (in no. of times)	0.52	0.605	0.44	0.65
10. Changing topics	1.36	0.287	0.13	0.878
11. Transfer				
11.1 Idea units (in Eng.) literally translated from Chinese	0.18	0.83		
11.2 Tense/aspect (in no. of times)	0.38	0.69		
11.3 Verb forms	0.65	0.536		
11.4 Plural	0.67	0.53		
11.5 Possible adjectives	0.30	0.75		
11.6 Voice	2.75	0.09		
11.7 Conjunction	1.16	0.34		
11.8 Preposition	0.88	0.43		
11.9 Article	1.67	0.22		
11.10 Negative	1.81	0.20		
11.11 Others	0.70	0.51		

Appendix 8.1

TYPES OF PAUSING DURING WRITING FOR PRIMARY 3 SUBJECTS												
SUBJECTS	3A1 E	3A1 C	3A2 E	3A2 C	3A3 E	3A3 C	3B4 E	3B4 C	3B5 E	3B5 C	3B6 E	3B6 C
TYPES	NUMBER OF TIMES											
1. Retrieving of information	1	3	0	2	0	2	0	2	1	1	0	2
2. Selecting information	1	3	0	1	0	1	1	1	0	2	0	2
3. Planning while writing	3	3	0	2	2	4	0	1	0	0	1	0
4. Thinking of logical problems	0	5	0	1	0	0	0	1	0	0	0	0
5. Words												
5.1 Selecting appropriate words	1	5	0	1	0	0	1	3	0	0	0	1
5.2 Looking for words	27	0	50	0	5	0	124	0	1	1	4	2
6. Constructing and rearranging sentences	4	1	15	1	0	3	16	0	1	0	1	1
7. Transforming Cantonese to Standard Written Chinese		4		1		1		2		1		0
8. Thinking about grammar												
8.1 Basic tense formation	3	0	0	0	0	0	0	0	2	0	0	0
8.2 Verb form	7	0	0	0	3	0	0	0	1	0	0	0
8.3 Singular or plural	1	0	0	0	1	0	0	0	0	0	2	0
8.4 Conjunction	3	0	1	0	7	0	0	0	0	0	1	1
8.5 Subject / pronoun	2	0	0	0	3	0	0	0	0	0	0	0
9. Spelling / recalling strokes in Chinese characters	23	27	2	10	15	26	3	13	2	2	13	9
10. Punctuations / capitalization	12	3	0	3	0	1	4	3	3	1	2	7
11. Rescanning	13	10	4	6	8	7	6	5	5	4	4	3
12. Personal feelings	3	1	0	0	0	0	0	1	0	0	2	0
13. Others	2	0	0	0	0	1	0	1	0	0	0	0

Appendix 8.2

TYPES OF PAUSING DURING WRITING FOR PRIAMRY 4 SUBJECTS												
SUBJECTS	4A1 E	4A1 C	4A2 E	4A2 C	4A3 E	4A3 C	4B4 E	4B4 C	4B5 E	4B5 C	4B6 E	4B6 C
TYPES	NUMBER OF TIMES											
1. Retrieving of information	0	0	0	2	0	3	0	1	0	1	0	2
2. Selecting information	0	4	0	2	1	4	1	3	0	0	0	1
3. Planning while writing	0	2	0	2	6	3	0	1	0	1	0	2
4. Thinking of logical problems	0	1	0	4	0	1	0	2	0	1	0	0
5. Words												
5.1 Selecting appropriate words	0	1	2	6	0	1	0	2	0	1	0	0
5.2 Looking for words	67	2	2	0	5	0	8	0	5	0	2	0
6. Constructing and rearranging sentences	0	1	2	0	3	0	1	0	1	0	2	0
7. Transforming Cantonese to Standard Written Chinese		3		2		1		1		2		1
8. Thinking about grammar												
8.1 Basic tense formation	0	0	2	0	7	0	0	0	1	0	1	0
8.2 Verb form	0	0	2	0	3	0	0	0	0	0	0	0
8.3 Singular or plural	0	0	0	0	3	0	0	0	1	0	0	0
8.4 Conjunction	0	0	2	0	6	0	0	0	1	0	0	0
8.5 Subject / pronoun	0	0	1	0	2	0	0	0	0	0	2	0
9. Spelling / recalling strokes in Chinese characters	5	8	3	11	14	7	5	16	4	1	7	10
10. Punctuations / capitalization	2	2	1	0	7	2	0	3	0	0	0	0
11. Rescanning	5	4	6	3	16	7	4	4	6	4	5	4
12. Personal feelings	0	0	0	2	2	2	0	0	1	3	1	1
13. Others	0	0	0	2	0	0	0	1	1	0	1	0

Appendix 8.3

TYPES OF PAUSING DURING WRITING FOR PRIMARY 5 SUBJECTS												
SUBJECTS	5A1 E	5A1 C	5A2 E	5A2 C	5A3 E	5A3 C	5B4 E	5B4 C	5B5 E	5B5 C	5B6 E	5B6 C
TYPES	NUMBER OF TIMES											
1. Retrieving of information	1	3	0	4	0	6	2	2	1	2	0	1
2. Selecting information	0	4	1	2	0	3	1	1	0	1	0	2
3. Planning while writing	0	2	0	2	0	2	1	0	1	3	0	3
4. Thinking of logical problems	1	8	0	1	1	2	0	0	0	2	0	2
5. Words												
5.1 Selecting appropriate words	1	4	0	3	1	5	0	1	0	0	0	4
5.2 Looking for words	8	0	5	1	11	0	4	0	4	0	7	0
6. Constructing and rearranging sentences	0	0	4	1	3	0	0	0	2	0	3	0
7. Transforming Cantonese to Standard Written Chinese		2		2		3		1		3		3
8. Thinking about grammar												
8.1 Basic tense formation	5	0	2	0	1	0	0	0	0	0	0	0
8.2 Verb form	5	0	2	0	2	0	0	0	1	0	1	0
8.3 Singular or plural	2	0	1	0	1	0	0	0	1	0	1	0
8.4 Conjunction	0	0	0	0	3	1	2	0	0	1	1	0
8.5 Subject / pronoun	0	0	2	0	1	0	0	0	0	0	0	0
9. Spelling / recalling strokes in Chinese characters	5	6	11	8	10	21	4	1	5	4	12	8
10. Punctuations / capitalization	1	2	4	1	0	6	0	1	1	0	0	1
11. Rescanning	8	6	6	4	9	22	4	3	4	5	4	5
12. Personal feelings	2	0	0	2	0	1	1	0	0	1	0	0
13. Others	0	0	0	1	1	0	0	0	0	0	0	0

Appendix 8.4

COMPARISON OF TYPES OF PAUSING FOR WRITING IN ENGLISH AND IN CHINESE (18 SUBJECTS)						
TYPES	E.MEAN	E.STD	C.MEAN	C.STD	T-TEST	PROB.
1.Retrieving of information	0.33	0.59	2.17	1.34	-5.31	0.00
2.Selecting information	0.33	0.49	2.06	1.21	-5.95	0.00
3.Planning while writing	0.78	1.55	1.80	1.15	-2.96	0.0088
4.Thinking of logical problems	0.11	0.32	1.56	1.46	-4.19	0.00
5.Words						
5.1Selecting appropriate words	0.33	0.59	2.11	1.97	-4.97	0.0001
5.2Looking for words	18.83	31.78	0.33	0.68	2.48	0.02
6. Constructing and rearranging sentences	3.22	4.66	0.44	0.78	2.48	0.02
7. Transforming Cantonese to Standard Written Chinese			1.83	1.04		
8. Thinking about grammar						
8.1 Basic tense formation	1.33	1.97				
8.2 Verb form	1.5	1.97				
8.3 Singular or plural	0.78	0.88				
8.4 Conjunction	1.50	2.09	0.22	0.43	2.51	0.02
8.5 Subject / pronoun	0.72	1.02				
9. Spelling / recalling strokes in Chinese characters	7.94	5.71	10.44	7.70	-1.75	0.10
10. Punctuations / capitalization	2.06	3.15	2.00	1.97	0.07	0.95
11. Rescanning	6.5	3.33	5.89	4.39	0.63	0.54
12. Personal feelings	0.67	0.96	0.78	0.94	0.37	0.72
13. Others	0.28	0.46	0.28	0.58	0.00	1.00

Appendix 8.5

COMPARISON OF TYPES OF PAUSES FOR P3, P4 AND P5 SUBJECTS DURING WRITING				
TYPES	ENGLISH	ENGLISH	CHINESE	CHINESE
	F-VALUE	PROB.	F-VALUE	PROB.
1. Retrieving of information	2.14	0.15	2.23	0.14
2. Selecting information	0.00	1.00	0.46	0.64
3. Planning while writing	0.34	0.78	0.11	0.89
4. Thinking of logical problems	2.50	0.12	1.51	0.25
5. Words				
5.1 Selecting appropriate words	0.00	1.00	0.59	0.57
5.2 Looking for words	1.34	0.29	0.33	0.72
6. Constructing and rearranging sentences	2.04	0.02	2.72	0.09
7. Transforming Cantonese to Standard Written Chinese			1.08	0.364
8. Thinking about grammar				
8.1 Basic tense formation	0.36	0.71		
8.2 Verb form	0.48	0.62		
8.3 Singular or plural	0.26	0.77		
8.4 Conjunction	0.31	0.74	1.25	0.32
8.5 Subject / pronoun	0.19	0.83		
9. Spelling / recalling strokes in Chinese characters	0.48	0.63	1.31	0.30
10. Punctuations / capitalization	1.11	0.36	1.39	0.28
11. Rescanning	0.18	0.84	0.76	0.485
12. Personal feelings	0.16	0.85	1.94	0.18
13. Others	0.24	0.79	1.21	0.33

Appendix 9.1

TYPES OF REVISIONS FOR PRIMARY 3 SUBJECTS													
SUBJECTS	3A1 E	3A1 C	3A2 E	3A2 C	3A3 E	3A3 C	3B4 E	3B4 C	3B5 E	3B5 C	3B6 E	3B6 C	
TYPES	NUMBER OF TIMES												
1. Correction of misspelt words / wrong Chinese characters	8(1)	24(2)	0	9(6)	14	10(1)	3	6(2)	2(1)	4(1)	12(2)	5(1)	
2. Vocabulary / lexical items (sub-total)	2	5	0	4	1	0	0	0	0	0	0	1	
2.1 Replacing words with more appropriate ones	1	5	0	1	0	0	0	0	0	0	0	0	
2.2 Modifying words (adjectives / adverbs)	0	0	0	2	0	0	0	0	0	0	0	0	
2.3 Changing Cantonese words to written Chinese		0		1		0		0		0		0	
2.4 Deleting words	0	0	0	0	0	0	0	0	0	0	0	0	
2.5 Addition of words	1	0	0	0	1	0	0	0	0	0	0	1	
3. Phrases (sub-total)	1	4	0	1	0	1	0	1	1	0	0	0	
3.1 Replacing phrases by more appropriate ones	0	2	0	0	0	0	0	1	0	0	0	0	
3.2 Deleting phrases	0	1	0	0	0	0	0	0	0	0	0	0	
3.3 Inserting phrases	1(10)	1	0	1(1)	0	1	0	0	1(1)	0	0	0	
4. Sentences (sub-total)	0	0	0	0	2	1	0	0	0	0	1	3	
4.1 Inserting clauses / sentences sentences for more information	0	0	0	0	1	0	0	0	0	0	1(1)	3(3)	
4.2 Deleting a sentence / sentences to avoid redundancy	0	0	0	0	1	1	0	0	0	0	0	0	
5. Punctuation	6	4	0	1(1)	5	2	4	4(1)	0	0	0	2(1)	
6. Grammar (sub-total)	19	1	0	1	1	1	0	2	3	0	3	1	
6.1 Basic agreement	1	0	0	0	1	1	0	0	0	0	1	0	
6.2 Basic tense formation	4	0	0	1(1)	0	0	0	0	2(1)	0	1(1)	0	
6.3 Verb form	3	0	0	0	0	0	0	0	0	0	0	0	
6.4 Pronoun / subjects	0	0	0	0	0	0	0	0	0	0	0	0	
6.5 Conjunctions	5	0	0	0	0	0	0	2	1	0	1(1)	1	
6.6 Articles	6	1	0	0	0	0	0	0	0	0	0	0	
7. Correcting careless mistakes	9	7	2	0	0	2	1	3	1	1	1	1	
8. Others	2	0	0	0	0	0	0	0	0	0	0	1	
9.1 Final revision	1	2	0	9	0	1	0	3	3	1	5	5	
9.2 Total revising	47	45	2	16	23	17	8	16	7	5	17	13	
10. Mistakes detected but unable to make corrections	27	2	50	8	8	26	125	6	0	1	3	7	

Key: 5(3) 5 = First revision + final revision
(3) = Final revision for three times

Appendix 9.2

TYPES OF REVISIONS FOR PRIMARY 4 SUBJECTS												
SUBJECTS	4A1 E	4A1 C	4A2 E	4A2 C	4A3 E	4A3 C	4B4 E	4B4 C	4B5 E	4B5 C	4B6 E	4B6 C
TYPES	NUMBER OF TIMES											
1. Correction of misspelt words / wrong Chinese characters	6	3	3(1)	9(1)	11	5	5	3	3	2	2	4
2. Vocabulary / lexical items (sub-total)	0	2	2	3	1	0	2	4	0	0	0	3
2.1 Replacing words with more appropriate ones	0	0	1	0	1	0	0	0	0	0	0	1
2.2 Modifying words (adjectives / adverbs)	0	0	0	0	0	0	0	1	0	0	0	0
2.3 Changing Cantonese words to written Chinese		0		0		0		1		0		0
2.4 Deleting words	0	1	1	2	0	0	2	1	0	0	0	1
2.5 Addition of words	0	1(1)	0	1(1)	0	0	0	1	0	0	0	1
3. Phrases (sub-total)	0	0	2	1	1	0	0	0	0	0	0	0
3.1 Replacing phrases by more appropriate ones	0	0	1	0	0	0	0	0	0	0	0	0
3.2 Deleting phrases	0	0	0	1	1	0	0	0	0	0	0	0
3.3 Inserting phrases	0	0	1(1)	0	0	0	0	0	0	0	0	0
4. Sentences (sub-total)	0	0	0	0	0	0	0	0	0	0	0	0
4.1 Inserting clauses / sentences sentences for more information	0	0	0	0	0	0	0	0	0	0	0	0
4.2 Deleting a sentence / sentences to avoid redundancy	0	0	0	0	0	0	0	0	0	0	0	0
5. Punctuation	0	0	3	0	3	0	0	2	0	1	0	0
6. Grammar (sub-total)	1	1	7	0	14	0	0	0	1	0	2	0
6.1 Basic agreement	0	0	0	0	0	0	0	0	0	0	0	0
6.2 Basic tense formation	0	0	3	0	3	0	0	0	0	0	0	0
6.3 Verb form	0	0	2	0	2	0	0	0	0	0	0	0
6.4 Pronoun / subjects	0	1(1)	1	0	3	0	0	0	0	0	2	0
6.5 Conjunctions	0	0	1(1)	0	5	0	0	0	1	0	0	0
6.6 Articles	1	0	0	0	2	0	0	0	0	0	0	0
7. Correcting careless mistakes	2	1	2	2	3	2	4	5	0	1	2	2
8. Others	0	0	0	0	0	1	0	1	0	1	0	0
9.1 Final revision	1	1	3	2	0	0	0	0	0	0	0	0
9.2 Total revision	9	7	19	15	35	8	11	15	4	4	6	9
10. Mistakes detected but unable to make corrections	6(1)	2	0	0	1	1	3	2	4	0	0	4

Key: 5(3) 5 = First revision + final revision
(3) = Final revision for three times

Appendix 9.3

TYPES OF REVISIONS FOR PRIMARY 5 SUBJECTS												
SUBJECTS	5A1 E	5A1 C	5A2 E	5A2 C	5A3 E	5A3 C	5B4 E	5B4 C	5B5 E	5B5 C	5B6 E	5B6 C
TYPES	NUMBER OF TIMES											
1. Correction of misspelt words / wrong Chinese characters	5	8	2	1	6	9(3)	0	0	4	9(3)	1	5(2)
2. Vocabulary / lexical items (sub-total)	2	3	1	9	0	12	0	1	0	2	1	0
2.1 Replacing words with more appropriate ones	0	2	0	2	0	2	0	0	0	1	0	0
2.2 Modifying words (adjectives / adverbs)	1	0	0	5(3)	0	1(1)	0	1	0	0	0	0
2.3 Changing Cantonese words to written Chinese		0		1		2		0		0		0
2.4 Deleting words	1	1(1)	1(1)	1	0	3	0	0	0	0	1	0
2.5 Addition of words	0	0	0	0	0	4	0	0	0	1	0	0
3. Phrases (sub-total)	2	1	0	4	2	2	0	0	0	0	0	0
3.1 Replacing phrases by more appropriate ones	1	0	0	1	0	1	0	0	0	0	0	0
3.2 Deleting phrases	1	1	0	2	1	1	0	0	0	0	0	0
3.3 Inserting phrases	0	0	0	1	1	0	0	0	0	0	0	0
4. Sentences (sub-total)	0	2	0	0	1	0	0	0	0	0	2	1
4.1 Inserting clauses / sentences sentences for more information	0	0	0	0	1(1)	0	0	0	0	0	1	1(1)
4.2 Deleting a sentence / sentences to avoid redundancy	0	2	0	0	0	0	0	0	0	0	1	0
5. Punctuation	1	0	1	0	0	2	1	1	1	0	0	1
6. Grammar (sub-total)	4	0	4	0	2	1	1	0	5	0	7	0
6.1 Basic agreement	0	0	0	0	0	0	0	0	0	0	0	0
6.2 Basic tense formation	4	0	1	0	1(1)	0	0	0	1(1)	0	0	0
6.3 Verb form	2	0	0	0	0	0	0	0	3(1)	0	0	0
6.4 Pronoun / subjects	0	0	2(1)	0	0	1	0	0	0	0	0	0
6.5 Conjunctions	0	1	0	0	1	0	1	0	1	0	0	0
6.6 Articles	0	0	1	0	0	0	0	0	0	0	0	0
7. Correcting careless mistakes	0	1	2	3	2	7	0	0	1	1	3	1
8. Others	0	0	0	0	0	0	0	0	0	0	0	0
9.1 Final revision	0	1	3	3	2	4	0	0	2	4	0	3
9.2 Total revision	16	15	10	17	11	33	8	2	11	12	6	8
10. Mistakes detected but unable to make corrections	2	1	8	2	6	0	1	0	1	0	7	3

Key:

5(3)

5 = First revision + final revision

(3) = Final revision for three times

Appendix 9.4

COMPARISON OF TYPES OF REVISIONS FOR WRITING IN ENGLISH AND IN CHINESE (18 SUBJECTS)						
	E. MEAN	E. STD	C. MEAN	C. STD	T-TEST	PROB.
1. Correction of misspelt words / wrong chinese characters	4.83	4.08	6.50	5.31	-1.30	0.21
2. Vocabulary / lexical items (sub-total)	0.67	0.84	2.33	3.36	-2.1	0.051
2.1 Replacing words with more appropriate ones	0.17	0.38	0.78	1.31	-2.09	0.052
2.2 Modifying words (adjectives adverbs)	0.06	0.24	0.56	1.25	-1.64	0.12
2.3 Changing Cantonese words to written Chinese			0.28	0.58		
2.4 Deleting words	0.33	0.59	0.56	0.86	-1.07	0.30
2.5 Addition of words	0.11	0.32	0.56	0.98	-1.72	0.10
3. Phrases (sub-total)	0.5	0.78	0.83	1.3	-1.06	0.3
3.1 Replacing phrases by more appropriate ones	0.11	0.32	0.28	0.58	-1.00	0.33
3.2 Deleting phrases	0.17	0.38	0.39	0.61	-1.46	0.16
3.3 Inserting phrases	0.22	0.43	0.22	0.46	-0.37	0.72
4. Sentences (sub-total)	0.33	0.69	0.39	0.85	-0.29	0.77
4.1 Inserting clauses / sentences	0.17	0.38	0.22	0.73	-0.44	0.67
4.2 Deleting clauses / sentences	0.11	0.32	0.28	0.67	-0.90	0.38
5. Punctuation	1.39	1.94	1.11	1.32	0.70	0.49
6. Grammar (sub-total)	4.33	5.34				
6.1 Basic agreement	0.11	0.32				
6.2 Basic tense formation	1.11	1.45				
6.3 Verb form	0.67	1.14				
6.4 Pronoun / subjects	0.44	0.92				
6.5 Conjunctions	0.94	1.55				
6.6 Articles	0.56	1.46				
7. Correcting careless mistakes	1.94	2.16	2.22	2.10	-0.69	0.50
8. Others	0.11	0.47	0.22	0.43	-0.7	0.50
9.1 Final revision	1.11	1.53	2.11	2.30	-1.80	0.09
9.2 Total revision	13.89	11.40	14.28	10.36	-0.17	0.87
10. Mistakes detected but unable to make corrections	13.94	30.28	3.67	6.15	1.46	0.16

Appendix 9.5

COMPARISON OF TYPES OF REVISIONS AMONG P3, P4 AND P5 SUBJECTS				
TYPES	ENGLISH	ENGLISH	CHINESE	CHINESE
	F-VALUE	PROB.	F-VALUE	PROB.
1. Correction of misspelt words / wrong chinese characters	1.13	0.35	1.78	0.20
2. Vocabulary /lexical items (sub-total)	0.21	0.81	2.25	0.14
2.1 Replacing words with more appropriate ones	1.15	0.34	1.01	0.39
2.2 Modifying words (adjectives, adverbs)	1.00	0.39	1.12	0.35
2.3 Changing Cantonese words to written Chinese			0.44	0.651
2.4 Deleting words	1.50	0.26	2.16	0.15
2.5 Addition of words	2.50	0.12	0.72	0.50
3. Phrases (sub-total)	0.25	0.79	1.22	0.32
3.1 Replacing phrases by more appropriate ones	0.50	0.62	1.21	0.33
3.2 Deleting phrases	1.15	0.34	1.06	0.37
3.3 Inserting phrases	0.28	0.76	5.00	0.02
4. Sentences (sub-total)	1.07	0.37	1.00	0.39
4.1 Inserting clauses / sentences	1.15	0.34	0.70	0.51
4.2 Deleting clauses / sentences	0.50	0.62	0.11	0.90
5. Punctuation	1.63	0.23	3.86	0.05
6. Grammar (sub-total)	0.01	0.99		
6.1 Basic agreement	2.50	0.12		
6.2 Basic tense formation	0.02	0.98		
6.3 Verb form	0.12	0.89		
6.4 Pronoun / subjects	2.06	0.16		
6.5 Conjunctions	0.34	0.72		
6.6 Articles	0.46	0.64		
7. Correcting careless mistakes	0.36	0.70	0.01	0.989
8. Others	1.00	0.39	2.50	0.17
9.1 Final revision	0.42	0.66	3.30	0.065
9.2 Total revision	0.53	0.60	1.15	0.342
10. Mistakes detected but unable to make corrections	1.46	0.16	3.67	0.05

Appendix 10.1

The Written Text of Bosco (in Chinese)

聰明的商人

- 1 從前，有一個大官，他終日玩樂，不理政
2 事，弄得民窮財盡，不久他的金錢也用光了。
3 他決定為了自己能繼續享樂，便想了一
4 個詭計。凡以後帶家畜出關的人，都要扣
5 除一隻家畜，但他怕人民不滿，便假裝裝好
6 意，發還一隻家畜。自此以後，再沒有敢帶家
7 畜出關。
8 一個月後，却有一個聰明的商人，他帶了
9 兩頭牛，準備出關，在第一關卡的時候，一
10 員把一頭牛沒收，又把一頭牛還給他一頭牛，
11 在第二關卡的時候也時這樣，所以我們終於都擁
12 有二頭牛。
13
14

The Written Text of Bosco (in English)

1	Once upon a time ^{There was} a thirsty bird. & It had
2	not drank drink water a long time ago.
3	
4	It is looking for water. It found a jar of a
5	bottle of water. It was very happy. It wanted
6	to drink the water ^{in the ground} because because but
7	it could not because the neck of the bottle is too
8	X. The clever bird pick up some some stones and
9	threw it into the water. The water in the bottle
10	rise X up and the bird can drink it.
11	
12	

