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**THE ONTOGENESIS OF MULTILITERACIES IN  
TEXTBOOKS: MULTIMODAL ANALYSIS OF  
ENGLISH LANGUAGE TEACHING TEXTBOOKS  
OF DIFFERENT GRADES**

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2015



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DEPARTMENT OF ENGLISH

**The Ontogenesis of Multiliteracies in Textbooks:  
Multimodal Analysis of English Language Teaching  
Textbooks of Different Grades**

GUO SONGDAN

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF DOCTOR OF PHILOSOPHY

SEPTEMBER, 2014

## **CERTIFICATE OF ORIGINALITY**

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\_\_\_\_\_ (Signed)

GUO SONGDAN (Name of student)

## DEDICATION

In my loving memory

of my uncle

Mr. Guo Changzhong (1956 – 2014)

## **ABSTRACT**

This thesis is concerned with modelling the processes of meaning making. The central goal is to explore the expansion of meaning potential constructed by both linguistic resources and visual images in English Language Teaching (ELT) textbooks used in Hong Kong primary and secondary schools. The exploration is based on systemic-functional theory and draws on insights from educational linguistics. Through empirical analysis of all the verbal texts and visual images included in thirteen ELT textbooks, this thesis explicates the ontogenetic expansion of the meaning potential as it is progressively constructed in successive textbooks.

Chapter 1 provides an overview of the theoretical and contextual backgrounds. Motivated by functional linguistic approaches to language development this thesis adopts an ontogenetic perspective to investigate textbooks as language learning materials during schooling, aiming to provide a systematic modelling of meaning construction in textbooks. The contextual motivation of this thesis stems from the recent academic reform in Hong Kong. As a consequence of this reform, the Education Bureau now stresses that students experience a smooth transition as they progress from grade to grade. Whether the current English textbooks support or impede the smooth transition is addressed in this study.

Chapters 2 to 4 set out the foundations of the current study. Chapter 2 reviews relevant issues on textbooks studies. In particular, the historical development of textbook design underlying the historical development of language teaching approaches is introduced. Chapter 2 also reviews the previous studies on textbook analysis. Chapter 3 outlines different approaches to explore the ontogenetic expansion of the meaning potentials of learners, especially the functional linguistic approaches underpinning the current thesis. In

Chapter 4, I elucidate the main theoretical foundations of the thesis, which include the systemic functional model of language and the stratified relations between context, discourse and language.

Chapters 5 to 7 present the main theoretical frameworks and analyses of verbal texts and visual images extracted from the textbooks. Chapter 5 introduces the contextual background and the research design. In Chapter 6, I investigate the expansion of meaning potential as constructed by verbal texts in the textbooks. Chapter 7 presents the meaning construction of visual images.

Chapter 8 further extends this thesis from learning materials for primary and secondary levels to include learning materials for the tertiary level by outlining a pilot study on college textbooks.

In Chapter 9 I conclude by summarizing the major findings of the research and its contribution to both language education and the exploration of meaning construction. Chapter 9 also discusses the limitations of the current study and the possible directions of further study.

The research is significant in both the theoretical and practical spheres: on the one hand, it serves as the starting point for future studies exploring multilingual meaning potential from an ontogenetic perspective, and on the other hand it maps out the systematic modelling of meaning potential constructed in language learning materials during schooling, providing insights for curriculum development and material design in English as a second or foreign language (ESL/EFL) context.

## PUBLICATIONS ARISING FROM THE THESIS

Guo, S. D. Nancy. (2014). Ontogenetic analysis of college English textbooks in China -- a systemic-functional perspective. In David Qian & Li Lan (Eds.), *Teaching and Learning English in East Asian Universities: Global Visions and Local Practice* (pp. 360-376). London: Cambridge Scholars Publishing.

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Guo, S. D. Nancy. (forthcoming). Book review: Language education throughout the school years: A functional perspective by Frances Christie. *Linguistics and the Human Sciences* (published on-line: <http://hallidaycentre.cityu.edu.hk/resources/LHS/BRChristie2012.pdf>).



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# Chapter 1 Introduction

## 1.1 Overview

When people learn languages, they build up their own personalized meaning potentials as part of the collective meaning potential that constitutes the language, and they build up these personal potentials by gradually expanding their own registerial repertoires—their own shares in the collective meaning potential. As they expand their own registerial repertoires, they can take on roles in a growing range of contexts, becoming semiotically more empowered and versatile. This kind of learning starts before children enter the institutions of formal education, and it continues after adolescents or young adults leave these institutions (at the secondary or tertiary level). It continues as adults take on new roles in their working lives and in other aspects of their adult lives. With today's emphasis on lifelong learning, on a succession of university degrees throughout life, and on professional training in the workplace, people's registerial repertoires are constantly changing in makeup and they typically keep expanding (Matthiessen, 2009b: 223).

This quote from Matthiessen (2009b) succinctly expresses the objective of this thesis, which is to investigate the expansion of people's registerial repertoires during certain periods of lifelong learning. Specifically, this study attempts to explore the expansion of meaning-potentials developed over time while undertaking English as a second language (ESL) or English as a foreign language (EFL) education. Using English Language Teaching (ELT) textbooks as data, the study explores the expansion of registerial repertoires reflected in the textbooks from primary school to senior secondary school.

The research contributes to educational linguistic studies from an ontogenetic perspective. In the field of educational linguistics, despite ongoing interest in developmental change in language and literacy, few studies have explored the registerial repertoires in the ESL and EFL contexts.

This thesis chooses Hong Kong as an example of ESL/EFL context to examine the expansion of English meaning potentials across the years of schooling.

This study also contributes to research on textbooks. Previous studies on textbook either take a macro-level perspective examining textbook compilations and evaluation (e.g. Tomlinson *et al.*, 2001; Chen, 2005) or adopt a micro-level approach investigating special content or core vocabulary in textbooks (e.g. Chen, 2010; Weninger & Kiss, 2013, Yang, 2012). As foreign language textbooks are the fundamental carrier of meaning in primary and secondary schooling in non-English speaking regions, they provide essential data for us to understand how meaning is constructed through verbal and visual resources. From a social-semiotic perspective, this research focuses on both verbal texts and images in the textbooks, aiming to investigate meaning construction through multimodal resources.

The method for modelling the meaning construction process in this PhD project is premised on systemic functional linguistics (SFL), a fundamental principle of which is that language is a multi-level stratified system consisting of context, semantics, lexicogrammar, and phonology/graphology (Halliday & Matthiessen, 2004: 24-26). Furthermore, language performs three metafunctions namely, ideational (construing experience), interpersonal (enacting social roles) and textual (organizing the text) (Halliday & Matthiessen, 2004: 29-30). These three strands of meanings (ideational, interpersonal, and textual) are simultaneously realized in every instance of semiotic resources.

The theoretical background of this thesis, which is situated in the broader context of systemic functional linguistics and systemic functional multimodal discourse analysis are elaborated in



Section 1.2. The EFL/ESL context of this study is introduced in further detail in Section 1.3. Finally, the organization of this thesis is outlined in Section 1.4.

## **1.2 Theoretical background**

### **1.2.1 Functional linguistic approach to language development**

A number of studies have attempted to explore the developmental change in language and literacy. Some studies focus on the synthesis of language learners' writing and the generalization of learners' cognitive development reflected in their writing. Other studies investigate the linguistic features in learners' writing across certain learning periods. All these studies contribute to the field of ontogenetic educational studies, but the body of work in this area lacks research in the area of ontogenesis that connecting context and lexico-grammar in light of the relationship between functions and structures.

Systemic functional linguistics, as developed by M.A.K. Halliday, builds on insights from Firth's (1957) system-structure theory, the Prague school of linguistics (Daneš, 1974), the glossematics theory of Hjelmslev (1961), and from British and American anthropological linguistic theories (Malinowski, 1923; Sapir 1949; Whorf, 1956). In the systemic interpretation of linguistics, language is conceived of as a resource for making meaning. Building on Malinowski's (1923) and Firth's (1968) conceptions and descriptions of context, Halliday (1985) proposed three features of context (field, tenor, and mode) and emphasized the relationship between language, context, and text that language lies in the study of texts and situation is "the context in which texts unfold and in which they are to be interpreted" (Halliday, 1985: 5-12). Matthiessen (2004, 2009) further elaborates the systemic functional linguistic approach to text and language claiming that "text instantiates the overall system potential of language" and "language [is] . . . a

resource for making meaning” (Matthiessen, 2004: 1; Matthiessen, 2009: 207) That is to say, the language used in the text is not a system, but an instantiated choice we select that corresponds to the particular context of situation available from the choices of meaning making in the overall system.

One of the dimensions of organizing language as a complex system is stratification (Halliday & Matthiessen 2004: 24-26). That is a multi-strata system consisting of context, semantics, lexicogrammar, phonology, and phonetics. The relationship between the strata and the process of linking one level of organization with another is called realization (Halliday & Matthiessen, 2004: 26).

Using this conception of language, Halliday (1994) examined children’s language development from a very early age and proposed four stages of language development (pre-meaning, first steps in meaning, protolanguage, and language). Painter (1996; 1999) undertook a two and a half year longitudinal case study of language development beginning when the child was two and a half years old. Christie and Derewianka (2008) analyzed students’ writing across all years of schooling from childhood to late adolescence. Complementing their efforts, this current thesis attends to the expansion of meaning potential in EFL/ESL contexts. As language textbooks are the fundamental carrier of knowledge in EFL/ESL contexts, they are a valuable resource for teachers to scaffold students’ literacy during schooling. Examining ELT textbooks used in different grades as data, this study aims to examine the ontogenesis of literacy based on an analysis of English language textbooks for primary and secondary school students.

### 1.2.2 Systemic functional multimodal discourse analysis and visual images

Addressing the need for multiliteracies in language education, this thesis also investigates the visual construction of knowledge in ELT textbooks and aims to develop a social semiotic framework to explicate the ontogenetic changes in the representational meaning of visual images in textbooks.

The linguistically informed multimodal approach used in this thesis is referred to as systemic functional multimodal discourse analysis (SF-MDA) (e.g. O'Halloran, 2008). According to the theory of systemic functional linguistics, the multimodal phenomena is treated as semiotic systems of meaning which are constructed by making different choices and combining different options of the system. Applying the notion of stratification, which posits that semantic meaning is realized by lexico-grammar for language, we can understand multimodal phenomena as semiotic systems of meaning such that semantic options are realized in the distance between the viewfinder and the subject, camera angle, framing, and so on. SF-MDA also extends the metafunctional diversification from the linguistic system to other modes of communication such as visual images (Kress & van Leeuwen, 2006), painting, architecture and sculpture (O'Toole, 1994), gesture (Martinec, 2000), mathematical symbols (O'Halloran, 2005), film (Bateman & Schmidt, 2013), and sound (van Leeuwen, 1999).

For visual images, which are the focus of this study, Kress and van Leeuwen (2006) have set out a systematic map to analyze multimodal visual-based communicative discourse, providing a “grammar” of the possibilities of meaning-making that applies to all forms of visual presentation. Adopting the notion of “metafunction” (Halliday & Matthiessen, 2004), Kress and van Leeuwen (2006) define the ideational metafunction of any semiotic mode as the function of representing objects and their relations in a world outside the representational system and name it the

representational meaning. Furthermore, any semiotic mode has an interpersonal metafunction that represents a particular social relation between the producer, the viewer, and the object represented, which is named the interactive meaning. The semiotic mode also has the capacity to form texts—complexes of signs which cohere both internally with each other and externally with the context in and for which they are produced. In other words, different textual meanings of semiotic modes can be realized by different compositional arrangements. Kress and van Leeuwen (2006) name it the compositional meaning. Previous studies examined the interactive and compositional meanings of visual images in the textbooks (e.g. Chen, 2010; Coffin & Derewianka, 2009). Complementing their efforts, this current study explores the ontogenetic expansions of the representational meaning of visual images in textbooks.

### **1.3 Contextual motivation**

The EFL/ESL context chosen for this thesis is Hong Kong, an international city adjacent to rapidly developing Mainland China. After the handover in 1997, the government of Hong Kong adopted the “biliterate and trilingual” policy (Education Bureau, 2013: 1). Under this policy, both Chinese and English are acknowledged as the official languages while Cantonese and Mandarin are acknowledged as the two spoken varieties of Chinese in Hong Kong. Of the two official languages, the mastery of English in Hong Kong is regarded vital for learners to open up their “intellectual and social development,” “educational attainment,” “career advancement,” “personal fulfillment,” and “cultural understanding” (Curriculum Development Council, 2007a: 2). Given the significance of English learning in Hong Kong the subject of English, or English language education, is one of the eight key learning areas in primary and secondary schooling as stipulated by the Education Bureau of the Government of Hong Kong Special Administrative Region (Curriculum Development Council, 2012a).

The context of this PhD research project was inspired by the recent academic reform in HK. In 2005, the Education Bureau of the Government of Hong Kong Special Administrative Region stated in a report that the implementation of a three-year senior secondary academic structure would commence at Secondary 4 (age 15-16) beginning September 2009. The current “3 + 2 + 2 + 3” system was to change to a “3 + 3 + 4” system: three years of junior secondary education, three years of senior secondary education, and a four-year undergraduate degree. The need to maintain a smooth transition between grades posed challenges for textbooks designers and teachers. Thus, this PhD project explores the expansion of meaning construction in the textbooks designed to support the new academic structure. The ontogenetic view adopted in this thesis may help identify the longitudinal shift in students’ learning across the schooling years and highlight potential learning difficulties at critical periods in a student’s education. This thesis sheds light on curriculum development, textbook design and language teaching in this context.

#### **1.4 Outline of the thesis**

To contextualize this research project, Chapter 2 starts with a review of the historical development of textbook design. It then provides a survey of research on textbook analyses that have explored the field at both macro and micro levels, including textbooks compilation and evaluation at macro levels and analysis of certain content and core vocabulary in textbooks at micro levels.

As this study adopts an ontogenetic perspective to examine the expansion of meaning potentials, Chapter 3 explores previous ontogenetic research on language development.

Chapter 4 introduces and discusses the core concepts underlying the design of this study: context, discourse and language. Various approaches of exploring the relations between these three concepts are reviewed, including genre approaches and other taxonomic frameworks. By comparing these approaches and frameworks, I explore my choice to adopt Matthiessen's registerial cartographic approach in this study.

In Chapter 5, I introduce the context and the research design of the study.

Chapter 6 presents and discusses the analysis of linguistic learning paths identified during the examination of textbooks for different grades, whereas Chapter 7 describes and discusses the visual learning path identified through examination of textbooks for different grades.

In Chapter 8, I further extend this study to a pilot analysis of college textbooks and explore the implications for teaching and learning at the tertiary level.

Finally, Chapter 9 discusses the general significance of the research and its limitations, concluding with a discussion of the implications for the teaching and learning multiliteracies across all years of schooling.

# Chapter 2 Why textbooks?

## 2.1 Introduction

The previous chapter introduced the theoretical and contextual background of this thesis in general. This chapter focuses on the issues of English Language Teaching (ELT) textbooks from both a diachronic and a synchronic perspective. Beginning with an examination of the diachronic, this chapter reviews historical trends in the design of ELT textbooks by exploring the development of teaching approaches underlying textbook design. In this historical overview I examine the significance of the notion of “context” as developed by functional linguistics. A discussion of how the notion of “context” was applied in the past is essential to this PhD project as it directly leads to the analysis and discussion in Chapter 6 of how the textbooks currently used in Hong Kong embody the conception of “context.” Recent studies on the synchronic in textbooks are reviewed in the third section of this chapter, including macro-level studies of textbook compilation and evaluation and micro-level studies of certain content and core vocabulary in the textbooks. This review of research on textbooks motivates the comprehensive semiotic analysis of textbooks including verbal texts and visual images in this PhD project.

## 2.2 The development of second language textbooks: historical development of teaching approaches underlying textbook design

### 2.2.1 Role of ELT textbooks

English Language Teaching (ELT) textbook publishing has been a multi-million dollars industry around the world for a long time (Johnson *et al.*, 2008; Sheldon, 1988). The exponential increase in the ELT materials on the market suggests the high popularity of ELT textbooks

(Cunningsworth, 1995; Ellis, 1997; Johnson *et al.*, 2008). Unlike traditional textbooks such as biology and history textbooks, which are designed to lead students to master a specific academic discipline, ELT textbooks used to teach English as second language (ESL) and English as foreign language (EFL) do not play the same role (Byrd, 2001). What is learned and practiced in such textbooks is language itself (Kleckova, 2004). The fundamental purpose of ELT textbooks is to help students master linguistics skills using examples from different aspects of daily life, such as making purchases in a supermarket or ordering in a restaurant (Kleckova, 2004).

There has been vigorous debate for and against textbook-based teaching (Allwright, 1981; Brumfit, 1979; O'Neill, 1982). Brumfit (1979) and Allwright (1981) argue that although textbooks can help teachers, they take away their initiative and fail to meet the needs of individual students and the complex language learning process (McGrath, 2002). However, an equally well-known statement by O'Neill (1982) presents a number of counterarguments and claims that the textbook is a convenient aid. To summarize the arguments, we can conclude that textbooks not only provide a structure for teaching, but also reinforce what the teacher has taught and offer support for learning outside the classroom such as preparation and revision (Grant, 1987; Hutchinson & Torres, 1994; O'Neill, 1982; Ur, 1996). The importance of textbooks also lies in the representation of new approaches to language teaching, which contribute to teachers' professional development (McGrath, 2002; Nunan, 1991; Edge & Wharton, 1998). The current situation of the ELT classroom also reflects that English language textbooks have become a central component in classroom practice (Zacharias, 2005). Whether they are being used in conjunction with other texts or materials or as a sort of surrogate curriculum, textbooks tend to affect the teaching and learning process in the classroom (Britton, Woodward & Binkley, 1993; Hutchinson & Torres, 1994; Tomlinson, 1998; Zacharisa, 2005).



Furthermore, foreign language textbooks are the fundamental carrier of knowledge in primary and secondary schooling in non-English speaking regions. They provide essential data for us to understand how knowledge is constructed through multiple resources. Given the popularity and importance of ELT textbooks, how textbook design has developed since nineteenth century is worth investigating. Yet, scholars have produced surprisingly few historical accounts of textbook development. This section aims to identify historical trends in ELT textbook development, explore the major turning points, and determine what major factors caused these fundamental changes.

### **2.2.2 The textbook, the syllabus and the curriculum**

When reviewing the historical development of the textbook, we also need to take account of the development of the syllabus and the curriculum because the textbook, the syllabus, and the curriculum are an integral part of the educational process and interact with each other. I am going to introduce the complementary relations between the textbook, the syllabus and the curriculum in this section. Figure 2.1 shows the relationship between the textbook, the syllabus and the curriculum. The textbook is closely related to the syllabus. In the historical development of language teaching and learning, textbooks are one type of instructional material guided by the requirement of the syllabus to present specific approaches of teaching and learning at that time (Dubin & Olshtain, 1986; Richards & Rodgers, 1986). The syllabus specifies “the content of a course of instruction and lists what will be taught and tested” (Richards, 2001: 2). The textbook provides the foundation for the syllabus. It provides the instructional content and helps fulfill the learning goals which are stated in the syllabus (McGrath, 2002; Nunan, 1988). The syllabus defines the linguistic content in terms of the language elements—structure, topics, notions, and functions—or in some cases in terms of the learning tasks (Johnson, 1982: 32-34). The textbook,

as a form of instructional material, in turn, further specifies the subject matter content and defines or suggests the intensity of coverage of the syllabus items, allocating the amount of time, attention, and detail a particular syllabus item or task requires (Richards & Rodgers, 1986: 25).

Secondly, not only is the textbook closely related to the syllabus, the textbook, the syllabus and the curriculum are closely related to each other (See Figure 2.1). The definitions of these three terms are essential to understanding their relationship. A number of educational linguists and practitioners have attempted to define the terms “curriculum” and “syllabus” (e.g. Allen, 1984; Nunan, 1988; Stern, 1984). Dubin and Olshtain (1986) offer a comprehensive definition. They posit that a “curriculum” contains a broad description of the general goals of learning and teaching by indicating the overall educational-cultural philosophy, which applies across subjects together with a theoretical orientation to language and language learning with respect to the subject matter at hand (Dubin & Olshtain, 1986: 34). The “syllabus” is a detailed operational statement of the teaching and learning elements that translate the philosophy of the curriculum into a series of planned steps leading towards more narrowly defined objectives at each level (Dubin & Olshtain, 1986: 35). A textbook or course book is one part of the instructional materials along with worksheets, teacher-written materials, self-access materials or independent learning materials, and other supplementary audio visual materials such as videos and recordings, which lay the foundation of the syllabus and help teachers facilitate and learners participant in the language teaching and learning (MacGrath, 2001; Nunan, 1988).

In all, based on the underlying philosophy of the curriculum the syllabus constitutes a series of planned steps for teaching and learning and defined objectives at each level, and the textbook as a part of the teaching and learning materials is designed based on of the syllabus and the curriculum.

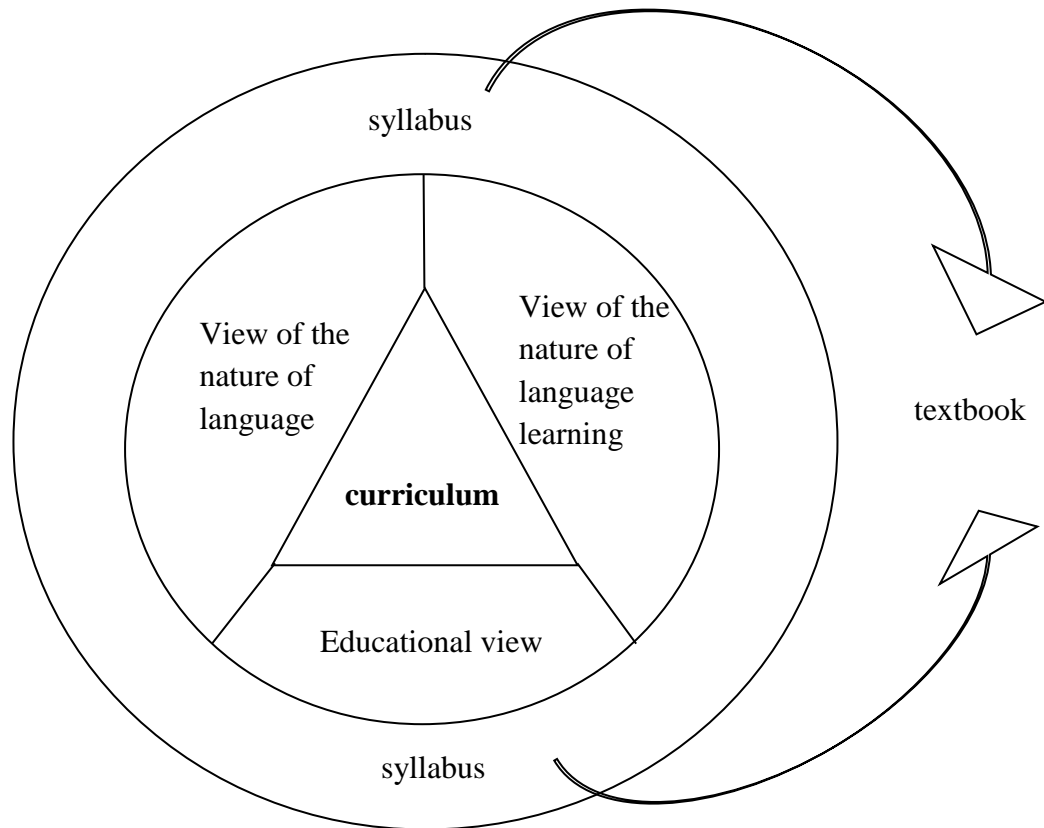


Figure 2.1 Relationship between the textbook, syllabus and curriculum

### 2.2.3 Historical development of the second language textbook, syllabus and curriculum design

Because of the close relationship between textbooks, the syllabus, and the curriculum, we cannot neglect a discussion of the historical change in the curriculum and the syllabus if we aim to provide an account of textbook development. According to Richards (2001), “the historical development of curriculum in language teaching starts with the notion of syllabus design” (2). Curriculum development in language teaching started in the early 1960s, whereas issues of syllabus design began even before then (Richards, 2001: 2). Since the curriculum is concerned with conveying the general rationale behind the educational requirement, it contains language to

do with the goals of learning and teaching underlying the viewpoints on the nature of language and the nature of language learning (Dubin & Olshtain, 1986: 35-37). Different methods for language teaching assume different types of syllabuses (Richards, 2001: 2-3). Generally, an educational orientation is compatible with one or more linguistic and language learning and teaching theories (see Richards & Rodgers, 1986: 34-35). As a result, it is posited that the design of the curriculum, the syllabus and the textbook developed alongside the language learning and teaching methods.

In the following section, I will discuss the historical development of the textbook by tracing the development of second language learning and teaching approaches. Using diagrams, I illustrate the curricula underlying the key teaching approaches discussed in this chapter. Through this section, I found the great significance of the notion of “context of situation” in this historical development, which led me to conduct a register-based study as explained in Chapter 6. Table 2.1 summaries all the comparisons of second language teaching approaches, including their different underlying linguistic theories, language learning theories, educational principles and the designs of the textbooks.

Table 2.1 Comparison of second language teaching approaches

| Approach                   |               |               |  | Language  |               |   |                                | Language learning                                       |                       | Educational principle  | Textbook  |
|----------------------------|---------------|---------------|--|---|---------------|---|--------------------------------|---|-----------------------|--|---|
| Name                       | Period        | Place         | Key figures  | Conception of language                            | Stratal focus | Role of context   | Linguistic tradition           | View of language learning                               | Role of mother tongue |  |   |
| Grammar Translation Method | 1840s - 1940s | Europe        | Inherited from the teaching of Latin and Ancient Greek |   | Grammar       | none  | formal description of language | grammar learning  | central               | Practising the exercise of translation into and out of mother tongue | Textbook consists of chapters or lessons organized around grammar rules |
| Direct Method              | 1890s - 1930s | Europe<br>USA | François Gouin<br>Maximilian D.                        | Stresses the direct association between forms and | Oral practise | Transitioning from none to material situational setting |                                | Naturalistic [e.g., modelled on mother tongue learning] | instruction in L2     | Stimulating conditions of first-language learning                    | Textbook avoids translated vocabulary learning                          |

| Approach    |               |         |                            | Language   |               |   |                        | Language learning                     |                       | Educational principle                                 | Textbook   |
|-------------|---------------|---------|----------------------------|--|---------------|---|------------------------|---------------------------------------|-----------------------|---|--|
| Name        | Period        | Place   | Key figures                | Conception of language                                     | Stratal focus | Role of context                           | Linguistic tradition   | View of language learning             | Role of mother tongue |   |  |
|             |               |         | Berlitz                    | meanings   |               |   |                        |                                       |                       |   |  |
| Situational | 1930s - 1960s | Britain | Harold Palmer, A.S. Hornby | Stresses the direct association between forms and meanings | Oral practise | Situation as material situational setting | Structural linguistics | Structure must be linked to situation | To be avoided         | Stresses processes rather than conditions of learning | Structural syllabus and textbooks with sentence patterns and |

| Approach           |               |       |               | Language                          |               |                           |                                 | Language learning         |                       | Educational principle | Textbook  |
|--------------------|---------------|-------|---------------|-----------------------------------|---------------|---------------------------|---------------------------------|---------------------------|-----------------------|-----------------------|---|
| Name               | Period        | Place | Key figures   | Conception of language            | Stratal focus | Role of context           | Linguistic tradition            | View of language learning | Role of mother tongue |                       |   |
|                    |               |       |               |                                   |               |                           |                                 |                           |                       |                       | a list of both grammatical words and content words relevant to designed language practice |
| Audiolingual (ALM) | 1950s - 1970s | USA   | Nelson Brooks | Inventory of structures and items | Oral practice | not applied significantly | American structural linguistics | Stimulus-response theory  | To be avoided         | Behaviourism          | Audiolingual syllabus and textbook containing   |

| Approach            |               |         |               | Language  |               |   |   | Language learning         |                       | Educational principle | Textbook  |
|---------------------|---------------|---------|---------------|---|---------------|---|---|---------------------------|-----------------------|-----------------------|---|
| Name                | Period        | Place   | Key figures   | Conception of language  | Stratal focus | Role of context                                 | Linguistic tradition  | View of language learning | Role of mother tongue |                       |   |
|                     |               |         |               |   |               |   |   |                           |                       |                       | structured-based sentences and lexical items  |
| Notional-Functional | 1970s - 1980s | Britain | David Wilkins | Wilkins (1972) “language is a vehicle for the expression of functional meaning” | Semantics     | The beginning of applying the notion of context | Firthian-Hallidayan—systemic functional; Dell Hymes—ethnography of speaking |                           |                       |                       | notional-functional syllabus and textbook consisting of functions, notions, topics, |



| Approach      |        |                       |                                | Language  |                     |                 |                              | Language learning  |                       | Educational principle               | Textbook  |
|---------------|--------|-----------------------|--------------------------------|---|---------------------|-----------------|------------------------------|--|-----------------------|-------------------------------------|---|
| Name          | Period | Place                 | Key figures                    | Conception of language  | Stratal focus       | Role of context | Linguistic tradition         | View of language learning  | Role of mother tongue |                                     |   |
|               |        |                       |                                |   |                     |                 |                              |  |                       |                                     | grammar, and vocabulary   |
| Communicative | 1970s  | Originated in Britain | Chris Candlin, Henry Widdowson | 1. Hymes' communicative competence;<br>2. Halliday's functional and contextual linguistics;<br>3. Widdowson's communicative nature of | Semantics → Context |                 | British functional linguists | 1. communicative principle;<br>2. task principle;<br>3. meaningfulness principle |                       | Stressing communicative proficiency | Integrated skills-based syllabus and textbook or functional syllabus and textbook |

| Approach  |        |       |                                   | Language               |               |   |                                | Language learning                   |   | Educational principle  | Textbook |
|---|--------|-------|-----------------------------------|------------------------|---------------|---|--------------------------------|-------------------------------------|---|--|----------|
| Name  | Period | Place | Key figures                       | Conception of language | Stratal focus | Role of context                               | Linguistic tradition           | View of language learning           | Role of mother tongue                             |  |          |
|   |        |       |                                   | language               |               |   |                                |                                     |   |  |          |
| Task-based [originating as subtype of Communicative approach] | 1990s  |       | Ellis, Prabhu, Swain, Long, Nunan |                        | Context       | Central: activity in context to perform tasks | “British functional linguists” | Gradual and complex organic process | Meaning-focused reflecting real-life language use | Task-based syllabus and textbooks with a thematic content of tasks |          |

### *2.2.3.1 Grammar textbooks in Europe from the 1840s to 1940s*

Textbooks for learning foreign languages in European schools from the 1840s to the 1940s tend to codify the target learning language into rules to be explained by teachers and memorized by students. The underlying teaching philosophy of textbooks during this period is the philosophy guiding the teaching approaches at the time: the Grammar-Translation Method. As early as the nineteenth century, the Grammar-Translation Method (an approach based on the study of Latin) dominated European and foreign language teaching and had become the standard way of studying foreign languages in schools at that time (Richards & Rodgers, 1986: 3-5). The Grammar-Translation Method was first known in the United States as the Prussian Method (Howatt, 2004: 151). It is a way of studying a language that, with students' native language as the medium of instruction, approaches the language first through detailed analysis of its grammar rules, followed by application of this knowledge to the task of translating sentences and texts into and out of the target language (Stern, 1983). The Grammar-Translation Method relies heavily on “the formal description of the language being taught and upon the exercise of translation into and out of the mother tongue” (Halliday, McIntosh & Stevens, 1964: 265). Grammar is taught deductively and the principles underlying the curriculum are the same basic procedures used to teach Latin (Titone, 1968: 26). With this curriculum and teaching philosophy, a typical textbook in the mid-nineteenth century consisted of chapters or lessons organized around grammar rules (Richards & Rodgers, 1986: 3-4). Each grammar point was listed, rules on its use were explained, and it was illustrated by sample sentences for translation (Richards & Rodgers, 1986: 4). At that time, the main job duties of textbook writers were to codify the foreign language into fixed rules of morphology and syntax which would be explained and eventually memorized. Oral work in the textbooks was reduced to an absolute minimum, whereas written exercises were included as a

sort of appendix to the rules (Titone, 1968: 27). The Grammar-Translation Method is the language teaching and learning approach behind syllabus design that emerged in the nineteenth century and laid the foundation for more broadly based curriculum approaches that are used for language teaching today. Mackey (1965: 151) argued that although there has been an emergence of certain methods during different periods, some methods are still possible to continue in certain forms long after they have fallen out of favour in the mainstream of language teaching. Richards (2001: 3) made the similar observation that the Grammar-Translation Method still exists in some parts of the world in the twenty-first century.

Halliday, McIntosh, and Stevens (1964: 266) criticized this approach by expressing their objections to using translation as a technique to teach in the very earliest stage of learning language. They argued that the isolated sentences used to demonstrate the translation techniques lacked linguistic or situational contexts thereby making the translation process meaningless and leading to a concentration on the formal equivalence of first-language and second-language learning (Halliday, McIntosh & Stevens, 1964: 266).

### ***2.2.3.2 Textbooks on oral work in Europe and USA from 1890-1930***

As Halliday (1978b) has pointed out, the development of second language teaching and learning approaches has a very close relationship to the development of views on the differences and similarities between second-language and first-language learning (175-177). The Grammar-Translation Method was, of course, advocated by those educators and experts who proposed the notion that first-language learning and second-language learning need to be taught in the different way. Reacting to the restrictions of the Grammar-Translation Method, a number of scholars and educators in Europe from 1890 to 1930 advocated for simulation of the conditions of first-language learning in the teaching of a second language (Howatt, 2004: 217-247; Richards

& Rodgers, 1986: 9-12). The similarities between second-language learning and first-language learning were stressed by Henry Sweet in 1899 and by Otto Jespersen in 1904 (Halliday, 1978b: 175). This foresight was also reinforced in the seminal language learning materials developed by Gouin, one of the pioneers of naturalistic theories of second-language learning and teaching (Halliday, 1978b).

A new approach to foreign language teaching emerged in 1890s. Based on natural language learning, it is known as the Direct Method and sometimes as the Natural Method (Howatt, 2004: 210; Richards & Rodgers, 1986: 9). Gouin's contribution to the Direct Method has been widely recognized, as Halliday (1978b) states, "Gouin's ideas had a strong influence on the development of the direct method, which was the modern way in which teachers were trained to teach languages in England in the 1910s" (179). Halliday (1978b) also explained how Gouin's personal experiences led to the development of his ideas on second-language learning and teaching:

Gouin had studied German in Paris for eight years. He then went to Berlin to study, and was distressed to find that not only could he not follow a word of what was said in the lectures but he couldn't even order himself a cup of coffee. (Failure is not a new phenomenon.) So Gouin became interested in the problems of second-language learning and teaching, and wrote a very interesting book in which he put forward certain ideas attempting to simulate in the second-language situation that aspect of first-language learning in which the child is organizing, categorizing and interpreting reality. Gouin indeed expressed the hope that, if adequate materials were devised for representing in the target language all those events, processes, qualities, objects, and so on of daily life that

language served to encode, the teaching programme and the materials could “exhaust the phenomena of the objective world.” (179)

The Direct Method, a product of the reform movement, stresses the direct association between forms and meaning in the target language and provides a theoretical justification for the monolingual approach to teaching (Harmer, 2004: 63). Instead of translating the grammar rules of the target language into the student’s native language as the Grammar Translation Method does, teachers encourage direct and spontaneous use of the foreign language in classroom teaching, allowing students to learn the rules of grammar (Harmer, 2007: 63-64). This curriculum model advocates using every day vocabulary and sentences to enhance the student’s communication skills and discourage textbooks use in the classroom (Titone, 1968: 32-33). Figure 2.2 illustrates the Direct Method curriculum, including its underlying language view, language learning view and educational view. During the period when the Direct Method was prominent, materials reflecting naturalistic theories of language learning appeared in various times and places. For example, in 1978 Halliday described the materials for learning Chinese at his time: the learning materials described in great detail all the small processes that take place when for example you take one step forward or open the door (Halliday, 1978b: 179). This emphasis of enhancing everyday communication reflects the naturalistic theories of language learning, which is the key component of the Direct Method. The Direct Method was first established in Germany and France and then adopted by key international language schools such as Berlitz in the USA.

Maximilian D. Berlitz, a native speaker of German, opened his schools for teaching French and German as foreign languages at the very beginning of its opening. Later they added the teaching

of English and other European languages. The textbooks used in Berlitz schools aim to provide beginners, rather than advanced learners, with a useful grounding in the target language (Howatt, 2004: 224). The textbooks emphasize oral work and offer no explanations about grammar until late in the course (Howatt, 2004: 224). The textbooks are designed to use as much “question-and-answer techniques” as possible (Howatt, 2004: 224). The way of teaching vocabulary in the Berlitz School is: “concrete vocabulary was taught through demonstration, objects, and picture and abstract vocabulary was taught by association of ideas” (Richards & Rodgers, 1986: 10).

Unlike the Grammar-Translation Method from the 1840s to 1940s, written teaching materials were not used during this period of time when the Direct Method is prominent (Halliday, 1978b: 179). Textbooks used in this period (if at all) tend to avoid translated vocabulary learning and interference of the mother tongue. Textbooks focus on oral practice. Changes in language textbooks manifest the changes in teaching language approaches resulting from the transition from the Grammar-Translation Method to the Direct Method.

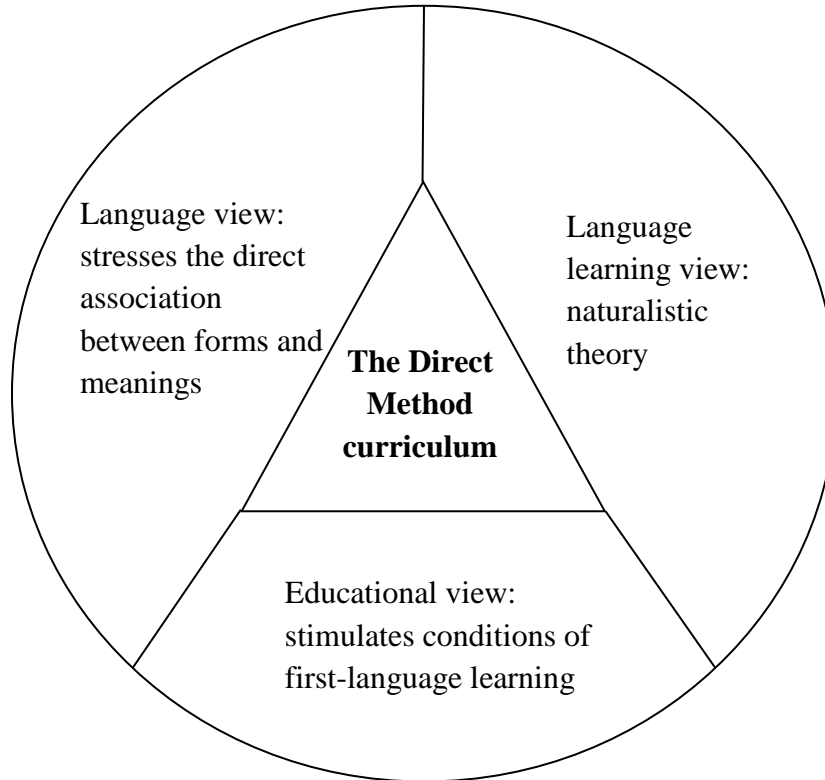


Figure 2.2 The Direct Method curriculum

### *2.2.3.3 The Structural syllabus and textbooks in Europe from the 1930s to 1960s*

In the tradition of the naturalistic theory of second-language learning and teaching since the prominence of the Direct Method, in 1922, Harold Palmer again emphasized the similarities between second-language and first-language learning, advocating simulation of the natural conditions of learning a second language. Influenced by psychologists such as William James and Leonard Bloomfield, in the late nineteenth and early twentieth centuries, Harold Palmer regards language learning as a way of habit formation and proposed his core methodology of “sentence patterns” for language teaching in Europe in the 1930s (as cited in Howatt, 2004: 263-276). Palmer’s “sentence patterns” emphasized the relationship between linguistic units (e.g., the



relations among phrases and sentences, and collocations). This emphasis critiques language learning instruction which only focuses on learning single isolated words. Frisby (1957), for example, cites Palmer's nine fundamental principles of good language teaching and learning (136):

As Palmer has pointed out, there are three processes in learning a language—receiving the knowledge or material, fixing it in the memory by repetition, and using it in actual practice until it becomes a personal skill. Harold Palmer, the prominent British applied linguist who laid the foundations for the Structural Method in the 1920s, summarized the principles of language teaching methodology at that time as follows:

1. Initial preparation—orienting the students towards language learning
2. Habit-forming—establishing correct habits
3. Accuracy—avoiding inaccurate language
4. Gradation—each stage prepares the student for the next
5. Proportion—each aspect of language given emphasis
6. Concreteness – movement from the concrete to the abstract
7. Interest —arousing the student's interest at all times
8. Order of progression—hearing before speaking, and both before writing
9. Multiple line of approach—many different ways used to teach the language

(38-39)

According to Howatt (2004), even though Palmer proposed his notion of “sentence patterns” in the 1930s, he did not fully put it into a “workable methodology” (297). By 1950, A.S. Hornby

had published a series of three articles in the journal of English Language Teaching (ELT) and proposed the Situational Approach in Language Teaching. He advocated the concept of language in situation, proposing that the best way of learning a language is to embed the sentence patterns in simple situations. He believed that a certain series of sentence patterns should be organized into sequences for students to learn over a number of classes. Classroom activities are used to practice these sentence patterns. The idea of teaching language through classroom activities originally came from Direct Method educators like Berlitz, but Hornby's proposal of putting the patterns into sequences made this way of teaching more "systemic" in the classroom (Howatt, 2004: 298). Moreover, his notion led to the creation of a syllabus of structures underpinning the design of textbooks at the time.

A syllabus based on the Situational Language Teaching is also often called as a "structural syllabus" (Richards & Rodgers, 1986: 37). It is a list of sentence patterns, grammatical words, and content words relevant to language practice (Frisby, 1957: 134-135). There are three main types of sentence pattern: "the statement pattern," "the question pattern" and "the request or command pattern" (Frisby, 1957: 134). Frisby (1957) gave an example of the structural syllabus for beginners learning English as a second language:

|                 | <i>Sentence pattern</i> | <i>Vocabulary</i>               |
|-----------------|-------------------------|---------------------------------|
| 1st Lesson Unit | This is ...             | book, pencil, ruler.            |
| 2nd Lesson Unit | These are ...           | chair, picture, door. (134-135) |

Pittman (1963) emphasized that this teaching method is situational (155-157). He regarded that controlling the "situation" in the classroom was a way to "get the meanings of English words, phrases and sentences across to the students" (Pittman, 1963: 155). It is believed that the only

way to enable students to learn a new language (other than by translating as proposed by the Grammar Translation method) is to control the “situations” in the classroom (Pittman, 1963: 155). He emphasized the need for making sure that “there is no danger of misunderstanding or confusion in the learner’s mind” (Pittman, 1963: 155). However, Richards and Rodgers commented in 1986 that the structural syllabus underpinning this situational teaching method is not a situational one because the term “situational” is sometimes used to refer to a list of situations and the language associated with them. The structural syllabus shown above only presents sentence patterns and emphasizes practicing them in situations. The syllabus only regards “situation” as circumstances where the sentences patterns are presented and practiced (Richards & Rodgers, 1986: 37). Halliday also commented on this that the syllabus underlying the Situational Approach only provides the recognizable situational settings in phrases such as “at the post” or “in a restaurant” that accompany the text (Halliday, 1991). If we compare Hornby’s concept of “language in situation” with the concept of “context of situation,” (the concept of context of situation was developed by J.R. Frith in 1950 who was building on Malinowski (1923) and the concept was further developed by M. A. K. Halliday and his colleagues as a fundamental concept of systemic functional linguistics), we find the two of them are not equal. Halliday discussed in 1991 that context of situation cannot be interpreted simply as a setting (Halliday 1991: 10). I will discuss this point further in section 2.4. Howatt (2004) also commented that it was clear that “situation” on its own did not provide a suitable framework for organizing language teaching programmes and that what was needed was a more analytical approach, which accepted that “situations” were made up of smaller events such as asking for things, expressing likes and dislikes, making suggestions, and so on (249-250). Hornby’s (1954) book on patterns and usage in English is a precursor to this more analytical approach and it

provides a detailed introduction to expressions of different “concepts,” including commands, requests, and invitations (201-249).

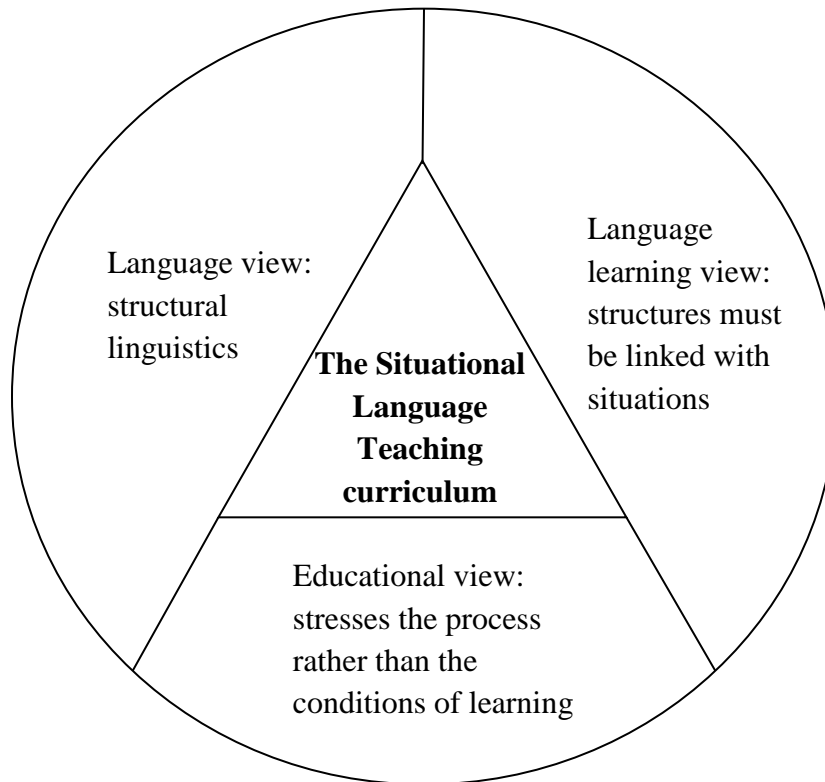


Figure 2.3 The Situational Language Teaching curriculum

#### ***2.2.3.4 The Audiolingual syllabus and textbooks in the USA from the 1950s to 1970s***

Towards the end of the 1950s in the United States, increased attention was given to foreign language teaching and this led to the emergence of new directions. The most newsworthy change was the emergence of the Audiolingual Method (Howatt, 2004: 315-321). The Audiolingual Method was introduced by Nelson Brooks in the 1960s (Howatt, 2004: 319) and emphasized that speech “can operate quite without assistance from the eye and may be carried on in the dark, or with mechanical aid, at distances far beyond the range of natural voice” (Brooks, 1964: 17). The

Audiolingual Method greatly relied on the linguistic theory of American structuralism and the language learning theory of behaviourism. American structural linguists believed that only speech is language, whereas “writing is not language, but merely a way of recording language by means of visible marks” (Bloomfield, 1933: 21). They argued this tenet by tracing historical language development, explaining that all languages which were spoken by people existed a long time before people began to read or write (Bloomfield, 1933: 21-22). “Structures” in structural linguistics were “identified with sentences or their components in isolation rather than utterances in context” (Howatt, 2004: 330). The priority of speech in language theory and the structural view of language led to excessive use of drills to do with sentence patterns and structures in language teaching at that time. This method was supported technologically by the formation of the early language laboratory in the United States during that period (Howatt, 2004: 319). Drawing upon a prominent school of American psychology, known as behavioural psychology, the language teaching theoreticians and methodologists who developed Audiolingualism assumed that the human being is an organism capable of a wide repertoire of behaviours (Skinner, 1957: 99). Behaviourism proposes that three parts of speech form the primary medium of language: intent (practical events preceding the act of speech), speech, and comprehension (practical events following the act of speech) (Bloomfield, 1933: 21; Brooks, 1964: 4). The practical events preceding the act of speech and which stimulate speech are called the “speakers’ stimulus” whereas the practical events following the act of speech which present how the hearers react to the speech are called the “hearers’ response” (Bloomfield, 1933: 21-29). Bloomfield (1933) argues that repetition of the three parts of language results in the conversion of certain language behaviours into habits (29-31). He regards the process of language learning as the

process of increasing the repetition. Figure 2.4 depicts the three components of the Audiolingual curriculum: language, language learning, and the educational view.

The Audiolingual curriculum is based on the structural linguistic view of language, the stimulus-response theory of language learning and behaviourism. At the elementary levels, the Audiolingual curriculum includes the sound-systems of language and sentence patterns in speech (Brooks, 1963: 127). Writing and reading is not included in the curriculum until learners reach certain levels of proficiency in speech (Brooks, 1963: 127-128). The Audiolingual syllabus usually begins with structure-based sentence practice, which enables students to incorporate the structures into their own behaviour pattern repertoire (Brooks, 1963: 142-143). Brooks (1964) listed two forms of sentence patterns practice in classrooms: repetition and replacement (156-161). Repetition encourages students repeat the sentence patterns aloud as soon as they hear them (Brooks, 1964: 156). Replacement refers to the practice whereby one word in an utterance is replaced by another. For example, the sentence “Helen left early” can be practiced as “She left early,” with “she” replacing “Helen” (Brooks, 1964: 157). Later on, after students begin to utter these patterns as their own language behaviour, they are then exposed to a stock of structural patterns and lexical items, which enable them to express their own intentions and views without the limitations of the patterns they were exposed to before (Brooks, 1964: 142-144).

The Audiolingual Method has certain similarities with situational language teaching. First, both situational language teaching and the Audiolingual Method reflect the structural view of the nature of language current at the time. According to Richards and Rodgers (2001), “language is a system of structurally related elements for the coding of meaning” (54-55). Moreover, “structures were identified with sentences or their components in isolation rather than utterances in context” (Howatt, 2004: 330). The success of language learning depends on mastery of

phonological units, grammatical units, grammatical operations (e.g., adding, shifting, joining, or transforming elements), and lexical items (e.g., content words and function words). Second, these two approaches pushed classroom teaching methods toward “patterns practice” or “structure drills” (Howatt, 2004: 330-331). As discussed earlier, the basic syllabus of situational language teaching includes a structural syllabus and a word list, whereas the syllabus of Audiolingualism consists of structural patterns and lexical items. Situational language teaching stresses the linkage between the structure of the language and the situation in which language is used. Situational language teaching was a development of the earlier Direct Method (see section 2.3.2). It does not have the strong ties to behavioural psychology that characterize Audiolingualism.

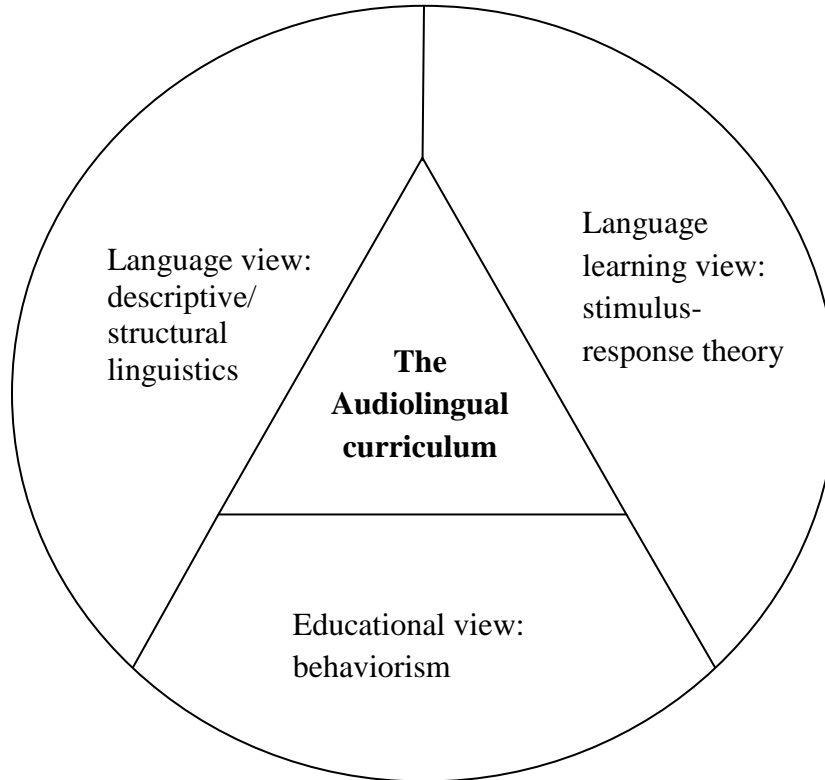


Figure 2.4 The Audiolingual curriculum

### *2.2.3.5 Notional-functional syllabus in Britain from 1970s to 1980s*

In the late 1960s situational language teaching, discussed above in section 2.1.3.3, was the major British approach to teaching English as a foreign language, which teaches language by practicing basic structures in so-called situation-based activities (Frisby, 1957). But later, people began to question its unsound theoretical foundations and the unsatisfactory results produced in learning and teaching practice. For example, Howatt (1984: 280) argued “there was no future in continuing to pursue the chimera of predicting language on the basis of situational events.” This is also the situation Audiolingualism was facing in the United States in the 1970s. Educators began to explore different approaches to foreign language teaching at that time. There was a



move from a structural view of the nature of language, which underlies Situational Language Teaching and Audiolingualism, toward a functional view of the nature of language, which emphasizes the semantic and communicative dimension rather than merely the grammatical characteristics of language (Wilkins, 1972). This move from a structural to a functional orientation in linguistic theory in both the US and Britain owes a great deal to work in social anthropology at that time. In the United States during the 1960s, inspired by anthropological linguists (especially the works of Edward Sapir and Benjamin Lee Whorf), Roman Jakobson, Dell Hymes, William Labov and others worked extensively on education exploring discourse and language in a social context. They published several significant works, including Hymes' paper "On Communicative Competence (1971)," which led to the emergence of the "Communicative Approach" (see more details in 2.1.3.6) (Howatt, 2004: 253). In Britain, a great contribution to this approach comes from the anthropologist Malinowski's notion of "context of situation," which was further developed by J.R. Firth and his successors most notably M. A. K. Halliday (Howatt, 2004: 253). Halliday carried on the Firthian tradition and proposed three features of context of situation: field, tenor and mode. This functional trend in theory leads to the organization of language teaching as a progression from the elements of structure and grammar to the categories of meaning. Notably, Lowe (2008) claimed that Halliday's functional systemic theory inspired the Threshold Level Project, which led to Wilkins's notional functional syllabus. David Wilkins, a member of the Threshold Level Project, which was sponsored by the Council of Europe, explored the communicative meanings that a language learner needs to understand and express (van Ek, 1973; Wilkins, 1972). Instead of using traditional concepts of grammar and vocabulary to describe the core of language, Wilkins attempted to demonstrate the systems of meaning according to the communicative uses of language. He described two types of meaning:

notional (which includes concepts such as time, sequence, quantity, location, and frequency) and communicative function (which includes requests, denials, offers, and complaints). Later, David Wilkins revised and expanded his 1972 document into a book called *Notional Syllabuses* (Wilkins, 1976), which had a strong influence at that time. The Council of Europe incorporated Wilkins's semantic/communicative analysis into the threshold level specifications for the language syllabus used in Europe (van Ek, 1973; van Ek & Alexander, 1980).

Wilkins's notional-functional syllabus and the threshold level specifications have had a significant impact on the development of Communicative Language Teaching, which I will discuss in the next section. It also possibly marks the beginning of the move from a structural view of the nature of language to a functional view of language in language teaching. It also represents the starting point of the move from a linguistically-focused or structural syllabus to a notional-functional syllabus. The linguistically-focused syllabus principles underlying Situational Language Teaching and the Audiolingual Method consist of a list of grammatical items and constructions, which are often presented together with an associated list of vocabulary items (Fries & Fries, 1961). Interestingly, notional-functional syllabuses only specify the communicative context of a course in terms of functions, notions, topics, grammar, and vocabulary (Howatt, 2004: 339).

#### ***2.2.3.6 Communicative syllabus and textbooks since the 1970s***

Wilkins' (1976) original notional syllabus model was soon criticized by British applied linguists as merely replacing one kind of list (e.g., a list of grammar items) with another (e.g., a list of notions and functions). The syllabus only emphasized the products of language learning, rather than the communicative processes. Widdowson (1979) argued that notional-functional categories only provide a very practical and imprecise description of certain semantic and pragmatic rules

that are used for reference when people interact (254). He emphasized the communicative nature of language proposing that language learning and teaching should take as their primary purpose the development of the ability to communicate with language, and that discourse should be the centre of attention (Widdowson, 1979: 254). Applied linguists such as Henry Widdowson and Christopher Candlin argued that the fundamental dimension of language underlying the notional syllabus was inadequately addressed in approaches to language teaching in place at that time (i.e., the functional and communicative potential of language). Drawing on the works of British functional linguists (e.g. Firth and Halliday), they stressed that success in learning a language came from communicative proficiency rather than mere mastery of structures. This move from the structural view of language to the functional view of language, together with the rapid application of these ideas by textbook writers, the equally rapid acceptance of these new principles by British language teaching specialists, curriculum development centres, and even the government gave prominence nationally and internationally to what came to be referred to as the Communicative Approach.

This Communicative Approach was heavily influenced by the functional tradition of linguistics, particularly by Halliday's (1973) work in *Explorations in the Functions of Language*. Between 1964 and 1971 Halliday directed a language research project called "Programme in Linguistics and English Teaching," aimed at exploring ways of teaching English as a mother tongue. His work had great impact on the understanding of language and language teaching at that time. The illuminating theories he introduced are the three "macro-functions" of language: ideational, interpersonal and textual (Halliday, 1973: 40). (Later, he used "metafunction" to replace "macro-function"). Lowe (2008) commented on Halliday's contribution to Communicative Language Teaching in his seminal paper stating, "the Communicate Approach which dominates our field

today stems from Halliday's ideas on how people master languages; Henry Widdowson's work on communicative methodology owes much to Halliday" (1).

American sociolinguistics, a branch of linguistic science that grew considerably in the 1960s, influenced the Communicative Approach as well (Howatt, 2004: 329; Hunter, 2009: 10-11). Key figures such as Hymes proposed the concept of communicative competence, which he defined as "the ability to participate in the society as not only a speaking, but also a communicating member" (Hymes, 1974: 75). Figure 2.5 presents the linguistic theories underlying the Communicative Language Teaching including Hymes' communicative competence, Halliday and Firth's functional linguistics and Widdowson's notion of the communicative nature of language. All together these theories see language and language learning in the following way:

1. Language is a system for the expression of meaning.
2. The primary function of language is for interaction and communication.
3. The structure of language reflects its functional and communicative uses.
4. The primary units of language are not merely its grammatical and structural features, but categories of functional and communicative meaning as exemplified in discourse (Richards & Rodgers, 1986: 71)

Three principles underlie communicative learning practices. One is the communicative principle whereby activities that involve real communication promote learning (Richards, 2001). The second is the task principle in which language is used for carrying out meaningful tasks that promote learning (Johnson, 1982). The third is the meaningfulness principle which concludes that language meaningful to the learner supports the learning process. Learning activities are consequently selected according to how well they engage the learner in meaningful and authentic language use (rather than undertaking merely mechanical practice of language patterns)

(Littlewood, 1981; Johnson, 1982). A communicative curriculum based on the communicative view of language, the language learning view and the educational view is illustrated in Figure 2.5.

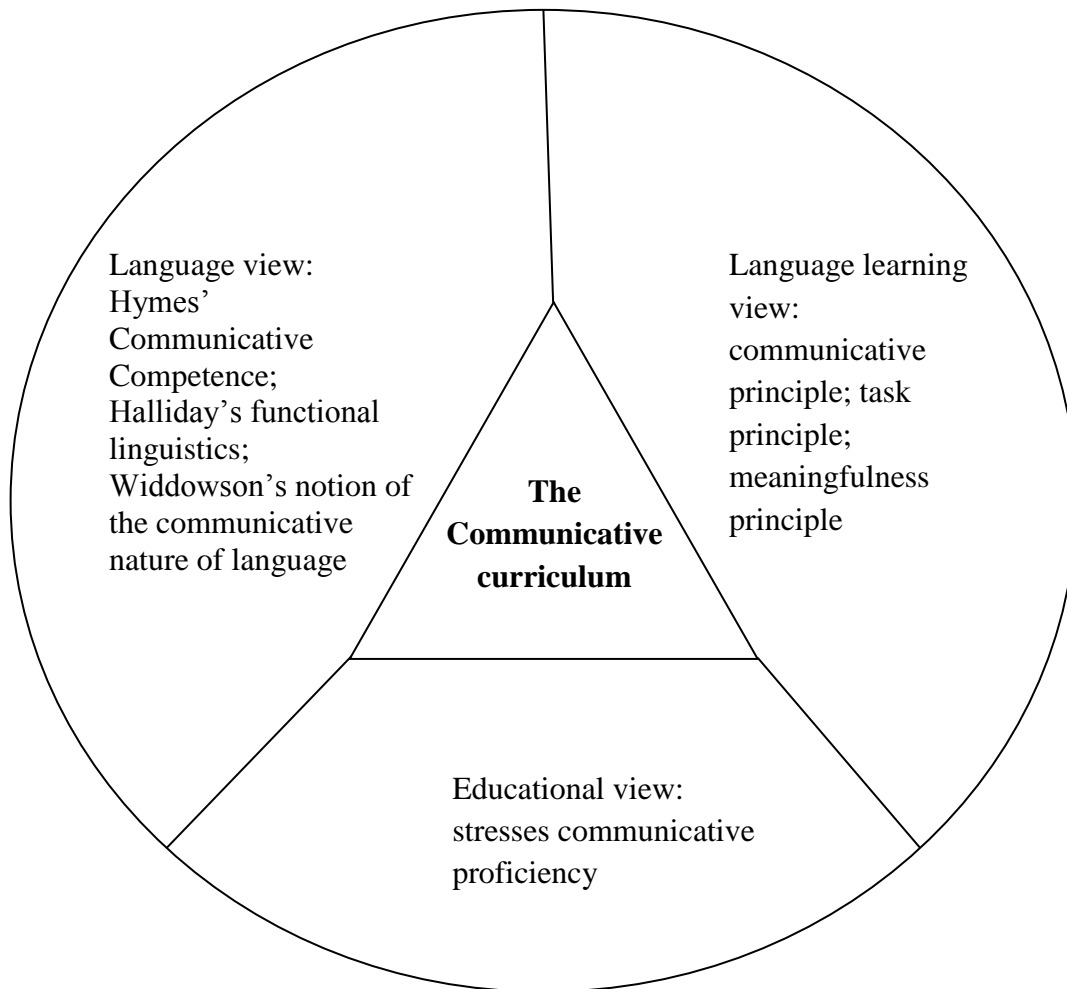


Figure 2.5 The Communicative curriculum

Various teaching and learning materials are produced using the principles of Communicative Approach. Learning materials like textbooks have the primary role of promoting communicative language use.

Unlike the syllabus underlying the previous language teaching approaches, the communicative syllabus does not specify the grammar and vocabulary that students need to master. There are several types of communicative syllabus. One is the integrated skills-based syllabus focusing on the four skills of speaking, listening, writing and reading. Another is the functional syllabus, which includes the functions learners can carry out such as expressing likes and dislikes (Richards, 2006:10-11).

### *2.2.3.7 Task-based syllabus and textbooks from the 1990s*

In the late twentieth century, educators and researchers began to question how generalizations can be made from particulars and how actual daily communication can be inferred from the samples of the texts that students engage with in the process of language teaching and learning (Howatt, 2004: 366). They requested that activities included in the teaching and learning curriculum should meet two requirements. On the one hand, they must be somewhat tied to specific samples of language to make them real for the learner. On the other hand, they had to include noticing. In short, the language associated with these activities needs to have potential as realization and to be pointed out as exemplification (Harmer, 2007: 71-72). An approach to language teaching consisting of such activities has become prominent in the recent past under the name of Task-based instruction (Leaver & Willis, 2004). Underlying the functional and communicative view of language, which is similar to the communicative approach, Tasked-based instruction advocates a meaning-focused approach that reflects real-life language uses (Willis, 2003). Three basic premises underlie the task-based approach (also illustrated in figure 2.6):

1. Language learning does not proceed in a linear additive fashion but is a gradual and complex organic process (Long, 1985; Lightbown, 2000). That is to say, teaching a

discrete language item does not lead to immediate mastery of that item. Learners often go through a developmental sequence which does not go directly to the target form, but involves a number of errors on the way (Skehan, 1996: 18).

2. “Language form is best learned when the learners’ attention is on meaning” (Prabhu, 1982, cited in Brumfit, 1984: 223). Based on the “Input Hypothesis,” learners need a lot of comprehensive input, that is, exposure to the target language being used in a variety of contexts, both spoken and written, that is just slightly above their current level of comprehension (Krashen, 1985).
3. Learners need opportunities to use the target language for a real purpose in order to learn it (Swain, 1985). This is sometime referred as the “Output Hypothesis” (Leaver & Willis, 2004).

There are several different types of syllabus that come out of the Task-based Approach. One type of syllabus treats tasks as the culminating points following language-focused activities designed to prepare learners for the linguistic demands of the task. According to Ellis (2003), this type of syllabus could be considered as task-supported learning rather than task-based learning (28-30). Two other dominant types of task-based learning that regard tasks as central components in each teaching process. One uses the topics and texts to structure the tasks, and the other uses functions to structure the tasks (Leaver & Willis, 2004). The former emphasizes learning and teaching language by starting with a list of topics or themes that will engage students, while the latter uses functions as the main organizing feature and progresses through the functions from their grammatical and lexical realizations to tasks (Ellis, 2003: 28-34).

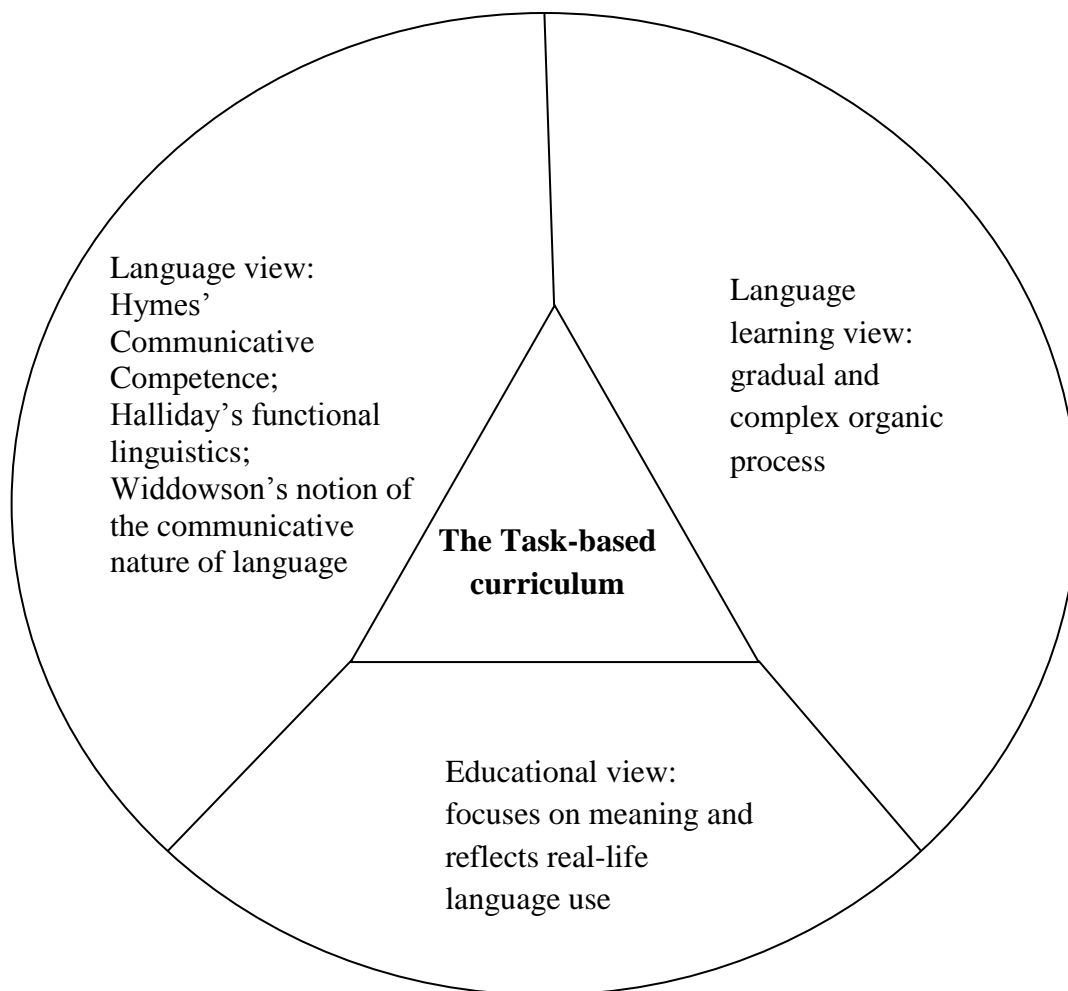


Figure 2.6 The Task-based curriculum

In this study, textbooks used in the Chinese Mainland for Junior Secondary students and textbooks used in Hong Kong for Junior and Senior Secondary students state explicitly in their introductions that the course books follow a task-based approach to language learning. Specifically, they use the task-based syllabus that starts with themes or topics rather than starting with functions. A key element in the design of tasks is the choice of thematic content (Ellis, 2003: 218). There are various guiding principles in the selection of context for tasks. The “theme generator” proposed by Estaire and Zanón (1994: 21) organizes the thematic areas according to whether they are close or remote to the learner.



## 2.2.4 Notion of “context” and “text” in second language teaching approaches and textbook development

After reviewing the history of textbook development and language teaching approaches, I found that the major turning points were largely influenced by British functional linguistics and our understanding of the notion of “context” (See Halliday & Hasan, 1985; Halliday, 1991). I would like to treat the situational language teaching as the watershed in this historical development, as it first introduces the concept of “language in situations” but does not embody the real nature of “context of situation.” Later on, the emergence of the notional-functional syllabus which evolved after Situational Language Teaching marks the beginning of the recognizable understanding of the functional view of language, that is, the functional notion of “the text.” In this section, I would like to divide the development of language teaching approaches into the following three stages and review the major development of each stage: Pre-situational Language Teaching (language teaching approaches before the appearance of Situational Language Teaching), Situational Language Teaching, and Post-situational Language Teaching (see Table 2.2).

Table 2.2 Three stages of language teaching approaches based on the extent to which the notion of “context” is applied

| <b>Pre-situational Language Teaching</b> | <b>Situational Language Teaching</b> | <b>Post-situational Language Teaching</b> |
|--|--------------------------------------|---|
| Grammar-translation method               | Situational Language Teaching        | Notional-functional syllabus              |
| Direct Method                            | Audiolingualism                      | Communicative language teaching           |

|  |  |                                 |
|--|--|---------------------------------|
|  |  | Task-based language<br>teaching |
|--|--|---------------------------------|

#### ***2.2.4.1 Pre-situational Language Teaching***

The major language teaching approaches before the emergence of Situational Language Teaching are the Grammar-Translation Method and the Direct Method. The underlying principle of these two approaches considers language to be an independent phenomenon rather than a “socio-semiotic resource which functions in context” (Halliday & Hasan, 1985; Halliday & Matthiessen, 2004). Halliday called this view of the problem of language “out of context” (Halliday, 1991,:12). As a result of this non-social perspective towards language, textbooks or learning materials at that time constitute lists of grammar and vocabulary without discussing the context in which language is used.

#### ***2.2.4.2 Situational Language Teaching***

The notion of “context” or “language in situation” was not taken into consideration until Situational language teaching was developed by educators and scholars such as Harold Palmer and A. S. Hornby in Europe during the 1930s to 1960s (Richards & Rodgers, 1986: 37). The underlying principle of Situational Language Learning is that language structure must be linked to situations (Richard & Rodgers, 1986: 37). According to Howatt (2004: 299), the concept of “language in situation” in Situational language teaching continued to be influential throughout the 1960s. During the same period, the notion of “context of situation,” which was originally proposed by the anthropologist Malinowski, was further developed by J. R. Firth and M. A. K. Halliday (Howatt, 2004: 253). Building on Malinowski’s (1923) conception, in 1950 Firth outlined his four-part description of context of situation:

My view was, and still is, that “context of situation” is best used as a suitable schematic construct to apply to language events, and that it is a group of related categories at a different level from grammatical categories but rather of the same abstract nature. A context of situation for linguistic work brings into relation the following categories:

- A. The relevant features of participants: persons, personalities.
  - (i) The verbal action of the participants.
  - (ii) The non-verbal action of the participants.
- B. The relevant objects.
- C. The effect of the verbal actions (Firth, 1957: 182).

This Firthian tradition was carried on by Firth’s former student, Halliday, who later developed three features of context of situation: field, tenor and mode (see more details in section 4.2). However, we cannot interpret the concept of “language in situation” as equal to the Firthian-Hallidayan “context of situation.” There are fundamental differences between the “language in situation” underlying Situational language teaching and the notion of “context of situation” the functional trend proposed by the academic linguists. The syllabus underlying the situational approach provides the recognizable situational settings to accompany the texts such as “at the post,” or “in a restaurant” (Halliday, 1991). However, Halliday (1991) pointed out that the “situational setting” is not equal to the “context of situation.” “Context of situation” is far more socio-semiotic than “setting” and it cannot be interpreted simply as a “setting” (Halliday 1991: 10). The “context of situation” is a “theoretical construct for explaining how a text relates to the social processes within which it is located” and it has three components: field, tenor and mode (Halliday, 1991: 10). But the setting is “only the immediate material environment” (Halliday,

1991: 10). We can also see the difference between “situational setting” and “context of situation” in the ordered typology of systems: first order, physical systems; second order, biological systems; third order, social systems; and fourth order, semiotic systems (see for example Halliday & Matthiessen, 1999; Matthiessen, 2009a). The “Situational setting” is material and is located in the first and second order of the typology system whereas “context of situation” is immaterial and located in the third and fourth order of the system (Halliday & Hasan, 1985: 99; Matthiessen, 2014). For example, “in the restaurant” is only the description of the situational settings. One of the possible social-semiotic descriptions could be two close friends are chatting in the restaurant and negotiating the preferences of their food for their lunch.

While the situational language teaching grew in Europe, Audiolingualism became prominent in the United States from 1950s to 1970s (Brown, 2007: 17). Audiolingualism adopts the structural view of language rather than the functional view and does not apply the notion of context significantly. This structural view of language advocates that the success of language learning depends on the mastery of linguistic elements including phonological and grammatical units, grammatical operations and lexical items. Unlike this structural view of language, the functional view regards language as a semiotic system, which I will discuss in more details in the text section.

#### ***2.2.4.3 Post-situational Language Teaching***

In the 1960s and 70s, there was a move from a structural to a functional orientation in linguistic enquiry in both the United States and Britain, owing a great deal to the works in social anthropology at that time (Hunter, 2009: 11). In Britain, the anthropologist Malinowski proposed the notion of “context of situation,” which viewed language as a mode of social action. J. R. Firth further developed Malinowski’s notion, outlining Firth’s four-part description of context of

situation (discussed in the previous section). Halliday, one of Firth's successors, has brought this notion to another height and contributed immensely to English language teaching.

Since the 1970s, influenced by this move from the structural view of language to the functional view, David Wilkins and his colleagues have developed a notional functional syllabus which specifies the communicative context of a course in terms of functions, notions, topics, grammar and vocabulary (Howatt & Widdowson, 2004; Wilkins, 1976). Different from the structural view underlying Situational Language Teaching and Audiolingualism, Wilkins (1972) and others view language as "a vehicle for the expression of functional meaning" with an emphasis on the semantic and communicative dimension of language rather than only the grammar and structure of language. The prominence of the notional-functional syllabus is a significant marker for the move from the structural view of language to the functional view of language (i.e., the functional notion of the "text" in language teaching and learning).

However, later on, the Notional-Functional syllabus was criticized by British applied linguists as merely replacing a list of grammar with another list of functions. At that time, applied linguists such as Candlin and Widdowson began to emphasize another fundamental dimension of language: the functional and communicative nature of language. They argued that the success of learning a language lies in communicative proficiency rather than in mere mastery of structures. Later on, this approach came to be referred to as the Communicative Approach.

In the transition from Situational Language Teaching to the Communicative Approach, understanding of the notion of "context" and "text" has undergone a profound change. As Halliday (1991: 11-12) puts it, the underlying views of the Communicative Approach are "really based on a context of situation" rather than "just on a setting" and "they do embody a real

conception of text, which is that language is effective in relation to the social activity and in the interpersonal relationships.”

In the late twentieth century, following the developments in the Communicative Approach, another approach to language teaching, the Tasked-based Approach, which advocates real-life learning activities in the teaching process, became prominent (Harmer, 2007; Howatt & Widdowson, 2004; Leaver & Willis, 2004). As with the Communicative Approach, Tasked-based instruction adopts a meaning-focused approach that reflects real-life language use (Willis, 2003; Swain, 1985). Also, the Task-based instruction is based on the understanding that language learning does not proceed in a linear additive fashion but is a gradual and complex organic process (Long, 1985; Lightbown, 2000). Learners often go through a developmental sequence, which does not shift directly to the target form, but involves a number of errors on the way (Skehan, 1996: 18).

The emphasis on real-life language use also echoes the conception of “text,” which is the socio-semiotic nature of language advocated by Halliday and his colleagues (e.g. Halliday & Hasan, 1985). Moving from a notional-functional syllabus to the Communicative Approach and to Tasked-based instruction the conception of “context” and “text” was first applied in language teaching with the presence of notional-functional syllabus, and then used to greater effect in the Communicative Approach and Task-based instruction.

### **2.2.5 Conclusion**

In this section, I identified the historical trends in curriculum, syllabus and textbook design. Particularly, I explored how the functional linguistic notion of “context” and “text” developed historically. The influence of these notions, especially Halliday’s influence on language teaching, is highly significant in the history of second language teaching and textbook development.

Howatt (2004: 309, 320) explored Halliday's influence on the historical development of language teaching and has noted that his contribution has been "immense" over the years. Lowe (2008) even pointed out Halliday's "incalculable" influence on several significant developments in language teaching, including the "Programme in Linguistics and English Teaching" project under his direction in the University College of London between 1964 and 1971, and two sets of key and practical materials for British schools at the time (Breakthrough to Literacy, 1976; Language in Use, 1971), and his influence on Wilkins' notional-functional syllabus and the communicative approach of teaching.

What I discovered in my review of the literature led me to explore the English Language Teaching textbooks currently used in Hong Kong. This literature inspires me to investigate how textbooks at the time embody the conception of "context", which is one part of data analysis conducted in this PhD project. I illustrate and discuss the finding of this part in Chapter 6.

## **2.3 Previous studies on ELT textbooks and materials**

### **2.3.1 Introduction**

The previous section analysed the textbook design from a diachronic perspective to show the historical developments. This section takes a synchronic perspective and reviewed the studies on textbooks research. Given the significance of language textbooks, a number of studies were conducted to research the language textbooks from different perspectives. Many of these studies have contributed at a macro level on textbooks compilation and evaluation (e.g. Tomlinson *et al.*, 2001; Chen 2005) or at a micro level on special content or core vocabulary in textbooks (e.g.

Gouverneur, 2008; Sznajder, 2010). In this section, both macro-level and micro-levels studies on textbooks are presented and reviewed.

### **2.3.2 Researching macro-level issues of textbooks: textbook evaluation**

Evaluation of materials and textbooks is a procedure that involves measuring the value (or potential value) of a set of learning materials (Tomlinson, 2003: 15). Different approaches to, and principles of, materials evaluation, have been presented in book-length publications (e.g. Byrd, 2001; Candlin & Breen, 1980; Cunningsworth, 1995; Ellis, 1997; McGrath, 2002; Tomlinson, 2003). In this section, I synthesize the previous literature with respect to three types of materials evaluation and discuss each type individually.

#### ***2.3.2.1 Three types of materials evaluation***

Materials evaluation is defined as “a procedure that involves measuring the value (or the potential value) of a set of learning materials” (Tomlinson, 2003: 15). There are a number of different types of materials evaluation in terms of different factors, such as purposes (Tomlinson, 2003: 23). Material evaluations can be used to help a publisher select a publication or help teachers select textbooks for teaching. Cunningsworth (1995) is one of the first educators to define three types of materials evaluation—pre-use evaluation, in-use evaluation and post-use evaluation—which were further developed by Tomlinson (2003) and Reinders and Lewis (2006). Pre-use evaluation involves making predictions about the potential value of materials to users. In-use evaluation (or whilst-use evaluation) measures the value of materials whilst using them or whilst observing them being used (Tomlinson, 2003: 23-25). Lastly, post-use evaluation measures the actual effects of the materials on the users (Tomlinson, 2003). According to Ellis (1997), evaluation of materials that are about to be used is predictive, while a retrospective evaluation is designed to examine materials that have actually been used (36-37). Therefore, pre-



use evaluation is predictive while in-use and post-use evaluation is retrospective. These three types of material evaluation are also complementary and a comprehensive observation of teaching and learning materials can be obtained from combining them.

### *2.3.2.2 Existing proposals for evaluating materials*

Numerous evaluation checklists have been designed to help teachers measure the value of textbooks and to make a systematic selection (e.g. Byrd, 2001; McGrath, 2002).

#### *2.3.2.2.1 Existing proposals of pre-use evaluation*

Of the three types of materials evaluation, predictive pre-use evaluation has been the focus of attention for a long time (e.g. Byrd, 2001; Skierso, 1991). A number of approaches to pre-use evaluation have been developed by researchers since the 1970s. They have ranged from limited and uni-dimensional guidelines involving making impressionistic judgments to systematic and multidimensional approaches providing in-depth investigation, proposing universal checklists, and developing specific criteria according to specific needs and contexts.

Candlin and Breen (1980) are two of the pioneering researchers developing approaches to materials evaluation. In their article (1980), teaching materials are evaluated based only on the appropriateness of textbooks for the purposes and methodologies of particular curriculums (Candlin & Breen, 1980: 178). However, they did not suggest further analysis and evaluation of the content of materials. Later, Williams (1983: 252) proposed four criteria to evaluate the content of textbooks, namely presenting up-to-date methodology, providing guidance for non-native teachers, matching learners' needs (only on linguistic content) and fitting with social-cultural environment. However, the importance of context analysis is omitted and the needs of teachers and students that textbooks should satisfy are limited. With the development of research

and academic enquiry in language teaching, a much more comprehensive evaluation checklist was developed by Skierso (1991). He suggested that detailed background information about not only students but also instructors and institutions should be collected before evaluation. Practical aspects like the layout and physical makeup of the textbooks; organizational elements such as grading, recycling and sequencing of subject matter; and psychological and psycholinguistic factors such as promoting learners' critical thinking and helping them develop communicative competences are all given great importance.

Since pre-use evaluation involves making predictions about the potential value of materials for their users, any pre-use evaluation is subjective (Ellis, 1998; McDonough & Shaw, 2003; Tomlinson, 2003; Tomlinson *et al.*, 2001). Thus, what experts and educators attempt to do is evaluate textbooks as systematically as possible to compensate for this. The concept of "systematic evaluation" was first proposed by Byrd (2001). He provided a comprehensive yet reasonable checklist for guiding the selection of textbooks and points out that the suitability between textbooks and curriculum and students and teachers must be addressed in the evaluation system. Future checklists and criteria were also developed on the basis of this "systematic" principle.

Since Candlin and Breen's (1980) interactive and step-by-step guidelines for textbook evaluation, which envisaged the "overall usefulness" of the materials and a "more searching analysis" of a certain group of students and classroom situations, experts and evaluators have attempted to organize evaluation checklists into two or more levels or stages. Hutchinson (1987) pointed out his interactive evaluation process which involved a subjective and objective analysis of the extent to which the materials match the nature of the teaching situation. More recently, McDonough and Shaw (2003) advanced two complementary stages of materials evaluation: an

external evaluation which offers a brief “overview” of the materials including the “blurb,” the introduction, and the table of contents, and a closer more detailed internal evaluation involving the examination of at least two units of a book to investigate eight criteria such as presentation of the skills.

The principle of being systematic and multidimensional is further developed in McGrath’s (2002) proposal. Based on previous literature and his observation on materials evaluation, he provided a systematic approach to evaluating materials, not only taking various factors (teachers’ and students’ needs and the context) into consideration, but also offering a four-stage evaluation system, which includes examination of context, needs analysis, textbook analysis, first-glance evaluation and close evaluation.

More recently, unlike some checklists and questionnaires that involve making general and impressionistic judgments, Rubdy’s (2003: 45-47) framework of materials evaluation tends to provide a more in-depth analysis to “look beneath the surface” and to discover dynamic features of material design. It covers a range of principles and detailed criteria including those relating to psychological validity concerning learners’ autonomy, their self-development and creativity, and pedagogical validity such as the usefulness of teachers’ guidance. Rubdy also highlighted the significance of process and content validity relating to materials authenticity, cultural sensitivity and organizational factors.

On the other hand, when other researchers attempted to develop evaluation checklists and approaches, which can be used in various contexts, Tomlinson (2003) advanced a procedure for developing criteria to match the specific circumstance of a particular evaluation, which not only

helps evaluators to clarify their principles of language learning and teaching but also ensures that future evaluation is systematic.

#### 2.2.2.2.2 Existing proposals of in-use and post-use evaluation

The fact that pre-use evaluation is a fundamentally subjective, “rule-of-thumb” activity has led to the need and increasing importance of evaluating materials retrospectively (Ellis, 1997; Sheldon, 1988: 245). However, it is surprising that there are very few published accounts of retrospective evaluations of course materials, and very little information about how to conduct them (Ellis, 1997). Ellis (1997) presented a systematic and manageable way of conducting a retrospective micro-evaluation of a particular task in the textbooks. By using methods such as analysis of the task, classroom observation, language tests and teachers’ questionnaires, micro-evaluation is able to assist teachers in determining whether material is worth using, which task works and which do not, and how to modify the materials to make them more effective for future use (Ellis, 1997).

#### 2.2.2.3 *Empirical studies of materials evaluation*

However, all the studies reviewed above have methodological issues. Instead of being developed based on empirical research with a solid supporting theory, most of the evaluation principles and checklists are based on authors’ personal experiences and preferences. This leaves the generalizability of the results of these studies open to question (Chan, 2001). The questions of whether these checklists can be used in real evaluation situations, which objectives can be or cannot be achieved by using them and what problems evaluators will encounter need to be answered. However, surprisingly, very few published works have focused on empirical research of materials evaluation—the following studies are six of them.

#### 2.2.2.3.1 Empirical studies of pre-use evaluation

Chan (2001) analyzed three ESL composition textbooks for advanced students mainly by calculating the frequencies of four variables (linguistic skills, textual organization skills, writing strategies and type of exercise) and sub-variables in each textbook and their percentages in proportion to investigate the approaches and theoretical bases adopted in ESL textbooks. Instead of using evaluation checklists proposed by researchers, Chan (2001) adopted a completely different way to evaluate these textbooks. He compared the approaches and theoretical bases adopted in the textbooks with the research results of, and recently emerging issues in, the second language teaching field. For example, the current approach of teaching writing was found in the textbooks but the issue of plagiarism when writing an academic paper was not addressed. In this way, Chan (2001) found the gap between textbook development and research insights and recommended the future direction to fill this gap. This evaluation strategy adopted in Chan's study is related to the principle advanced by Tomlinson (2003, 2008): since ELT textbooks play a role in helping students to learn a second language, Tomlinson (2008) assumed that textbooks should be driven by principles of language acquisition. Thus, previous research findings and principles in learning theory, second language learning and second language teaching can serve as a solid foundation for developing the criteria to evaluate textbooks (Tomlinson, 2003).

Another empirical study was conducted by Tomlinson and his team (Tomlinson *et al.*, 2001) to evaluate eight adult textbooks published by major British publishers. They developed a list of 133 evaluation criteria, including published claims, flexibility, syllabus, pedagogic approach, topic content, instructions, teachability and specific aspects such as appearance and illustration, and then graded textbooks on a scale of 0 – 5 for most of the 133 criteria and wrote evaluative comments for each of the major criteria. Ultimately, four out of eight textbooks were

recommended due to their potential to motivate both teachers and learners, and both positive and negative trends in textbooks development were identified and discussed. From my point of view, this study made two contributions on how to evaluate materials. Firstly, the criteria used in this study were developed from research into what learners, teachers and administrators want from textbooks. This pre-evaluation step acknowledges the importance of a prior analysis of contextual and learner factors as well as teachers' expectations as underlined by many experts and evaluators (e.g. Cunningsworth, 1995; McDonough & Shaw, 2003; McGrath, 2002; Skierso, 1991). Since the purpose of ELT textbooks is to help students master linguistic skills (Kleckova, 2004), learners' needs, such as proficiency level, preferred learning styles and their interests, should be regarded as the basis of criteria during material evaluation (McGrath, 2002: 18-19). Moreover, as teachers are mediators between published material and learners, their views need consideration and study to determine what to evaluate (Masuhara, 1998). Information will also be needed on institutions and specific programmes to evaluate whether a textbook suits the specific context (McGrath, 2002: 21). McGrath (2002: 20) also proposed the need to consider factors such as teachers' language competence, their familiarity with the target language culture, their attitude toward teaching and learners, and their time available for preparing, and so on. Therefore, the analysis of the context, learners' needs and teachers' factors is a necessary and significant pre-evaluation stage for evaluating textbooks systematically. Secondly, as mentioned above, experts and evaluators attempt to evaluate textbooks as systematically as possible to compensate for the subjective decision-making in pre-use evaluation. In this empirical study conducted by Tomlinson and his colleagues (Tomlinson *et al.*, 2001), however, researchers managed to conduct a systematic evaluation by establishing a team of experts and teachers from different countries and backgrounds, by evaluating textbooks in isolation from each other, and by

averaging their scores. Besides developing systematic criteria and checklists, integrating several evaluators' perceptions is an effective method for carrying out an objective and rigorous pre-use materials evaluation.

More recently, Johnson and his colleagues (Johnson *et al.*, 2008), using think-aloud protocols, investigated different textbook evaluation techniques used by one novice and two experienced ELT teachers to help point to more effective means of evaluation. They found that less experienced teachers took account of either the teachers' or the students' needs while the experienced teacher managed to consider how the textbook fits into a long-term programme of preparation for academic study and how other teachers might relate to it. In all, an experienced teacher's approach to evaluation aligns with the criteria proposed by a large number of experts and affirms that textbooks need to be both learner-friendly and teacher-friendly (e.g. Byrd, 2001; Campbell *et al.*, 1998; Grant, 1987, Skierso, 1991). Due to the benefits of knowing how experienced evaluators actually operate and how teachers recognize their own evaluation preferences and styles Johnson *et al.* (2008) recommended a research-informed approach to teacher training for developing teachers' materials evaluation skills. From my point of view, it is likely to eliminate the novice teacher's personal style and creativity if he or she is taught all the characteristics an expert possesses. The valuable way to train teachers is to underline the basic principles that the experienced teachers stick to but the novice teachers ignore and teach them how to develop systematic evaluation criteria and checklists according to their own teaching style and the learning style of their own students. This point is similar with the one made by Tomlinson (2003) that evaluation criteria should be developed for specific purposes and specific contexts.

It is easy to see that all of these pre-use evaluations were conducted by developing evaluation criteria either from previous research results in second language learning and teaching, from a context and needs analysis of students and teachers, or from the teacher's own experience and preferences. None of these pre-use evaluations have used the evaluation checklists proposed by previous studies. There is a huge gap between experts' proposals and empirical research. However, consciously or not, some principles presented by experts and educators were more or less adopted in these empirical pre-use evaluation studies. For instance, the notion that textbooks should be driven by principles of language acquisition as proposed by Tomlinson (2008) was adopted in Chan's (2001) study. It can be further assumed that evaluation criteria proposed by experts are valuable. Therefore, it calls for future research to apply proposed criteria in a real context to investigate the effects and problems of those criteria.

#### 2.2.2.3.2 Empirical studies of in-use and post-use evaluation

In addition to empirical studies of pre-use evaluation, this section reviews one in-use evaluation and two post-use evaluations.

Chen (2005) conducted an in-use evaluation focusing on pragmatic discourse markers in textbooks. The researcher used role playing in different situations with both native students and non-native students and compared the different usages of discourse markers used by two different groups. The researcher then checked whether the most frequently-used discourse markers used by native students were included in the currently used textbook, finding that none of these markers appeared in a total of 29 requested situations out of 6 volumes, which could be the cause of non-native students' low uses of them. The researcher used her own research results on the different performance between native speakers and non-native speakers as the criteria to evaluate textbooks, which can be a very innovative and useful direction for future material



evaluation research. However, it can also be very risky if the research findings are questionable due to invalid factors used in the study. This research also highlights the significance of “situation” in language learning and teaching, as the results are based on the discourse markers used in requested situations (e.g. request-making) (Chen, 2005: 8). This highlight also emphasizes the earlier discussion of the notions of “context” and “situation” in textbook design and language education, which was discussed in the previous section. This again stresses the need of conducting contextual analysis of the currently-used textbooks in this current PhD project (see chapter 6, section 6.1).

Al-Hajailan (1999) carried out a comprehensive post-use macro evaluation of ELT textbooks at the third-grade secondary level in Saudi Arabia using multiple data resources including a questionnaire-based study, interviews with seven teachers and administrators, and content-analysis of the textbook. A large-scale questionnaire-based study was conducted to collect teachers’ and students’ perceptions of the textbooks. The content analysis of the textbooks, interviews of seven teachers and administrators, and open-ended questions in the questionnaire provided insights on the quality of the textbooks. Although this research successfully investigated the strengths and the weaknesses of the textbooks, which were found to be very useful for textbook development and curriculum development, it took a lot of time and involved a great many teachers and students as well as administrators and therefore would be more suitable for evaluating textbooks in wider circulation used by larger populations of students. However, it also found that retrospective evaluation can be very straightforward and the results can be very convincing if based on empirical data.

Kleckova (2004) addressed two aspects of visual elements in ELT material evaluation, the placement of headings and the number of columns. Three two-page prototypes of EFL teaching

materials were created by the researcher and a graphic designer. They used the most common visual element identified in their previous analysis, and specified three special tasks requiring that only columns and headings be studied to complete the tasks. They then conducted a questionnaire-based study to gather the students' preferences for the three prototypes. The study demonstrated students' preferences for one-column designs over two-column designs and their preference for both the marginal and flush left headings in the one-column design. Student preferences observed in this study can serve as criteria to evaluate textbook design. This study provides an effective method of textbook evaluation by getting feedback from textbook users after using different textbooks for a short time.

Although there is a gap between empirical studies and expert proposals, the studies reviewed in this section prove the potential importance and effectiveness of retrospective evaluation.

#### ***2.2.2.4 Conclusion***

In this section, the historical trend of using past proposals to evaluate textbooks is identified and the gap between these proposals and empirical research is identified. In terms of the three types of materials evaluation identified above, although empirical studies proved in-use evaluation and post-evaluation significant and effective, pre-use evaluation would be more common in a real situation because teachers face the difficulty of choosing a large number of different textbooks before using them and because it also helps to identify specific aspects of the materials that require adaption (Rubdy, 2003). Thus, we need effective evaluation checklists and instruments proved by empirical studies, rather than based on an expert's experiences. As discussed at the beginning of this section, these three types of evaluation are complementary and can be used to obtain a comprehensive view of evaluations.

The significance of this section in my thesis is fourfold. Firstly, it highlights the significance of textbook analysis, which is regarded as an essential step in material evaluation. A comprehensive textbook analysis provides important empirical data for material evaluation. Thus, the analysis of textbooks in this dissertation can significantly contribute to further study on materials evaluation in EFL/ESL contexts. Secondly, the importance of the notion of situation is also highlighted by some of the studies reviewed in this section (e.g., Chen, 2005). The importance of the notion of “situation” also relates to my earlier discussion on the notions of “context” and “situation” in materials development and language education, which motivates me to conduct the part of my analysis in chapter 6, section 6.1. Thirdly, it is surprising to see how little attention has been paid to the linguistic features of verbal texts in textbooks when evaluating language textbooks. I also observe this in my analysis of micro-level textbook research, which will be introduced in the next section. The linguistic analysis of the textbooks conducted in this PhD project aims to fill this gap. In chapter 6, section 6.2 of this dissertation, I focus on the linguistic features of textbooks and attempts to identify the longitudinal shift across the years of schooling. Fourth, these studies have also paid attention to the visual elements of textbooks (e.g., Kleckova, 2004), which highlights the significance of exploring the visual images in textbooks, an analysis of which is presented in chapter 7 of this thesis.

### 2.3.3 Researching micro-level issues of textbooks: textbooks analysis

Research on textbook analysis has become more prevalent across disciplines and academic areas (e.g., Gouverneur, 2008). In the field of language textbook research, the research using the micro approach can focus on different aspects of the textbooks. I will review previous studies and categorize them based on orientations toward on lexical words, social issues reflected in the textbooks, and visual elements in the textbooks

First, several studies focus on lexical words in the textbooks. For example, following the recent interest in phraseology in language learning materials, which focuses on the vocabulary content of a language syllabus, Gouverneur (2008) analyzed the two high-frequency verbs *make* and *take* in three sets of English for General Purposes (EGP) textbooks at the intermediate and advanced levels. Similarly, focusing on vocabulary in language textbooks, some studies compared the vocabulary in a corpus of study textbooks to a corpus of reference textbooks (e.g., He, 2010; Sznajder, 2010). For instance, He (2010) compared the vocabulary in Chinese foreign language textbooks with the vocabulary list used in a Chinese proficiency test. Sznajder (2010) examined metaphorical words and phrases in a business English textbook and contrasted them with the metaphors identified in a sample corpus of business periodical and journal articles.

Second, some textbook research is oriented toward social issues. Several researchers examined gender stereotyping in Hong Kong English textbooks. For example, Lee and Collins (2008), compared ten recently published books with ten published in the late 1980s and early 1990s and found that women appeared more frequently in the former and that greater use was made of gender-inclusive pronouns and the neutral address title “Ms,” but the “male-first” phenomenon and the visual under-representation of women was still prevalent in recent textbooks. Analysing the content and language of a current Hong Kong English language textbook series for grade one

students, Yang (2012) found that males and females were almost equally represented and were portrayed in a similar range of activities. All these examples of textbook research tend to be more lexical than grammatical. We need a study to explore the contents of textbooks from a functional perspective.

Lastly, various studies tend to be orientated towards visual literacy and explore the visual resources of textbooks or the relationship between images and texts in textbooks. Guo (2004) developed a theoretical framework for the analysis of two types of visual display common in biology textbooks (e.g., schematic drawings and statistical graphs) using O'Toole's (1994) and O'Halloran's (1999) models and applying them to explore the metafunctional meanings of different semiotic elements in biology texts. Based on the multimodal convention of meaning making that understands visual and linguistic semiotic modalities are codependent, Baldry and Thibault (2006) investigated how the codependence of verbal and visual resources in science textbooks produce multimodal meanings. Coffin and Derewianka (2009) analyzed the layout of school history textbooks multimodally using Kress and van Leeuwen's (2006) signifying system. Working in the area of research on materials and assessment for language learning, and focusing on the relationship between text and image, Unsworth and his colleagues (2006-2008: e.g. Unsworth & Chen, 2008) examined factors affecting difficulties in students' multimodal reading. Chen (2010) studied English textbooks used in mainland China and investigated how the visual and verbal semiotic resources are co-deployed to construe the evaluative stance of the textbooks. Weninger and Kiss (2013) analyzed both texts and images in EFL textbooks to explore the cultural content of language teaching materials. Although they claimed to conduct quantitative research, their study lacked an analytical framework and did not use statistics. What we need

now is an analytical framework to explore the images in the textbooks that produces both qualitative and quantitative data.

This dissertation attempts to complement these studies. Based on a framework of systemic functional linguistics, this doctoral research project conducts a contextual analysis of textbooks and explores the linguistic features of the verbal texts included in the textbooks. By taking an ontogenetic perspective, I elucidate the ontogenesis of meaning expansion constructed by linguistic resources in the textbooks (the results of this part are presented in chapter 6). This research project also investigates the visual construction of knowledge in language textbooks and explicates the ontogenetic development of representational meaning of visual images in the textbooks (the results of this part are presented in chapter 7).

# Chapter 3 Why ontogenetically?

## 3.1 Introduction

The previous chapter reviewed historical trends in textbook design and examined previous studies on both macro- and micro-level textbook research. The review is essential to this current doctoral project as it guides how I situate my research within the historical context and how my research contributes to the field of materials design and curriculum development. As introduced in the first chapter, the unique perspective I bring to my research is the ontogenetic lens through which I examine the longitudinal expansion of meaning potentials reflected in English language learning textbooks used in Hong Kong for primary and secondary students. A number of previous studies examined the developmental change in language across the years of schooling (e.g., Christie & Derewianka, 2008). This current chapter focuses on these ontogenetic studies and explores the different methods adopted by them and which I used to design this PhD project.

This chapter unfolds in the following manner. First, section 3.2 provides a survey of approaches to ontogenetic studies on language learning in which I critically review studies adopting context-oriented approaches and linguistic-oriented ones. Second, section 3.3 introduces the functional linguistic perspective to language development that addresses the problems of both context-oriented and linguistic-oriented approaches.

## 3.2 A survey of approaches to ontogenetic studies on language learning

As Christie (2012: 2) notes,

The theory [we need to provide a model for tracing developmental change in language and literacy across the years of schooling] provides a solid basis on which to plan curriculum and pedagogy for the school years, enabling teachers to provide appropriate support at the different stages, to anticipate

potential learning difficulties, and to offer challenges in dealing with the emerging tasks over the years of schooling.

Given the importance of language development, the developmental change in language and literacy across certain learning periods is of great interest to a number of educators and researchers. Illuminating studies on learners' language abilities at particular phases of life and on pedagogical strategies to enhance mature language performance (mainly to do with written performance) have been conducted in the English-speaking world (e.g., Britton *et al.*, 1975; Christie, 2010; Christie & Derewianka, 2008; Painter, 1996; Myhill, 2009). All of these studies tracing the developmental change in learners' language abilities can be divided into two types. One is more context-oriented and involves synthesizing the different text types of language learners' writing and generalizing the cognitive development reflected in the writing rather than analyzing the linguistics features of writing. The other is more linguistically oriented and traces the development of various linguistics features in language learners' writing across certain learning periods. I will introduce and review the first type of study in section 3.2.1 and the second type in section 3.2.2.

### **3.2.1 Context-oriented approaches to ontogenetic studies on language learning across the years of schooling**

There are two features of the context-oriented approaches to language development: they paid more attention on categorizing learners' writing rather than discussing or explaining the linguistic features of the writing; they also tended to focus on one discrete stage in the overall developmental trajectory rather than on a range of ages across the years of schooling.

Emig (1971) studied a number of differently oriented pieces of writing produced by eight high school students in Chicago between the ages of 17 and 18 and recorded interviews about students



writing. She categorized the writing into two groups: reflexive/inward-looking and extensive/outward-looking. Britton and his colleagues criticized that her categories were too restricted and not detailed or specific enough to analyze students' writing at that stage (Britton *et al.*, 1975: 20). They even found some of her findings difficult to apply to British children and adolescents (Britton *et al.*, 1975: 20).

Based at the University of London's Institute of Education, Britton *et al.* (1975) conducted a significant project on children's written language between the ages of 11 and 18 years old from 1966 to 1971. The project was approved by the Schools Council as a part of its initial English Programme in April 1966 (Britton *et al.*, 1975). The data consisted of 2122 pieces of writing from sixty-five secondary schools produced by school students in the first, third, fifth and seventh years of their education in all subjects of the curriculum. All the data were analyzed in order to create a multi-dimensional model, which would enable characterization of all mature written texts (Britton *et al.*, 1975: 106). The major and most influential contribution of this project was Britton's proposal that there are three types of writing: transactional, expressive and poetic (Durst & Newell, 1989). Instead of investigating the developmental change in students' language abilities from year to year, Britton *et al.* identified three stage of student writing based on Vygotsky's theory of the psychological process of writing (Britton *et al.*, 1975: 22). For example, the first stage, conception, is completed when the student knows what he or she is going to write and what he or she is expected to achieve. The second stage, incubation, requires students to define and refine the writing task and plan ahead to sort out their ideas. The final stage of production, which runs concurrently with the conception and incubation processes, allows students to produce the final written piece (Britton *et al.*, 1975: 19-49).

Although these two studies have contributed to identifying various types of student writing, there is a lack of explication of the developmental changes in student language and literacy over a certain learning period. Moreover, these two studies have not elucidated the ontogenetic changes in the lexico-grammars of student writing. In the following section, I will review the studies that focus on the linguistic features of student writing and which manage to explicate the developmental shift in the lexico-grammar of student language learning over a certain period.

### **3.2.2 Linguistically-oriented approaches to ontogenetic studies on language learning in the years of schooling**

A number of illuminating studies have been conducted in the U. K. and the U. S. that attempt linguistic descriptions language development in learner ranging in age from two or three to eighteen years old (Myhill, 2008, 2009; Harpin, 1976; Loban, 1976; Perera, 1984).

Loban's (1976) longitudinal study followed the same population of 211 children from kindergarten through grade 12. The linguistics features of the children's writing across the years were compared and discussed including the average number of words in sentences, average number of dependent clauses in independent clauses, the proportion of noun, adjectival and adverbial clauses, and the verb density (Loban, 1976: 24-69). After identifying three groups—those with high language proficiency, low language proficiency and a randomly selected group—the linguistic differences between the groups were investigated (Loban, 1976: 24-69). One of the interesting and major findings of this study was that the more proficient and mature writers tend to use non-finite complex clauses “as a tighter way to coil their thoughts” (Loban, 1976: 38-39). For example, instead of writing “After he had finished the crossword puzzle, he went to bed” the high language proficiency group tended to write “having finished the crossword puzzle, he went to bed” (Loban, 1976: 39). However, the study lacks a detailed and systemic

grammar framework to describe and explain the differences between these two clause complexes. Loban (Loban, 1976: 39) realized this and thus recommended that researchers “look beyond the statistical data on dependent clauses.”

Harpin (1976) traced 290 children aged 7 to 11 performing four tasks of writing over four years in junior school and collected nearly 7,000 pieces of writing in all. He addressed twelve linguistic measures, including sentence length, clause length, subordination indices, proportion of simple and complex sentences, non-finite verb constructions in the main clause, uncommon clauses (any clause which is not an adverbial clause of time or a noun clause acting as object), and pronoun usages (Harpin, 1976: 59-60). The main findings of this study were that the use of personal pronouns decreased throughout development whereas the other 11 linguistics features increased (Harpin, 1976: 59-62). The successful collection of longitudinal data is quite impressive but the whole study lacks a clear description of the writing tasks given to students and insights on how the research results could be explained and applied to teaching and learning in practice. One of the interesting findings was that, in terms of the average length of writing in words, girl writers in this study were found to be 10% more productive than boys (Harpin, 1976: 54). Again, the possible explanation of this result needs to be explored on the basis of post-research interviews or an informative observation.

Using Quirk’s descriptive grammar (Quirk *et al.*, 1972), Perera (1984) reviewed most of the large-scale studies on children’s language development in both Britain and the U. S., covering children ranging in age from seven to eighteen (e.g. Harpin, 1976; Hunt, 1965; O’Donnell *et al.*, 1967; Yerril, 1977). She discussed language development at the level of word structure, phrase structure, clause structure, and clause complex (Perera, 1984: 223-241). At the discourse level, cohesion, which she call “discourse connections” was also analyzed to examine how students use

references, substitutions, ellipsis and conjunctions to contribute to the coherence of the text (Perera, 1984: 241-247). The significant contribution of her study lies in her findings on children's steady development from simple clause structures and clause relations, simple lexis, use of personal pronouns and the active voice, to greater complexity in clause types and clause relations, expanded lexis, greater use of modals and use of the passive voice (Perera, 1984: 223-241).

One of the most significant studies investigating the linguistics characteristics of language development in adolescents is a recent large-scale empirical study by Myhill (2008, 2009), which examined student's writing in junior secondary school from year 8 (12 to 13 year olds) to year 10 (14 to 15 year olds) in Britain. In her detailed grammatical and text-level analysis, Myhill (2008) compared the linguistics features of personal narrative and argument at different levels of language proficiency in terms of sentence length, the use of subordination, coordination and non-finite clauses, different choices in creating the opening of sentences and subject-verb inversions. In line with Loban (1976), Harpin (1976) and Perera (1984), she discovered that there was an increased use of non-finite clauses in mature writing as good writers tend to use within-sentence connectivity to support the communication of their ideas (Myhill, 2008: 279). In terms of syntactic structures, which Loban (1976) and Hunt (1965) failed to touch upon, Myhill (2008) found that good writers tend to use complicated structures at the beginning of sentences to guide the readers. For example, good writers tend use adverbials more often to begin a sentence in the early stages of schooling whereas they use more non-finite clauses in sentencing openings to develop variety at the later stages of schooling (Myhill, 2008: 285). Based on the results of her linguistic analysis, Myhill (2009) proposed the existence of three overlapping "development trajectories" in the growth of writing. Through investigating the linguistics features of students'

writing in the first year of the project and by conducting classroom observation and post-analysis interviews with students in the second year she observed 1) a shift from speech to written language patterns, 2) emergent capacity to express and elaborate the experience in writing, and 3) the ability to “transform” the experience, which is presented so that writers achieve some rhetorical impact. Myhill (2009) also proposed the notions of writing as design and writers as designers. She proved that mature writers in the secondary phase can integrate all three trajectories and craft different visual, presentational and linguistic choices. These notions were also echoed in the work of Sharples (1999) and Kellogg (2006). In light of the results of her project, Myhill (2009) recommended that instead of scaffolding grammatical rules or error correction, language teaching needed to enable teachers to help writers and learners gain a deep understanding of the range of options and possibilities available, and to encourage them to manipulate these choices in order to exert rhetorical impact and fulfill communication needs (Myhill, 2009). Christie and Derewianka (2008: 4) regarded Myhill’s work as one of the most influential studies to go beyond structural description to consider function and meaning. However, her study is restricted to a narrow age range (her subjects were in years 8 to 10 in secondary school) and she does not elaborate on the interpersonal dimension of language development (Christie & Derewianka, 2008: 4).

Table 3.1 summarizes the results of all the studies reviewed in this section using systemic functional grammar (SFG) terminology.

Table 3.1 Summary of linguistically-oriented approaches to ontogenetic studies on language (see Halliday & Matthiessen (2004) for a detailed introduction to SFG terminology)

| Metafunction /Clause | Features                        | Studies/ Age                    | Kindergarten  | Age 7  | Age 9   | Age 11   | Age 12 | Early Adolescence |
|----------------------|---------------------------------|---------------------------------|---|--|---|--|--------|-------------------|
| Interpersonal        | modality (Modal words)          | Harpin, 1976                    |   | Fewer modal words → More modal words   |   |  |        |                   |
|                      |                                 | Burgess et al, 1973; Hunt, 1970 |   |  | Few modal words → More modal words  |  |        |                   |
| Textual              | voice                           | Burgess et al, 1973; Hunt, 1970 |   |  | Active → Passive  |  |        |                   |
|                      | Choices of Theme                | Myhill, 2008                    |   |  |   | Unmarked theme → more Interpersonal Adjunct as theme → more Marked topical theme and non-finite clause as marked theme in clause complex |        |                   |
| Logical              | secondary tense                 | Harpin, 1976                    |   | Primary → Secondary  |   |  |        |                   |
|                      |                                 | Burgess et al, 1973; Hunt, 1970 |   |  | Primary tense (past, present) → Secondary tense (present in present, past in present) |  |        |                   |
| Experiential         | participants (personal pronoun) | Harpin, 1976                    |   | More personal pronouns → Fewer personal pronouns   |   |  |        |                   |
|                      |                                 | Hunt, 1970; Yerril, 1977        |   |  | Third personal pronoun → First personal pronoun                                       |  |        |                   |
| Clauses complex      | para/hypo                       | Hunt, 1965                      |   | More clause connected by "and" → much less clauses connected by 'and' (without differentiation of specific logical-semantic relations) |   |  |        |                   |
|                      |                                 | Harpin, 1976                    |   | More enhancement of time → Various of extension and enhancement  |   |  |        |                   |
|                      |                                 | Loban, 1976                     | Enhancement of time or cause → Enhancement of sequence and concession |  |   |  |        |                   |
|                      |                                 | Myhill, 2008                    |   |  | Enhancement of time, cause, condition<br>Enhancement of concession, result, manner    |  |        |                   |
|                      |                                 | Myhill, 2008; Loban, 1976       | Fewer or no non-finite clauses → more non-finite clauses              |  |   |  |        |                   |

### 3.2.3 Conclusion

All of these linguistically-oriented approaches to language development have made influential contributions to the corpus of research on longitudinal developmental changes in language learning but most of them lack a systematic lexico-grammatical framework to describe the linguistic features. Moreover, most of them tend to be structural rather than functional and do not discuss or explain how different lexico-grammatical choices realize meaning in different contexts. The context-oriented approaches that were introduced in section 3.2.2 also have their disadvantages—they pay more attention to exploring and synthesizing different types of student

writing in different contexts than exploring the relationships between linguistic features and contexts. Studies balancing their focus on both context-oriented approaches and linguistically-oriented approaches are needed to contribute to the field of language development. In other words, we need studies that draw on a detailed and systemic lexico-grammatical framework, discuss how different lexicogrammatical features in student language and literacy develop across the years of schooling, and explicate how these choices are made to realize meanings in different contexts. In the next section, I will introduce ontogenetic studies that adopt a systemic-functional approach, which addresses the problems of context-based and linguistically-oriented approaches.

### **3.3 Exploring the relations between context and lexico-grammatical features:**

#### **A functional linguistic approach to language development**

All of the research described in the previous section on language development does not commit functional elements, or attempted to partially commit functional elements. Based on SFL, a group of linguists and educators led by Halliday and others contribute influentially to a comprehensive and functional-oriented account of children's language development in different stages from infancy and early childhood to late adolescence (e.g. Christie & Derewianka, 2008; Halliday, 1995; Painter, 1999). SFL is a theory of language that helps to explain the meaning potential of language for use in the ways which have been described.

#### **3.3.1 Language as a social-semiotic perspective**

Before introducing studies based on systemic functional model of language, let me present Halliday's concept of language and other different conceptions in the past.

When it comes to language learning and language education, a range of factors would be considered to determine which approach is best adapted to learning a second or foreign language.

These factors include the context of learning/teaching, the age of learners, the range of learning styles within a given group of learners, and the concept of language in use (Matthiessen, 2006). Of these factors, the concept of language is especially critical because it will not only determine the focus of the content during the process of language teaching and learning, it will also tremendously influence the syllabus planning and materials design for the entire teaching and learning process (Matthiessen, 2006: 31).

In a period of history when unprecedented attention was given to language learning and teaching, a number of educators and researchers attempted to propose different conceptions of language. During and after World War II in the United States, American structuralists conceived of language as rule-governed patterns. On the basis of this conception of language, Lado (1957) developed an approach of contrastive analysis and Lantolf and Thorne (2006) conducted research into the semantic system of the mother tongue in second language development. Later, the commonsense conception of language—characterized by Whorf (1956: 207-208) as “natural logic” or “merely an incidental process concerned with communication, not with formulation of ideas”—became influential. According to “natural logic,” perception and conceptualization are independent of, and precede, verbalization. The learning of language and the learning of content can be conceived of as distinct activities (Matthiessen, 2006: 32). The notion of “natural logic” gradually came to be recognized as a fallacy and the conception of language played a more central role in the construal of experience, in the formation of ideas, in thinking and in reasoning—a position that is related to Whorf’s notion of fashions of speaking and frames of consistency (cf. Martin, 1988: 246-252). Guided by Whorf’s conception, Stutterheim and Carroll (2006) conducted experiments requiring speakers of different languages to report the sequences



of events shown in film clips as evidence to support the notion of an “interrelation[ship] between grammaticized means and specific principles of information organization” (2006: 41).

Systemic functional linguistics, as developed by M. A. K. Halliday, builds on insights from Firth’s (1957) system-structure theory, Prague school linguistics (Daneš, 1974), the glossematics theory of Hjelmslev (1961) and from British and American anthropological linguistic theories (Malinowski, 1923, 1935; Sapir 1949; Whorf, 1956). Halliday and others’ general approach to language, as the title of this section suggests, focuses on the social-semiotic perspective (Halliday & Hasan, 1985). By considering language as semiotic, Halliday (1985: 4) defined “language as one among a number of systems of meaning that, taken all together, constitute human culture.” By interpreting language is social, Halliday (1985: 4) “relate[d] language primarily to one particular aspect of human experience, namely that of social structure” while some linguists (e.g. Chomsky 1957; Lamb, 1966) interpreted language from a psychological perspective in which language was explained in terms of the processes of the human mind. Building on Malinowski (1923) and Firth’s (1968) conception and description of context of situation, Halliday proposed three contextual variables (field, tenor and mode) and emphasized the relationship between language, context and text that language lies in the study of texts and situation is “the context in which texts unfold and in which they are to be interpreted” (1985: 5-12). Matthiessen (2004, 2006) further elaborates the systemic functional linguistic approach to text and language stating that “text instantiates the overall system potential of language” and “language as a resource for making meaning.” That is to say, language used in the text is not a system, but an instantiated choice we select that corresponds to a particular context of situation among the choices of meaning making in the overall system.

Judged by its conception of language, it is evident that the functional linguistic approach is very different from all the other approaches mentioned and discussed earlier. Rather than focusing on syntax and structure, it emphasizes the relationship between the lexico-grammatical elements and more importantly, how these elements are chosen to realize different meanings in various social contexts.

### 3.3.2 Halliday's four stages of language development

M. A. K. Halliday suggests three aspects of language learning, which are defined as “learning how to mean.” They include learning language, learning through language, and learning about language (1991: 288). Different from learning sounds and words or learning to name and to refer, language learning, according to Halliday is “learning how to mean” (1995: 397). Children’s semiotic development of learning how to mean carries on along with their material development of acting and doing, both of which rely on the child’s interaction with the physical and social context (Halliday, 1995: 397). Halliday identified four stages of a child’s semiotic development of how to mean (shown in Table 3.2) (Halliday, 1995: 394-403). The first stage of exchanging attention with their caregivers takes place by activating the whole body. The second stage of exchanging signs involves using body postures and movement, which are endowed with potential meanings like “I want to be together with you,” or “I want to know what’s going on.” The third stage of exchanging sign systems involves using a “protolanguage” developed around a small number of motifs (see details in section 3.3.3 of this chapter). The fourth stage involves exchanging words-in-structures (lexico-grammar) after the sign-based system of language has been deconstructed and reconstructed as a tristratal semiotic comprising semantics, lexicogrammar and phonology (see details in section 3.3.4 and section 3.3.5 of this chapter). In

the following sections, I discuss studies by SFL researchers on language development at these stages.

Table 3.2 Four stages of language development

| <b>Stage</b>                  | <b>Physiological period</b>                    | <b>Performance</b>   | <b>Nature of the activities</b> |
|-------------------------------|--|--|---------------------------------|
| <b>Pre-meaning</b>            | from birth                                     | <b>Exchanging attention</b> by activating the whole body, including the organs of speech, accompanied by smiling and gurgling, in phase with the directed attention of their caregivers.   | material and pre-semiotic       |
| <b>First steps in meaning</b> | around four months                             | <b>Exchanging signs</b> by lifting the head, aligning the body, rolling over, reaching and grasping an object to realize the semiotic sign of gaining attention and /or showing curiosity. | material and pre-semiotic       |
| <b>Protolanguage</b>          | typically in the second half of the first year | <b>Exchanging sign systems</b> by crawling, mobility from one place to another.  | semiotic                        |
| <b>Language</b>               | typically early in the second                  | <b>Exchanging words-in-structures</b> by walking or other bipedal movement   | semiotic                        |

|  |      |                                     |  |
|--|------|-------------------------------------|--|
|  | year | where the grammar begins to develop |  |
|--|------|-------------------------------------|--|

### 3.3.3 Developing the mother tongue “protolanguage”

When Halliday (1995) discussed a child’s ability to use protolanguage to make meaning, he emphasized two aspects of the meaning-making process: 1) meaning is created in the process of interactive environment, and 2) language is a system of meaning. The nature of interactive is continuity from the child’s earlier communication experiences which involved exchanging attention and signs, stressing Halliday’s notion that “language is to act with,” not “to learn with” (1995: 401).

Meaning creation in the process of interactive environment means the success of communication depends on not only the child’s expressions, but on the caregivers understanding of it. For instance, if a child demands help to get down by saying “down” (“I want to get down”), the exchange could not be completed without the caregiver’s ability to interpret the child’s “down” into the actual demand, “I want to get down.” We can also find the consistency of vocal and gestural communication when exploring children’s protolanguage. For example vocalization of /da/ could be glossed by “that’s interesting—don’t you agree?” to express the child’s curiosity and interests when the caregiver attends to a particular object or talk with the children. This curiosity or interests could also be simultaneously accompanied by the child pointing at the object he or she is interested in or curious about. In this situation, the consistency of vocal and gestural expression found in the repeated meaning of curiosity and interests is realized in two modes: vocal language and body language.

The second aspect of protolanguage, the systemic aspect, is based on the fact that the development of protolanguage is a paradigm of alternatives, which begin with the initial intersubjective formation of the child's subjectivity. In the earlier stages, children exploit gestural expressions to exchange attention, which are mainly used to convey the meaning of experiences about only "you" or "I." Later on, the domain of experience beyond "you" and "I," such as the experience of other people except the speaking interactants, is facilitated by the communication invoked through the child's protolanguage. Furthermore, through protolanguage, the child is able to express his or her different forms of consciousness, including expressing his or her reflection on things or people by presenting personal opinions of either the speaking interactants (being together) or other people (that's interesting), and proposing an action in order to effect some change of either the speaking interactants (you do) or other people (I want it) (see table 3.3). As shown in Table 3.3, the cooperation of each social mode of consciousness with each domain of experience represents a different possible way of meaning making, or as Halliday puts them "regulatory," "instrumental," "interpersonal" and "personal" (Halliday, 1971: 41). In SFL theory, any paradigm of alternatives is called a "system," which can be modelled formally in a "system network." This paradigm of meanings of protolanguage shows its systemic nature and echoes Halliday's proposal of "language is a system for meaning". But the paradigm is the simplest and is the most initial kind of mutually exclusive alternatives which are available for a particular choice for the child to make meaning by means of protolanguage. If more delicate, within "instrumental", the choices available are demanding object ("I want") and refusing object ("I don't want"). To be even more delicate, under "demanding object", more choices are available including urgent demand ("I want now"), strong demand ("I want very much"), and neutral demand ("I want"). The different possibilities presented by the notion of

“refusing object” can be explored similarly, too. The expandability of the semiotic system of protolanguage is being modelled as a resource for meaning making. As Painter (1999) explains, “value relations” between these possibilities and choices are “at the heart of the description” (41).

Table 3.3 Protolanguage: a paradigm of meanings

| Forms of consciousness                                  | Action                            | Reflection                            |
|---|-----------------------------------|---------------------------------------|
| Domain of experience                                    |                                   |                                       |
| 1 <sup>st</sup> /2 <sup>nd</sup> person<br>(you and me) | regulatory<br><br>“you do”        | interactional<br><br>“being together” |
| 3 <sup>rd</sup> person<br>(all else)                    | instrumental<br><br>“I want that” | personal<br><br>“that’s interesting”  |

However, the limitation of the protolanguage lies in the nature of the system of signs which can only construct either action or reflection towards speaking interactants or other people. At the later developmental stages children use language in a semiotic process to construe their representational and personal experience of the world and simultaneously enact the interpersonal relationship between the interactants by facilitating the ongoing coherence of the exchange to enable the two meanings. For instance, a child’s refusal of an object is realized by a headshake. The headshake can realize the meaning of refusal but not which object the child refuses. That’s the reason why another sign, pointing, is needed for a child to express which object is being

refused. The vocal or gestural sign can only contain one meaning per sign rather than the combination of meanings in one sentence as is realized by using lexicogrammar (Halliday, 1971).

### **3.3.4 Developing from protolanguage to lexico-grammar before schooling**

As illustrated above, the limitations of a protolanguage lie in the nature of the sign systems that separate the construction of the representational and the interpersonal meaning. In children's later development, the mastery of lexico-grammar makes it possible for them to construe their experiences of the world (representational meaning) and simultaneously enact with the interactants to facilitate their roles in the communication in relation to the meaning (interpersonal meaning) by facilitating the ongoing coherence of the communication to enable these two meanings (textual meaning).

How is lexico-grammar picked up by children learning their mother tongue before schooling? How are various linguistic resources learned by children? What happens to children's cognition during the on-going process of learning language? These questions guide researchers and educators as they conduct research on children's language development in the pre-school years.

Painter (1996; 1999) undertook a longitudinal case study of a child's talk with his parents from the age of two years and six months to the age of five years using audio-tape recordings and notebook and pencil jottings, which aimed to address the relationship between developments in language and developments in thinking. These developments are crucial in enabling children to move from commonsense, everyday, domestic knowledge to the uncommonsense or educational knowledge of school learning (Painter, 1996; 1999). Painter used this illuminating study to demonstrate that language is learnable during the child's pre-school years by expanding the child's mastery of various linguistic resources, and that educational knowledge is learned

through language by orienting language as an object of attention (Painter, 1999: 318-334). For instance, children's mastery of relational clauses during pre-school shows movement from language abilities involving using clauses with exophoric reference items to realize one participant's role (e.g., that's a van), to the mastery of classifying clauses with lexical realizations in both participant roles (e.g., a bus isn't a truck) (Painter, 1996: 67). Greater flexibility using language resources can also be seen from this stage. Children were able to use more lexical words. Children's meaning potentials have expanded from a positive mood to negative mood. We are also able to discover the child's ability to use relational clauses to categorize the phenomenal world and find out the interrelationships between taxonomies of qualities, which mark the child's development of generalizing experiences. Moreover, two key developments of knowledge are traced in line with this development in language: movement from the construal of concrete phenomena to the construal of abstractions, and movement from intersubjective and affect-charged negotiation to objective and affect-neutral assessments (Painter, 1996). These key developments are the meaning potentials that normal children will expand by school ages and they are essential for children to involve educational knowledge of school learning. Painter's case study supports the argument that at least some children's linguistic development involves cognitive development, which contributes to the demands of educational knowledge. More specifically, Painter sees "learning as a linguistic process" and concludes that language development can be "fruitfully read as a study of the child's intellectual development" (Painter, 1999).

### **3.3.5 Developing lexico-grammar in the year of schooling**

Clare Painter and M. A. K. Halliday have conducted studies on writing development focusing on the early years of infancy and childhood. A number of studies were conducted on entry to school



to investigate the ontogenetic development of linguistic patterns picked up by children during different years of schooling. Other than the non-SFL research discussed in section 3.2, the study by Christie and Derewianka (2008), which builds on Halliday's functional description of language, can be regarded as a masterpiece in the field of language development in the school years.

Christie and Derewianka's study (Christie, 2010; Christie & Derewianka, 2008) of the ontogenesis of student writing from childhood to late adolescence not only covered the whole years of schooling, exploring student's writing on history, science and English, but, also provided an in-depth profile of how literacy is developed and what constitutes mature writing performance. They outlined an overall trajectory in language development through the school years, which is illuminating for informing pedagogical ways to enhance students' "middle ages" across all the years of schooling (Christie, 2010). Christie (2012: 189) characterized the overall trajectory as movement:

from the simple and congruent to the less simple and noncongruent; from the familiar and commonsense knowledge of life toward the less familiar, uncommonsense areas of knowledge that the school subjects represent; from meanings and discourses that are elemental and of the immediate context toward meanings and discourses that are abstract and of more distant contexts. (Christie, 2012: 189)

The following table shows a summary of Christie's (2010) research and traces how linguistic resources expand in the process of language development during the school years. The features are organized based on the existing functional grammar framework, as in section 3.2.2 (Halliday & Matthiessen, 2004). As an example of the development of successful learners in late childhood

to adolescence mastery of clause complexes (Christie 2012: 18-22), Christie shows that students' linguistic literacy develops from being able to write simple clauses linked by *but* or *and*, to the use of clause complexes, often with dependent clauses of time linked by *when*, and then to clause complexes with dependent clauses of reason linked by *because* or *so* together with their mastery of non-finite clauses of purpose, and then further to grasp a full range of dependent clauses.

Students' writing on the subject of science offers a good example of Christie's (2010) four proposed phases of language development: 1) early childhood, 2) later childhood to early adolescence, 3) mid-adolescence, and 4) late adolescence to adulthood.

In the first phase of early childhood, Christie proposes that students in primary school start to engage in science learning through classroom talk with teachers constructing scientific knowledge together in order to have a shared basis for learning. The finished written text, which is based on classroom talk, is a written procedural recount about nature. As an example, Christie presented an example of the written text by a student to show the use of exophoric references, the type of thematic patterning (e.g., the theme of one clause is often retrieved from the rheme of the previous one). Christie notes that early writing by some successful writers can involve the use of marked themes in clause complexes in the form of dependent clauses of time.

Moving to the second phase of late childhood to early adolescence, Christie notes that students in this phase begin to face distinctive subject specialism. Students begin to master "subject-specific literacies," especially in the subject of science to explore the nature of the world systematically and effectively. Students have to expand their emergent ability to handle abstract qualities and values. To explain this challenge and development, she uses a written text explaining the human digestive system produced by a year 8 student that illustrates her linguistic ability to present

abstractions. The writer achieves growing control of thematic patterning and endophoric references to build coherence in the text. The text includes extensive grammatical metaphors, which shows her ability to pack information quite densely into language. For example, when she explained the role of nutrients in the digestive system, she wrote: “The nutrients that are absorbed from your food are used for growth and tissue maintenance, or burnt off as energy” (Christie, 2012: 100).

In the third phase of mid-adolescence, students have to master more challenging “subject-specific literacies.” Christie notes that mid-adolescence is now widely recognized as a critical period for educational development in the U. K., Australia and in the U. S. To explore development in this period and to describe major developments in “scientific language” during this phase Christie introduces an interesting text written by a year 10 student, a report on hemophilia. In this text the student demonstrated his good control of marked themes to unfold the whole text. The student also demonstrated his knowledge of this field by using technical language. He made considerable use of relational processes to introduce technical language. For example, when he introduced hemophilia at the beginning of his text, he wrote: “Hemophilia is a genetically linked blood disease that mostly affects males” (Christie, 2012: 141). He also used relational processes to illustrate the cause: “Hemophilia is a hereditary disease in which there is a defective gene that causes the owner of this gene to be unable to clot efficiently” (Christie, 2012: 142). Interpersonally, although the writer successfully detached himself from the field and from the potential readers, as indicated by the non-appearance of his identity in the text, he also used interpersonal features effectively, as for example in his use of modal adverbs such as “generally” and “usually,” to present his evaluation and judgment.

In the last phase, the last few years of secondary school, the student's particular challenge is to learn how to report scientific experiments or investigations that explore methods of building scientific meanings in this transitional period before tertiary learning. Hence, in the texts studied during this period, difficult technical language is often accompanied by images, diagrams and graphs. Christie's example text is a report of an experiment in what she calls a "demonstration genre" that is typical in late secondary school and undergraduate studies in science. The text is worded as for a procedure accompanied by one diagram, one table and one figure. The grammatical structure of this text is actually relatively simple. For example, the text is relatively free of grammatical metaphor. However, technical lexis is extensively used to present the technicality of a scientific experiment, and it is this technicality in scientific language, foregrounded in the example of writing of the year 10 student that Christie argues students find "arcane" and "intimidating" (Christie, 2012: 137). Christie also argues that "multiliteracies"—the ability to read images and to relate images to the linguistic text—needs enhancement to enable students to better comprehend multimodal scientific texts in this last phase of secondary school.

Christie's (2012) comprehensive work on the systemic functional linguistic description of students' writing across the school years will serve as a significant reference for curriculum development in language education. However, the detailed analysis presented in this study is based on sample texts selected by the author, whether these sample texts are sufficiently representative enough would need to be verified by subsequent studies. Tasks remaining in the field include the publication of more empirical studies involving both qualitative and quantitative analysis of students' writing during their school years.

Table 3.4 Descriptions of language development across all the years of schooling based on Christie (2012)

| Metafunction<br>/Clause | Features               | Early childhood (Age 6 - 8)                            | Late childhood to adolescence<br>(Age 9 - 13/14)   | Adolescence (Age 14 - 15/16)                                      | Early<br>adolescence to<br>adulthood<br><br>(Age 17 - 18) |
|-------------------------|------------------------|--|--|---|---|
| Interpersonal           | Adverbial expressions  | Adverbial expressions only for intensity               | Adverbials used to add meaning   | Adverbials construct additional meaning and/or attitudinal colour |   |
|                         | Attitudinal expression | Simple adjectives or verbs which realize simple affect | Expressed in adverbial expression and in increasingly nuanced lexical choices across all areas of the lexicogrammar. |   |   |
| Textual                 | Theme choices          | Subject or personal pronouns as Theme                  | 1.New information at the end of the previous sentence as Theme<br><br>2.Circumstantial information as marked Theme   |   |   |

|                 |                          |   |  |  |  |
|-----------------|--------------------------|---|--|--|--|
| Logical         | secondary tense          | Verbal group structures expand by making varied uses of tense choices   |  |  |  |
| Experiential    | Nominal group structure  | Expanding nominal group structure either by embedding a clause, or by using pre-modification of the noun.                     |  |  |  |
|                 | Circumstantial varieties | Circumstances of place or time  | Various prepositional phrases expand to create many different kinds of circumstantial meaning including concession manner and purpose. |  |  |
| Clauses complex | Clause complex           | Singular; linked by simple additive conjunctive relations, e.g., And; putting the dependent clause of time as a marked theme. | The nuanced types of dependent clauses appear including reason, purpose, condition and concession.                                     | Non-finite clauses, quite often as marked theme. |  |

Against the background of the insights derived from Christie and Derewianka's (2008) research into the development of writing in English in different subjects in Australian schools, other studies representative of SFL contributions have been conducted in the fields of history, science and English (see Table 3.5). In the field of history, Coffin (2006) and Schleppegrell (2004) have investigated the nature of historical discourses and described the challenges of historical comprehension and writing. Work in science have been reported in *Talking Science* (Lemke, 1990), *Writing Science* (Halliday & Martin, 1993) and *Reading Science* (Martin & Veel (Eds.), 1998). On the subject of English, Rothery & Stenglin (2000) and Macken-Horarik (2006) have examined students' story writing and their response to the literacy works.

The studies discussed above on writing development only focus on the context of English as a first language. Little research has been conducted in the context of English as a second language. Gebhard *et al.*'s (2011) analyzed the literacy development of one student whose first language was Spanish, during a blog-mediated writing curriculum over 22 months that was designed by the teacher to enhance computational skills and second language proficiency in an urban U. S. elementary school. The school had limited technological resources and students did not have access to or experience using computers at school or at home prior to their participation in the study (Gebhard *et al.*, 2011). The study was informed by Halliday's theory of systemic functional linguistics and Vygotskian conceptions of appropriation and mediation (Gebhard *et al.*, 2011: 280-281). The study demonstrated that the student's computational skills were highly developed and, in terms of language proficiency, showed an expansion in the functions of the student's posts which moved from "praising" through "expressing curiosity," "requesting action and committing to future action," and "explaining," to "provision [of] evidence to support a

claim in the context of discussing a piece of literature” (Gebhard *et al.*, 2011: 289-296). At the grammatical level, the student progressed from simple subject-verb-object patterns to clause complexes and the expansion of nominal group by using embedded clauses (Gebhard *et al.*, 2011: 296-300). However, a detailed analysis of how different types of clause complexes are associated with different stages of literacy development was not provided.

Table 3.5 Ontogenetic studies adopting systemic-functional approaches in both first and second language learning contexts

| English as a first language learning context | English   | Science  | History   |
|--|---|--|---|
|  | Rothery & Stenglin, 2000; Macken-Horarik, 2006; Christie and Derewianka, 2008 | Lemke, 1990; Halliday & Martin, 1993; Martin & Veel (Eds), 1998; Christie & Derewianka, 2008 | Coffin, 2006; Christie & Derewianka, 2008; Schleppegrell (2004) |
| English as second language learning context  | Gebhard, Shin, & Seger, 2011.   |  |   |



### **3.3.6 Conclusion**

This review of the systemic functional approaches of ontogenetic studies demonstrates the significance of the SFL model of language (Halliday & Matthiessen, 2013), which not only provides a systemic framework of lexicogrammar also enables researchers to examine the developmental changes in students' language abilities thoroughly. SFL will be introduced as the theoretical model underpinning this current PhD research project. The design of which will be explained in chapter 5.

Judging from the literature review above, few studies touch on the issue of ontogenetic research in the context of English as a second or foreign language. This current PhD project aims to fill this gap by conducting an ontogenetic study of students' English textbooks in an EFL context.

## Chapter 4 Context, discourse and language

One of the major priorities of this study, identified through the review of previous works on textbooks analysis in Section 2.2, is the exploration of how to analyze textbooks in a systematic way. A pivotal issue is the need for a systematic framework to describe and categorize the different types of the texts included in textbooks.

As far back as the 1920s, a number of studies captured the importance of situation in language and tried to categorize the various discourse types in different ways such as, for example, proto-pragmatists such as Wegener (see Nerlice, 1990). The reason I use the term “discourse” here rather than “text” is to do with Halliday’s distinction between “text” and “discourse.” Text is the product of a process of language, whereas discourse is text that is viewed in its socio-cultural context (Halliday, 2008: 77-78; Halliday, 2010). The purpose of reviewing the works in this chapter is to explore the classification of different texts for different uses in different socio-cultural contexts, thus my decision to use the term “discourse” in this chapter. The variation between different discourse types has long been acknowledged and has been associated with different terminologies such as register, text type and genre. What has received consensus is the use of register to refer to “situationally defined varieties” (Biber, 1994). This definition is very close to Halliday’s definition of register variation—“variation according to use”—as distinguished from dialect variation which is “variation according to user” (Halliday, 2010). The term register is often regarded as a “cover term” for all situational varieties, although there is less consensus on using text type, genre or others to refer to individual ones. A theoretical foundation behind the definition of the relationship between “register” and “discourse types” until Halliday (1991) proposed a relationship between “system” of language and text as the cline of

instantiation (Halliday & Matthiessen, 2004). Figure 4.1 depicts the cline of instantiation (Halliday & Matthiessen, 2004: 24). Halliday and Matthiessen described the relationship between “system of language” and “text” as like the relationship between climate and weather: the text is like the weather—the cline of the particular instance, whereas the system is like the climate—weather seen from a greater depth of time, the cline of overall potential. Therefore, the relationship between “system of language” and “text” is instantiation. When moving along the cline of instantiation away from the text pole towards the system pole, we started with a single text and began to look for other texts that are like it according to certain criteria. The other texts are identified as text types that could be interpreted as registers if approached from the potential pole, which is a functional variety of language (Halliday, 1978a).

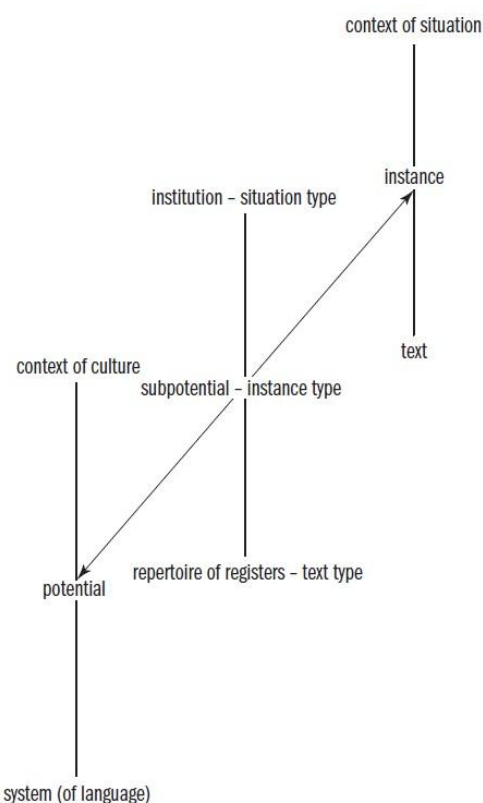


Figure 4.1 The cline of instantiation

Research has shown that texts vary systemically according to contextual values. Catford (1965: 83) stated the need for a classificatory framework arguing that “the connect[ion] of a ‘whole language’ is so vast and heterogeneous that it is not operationally useful for many linguistic purposes, descriptive, comparative and pedagogical.” It is therefore desirable to have a framework of categories for the classification of “sub-languages” or varieties within a total language. The following sections review the different major classificatory frameworks for discourse types and introduce the descriptive resources adopted in this study. I will first introduce Halliday’s (1985) notion of context and Hasan’s contextual configuration (1985), followed by a review of different proposed frameworks for classifying and describing different discourse types. Lastly, I will review Matthiessen’s (2014) recent registerial cartography, which is adopted in this doctoral project.

#### **4.1 Hallidayan notion of context and register:**

Halliday cited Reid as the first one to use the term “register” to describe the concept of “text variety” (Halliday, 1975: 181). Firth (1950) and Hymes (1969) developed the concepts of contextual elements as they pertain to the different situations in which languages operate. Ure (e.g. Ure, 1968; Ure & Ellis, 1972) further developed the concept of the context of situation. Halliday (1964) interpreted and introduced the concepts of “field,” “mode” and “style of discourse.” Halliday later adopted the term “mode” from Spencer and Gregory (1964). That is where the three contextual variables come from. Below is Halliday’s (1985: 12) description of the three features of context—field, tenor and mode:

**Field:** what is happening, to the nature of the social action that is taking place: what is it that the participants are engaged in, in which the language figures as some essential component?

**Tenor:** who is taking part, to the nature of the participants, their statuses and roles: what kinds of role relationship obtain among the participants, including permanent and temporary relationships of one kind or another, both the types of speech role that they are taking on in the dialogue and the whole cluster of socially significant relationships in which they are involved.

**Mode:** what part the language is playing, what it is that the participants are expecting the language to do for them in that situation: the symbolic organization of the text, the status that it has, and its function in the context, including the channel (is it spoken or written or some combination of the two?) and also the rhetorical mode, what is being achieved by the text in terms of such categories as persuasive, expository, didactic, and the like. (12)

The term register was first used by Halliday (1978a) in his paper titled “The Users and Uses of Language.” He stated that the purpose of approaching the register lies in the “attempt to uncover the general principles which govern this variation, so that we can begin to understand what situational factors determine what linguistic features” (32).

Halliday’s notion of register has exerted influence on various schools of linguistics, including the Birmingham school (e.g. Sinclair & Coulthard, 1975) and corpus linguistics (e.g. Biber, 1995), but these schools approach their understanding of register in different ways.

Gregory (1967) argued that, given the importance of contextual categories it is helpful to be explicit about the description of the situational category, which may correlate with sub-sets of linguistic features (Gregory, 1967: 178). He then proposed that situationally, field, tenor and mode are all related in a general sense to “the role being played by the users in the language event,” which could be sub-categorized into the “user’s purposive role relating to the field of discourse,” “medium relationship relating to mode of discourse,” and “addressee relationship relating to the tenor of discourse” (Gregory, 1967: 184). As Biber (1994: 33, 38-39) commented, Halliday’s description of contextual categories, which refers to field, tenor and mode is correlational rather than deterministic, he calls for a classificatory framework of text types rather than only describing the variables. Because of the complex and abstract nature of contextual variables, it is more difficult to develop a classificatory framework with high delicacy. However, to some extent, the situational category proposed by Gregory (1967) makes a classificatory framework possible and approachable. Gregory also presented an example to illustrate how to describe the situational category in detail. The great influence of Gregory’s work on this current study comes from his suggestion regarding distinctions along the dimension of situation variation categories as the user’s medium relationship. Figure 4.2 depicts Gregory’s suggested distinctions (Gregory, 1967: 189). In keeping with his argument that “a detailed consideration of user’s medium relationship will show how diversification of the situational description might yield a framework for arriving at a useful sub-categorization of the contextual category of mode of discourse,” he proposed distinctions in classifying the user’s medium relationships between the spoken and the written more delicately than some descriptive contextual modes (Gregory, 1967: 188). For instance, speaking is distinguished as speaking spontaneously, speaking non-spontaneously, and speaking spontaneously. It is then categorized as conversing (the medium

relationship in those speech situations in which there is the possibility of spontaneous interchange between two or more people) and monologue (the medium relationship in those speech situations in which the other people present, if any, do not join in, or at least are not meant to except perhaps to show approval or disapproval) (Gregory, 1967: 88-190).

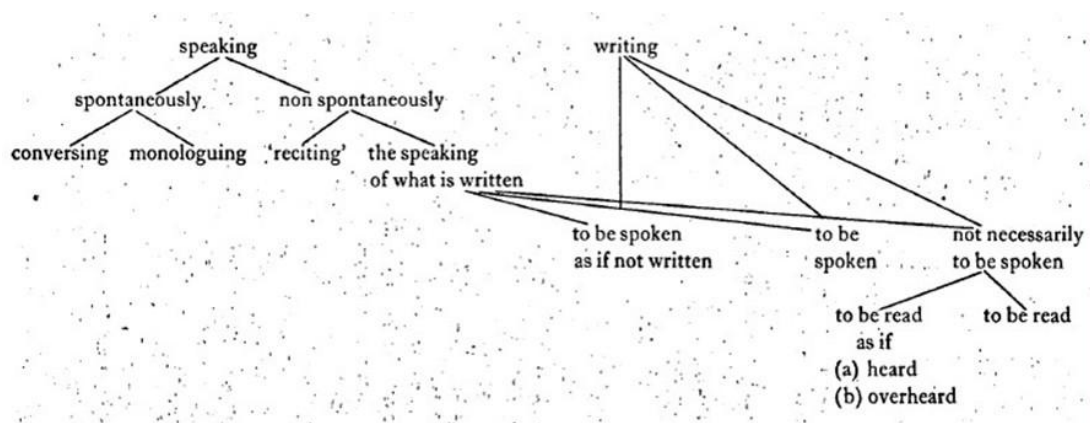


Figure 4.2 Suggested distinctions along the dimension of situation variation categorized as users' medium relationship

## 4.2 Hasan's expansion of the contextual variables

Further to Halliday's notion of register and the three terms field, tenor, and mode, Hasan (1985) has proposed a related concept: contextual configuration. She argues that field, tenor and mode, "may [each] be thought of as a variable that is represented by some specific values" (Hasan, 1985: 55). For instance, field could have variables that may have the value "buying" or "selling," "learning" or "tutoring." Tenor, may have options ranging from "parent" to "child," or "student"

to “teacher.” Mode also offers variables between “speech” and “writing”. These variables are instances of contextual configuration, “a specific set of values that realizes field, tenor and mode.” By combining related pairs of options, we can have a number of possible configurations. For instance: a teacher tutoring a student in speech. Each of these possible entries is contextual configuration (Hasan, 1985: 56).

Hasan (1985: 55-59) proposed the different components of contextual configuration. Table 4.1 illustrates these three different components (Hasan, 1985: 55-59). Field was mainly concerned with the nature of social activity. Hasan has not presented any further categories of social activity within the field and left it open. Matthiessen (2009a, 2013, 2014) recently proposed eight primary fields of activity, which can be regarded as a milestone in the field of systemic functional linguistics. I will introduce Matthiessen’s proposal in detail in the next section (section 4.5). Tenor, which is to do with the interactants involved in an activity, can be realized by different variables in terms of agent roles, dyadic relation and social distance. For instance, in the context of a teacher tutoring a student in speech, the agent roles are performed by the teacher and the student. Whether the dyadic relations are hierarchic or non-hierarchic depends on the degree of control one agent has over the other. If the teacher demonstrates power over the student, the dyadic relation in this context is hierarchic. If the teacher treats the student as a very close friend, the dyadic relation would possibly be non-hierarchic. The final component of tenor is social distance. Social distance is a continuum, the two end-points of which are maximal and minimal. The greater the degree of familiarity between the interactants, the more minimal the social distance, such as between husband and wife or mother and son/daughter. If interactants know each other through infrequent encounters, the social distance would be maximal.



Matthiessen, Teruya and Lam also proposed variables of realizing tenor (Matthiessen, Teruya & Lam, 2011: 106), which will be introduced in section 4.5.

The contextual parameter of the mode can be examined under three different aspects (Hasan, 1985: 58): language role (whether language is constitutive or ancillary), the medium (written medium or spoken medium), or the channel (whether the message travels on sound waves or on graphic-visual materials).

Table 4.1 Contextual configuration

| Field                         | Tenor           | Mode                                      |
|-------------------------------|-----------------|---|
| The nature of social activity | Agent roles     | Language role<br>(constitutive/ancillary) |
|                               | Dyadic relation | Medium (spoken/written)                   |
|                               | Social distance | Channel (visual/aural)                    |

### 4.3 Proposed framework for Genre:

Since the 1920s, a number of attempts have been made to capture the importance of situation on language and to categorize various discourse types in different ways. In all of these proposals, the genre approach is one worth exploring as it has a considerable impact on literacy education (Hyland, 2002; Hyon, 1996). The last three decades have seen increasing interest in the notion of genre and its application in first and second language teaching and learning (Hyland, 2002; Hyon, 1996). This growing interest derive from the researcher's desire to explore the relationship

between language and its context of use, and the educator's interests in how to apply the genre approach to better facilitate language teaching and learning (Hyland, 2002).

There are three assumptions underlying the genre approach:

- 1) Similar to Halliday's description of register, variation occurs based on the use of the discourse.
- 2) Similar discourse types which have similar features can be grouped together to distinguish others
- 3) The features of one certain discourse type are described as choices by its speaker or writer.

In the following, I will review three different ways to approach genre based on the research conducted and methodology used: English for a specific purpose (ESP), New Rhetoric studies, and Australian genre-based pedagogy.

#### **4.3.1 English for specific purpose (ESP)**

English for a specific purpose (ESP) researchers motivated by the desire to explore a framework for analyzing and teaching the spoken and written language for both English as first language and English as second/foreign language students and professionals, have framed genre as a discourse type distinguished by its communicative purpose and formal properties of the text. Genre is defined as "a class of communicative events, the members of which share some set of communicate purposes" (Swales, 1990: 38). "These purposes are recognized by the expert members of the parent discourse community and thereby constitute the rationale for the genre" (Swales, 1990: 38). Other scholars in the field have emphasized both social function and form when discussing their understanding of genre (Bhatia, 1993; Flowerdew, 1993; Hopkins &

Dudley-Evans, 1988; Thompson, 1994; Weissberg, 1993). The most profound contribution made by ESP researchers comes from their work translating research findings into materials for language learners in both academic and professional settings (Swale & Feak, 1994, 2000). They have conducted the move analysis on different types of discourse, such as experimental research articles (Swale, 1981) and business letters (Bhatia, 1993). They also investigated sentence-level grammatical features, such as passive voice and hedges (e.g. Hyland, 1998). However, while they have emphasized the formal properties of the texts, they have been critiqued for their lack of concern about the specialized functions of texts and their surrounding social contexts (Hyon, 1996). A systemic model of language is needed to explore the sentence-level grammatical features. Moreover, features with multiple metafunctions remain under explored in this area of research.

#### **4.3.2 New Rhetoric studies**

Researchers working in the rhetorical tradition—an area we now call New Rhetoric—adopt a different approach to conceptualizing and analyzing genre than ESP researchers (Coe, 1994; Freedman & Medway, 1994). The most representative and influential work in this area is Millers’ article “Genre as Social Action” (Miller, 1994: 151). Miller claims that “a rhetorically sound definition of genre must be centred not on the substance or the form of discourse but on the action it is used to accomplish.” Emphasizing the functional and contextual aspects of genre, New Rhetoric studies mainly aims to analyze ethnographic features that distinguishing one genre from another rather than the linguistic features, with the aim of exploring the reasons (e.g., attitudes, values, and beliefs) behind the choices made by text producers (Hyland, 2002; Hyon, 1996). Schryer (1993), for example, used various ethnographic methods including participant observation, interviews, and document collection to identify the distinguishing features of the

veterinary medical record genre and the attitudes of clinicians and researchers toward the genre. Unlike the other two research areas on genre approach (ESP and Australian genre-based pedagogy), the New Rhetoric approach was not intended to address genre in the classroom, yet some studies have noted pedagogical implications for academic writing (Adam & Artemeva, 2002; Coe, 2002).

### **4.3.3 Australian genre-based pedagogy**

Inspired by Gregory's (1967) suggestion that tenor could be split into personal tenor (concerned with status and formality) and functional tenor (having to do with purpose) Martin (1984) and his colleagues began to explore the relationship between purpose and register. They argued that Halliday's attempt to subsume purpose into the definitions of field, tenor and mode was problematic and proposed a third semiotic system in addition to language and register: genre. Drawing on Malinowski's notions of context of culture and context of situation, Martin (2012: 56) and his colleagues suggest "the level of genre corresponds roughly to the context of culture and register perhaps to the context of situation." Martin and Rose (2008) also attempted to make a theoretical distinction between register and genre. They claimed that register is the content-plane of language, while the schematic structure of the genre comes from the context of culture. Martin (2012: 56-68) defined genre as "a staged, goal-oriented social process, through which text producers achieve some social purposes," and emphasized the purposeful, interactive, and sequential character of different genres and the lexico-grammatical features of language operating in different contexts. They observed some genres as goal-oriented activities, like telling a story or writing a letter to editor. Figure 4 presents Martin's model of language (2009: 2).

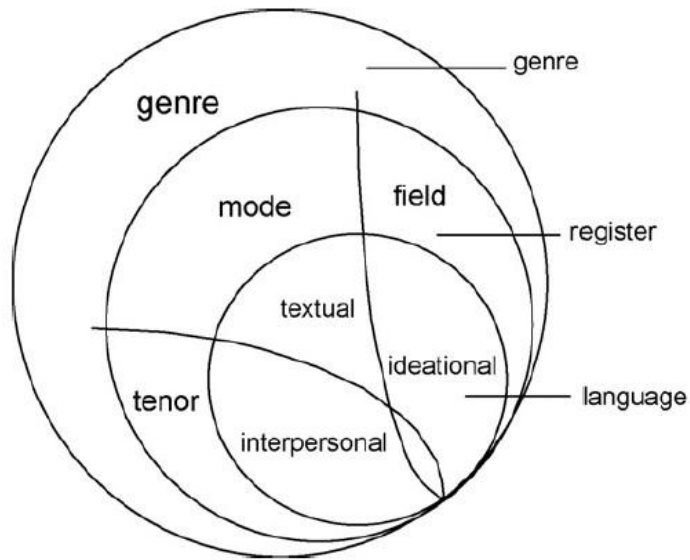


Figure 4.3 Martin's model of language

In the field of educational linguistics, genre theory is mainly used to explore a particular genre and use this understanding to map curriculum for primary to secondary school classrooms and to develop language learning and teaching pedagogy (Martin, 2009).

Martin and his colleagues explored the distinctive goal-oriented staging structure of genres. For example, they proposed the generic stages of a service encounter in a small shop (Martin, 2012: 64) as follows (note that the caret symbol ^ means followed by):

Greetings^ Service Bid ^ Statement of Need ^ Need Compliance Decision to Buy ^  
 Payment ^ Leave-taking (Martin, 2012: 64)

When students are expected to write an exposition, the basic staging structure of exposition genre would be: Thesis ^ Argument ^ Reiteration. Students learn this basic staging structure and

their teachers work with them to help develop their ability to make their point using the different stages.

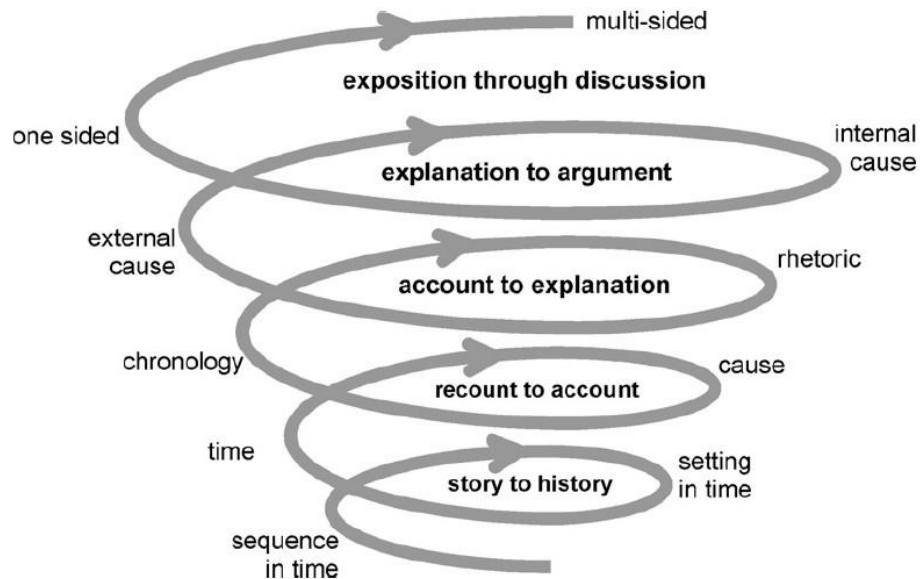


Figure 4.4 Spiral curriculum (learner pathway) for history genres

In tandem with the understanding of each genre in different subjects, the learner pathway is mapped by tracing the genres students are engaged with. Taking history as an example, the above figure (Figure 4.4) represents secondary school history genres from story to history to exposition through discuss (Martin, 2009: 15).

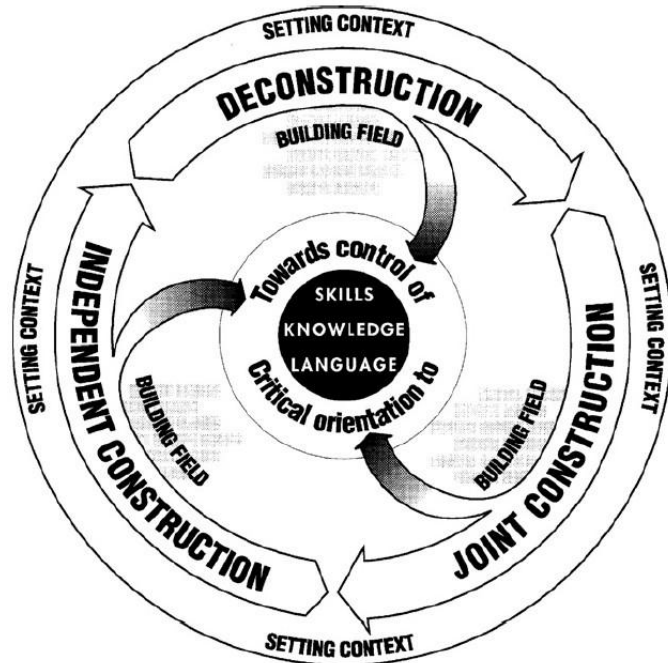


Figure 4.5 Teaching/learning cycle for the mentoring genre

In addition to being used to explore the structure of a particular genre and to map curriculum, Martin and his colleagues' genre theory is also used to design pedagogy. Working with teachers and educators, Rothery (1996) developed the teaching and learning cycle shown in Figure 4.5. The cycle consists of three stages: deconstruction, where models of the target genre are presented; joint construction, where teachers describe another model text in the same genre; and independent construction, where students write in a genre for the first time on their own.

Some SFL scholars have commented on Martin's genre theory in different ways. Lukin *et al.* (2011) regarded it as an "obscuring" of the theoretical distinction between Halliday's notion of register and Martin's use of his own terms "genre" and "register." They considered this distinction to be one of the reasons Martin's theory lacked critical explication and application of register along Halliday's line of development. Hasan (1995) argued that the genre model

proposed by Martin and his colleagues did not recognize the dynamic change in societies and cultures. In contrast, Halliday's notion of register does present the openness of language to eco-cultural environment (Lukin *et al.*, 2011).

#### **4.3.4 Conclusion**

What research in genre has in common is that each approach tries to describe discourse types in their own way depending on how they understand "genre" or on their theoretical framework of grammar. For instance, the ESP approach is used to analyze the move analysis of research articles and business letters. Genre-based pedagogy, using their own definitions of genre and functional grammar, analyzes the generic stages and metafunctional meanings of historical recount. Yet, all these approaches tend to focus on one discourse type or another without systemically specifying their relationship to each other. Tannen (1982) had seen this feature of linguistic research and called for a taxonomy of discourse types in order to distinguish between them (Tannen, 1982: 1). Lacking the requirement to explore a certain taxonomic framework to classify and categorize the discourse types, all these approaches are more descriptive rather than classificatory. In section 4.4, I will review different proposed frameworks for classifying discourse types.

#### **4.4 Proposed framework for classification of different discourse types**

In order to explore different proposed frameworks for systematically classifying and describing discourse types, I will adopt Halliday (1996) and Matthiessen's (2013) "trinocular" perspective which uses the three angles: "from above," "from below," and "from roundabout." However, let me first introduce SFL's concept of stratification, which will enable us to view the system of language from these three different angles.



Language is a complex semiotic system (Halliday & Matthiessen, 2004: 24). Other than the cline of instantiation, which was introduced at the very beginning of this chapter, the other dimension of organization of this complex system is stratification (Halliday & Matthiessen 2004: 24-26). This can be illuminated by Halliday's (1975) account of ontogenesis, I which he shows the gradual development in complexity as language becomes an increasingly more powerful resource for making meaning. In the protolanguage stage, (one of Halliday's four stages of language development as discussed in chapter 2), there are two strata: a stratum of content and a stratum of expression (Halliday, 1995; Halliday & Matthiessen, 2004: 24). The meaning of "that's interesting—don't agree?" could be expressed by a vocalization of /da/ (Halliday, 1995). There is no grammar in it yet. When moving to the adult language as one phase of language development, there are two modes of alternative expression: the system of writing and the system of speech (Halliday & Matthiessen, 2004: 24).

The stratum of "content" expands to lexicogrammar and semantics. By saying lexicogrammar, we refer to both grammar and vocabulary—the form two poles of a single continuum of wording (Hasan, 1987). With language functioning to construe experience and the enactment of social processes (see details in section 5.4.1), the stratum of semantics provides the resources for transforming experience into meaning and enacting interpersonal relationships as meaning, while the stratum of lexicogrammar provides the resources for realizing these meanings as words (Halliday & Matthiessen, 2004).

The "expression" plane splits into phonetics, which is "the interfacing with the body's resources for speech and for hearing," and phonology, which is "the organization of speech sound into formal structures and systems" (Halliday & Matthiessen, 2004: 25). The relationship between the strata, the process of linking one level of organization with another, is called realization

(Halliday & Matthiessen, 2004: 26). Figure 4.6 illustrates this dimension of organization of the language system, stratification (Halliday and Matthiessen, 2004: 25). It shows the relationship between the strata as Halliday and Matthiessen (2004) conceptualize it (25). This stratified vision enables us to view language from a “trinocular” perspective (Halliday, 1996: 398, 408): Things may appear alike from any of three different angles: “from above” – similarity of function in context; “from below” – similarity of formal make-up; “from the same level” or “from roundabout”—fit with the other categories that are being construed in the overall organization of the system.

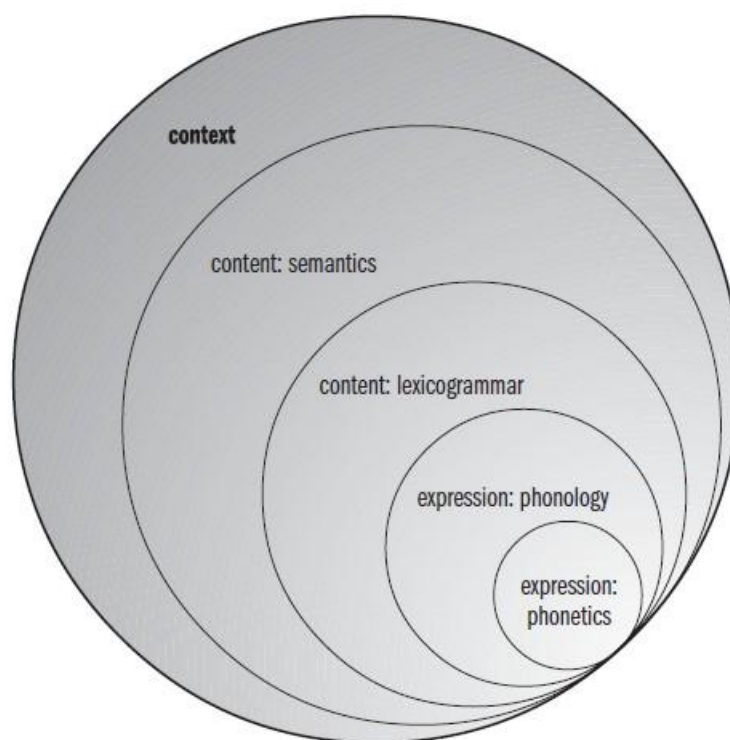


Figure 4.6 Stratification

If we explore different proposed frameworks for systematically classifying and describing discourse types, “from above” means “from the standpoint of context”, exploring the combination of three contextual variables (field, tenor and mode). “From below” means “from

the standpoint of “lexicogrammar”. “From roundabout” means “from the standpoint of “semantics”. I will review the proposed frameworks for classifying and describing different discourse types by exploring their different starting points: whether the frameworks start with “from above”, “from below”, or “from roundabout”.

#### **4.4.1 “From above”**

In the 1920s, a number of researchers and scholars attempted to develop frameworks for classifying and describing different discourse types. Instead of the term “genre” they used register or text types.

There are a number of taxonomic frameworks for different discourse types, starting from “the above,” the three contextual variables. For instance, Malinowski (1923), an anthropologist, classified the two-way distinction between pragmatic and magical language varieties. He further subdivided the pragmatic uses of language into active and narrative.

Karl Bühler, a German psychologist, proposed a different classification to do with the different orientations of discourse. He distinguished between expressive language (which is oriented towards the speaker), conative language (which is oriented towards the addressee), and representational language (which is oriented towards the rest of reality— anything other than the speaker or addressee). Halliday (1985:15-16) commented that Bühler’s model draws on the person system in familiar languages—first person, second person and third person—and is concerned with tenor contextual variables.

Other frameworks were proposed by rhetoricians such as Moffet (1968), Kinneavy (1971). Rhetoricians prefer to use the term of “taxonomy of texts,” “modes of discourse,” “function

category system,” etc. In rhetorical theory, four basic “modes” of discourse: narration, description, exposition, and argumentation, dominated discussions on writing instruction and writing research in the eighteenth century (Kinneavy, 1971). Despite, the importance of these four discourse types it does not change the fact that there are no particular or explicit parameters distinguishing them. Some rhetoricians, after careful examination of the theoretical basis of these modes, moved away from the traditional rhetorical categories and developed their own system of classification.

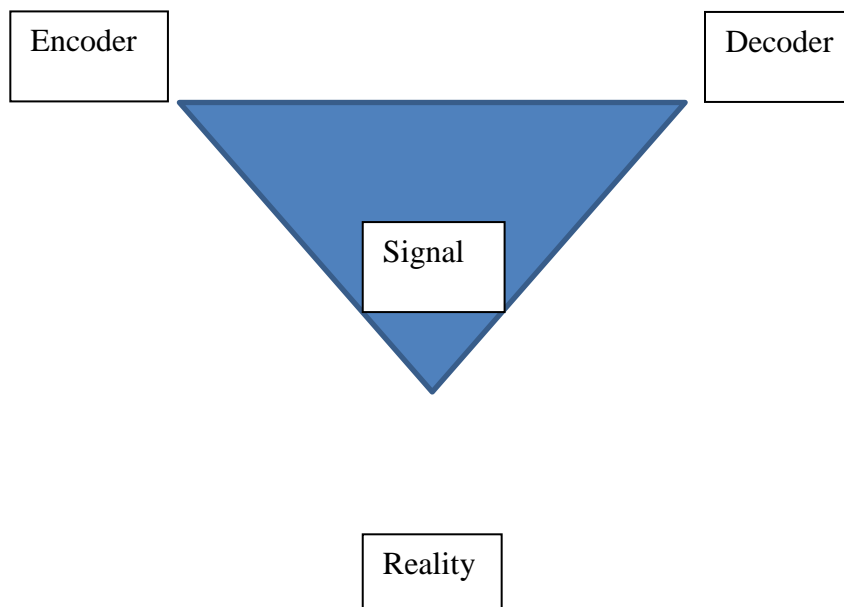


Figure 4.7 Communication triangle

Following in Bühler’s footsteps, the rhetorician Kinneavy, proposed a “communication triangle”, which is illustrated in Figure 4.7 (Kinneavy, 1971: 25). In the diagram, the term “encoder” refers to the speakers and writers, while “decoder” refers to the listeners and readers. The terms “signal” and “reality” are used to distinguish whether the texts deal with reality or with language

itself. By intersecting this communication triangle with his “aim of discourse,” Kinneavy identified four taxonomies of texts, which is depicted in Figure 4.8 (Kinneavy, 1971: 61). If the text emphasizes the encoder, it is an “expressive” discourse (e.g., a diary) (Kinneavy, 1971: 60). If the text focuses on the decoder, it is a “persuasive discourse” (e.g., advertising) (Kinneavy, 1971: 60). The text is categorized as “literary” if it uses language to call attention to the language itself or to its own structures (Kinneavy, 1971: 39). If the text uses language to present, reproduce, or explain reality, it is “referential” discourse (Kinneavy, 1971: 39). It is clear that the way Kinneavy approaches the different discourse types is more field-oriented (distinguishing between the different purposes of the discourse) and somewhat tenor-oriented with exploration of person system like what Bühler investigated. However, the proposed framework lacks concern for tenor (the relationship between addressers and addressees or the encoder and decoder) and mode (the way the text is produced).

Bühler’s scheme was also adapted in a different direction by the English educator Britton (1970).

With the goal of developing a

means of classifying writing according to the nature of the task and the demands made upon the writer, and, as far as possible [to find] a way of classifying that is both systematic and illuminating in the light it sheds upon the writing process itself (Britton *et al.*, 1975: 3)

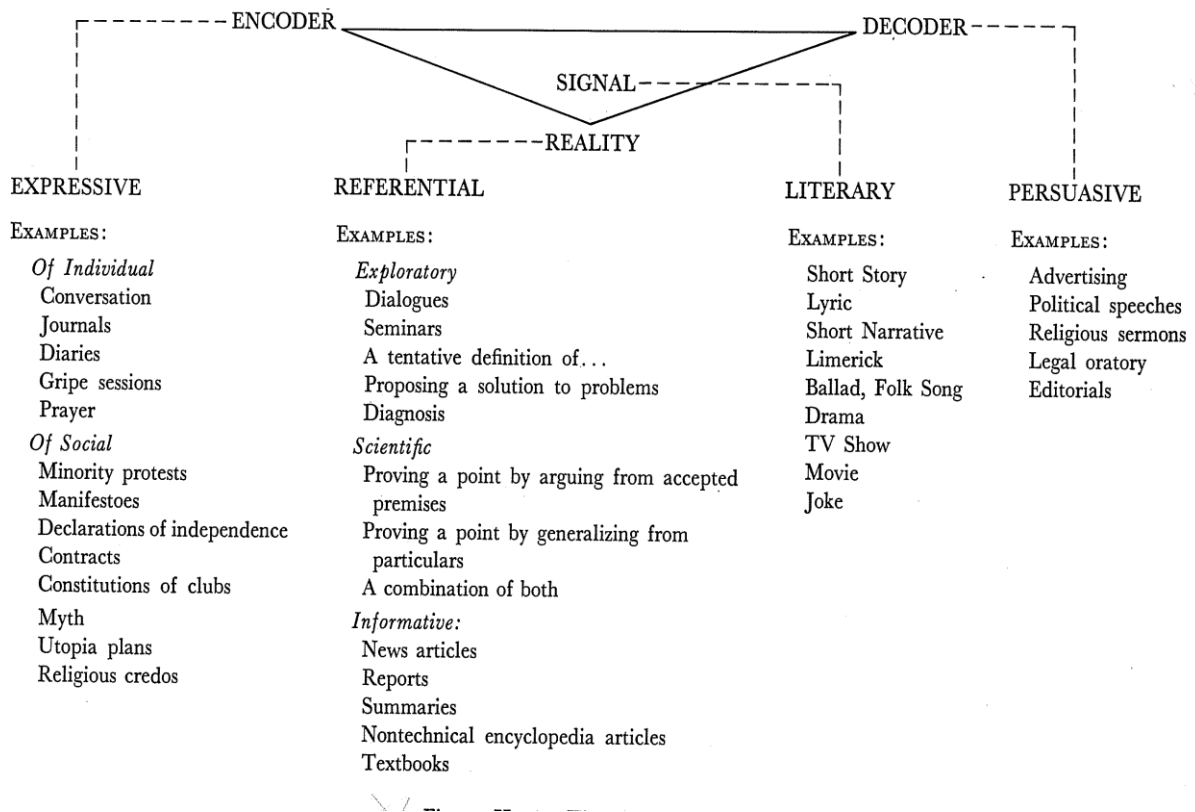


Figure 4.8 The aim of discourse

Britton (1970) conducted a study to explore how children learned to use different forms of writing to convey kinds of message. He has collected 2122 pieces of writing from sixty-five secondary schools produced by students in the first, third, fifth and seventh years of their work in all subjects of the curriculum. Britton developed his functional categorization scheme by observing and exploring the nature of the students' writing. Instead of following the parameters developed in previous taxonomic frameworks, Britton started to research the nature of different types of writing assuming that "the underlying logic of a writer's message is driven by a need to aid the reader in understanding what the writer intended" (Durst & Newell, 1989: 377). Consequently, he proposed a taxonomic framework using three types of writing: transactional,

expressive and poetic (Britton *et al.*, 1975). The language of the transactional is used to inform or persuade as in expository writing. In the expressive function, language is involved with the interests, activities and feelings of the writer, such as in a diary. The third category, poetic function, concerns language conveying experiences in a literary form, such as poems and stories. Britton's first category corresponds to Kinneavy's persuasive and referential discourses, while the second category corresponds to expressive discourse, and the third to poetic. As discussed above, tenor and mode also needs to be taken into consideration when discussing the nature of different discourse types. Nevertheless, Britton's categorization scheme has had considerable influence on composition theory and research (Durst & Newell, 1989).

If adopting Halliday (1996) and Matthiessen's (2013) "trinocular" perspective which uses the three angles: "from above," "from below," and "from roundabout", we can find other classifications also start "from above", from three contextual variables. But other than being field-oriented or tenor-oriented, these studies are more concern with the contextual variables of mode.

Started by Randolph Quirk at the University College of London, the Survey of English Usage (SEU) project categorized 200 writing samples, each 5000 words in length, that were collected over 30 years (Greenbaum & Svartvik, 1990: 12). The project used "mode" as its standpoint, categorizing all the samples into spoken (dialogue or monologue) or written (for spoken delivery, non-printed or printed) (Greenbaum & Svartvik, 1990: 12). Figure 4.9 presents the SEU corpus taxonomy of both spoken and written discourse (Green & & Svartvik, 1990).

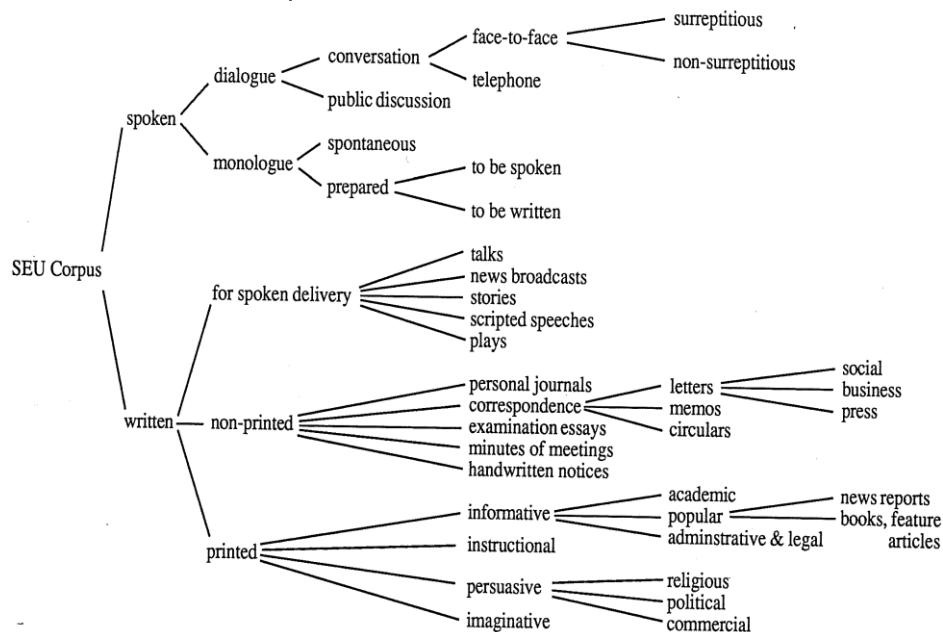


Figure 4.9 SEU corpus taxonomy

#### 4.4.2 “From below”

While the studies reviewed in the previous section explored language “from above”, from the perspective of context, Biber (1989) looks at linguistic forms “from below”, from the perspective of lexicogrammar. Biber (1989) chose to study linguistic forms, classifying the different discourse types and then interpreting their functions.

Biber (1989, 1994) argued that previous approaches introduced above starting from context (e.g. Britton, 1970; Kinneavy, 1971) isolated the functional differences between texts. The previous approaches were unable to identify text types that were linguistically well defined. Beginning by analyzing the linguistic features distinguishing one text type from another, Biber (1988, 1994) identified eight major text types: two interactive types (“intimate interpersonal interaction” and “informational interaction”), three expository types (“scientific exposition,” “learned exposition,” and “general narrative exposition”), two narrative types (“general narrative exposition” and “imaginative narrative”), and two non-narrative types (“situated reportage” and “involved



persuasion”). Biber (1988: 14) used 481 texts which represented 23 different genres to form his corpora (17 written genres from the Lancaster-Oslo-Bergen corpus and 6 spoken genres from the London-Lund Corpus). He first analyzed 67 grammatical features of the texts, such as passives and prepositional phrases (Biber, 1989: 7). He then analyzed the co-occurrence distribution of the 67 features and developed a five-dimensional model based on identification of the co-occurrence patterns using factor analysis (Biber, 1989: 8-15). Finally, using cluster analysis, he grouped the texts with similar features to determine the eight major text types.

Longacre’s (1983) four-way model of monologue texts is another study on text types based on lexicogrammar with a focus on temporal succession. He began by classifying monologue discourses according to two basic parameters: contingent temporal succession and agent orientation. His framework categorizes discourse types based on whether some of the events in the discourse are contingent on previous ones and whether the discourse is organized based on the orientation towards agents (Longacre, 1983). For instance, procedural discourse is positive in regard to contingent succession but negative in regard to agent orientation because procedural discourse is produced according to the temporal sequence of events rather than the orientation of the agents. Behavioural discourse, however, is negative in respect to contingent succession but positive in respect to agent orientation because behavioural discourse is organized according to the orientation of the agents rather than the temporal succession of the events. In order to classify more discourses, two further parameters were defined: projection which has to do with a situation or action that is anticipated but not realized; and tension, which has to do with whether a discourse reflects a struggle or polarization. Using these two parameters, narrative discourses can be divided into prophecy, which is a positive projection, and discourses such as story or history, which are negative projections because the events described have already taken place.

Moreover, episodic narrative, which describes the story by chapters is a negative tension while climactic narrative, which has climax (a point of high tension or drama or when the action in which the solution is given begins) is positive tension. Table 4.2 presents Longacre’s proposal of notional types based on four parameters: contingent succession, agent-orientation, project and tension (Longacre, 1983).

Table 4.2 Notional Types based on four parameters: contingent succession, agent-orientation, projection and tension

|                                   | <b>+Ag-Orienta-tion</b>                 | <b>-Ag-Orienta-tion</b> |                    |
|-----------------------------------|---|-------------------------|--------------------|
| <b>+Contingent<br/>succession</b> | Narrative                               | Procedural              |                    |
|                                   | Prophecy                                | How to do it            | <b>+Projection</b> |
|                                   | Story:<br>Episodic<br><b>(-Tension)</b> | How it was done         | <b>-Projection</b> |
|                                   | Climactic<br><b>(+Tension)</b>          |                         |                    |
| <b>-Contingent</b>                | Behavioral                              | Expository              |                    |

|                   |            |                  |                    |
|-------------------|------------|------------------|--------------------|
| <b>succession</b> | Hortatory  | Budget Proposal  | <b>+Projection</b> |
|                   | Promissory | Futuristic Essay |                    |
|                   | Eulogy     | Scientific Paper | <b>-Projection</b> |

**4.4.3 Conclusion**

Each of the frameworks used to classify different discourse types chose to start at a certain points, including from one of the three contextual variables, field or mode (“from above), or from lexicogrammar (“from below”). In this doctoral project, however, we need a classificatory framework that begins in one place but which allows for further examination from different angles, including both “from above” and “from below”. In the next section of this chapter, I introduce Matthiessen’s registerial cartography, which is the methodology adopted in this project.

**4.5 Registerial cartography proposed by Matthiessen and Teruya**

Aiming to develop register typologies based on contextual parameters of field, tenor and mode, Matthiessen developed registerial cartography (see Matthiessen, 2009a; Matthiessen, Teruya & Lam, 2010; Matthiessen, 2013; Matthiessen, 2014; Halliday & Matthiessen, 2014; Matthiessen & Teruya, forthcoming). Starting with a field of activity in the context (starting “from above”), Matthiessen proposed eight primary fields of activity, which he grouped into three superordinate categories based on “whether the field of activity is primarily a process of making meaning (semiotic), a process of behaviour (or ‘doing’; social) or a transition between the two (semiotic

processes potentially leading to social processes)” (Matthiessen, 2014: 172). Figure 4.10 cites Matthiessen's (2014: 172) most recent presentation of each primary field of activities and their sub-types. Their definitions will be explained in further detail in Chapter 5 where I will use them to examine the text in the textbooks used in Hong Kong across all years of schooling.



Figure 4.10 The eight primary fields of activity and their subtypes

According to Matthiessen (2014), there are eight primary fields of activity, based on “whether the field of activity is primarily a process of making meaning (semiotic), a process of behaviour (or “doing”; social) or a transition between the two (semiotic processes potentially leading to

social processes)”: semiotic processes (expounding, reporting, recreating, sharing, and exploring); semiotic processes potentially leading to social processes (enabling); social processes (doing)” (Matthiessen, 2014: 170-171).

This list contains Matthiessen's (Matthiessen, 2014: 170-171) definition of the eight categories of activities:

- 1) **Expounding** knowledge about general classes of phenomena (rather than particular phenomena), theorizing our experience of the world in terms of a commonsense (folk) or uncommonsense (scientific) model by explaining why general classes of events take place or by categorizing general classes of entities (in terms of taxonomies, hyponymic and/ or meronymic, and/ or characterization). (Matthiessen, 2014: 170)
- 2) **Reporting** on particular phenomena (rather than general classes of phenomena), by recording or chronicling (the flow of) particular events, inventorying particular entities, or surveying particular places. (Matthiessen, 2014: 170)
- 3) **Recreating** various aspects of life—involving any of the eight different types of context according to field of activity, typically imagined (fictional) rather than experienced (personally or vicariously), as verbal art with a “theme” (in the sense of Hasan, 1985), through narration and/ or dramatization. (Matthiessen, 2014: 170)
- 4) **Sharing** personal experiences and values (opinions) as part of establishing, maintaining and calibrating, negotiating interpersonal relationships; in terms of tenor, ranging from (and potentially transforming) strangerhood to intimacy, but in sustained form involving

fairly intimate relationships; in terms of mode, traditionally and prototypically in private face-to-face interaction, but increasingly enabled by new technologies opening up new channels of sharing (epistolary, telegraphic, telephonic—and now with an explosion of mobile and Internet based possibilities, with a tendency to blur the distinction between private and public spheres). (Matthiessen, 2014: 170)

- 5) **Exploring** public values (opinions) and positions (ideas, hypotheses) by reviewing commodities (assigning them values on a scale from very positive to very negative) or by arguing about positions, debating or discussing them—in terms of tenor, typically between one person (a professional or a member of the general public) and some segment of the general public, so between strangers; in terms of mode, typically using media channels, either ‘old’ media channels (print, radio, TV) or “new” media channels (mobile and/ or Internet-based). (Matthiessen, 2014: 171)
  
- 6) **Recommending** some course of action (typically some kind of social process—exhortation in the strong form), either for the sake of the addressees by advising them to undertake it for their own good or for the sake of the speaker by promoting some type of goods-&-services. (Matthiessen, 2014: 171)
  
- 7) **Enabling** some course of action (typically some kind of social process), either literally enabling (empowering) them by instructing them in some type of procedure or constraining them by regulating their behavior. (Matthiessen, 2014: 171)

- 8) **Doing**—performing some form of social behaviour, on one’s own or as part of a team, with semiotic processes (“meaning”) coming in to facilitate this social behaviour through direction or collaboration. (Matthiessen, 2014: 171)

In addition to introducing these eight primary fields of activity, I will review some key issues concerning their context-based register typology and respond to comments and questions raised by other authorities doing research in this area.

To begin, although this context-based register typology starts with a field of activity, it also takes into consideration other contextual parameters, such as tenor, mode, and field of experience. For example, Matthiessen and Teruya (forthcoming) address concerns about tenor by introducing a sector called “sharing.” The tenor relationship of “sharing” can range from between strangers or new friends to between people who have intimate relationships. Possible modes of “exploring” can include traditional media channels like print, radio, and TV, or new and advanced ones like mobile or Internet-based channels. This context-based register typology starts with field, but operates using the tenor and mode of each primary field of activity. In a recent publication, Matthiessen’s (2013: 49-51) drew a figure to illustrate “how the map based on field of activity can serve as the foundation for other maps by adding parameters from tenor or mode, or field itself—field of experience”. The figure is depicted in Figure 4.11 (Matthiessen, 2013: 50). In Figure 4.11, values from variables of other contextual parameters (e.g., tenor, mode, and field of experience) are added to the representation of fields of activity by means of concentric circles, with each concentric circle representing a unique value (Matthiessen, 2013: 49). For instance, the mode value can be examined from two aspects: medium (spoken/written) and turn (dialogic/monologic). By categorizing related options, results in four mode values: spoken and

monologic, spoken and dialogic, written and dialogic, or written and monologic (Matthiessen, 2013: 49).

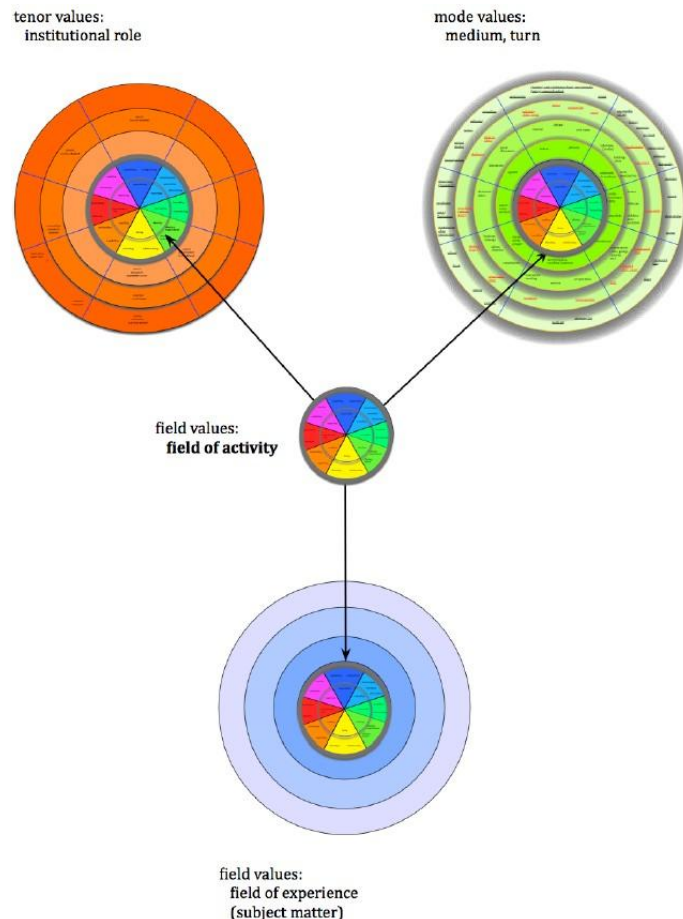


Figure 4.11 Fields of activity intersecting with tenor (institutional role), mode (medium, turn) and field of experience

Matthiessen's (2013) examination of the tenor parameter of the institutional role (the "agent role" in Hasan's contextual configuration) is depicted in detail in Figure 4.12 (50-51). This diagram functions as an addition to the "tenor parameter of the institutional role to the central field of activity representation of contexts and shows how different institutional roles are involved in different activities" (Matthiessen, 2013: 50). Matthiessen (2013: 51) provided an example of



“sharing,” which involves the symmetrical roles of “friend” and of “regulating” in “enabling” and involves the hierarchical roles of “employer” and “employee.” Matthiessen also used concentric circles to represent a developmental order whereby the ontogenetic expansion of institutional roles from childhood to adulthood would move from family roles, to neighborhood, education, and workplace roles and then to institutional roles.

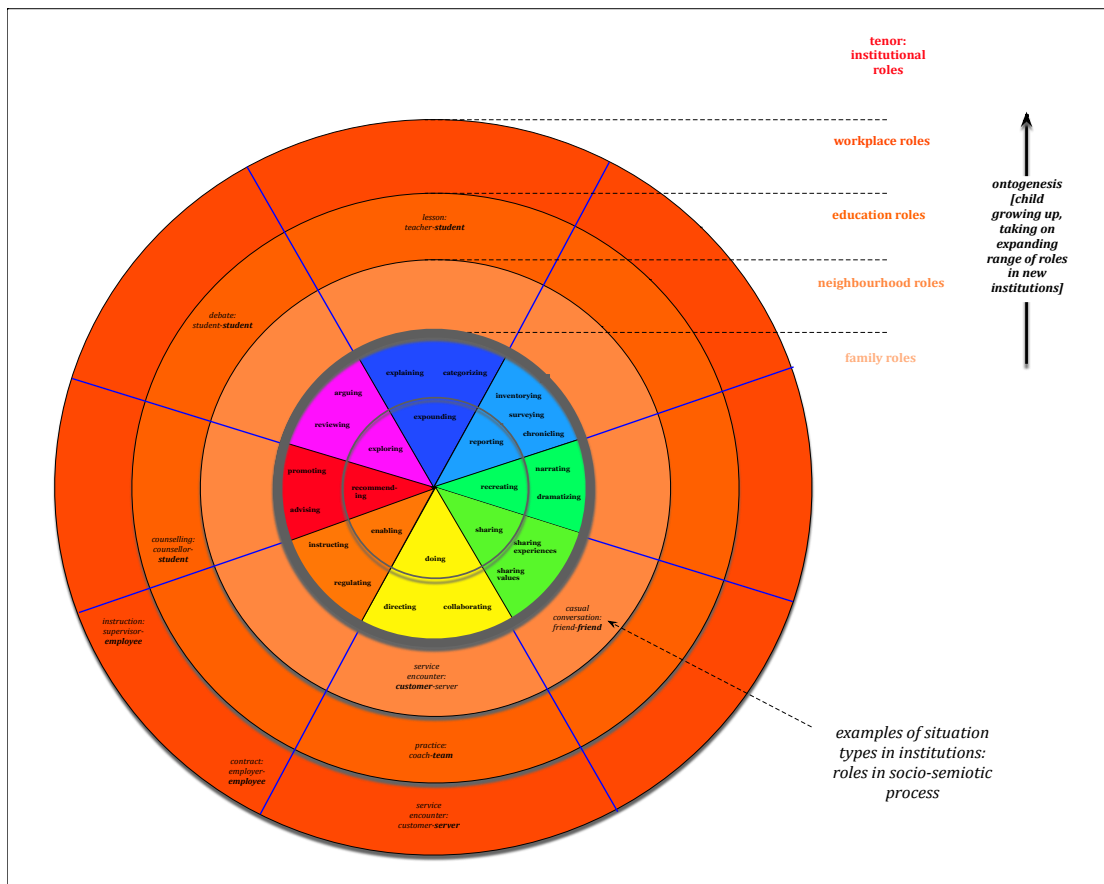


Figure 4.12 Field and tenor intersected—fields of activity in combination with different sets of institutional roles ordered ontogenetically

By mapping the intersection of fields of activity with institutional roles, we can identify the kind of semiotic labour and the combination of people within institutions. This also enables us to understand the division of labour based on both field and tenor and obtain a profile of the

“registerial repertoire people have to master in order to take on particular institutional roles” (Matthiessen, 2013: 52).

Matthiessen used these two figures (Figure 4.11 and Figure 4.12) to represent the general principles of intersecting fields of activity using the variables of tenor and mode. By doing this, he was able to determine the fields of activities, the institutional roles and the mode variables in order to obtain a comprehensive profile of the contextual parameters.

Matthiessen and Teruya (forthcoming) are interested in the “hybridity” of registers, what they refer to as “the mixture of functional varieties of language operating in different institutional domains.” Matthiessen and Teruya explored the registerial hybridity of indeterminacy among fields of activities by adopting a typology of kinds of indeterminacy as follows (the notion of indeterminacy is put forward in Halliday & Matthiessen, 1999: 547-562):

1. ambiguities (“either a or x”): one text can be interpreted as an instance of either of two distinct registers;
2. blends (“both b and y”): one text can be interpreted as a fusion of two different registers;
3. overlaps (“partly c, partly z”): two registers overlap so that certain texts display features of each: they are borderline cases;
4. neutralizations: in certain contexts, the difference between two registers disappears;
5. complementarities: certain texts can be interpreted in contradictory ways in the assignment to registers (Matthiessen & Teruya, forthcoming).

By exploring the registerial hybridity of the field of activity within the contextual parameter of field, we can investigate the complexities of authentic spoken and written discourse. It is not simply a case of assigning each discourse to one field of activity, but truly exploring the fields of activity in depth.

Lastly, as discussed in the conclusion to the previous section, we are looking for a framework that starts from a certain angle but that also has the potential to be explored from other angles. The registerial cartography proposed by Matthiessen starts with field (“from above”) but it affords the opportunity to explore the discourse from other angles, such as lexicogrammar or “from below.” Using the experiential clause in English grammar, Matthiessen (2013) explored the system of process types beginning with lexicogrammar. He ranked approximately 8700 clauses that operate within the five different fields of activities. The following two charts, Figure 4.13, present the profiles of different fields of activities in terms of process types using different graphical formats (Matthiessen, 2013: 27).

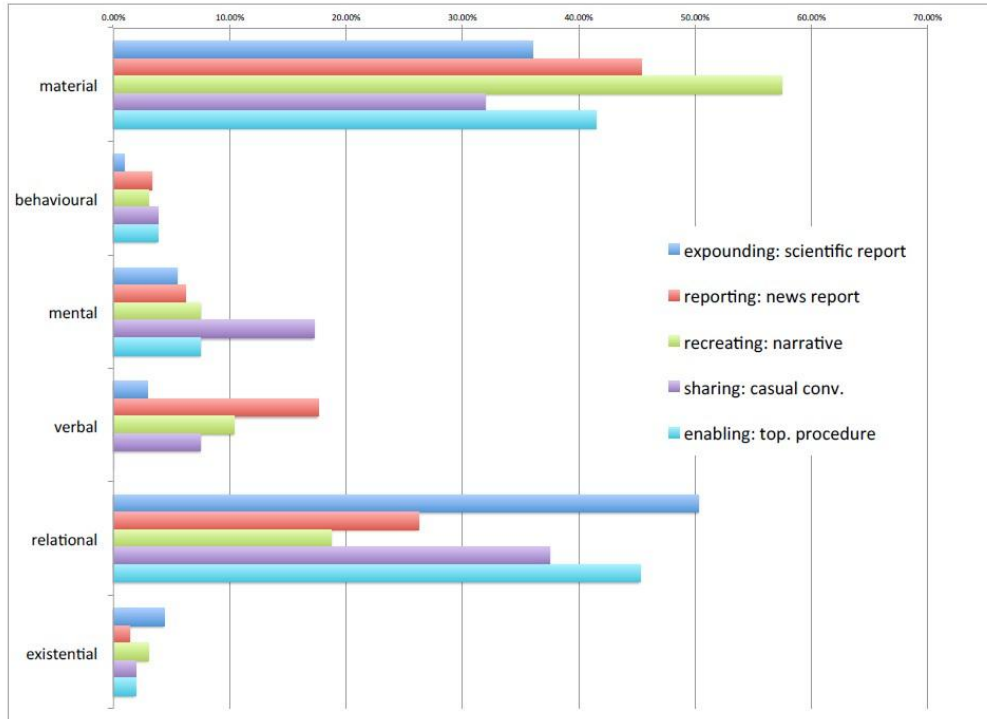


Chart (a)

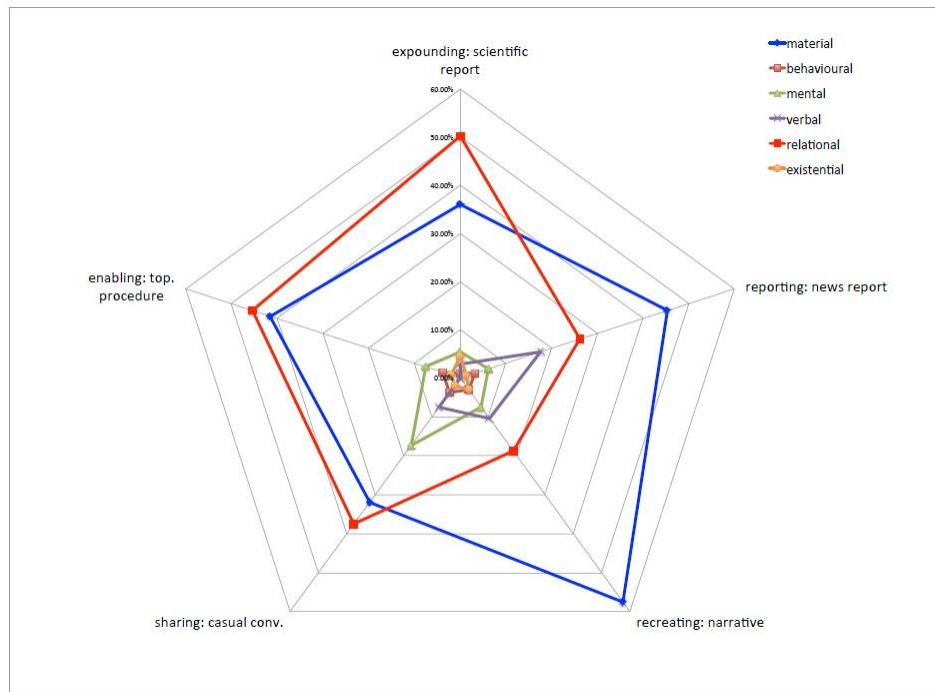


Chart (b)

Figure 4.13 Registers grouped according to the field of activity (expounding, reporting, recreating, sharing, enabling) attracting different process types, displayed in a bar chart (a) and a radar chart (b)

Figure 4.13 shows that different fields of activity have different profiles. For instance, scientific reports, which operate within the reporting sector, favour “relational” process types over “material” process types, while narratives within a recreating sector favor “material” process types over “relational.” Exploring the system of process types in this way shows that registerial cartography has the potential to be further explored from the perspective of lexicogrammar (“from below”). It also opens up the possibility of comparing the profiles of different fields of activity to profiles of certain lexico-grammatical features to reveal the intersecting relations between fields of activity and lexicogrammar.

In all, the registerial cartography proposed by Matthiessen (2014) identified eight comprehensive primary fields of activity, touched on other contextual parameters including tenor and mode values, and enabled exploration from a lexicogrammatical perspective, which in turn enabled further investigation of the intersecting relations between fields of activity and lexicogrammar.

## 4.6 Conclusion

In this chapter, I first reviewed different concepts and terms to do with “register” and its relationship to “discourse” and “language” followed by a discussion of Halliday’s notions of context and register, and Hasan’s expansion of contextual configuration. Different approaches to “genre” analysis were introduced in section 4.3 and frameworks for classifying discourse types were reviewed in section 4.4. In the final section, I reviewed Matthiessen’s (2014) registerial

cartography, which is the methodology adopted in this study. Compared to other approaches to genre, Matthiessen's registerial cartography not only focuses on a variety of discourse type, it offers a taxonomic framework for their classification and categorization. Moreover, Matthiessen's (2014) registerial cartography not only starts with a certain angle ("from field") and addresses three contextual variables (starting with field of activity and also examine tenor and mode values), it also offers the opportunity to explore the system of language from different perspectives such as from lexicogrammar ("from below"). The advantages of this registerial cartography are why I am adopting this framework for my dissertation research.

# Chapter 5 Design of the study

## 5.1. Introduction

This chapter introduces the design of my research project, explains the contextual background, introduces the textbooks chosen for the project, outlines the analysis focuses, and details the analytical framework I use. The EFL context of this study is Hong Kong. In order to understand the contextual background of the study, I will explain Hong Kong's educational system and new academic structure in section 5.2. Issues to do with learning and teaching English in Hong Kong primary and secondary schools will be explained in section 5.3. Section 5.4, will introduce the textbooks chosen for this study, and lastly, section 5.5 will explicate the theoretical framework underpinning the analysis of the textbooks.

## 5.1 The significance of English in Hong Kong

After the handover, the government of Hong Kong adopted a "biliterate and trilingual" policy. Under this policy, both Chinese and English were acknowledged as the official languages, while Cantonese and Mandarin were acknowledged as the two spoken varieties of Chinese in Hong Kong. In an official document published by the Education Bureau of the Government of Hong Kong Special Administrative Region (2013: 1), the use of different languages in Hong Kong was outlined as follows:

As an international city with a rapidly developing Mainland China as our hinterland as well as a host of other strong regional competitors, one of Hong Kong's goals is to nurture the development of biliterate and trilingual talents. Although both English and Chinese are enshrined in the Basic Law as official languages, approximately 97% of the population uses Cantonese (a Chinese dialect not considered an official language) for

daily communication at home and in social circles, with English used mainly to conduct business. The growing use of Putonghua, the official language of the People's Republic of China, reflects the stronger economic and cultural ties between the Hong Kong SAR and the mainland.

In a key document, the Hong Kong Government and the Education Bureau (emphasized the significance of language learning and communication skills stating:

This complex language environment is not only a product of the historical development of the city, but also of the need to ensure that Hong Kong remains a competitive financial centre at the forefront of innovation in the Asia-Pacific region. In a context of ever-increasing globalisation and competition for resources, it is of critical importance that the people of Hong Kong are equipped with values, attitudes and skills that will enable lifelong learning. (Education Bureau, 2013: 1)

In light of the challenges involved in helping students acquire a solid language foundation and the sophisticated communication skills required to sustain the city's competitive edge, the Education Bureau provided strong and professional support to schools and teachers so that they could equip students with the skills they needed to engage with others fluently in both English and Chinese during school and after graduation (Education Bureau, 2013). The Task Force on Language Support (TF) was set up by the Language Learning Support Section in 2004 with the ultimate aim of raising the standard of language proficiency in Hong Kong. It consisted of teaching consultants who provided Chinese (including Putonghua) and English language curriculum development support services to all primary and secondary schools (Education Bureau, 2013).



Of the two official languages in Hong Kong, the significance of English as a global language is evident in education policy. The “English language education key learning area English language curriculum and assessment guide” (Secondary 4 - 6)” (Curriculum Development Council, 2007: 2), states that the rationale for studying English language as a core subject at the senior secondary level is:

1. English is the language of global communication. It is not only a powerful learning tool, a medium by which people gain access to knowledge from around the world, but also a medium through which they develop positive values and attitudes, establish and maintain meaningful relationships with people, increase their cultural understanding and expand their knowledge and world-views.
2. English is the language of international business, trade and professional communication. Traditionally much emphasis has been placed on English Language learning in school. Such a tradition must be continued, since proficiency in English is essential for helping Hong Kong to maintain its current status and further strengthen its competitiveness as a leading finance, banking and business centre in the world.
3. English plays a crucial role in empowering learners with the capabilities necessary for lifelong learning, critical thinking, problem-solving, creativity, and innovation and for adapting to the rapid changes and demands of society.
4. English opens up a world of leisure and entertainment for learners.

As such, the mastery of English in Hong Kong is regarded as vital in order for learners to experience “intellectual and social development,” “educational attainment,” “career

advancement,” “personal fulfillment,” and “cultural understanding” (Curriculum Development Council, 2007a: 2).

David Nunan (2003) surveyed the situation of English as global language in Hong Kong in 2003 and concluded that:

For more than a century, English has been the prevalent language in the government, legislature, and judiciary. Hong Kong is a major internal trading, business, banking, and communications center, and English is seen as a key to maintaining its position in these areas (Forey & Nunan, 2002).

An empirical study conducted by Evans and Green (2003) also indicated the importance of being able to read and write English, particularly to Chinese professionals living in post-1997 Hong Kong. The documents most frequently read or written in English by Evans and Green’s (2003) study participants were emails, faxes, memos and letters.

## **5.2 Learning and Teaching English in Hong Kong primary and secondary schools: the current education policy and curriculum of English Language Education**

Given the significance of English in Hong Kong, the importance of learning and teaching English is strongly advocated by the Hong Kong Government and Education Bureau.

English language education is one of the eight key learning areas in primary and secondary schooling proposed by the Education Bureau of the Government of Hong Kong Special Administrative Region (Curriculum Development Council, 2012a). The other seven key learning

areas are: Chinese, mathematics, science (including biology, chemistry, physics, integrated science and combined science), technology education (business, accounting and financial Studies, design and applied technology, health management and social care, information and communication technology, technology and living), personal, social and humanities education (including Chinese history, economics, ethics and religious studies, geography, history, tourism and hospitality studies), arts (including music and visual arts), and physical education (Curriculum Development Council, 2012a).

In keeping with the educational goals and the overall aim of the school curriculum, the Curriculum Department Council set out the learning goals that students should be able to achieve within 10 years. They are as follows:

1. recognize their roles and responsibilities as members in the family, the society, the nation; show concern for their well-being
2. understand their national identity and be committed to contributing to the nation and society
3. develop a habit of reading independently
4. engage in discussion actively and confidently in English and Chinese (including Putonghua)
5. develop creative thinking and master independent learning skills (e.g., critical thinking, information technology, numeracy and self-management)
6. possess a breadth and foundation of knowledge in the eight Key Learning Areas; and
7. lead a healthy lifestyle and develop an interest in and appreciation of aesthetic and physical activities (Curriculum Development Council, 2012b: 1).

Of the eight key learning areas identified above, English is introduced at Level 1 of primary school when students are about six years old. From Primary 1 to Secondary 3, 17 to 21 percent of the lesson time is allocated to English language education (Curriculum Development Council, 2002: 84). In Secondary 4 to 6, it is suggested that up to 75 percent (approximately 305 hours) of lesson time be allocated to learning English (Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a: 28).

The overall aim of the English language education curriculum throughout primary and secondary schooling is:

To provide every learner of a second language with further opportunities for extending their knowledge and experience of cultures of other people as well as opportunities for personal and intellectual development, further studies, pleasure and work in the English medium; and

To enable every learner to prepare for the changing socio-economic demands resulting from advances [in] information technology (IT); these demands include the interpretation, use and production of materials for pleasure, study and work in the English medium (Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a: 2).

In 2005, the Education Bureau of the Government of Hong Kong Special Administrative Region stated in a report that the implementation of a new three-year senior secondary academic structure would commence with Secondary 4 in September 2009. The new academic structure involved two major changes. First, the current “3+2+2+3” system was

to change to a “3+3+4” system—three years each of junior and senior secondary and a four-year undergraduate degree. Second,

students . . . [were] no longer [to] be confined and streamed into arts, science, commercial or technical studies at an early age. All students [would have to] . . . pursue a programme of study made up of three components—core subjects, elective subjects and other learning experiences that cater to their different needs, interests, aptitude and abilities (Li, 2005: 1).

Reform of the existing “2+2” system in senior secondary education to the new three-year senior secondary system was due to economic and societal changes, rapid development of new technologies and knowledge, and increasing global competitiveness, which required that “Hong Kong . . . [provide] a full senior secondary education to all, enabling all students to become self-initiating and lifelong learners” (Li, 2005: 1).

Under this new academic structure, the Curriculum Development Council and the Hong Kong Examinations and Assessment Authority jointly prepared *The English Language Education Key Learning Area English Language Curriculum and Assessment Guide (Secondary 4 - 6)* in 2007. The new curriculum specifically highlights the importance of the interface of senior secondary curriculum with the primary and junior secondary curriculum:

While the six-year primary curriculum focuses on laying the foundation of English Language development, the secondary curriculum at both junior and senior levels focuses on the application of English for various everyday learning and developmental purposes. Specifically, the senior secondary English

Language curriculum comprises a broad range of learning targets, objectives and outcomes that help learners to consolidate what they have learned through basic education (P1 – S3), as well as to broaden and deepen their learning experiences to help them to develop the necessary language knowledge and skills for their future needs, whether they choose to pursue vocational training or university education, or to work after they complete secondary education (Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a: 3).

With the implementation of new senior academic structure, a new set of English textbooks were put into use. Whether or not this set of textbooks is able to support a smooth transition in expected literacy development between the different grades (including both print literacy and visual literacy), which is strongly emphasized by two curriculums (Curriculum Department Council, 2002; Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a), is going to be addressed by this study. This study is also going to determine whether it is possible to discern learning paths through the school years based on a selection of “input” texts in the textbooks used in primary and secondary schools.

### **5.3 Introduction to the chosen set of textbooks**

In this study, I chose textbooks published by one of the most authoritative presses in Hong Kong, Pearson Longman Hong Kong Education, which was renamed Pearson Hong Kong in 2011. Textbooks produced by Pearson Hong Kong are widely used in primary and secondary schools in Hong Kong.

Pearson Hong Kong, which celebrated its fiftieth anniversary in 2008, is regarded as the largest educational solution provider in Hong Kong (Pearson Education Asia Limited, 2012a). Over the years, its commitment to providing quality teaching and learning solutions has enabled it for many decades to maintain its leadership in all academic sectors from pre-school, primary, and secondary school to higher education (Pearson Education Asia Limited, 2012a). The Education Bureau of the Government of Hong Kong Special Administrative Region stated in its 2005 report that the implementation of a three-year senior secondary academic structure would commence with Secondary 4 in September 2009. As a result, textbook publishers designed the new sets of textbooks on the basis of the new structure. In 2007, Pearson Hong Kong launched the English Language textbook *Longman Activate* and it soon became the market leader in English language textbooks used at the New Senior Secondary level (Secondary 4-6) (Pearson Education Asia Limited, 2012b). With world class authors, renowned dictionaries and full product coverage, Longman is also a trusted name in English Language Learning (Pearson Education Asia Limited, 2012b).

This study explores the transitional periods from primary school to junior secondary school and from junior secondary school to senior secondary school. Therefore, the target data is drawn from the textbooks used by Primary 4 to Senior Secondary 1 students as the targeted data. They are specifically designed for Hong Kong's English language primary curriculum (grade primary 4-6), junior secondary curriculum (grade secondary 1-3), and senior secondary curriculum (grade secondary 4) (Curriculum Development Council, 2002; Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a):

1. Primary 4-6: Primary Longman express (2010) (6 books in total)

2. Secondary 1-3: Longman activate (2011) (6 books in total)
3. Secondary 4: Longman activate new senior secondary theme book (2009) (1 book in total)

These textbooks, produced by Pearson Longman Hong Kong, have been on the Education Bureau's (EDB) recommended textbook list and are widely used in primary and secondary schools in Hong Kong. Given the limited scope of a PhD project, this study analyses textbooks for students of Primary 4 rather than Primary 1, and extends the analysis to Secondary 4 rather than Secondary 6. When discussing the study results in Chapter 6, I will use "Primary 4," "Primary 5," "Primary 6," "Secondary 1," "Secondary 2," "Secondary 3," and "Secondary 4" to identify the textbooks analysed in this section. I chose these labels in order to be consistent with terminology used in the Hong Kong curriculum. Table 5.1 presents the levels and grades of the textbooks chosen for this doctoral project.

Table 5.1 Textbooks chosen for the study

| <b>Levels</b>    | <b>Grades</b> |
|------------------|---------------|
| Primary          | Primary 4     |
|                  | Primary 5     |
|                  | Primary 6     |
| Junior Secondary | Secondary 1   |
|                  | Secondary 2   |
|                  | Secondary 3   |



|                  |             |
|------------------|-------------|
| Senior Secondary | Secondary 4 |
|------------------|-------------|

The textbooks chosen for Primary 4 to 6 are published under the series titled *Longman Express Pearson* (Education Asia Limited, 2010a, 2010b, 2011a, 2011b, 2012c, 2012d) and are designed for a six-level primary course based on the requirements of the “English Language Curriculum Guide (Primary 1 to 6)” (Curriculum Department Council, 2004). They were written by Alison Wilson, Katy Clarke, Ella Hall and Mabel Sieh. There are two textbooks for each grade.

The textbooks chosen for Secondary 1 to 3 are published under the series titled *Longman Activate JS 1 – 3* (Junior Secondary 1 – 3) (Education Asia Limited, 2009a, 2009b, 2011a, 2011b, 2011c, 2011d). They are designed to prepare students to excel in New Senior Secondary (NSS) 1 – 3. The Longman Activate JS 1 – 3 course has a total of six textbooks (two textbooks for each grade), which combines a strong focus on reading, vocabulary and grammar with a language arts and non-language arts component that is integrated into a task- and project-based framework. This series follows a theme-based approach to task-based learning. Each textbook contains four units, all of which have a pre-task section, an integrated task, a language arts task and a self-assessment. The units are followed by a skills-based assessment and a project focusing on one or more of the NSS electives. They were written by Jo Ann Nelson, John Potter, Sarah Rigby, Kitty Wong.

The textbook for Secondary 4 is published under the series titled *Longman Activate NNS Theme book* (Education Asia Limited, 2009c). Specially designed to meet the aims of the New Senior Secondary (NSS) English Language Curriculum for Secondary 4 to 6 (Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a), this series of textbooks

is intended to build upon the student's solid foundation of knowledge, skills, values and attitudes. The text also claims to ensure a smooth transition between Key Stages 3 and 4, challenging students to fulfill their potential in Secondary English language. Each unit in the textbooks has an overarching theme, a pre-reading activity that aims to facilitate the development of effective reading strategies, a variety of reading text types on a range of topics, followed by vocabulary coverage and skills-based self-assessment tasks.

All the textbooks chosen are designed as students' or pupils' textbooks, rather than teachers' books or supporting materials. The corpus of this PhD project is made up of 13 textbooks. In order to analyze the expansion of the meaning potential constructed by the verbal texts included in the textbooks, I select the texts that consist of a minimum of four clauses except those used as exercises or assessment. The reason for not choosing texts used for exercises and assessment is that those texts are often incomplete and they require students to fill in blanks or to answer questions, which are not suitable to lexico-grammatical analysis, and register analysis of those could be arguable. The images accompanying the chosen texts are extracted to analyze expected visual literacy.

## **5.4 Functional framework for analyzing print literacy**

In this section, I will introduce the functional analysis framework used to analyze the print literacy reflected in the chosen textbooks by using instances of texts selected from the textbooks as examples.

### **5.4.1 Metafunction and Stratification**

Halliday and Matthiessen (2004: 29-30) proposed three metafunctions of language. First, language provides a theory of human experience and certain of the recourses of the

lexicogrammar of every language are dedicated to that function. Halliday and Matthiessen (2004) call it the ideational metafunction and break it down into the experiential and the logical metafunctions. Second, language is always also enacting our personal and social relationships with other people. They call it the interpersonal metafunction to suggest that it is both interactive and personal. Last, language has the function to enable or facilitate communication, for instance, building up sequences of discourse, organizing the discursive flow, or creating cohesion and continuity. They call it textual metafunction.

In this study, in view of the limited scope of a PhD project, I am not able to address the three metafunctional meanings in all the texts in the textbooks. As the purpose of this study is to explore whether there is a smooth transition from primary textbooks to senior textbooks, and to discern possible learning paths, I will focus on investigating the development of logical metafunctions, particularly the clause complexes used in the texts of the textbooks across the years of schooling.

To analyse the print literacy reflected in the chosen textbooks, I will use the SFL concept of stratification to conduct a multi-level or multi-strata analysis. Language is a complex semiotic system (Halliday & Matthiessen, 2004: 24). One of the dimensions of organization of this complex system is stratification (Halliday & Matthiessen 2004: 24-26). This can be illuminated by Halliday's (1975) account of ontogenesis, in which he shows the gradual development in complexity as language becomes an increasingly more powerful resource for making meaning. In the "protolanguage" stage, one of Halliday's four stages of language development, which was discussed in Chapter 2, there are two strata: a stratum of content and a stratum of expression (Halliday, 1995; Halliday & Matthiessen, 2004: 24). The meaning of "that's interesting—don't [you] agree?" could be expressed by a vocalization of /da/ (Halliday, 1995). There is no grammar

in it yet. In adult speech, there are two modes of alternative expression: the system of writing and the system of speech (Halliday & Matthiessen, 2004: 24).

The stratum of “content” can be expanded into lexicogrammar and semantics. The term lexicogrammar refers to both the grammar and the vocabulary, which form two poles of a single continuum of wording (Hasan, 1987). Language functions to construe experience and enact social processes. As such, the stratum of semantics provides the resources to transform experience into meaning and to enact interpersonal relationships as meaning, while the stratum of lexicogrammar provides the resources for realizing these meanings as wordings (Halliday & Matthiessen, 2004). The “expression” plane splits into phonetics, “the interfacing with the body’s resources for speech and for hearing” and phonology, “the organization of speech sound into formal structures and systems” (Halliday & Matthiessen, 2004: 25). The relationship between the strata, which is the process of linking one level of organization with another is called realization (Halliday & Matthiessen, 2004: 26).

Therefore, in this study, I will start by exploring the context of the texts in the textbooks, followed by a semantic and lexicogrammatical analysis. I will investigate three contextual parameters: field, tenor, and mode by applying Matthiessen’s (2014) context-based register typology and Hasan’s (1985) expansion of contextual variables, which were introduced in Chapter 4. I will also use instances of texts in the textbooks to illustrate each category. As for the stratum of semantics, I will explore different text types of the texts in the textbooks. The findings of the contextual-semantic analysis of the texts will be presented in Chapter 6. Given the limited scope of a PhD project, I am not able to address the various lexicogrammatical features of all the texts in these textbooks. As this study is exploring whether there is a smooth transition from primary textbooks to senior textbooks, and to discern possible learning paths, I will focus on

investigating the development of complexity in language. Instances of clause complexes and embedded clauses in the texts are found to contribute this development of complexity. Therefore, I will adopt the systemic functional network of clause complexes (Halliday & Matthiessen, 2004: Chapter 7) to analyze all the instances in the data. Each category of clause complexes will be introduced by using examples in the textbooks in the following sections of this chapter.

### 5.4.3 Context: Field

In order to analyse the contexts of the texts in the textbooks in terms of field, this study first applies the context-based register typology developed by Matthiessen (see Matthiessen, 2006; Teruya, 2007; Matthiessen, Teruya & Lam, 2010; Halliday & Matthiessen, 2013; Matthiessen, 2013; Matthiessen, 2014; Matthiessen & Teruya, forthcoming) to map out the texts chosen for the textbooks in terms of the socio-semiotic activities they operate in, and then analyzes these texts by exploring the domain of experiences with which they are associated.

As introduced in Chapter 4, Matthiessen proposed eight primary fields of activity, which can be grouped into three superordinate categories depending on “whether the field of activity is primarily a process of making meaning (semiotic), a process of behaviour (or ‘doing;’ social) or a transition between the two (semiotic processes potentially leading to social processes),” semiotic processes (expounding, reporting, recreating, sharing, and exploring), semiotic processes potentially leading to social processes (doing), social processes (doing)” (Matthiessen, 2014). Below I quote the most recent definition of each primary field of activity (Matthiessen, 2014) and follow with illustrations of each using instances from the texts used in the textbooks.

- 1) “**Expounding** knowledge about general classes of phenomena (rather than particular phenomena), theorizing our experience of the world in terms of a commonsense (folk)

or uncommonsense (scientific) model by explaining why general classes of events take place or by categorizing general classes of entities (in terms of taxonomies, hyponymic and/ or meronymic, and/ or characterization)” (Matthiessen, 2014: 170).

The example text is extracted from *the Longman Activate New Senior Secondary Theme Book for Key Stage Secondary 4* (Pearson Education Asia Limited, 2009c: 144).

The environment – a local and global issue

In many ways, life has become far more comfortable and convenient in the past few decades. However, this has come at a huge cost to the environment. Here, we look at three of the most serious environmental problems we are now facing.

Air pollution

The main cause of air pollution is the burning of fossil fuels by vehicles and power plants. Other human activities such as construction and the burning of waste also contribute to air pollution.

The effects on our health are grave. According to the World Health Organization, 2.4 million people die annually from causes directly related to air pollution. Young children, the elderly and people with heart and lung problems suffer the most from this environmental problem.

Global warming

Global warming is the increase in the temperature of the earth’s near-surface air and oceans. It is caused by the build-up of carbon dioxide and other pollutants in the air, which traps the sun’s heat and warms up the planet.

During the past one hundred years, average temperatures around the world have risen between 0.5°C and 1°C. Scientists predict that temperatures will rise a further 1°C to 3.5°C during the 21<sup>st</sup> century.

Global warming is already causing a wide range of problems. Sea levels are rising due to the melting of polar ice sheets. Countries around the world are facing extreme weather, such as hurricanes, floods and heat waves. Such changes threaten the lives of both wildlife and humans.

#### Overflowing landfills

Landfills are used for waste disposal in many countries around the world. However, due to the amount of waste our lifestyles produce, these landfills are reaching capacity.

In Hong Kong, it is predicted that the three existing landfills will be full within the next decade. The government is now trying to find alternative waste disposal methods.

Apart from the three Rs (reduce, reuse and recycle), the Environmental Protection Department has begun advocating the fourth R – responsibility. It believes that the most effective way to solve the problem of overflowing landfills is to encourage people to take responsibility for reducing waste.

This sample text, within the expounding field of activity, expounds on environmental issues, in particular air pollution, global warming and overflowing landfills. The text explains why these environmental issues take place and how they affect people's lives.

- 2) “**reporting** on particular phenomena (rather than general classes of phenomena), by recording or chronicling (the flow of) particular events, inventorying particular entities, or surveying particular places.” (Matthiessen, 2014: 170)

The sample text is extracted from *Longman Activate JSIA* for Secondary 1 students (Pearson Education Asia Limited, 2011c: 25).

Hui sai-cheung was a violin player. His wife, Lee Seen-wun, loved Cantonese opera. Their first son, Michael, was born in 1942. His brother Ricky was born four years later. Sam was born two years after Ricky. Sai-cheung and Seen-wun also had a daughter called Judy and another son called Stanley. All their children grew up to love music and acting.

In 1971, Sam and Michael starred in a TV programme. They performed funny skits and Sam sang songs in English and Cantonese. The same year Sam married Rebecca, an American. Their first son, Ryan, was born in 1976. Another son, Scott, was born two years later.

During the 1970s and 1980s, Michael and Ricky acted in many popular films, while Sam became one of Hong Kong’s biggest pop stars.

Sam’s son Ryan went to school in America and played in a rock band there. In 2004, he returned to Hong Kong. He released his first CD, *Open Up*, in 2006.



This example text, within the reporting field of activity, reports the experiences of a particular family that loves music and acting, by chronicling the events of their lives from when their first son was born to when the son of their third son released his first CD. Unlike expounding, which expounds on a general class of knowledge, this example reports particular phenomena by recording events to illustrate how these family members are connected through music and acting.

- 3) **recreating** various aspects of life — involving any of the eight different types of context according to field of activity, typically imagined (fictional) rather than experienced (personally or vicariously), as verbal art with a “theme” (in the sense of Hasan, 1985), through narration and/ or dramatization. (Matthiessen, 2014: 170)

I use a short story as an example text within the recreating field of activity. Extracted from *Primary Longman Express 4B* (Pearson Education Asia Limited, 2010b: 49-50) for Primary 4, this short story fictionalizes an amusing interaction between a goat and a troll.

Once upon a time there were three goats. They were brothers. They lived together beside a river. “I want to eat the sweet grass across the river,” said the youngest goat Gavin. “Don’t go there!” said his brother. “The troll under the bridge will eat you.”

Gavin did not listen to his brother. One morning he tried to cross the bridge. “Who’s crossing my bridge?” shouted a voice. “I’m a just little goat. Don’t eat me,” replied Gavin.

“I won’t eat you,” said the troll. “I just want to be your friend.” Gavin was surprised. He went closer to the bridge. He saw two huge feet in smelly dirty socks. There were flies buzzing around.

“Pooh! How often do you change your socks?” Gavin asked. The troll came up to the surface and said, “Once a month . . . maybe.” “Ugh! You ought to change your socks every day,” said Gavin.

“How often do you brush your teeth?” asked Gavin. “Once a week, on Fridays.” said the troll. “You ought to brush your teeth twice a day. Look at your hair! You ought to wash it four times a week. You ought to . . .” said Gavin.

The troll was angry. “I don't want to make friends with you anymore. “You’re an annoying goat!” shouted the troll. He tried to catch Gavin but Gavin was faster than him. “Oh! One more thing,” laughed Gavin, “you ought to do more exercise.”

4) **“sharing** personal experiences and values (opinions) as part of establishing, maintaining and calibrating, negotiating interpersonal relationships; in terms of tenor, ranging from (and potentially transforming) strangerhood to intimacy, but in sustained form involving fairly intimate relationships; in terms of mode, traditionally and prototypically in private face-to-face interaction, but increasingly enabled by new technologies opening up new channels of sharing (epistolary, telegraphic, telephonic — and now with an explosion of mobile and Internet based possibilities, with a tendency to blur the distinction between private and public spheres).”  
(Matthiessen, 2014: 170)

I use an email from one friend to another as an example text to demonstrate the sharing field of activity, which is extracted from *Primary Longman Express 4A* (Pearson Education Asia Limited, 2010: 9). The email writer, Jason, shares information about his friends and himself, including appearances, age, hobbies and preferences, in order to maintain or enhance friendships with the addressee, his friend Gary, in Australia.

Jason sent an e-mail to his friend Gary in Australia.

Hi Gary,

How are you and your family? I miss you all very much.

I like Hong Kong. I have lots of friends here. I am attaching a photo of my new friends. Coco is at the front. She is from Planet Bibi. My best friend is Tim. He is behind Coco. We are in the same class. Tim and I are the same age and we have the same hobby. We both like going ice-skating but we like different school subjects. I like Maths. Tim likes PE. He is good at running. I am taller than him. I am fatter than him too.

Hope you like the photo. Write soon!

Love

Jason

- 5) “**exploring** public values (opinions) and positions (ideas, hypotheses) by reviewing commodities (assigning them values on a scale from very positive to very negative) or by arguing about positions, debating or discussing them—in terms of tenor, typically between one person (a professional or a member of the general public) and some segment of the general public, so between strangers; in terms of mode, typically using media channels, either “old” media channels (print, radio, TV) or “new” media channels (mobile and/ or Internet-based).” (Matthiessen, 2014: 171)

The following film review is used as an example of the field activity of exploring. It is extracted from *Longman Activate JS2A* (Pearson Education Asia Limited, 2011e: 24). The writer of this review, Joyce Larson, explores her perspective on the film *War of the Worlds*, its director and the performances of the leading actor and actress.

#### Film Review

*War of the Worlds* is an exciting science fiction film. It has amazing special effects and non-stop action.

In the film, Ray (leading actor Tom Cruise) and his children are spending a weekend together when a lightning storm hits the city. When the lightning stops, people come out again into the streets. Then alien machines rise up out of the ground and attack the people. Ray realizes that aliens are taking over and he must find a way to save his children. In their struggle to survive, they run through streets filled with terrified people.

Tom Cruise is perfect as the desperate father. Young leading actress Dakota Fanning is brilliant as Ray's daughter, Rachel. Supporting actor Justin Chatwin, playing Ray's son, also gives a good performance.

Film reviewer Steve Rhodes of Internet Reviews said that *War of the Worlds* was an entertaining thrill ride. Paul Clinton, film reviewer for CNN.com, said that it was a terrific film. I completely agree. Director Steven Spielberg has made another fantastic film.

By Joyce Larson

- 6) “**recommending** some course of action (typically some kind of social process—exhortation in the strong form), either for the sake of the addressees by advising them to undertake it for their own good or for the sake of the speaker by promoting some type of goods-&-services” (Matthiessen, 2014: 171);

The following article promotes the attraction, See Jelly Spectacular by highlighting its popularity and specialty attraction. It is extracted from *Longman Activate JSIB* (Pearson Education Asia Limited, 2011d: 25). By promoting that See Jelly Spectacular has more than 1,000 jellyfish, special lights and music, and an interactive game area the article, a sample of the recommending field of activity, recommends that readers or potential customers buy their goods-&-services.

Sea Jelly Spectacular: more than 6,000 visitors per day!

Since it opened in April, 2006, the Sea Jelly Spectacular in Hong Kong's Ocean Park has become one of the most popular attractions there. The aquarium is visited by more than 6,000 people every day.

Costing HK \$6 million to build, the aquarium displays more than 1,000 jellyfish. Half of its eight sections are viewing areas, which have special lights and music. There is also an area where visitors can play interactive games.

7) “**enabling** some course of action (typically some kind of social process), either literally enabling (empowering) them by instructing them in some type of procedure or constraining them by regulating their behaviour.” (Matthiessen, 2014: 171)

The example text demonstrating the enabling field of activity is extracted from *Longman Activate JSIB* (Pearson Education Asia Limited, 2011d: 45). By providing instructions on how to make brown sugar rice pudding, this recipe enables students to make this recipe on their own.

Recipe of the week

Brown sugar rice pudding (*boot jai go*) is a common street food in Hong Kong. It's also surprisingly easy to make at home. Why not give it a try?

80g of red beans

1 cup of rice flour

1/4 cup of brown sugar

2 cups of water

\* If you don't have any brown sugar, white sugar will do.

Instructions:

1. Boil the red beans in water until they are soft. Then cool and dry.
2. Put one cup of water in a bowl. Add the flour and stir.
3. Dissolve the sugar in a pan of hot water. Pour it into the flour and water. Stir again.
4. Pour the mixture into small bowls. Add some of the red beans. Steam for 5 minutes then add the rest of the beans. Continue steaming for another 20 minutes.

8) “**doing**—performing some form of social behaviour, on one’s own or as part of a team, with semiotic processes (‘meaning’) coming in to facilitate this social behaviour through direction or collaboration.” (Matthiessen, 2014: 171)

A: What would you like? What’s tasty to eat?

B: I’d like something cold and sweet.

A: Let’s have some fruit cake. Which would you like?

B: Mango or banana? They are both very nice.

This above example text operating within doing sector is extracted from *Primary Longman Express 4A* (Pearson Education Asia Limited, 2010: 25). The two speakers in this text place their food orders by negotiating and collaborating.

#### **5.4.4 Context: Tenor**

Using Hasan's (1985) contextual configuration and Matthiessen's (2013) registerial cartography variables (which I reviewed in Section 4.2 and Section 4.5) I will next analyze tenor. Due to the complexity of the different tenor relationships, the results from this section will not be quantified but presented as observation and discussion in Chapter 6.

#### **5.4.5 Context: Mode**

The contextual parameter of mode can be examined under three different perspectives (Hasan, 1985: 58): role (whether language is constitutive or ancillary), medium (written or spoken), and channel (whether the message travels on sound waves or through graphic-visual materials). Since all the data in this study are textbooks, which are printed materials rather than recordings, their channel is reading rather than hearing. Therefore, of the three perspectives, only the language role and the medium needs detailed analysis. Given the limited scope of a PhD project, the medium will be analyzed in detail in this study. All the texts will be analyzed based on whether they are spoken or written medium and whether they are monologic or dialogic. The notion of a monologue is associated with the written medium although though the spoken medium permits the possibility of either monologue or dialogue (Hasan, 1985: 58).



The following interview, an example of a text in the spoken medium, was extracted from *Primary Longman Express 6A* for Primary 6 (Pearson Education Asia Limited, 2011a: 9). This text is dialogic.

Who wants to join the circus? If you want to do something different when you grow up, read these interviews by Justin Tang!

JT: Hi, Elsie. Can you tell us what you do?

E: I'm a trapeze artist.

JT: Wow! You're the person who swings in the air!

E: That's right.

JT: You need to be very adventurous then.

E: Yes, and I need to be very patient too. It can take a long time to learn how to swing in the air.

JT: Anything else?

E: Well, yes there is. You mustn't be afraid of heights.

Another example of the spoken medium is presented in the following debate speech. Unlike the above interview it is a monologue. The speaker uses this speech to argue that "laws should be made to monitor the use of air conditioners." The text is extracted from *Longman Activate New Senior Secondary for Key Stage Secondary 4* (Pearson Education Asia Limited, 2009c: 146).

Debate speech

Good morning. My name is Karen Ho, and I'm the first speaker of the affirmative team.

Let me introduce our two other speakers to you. Sitting on my left is our second speaker, Andy Lam, and sitting on the end is our third speaker, Sam Chan.

The motion for today's debate is that "Laws should be made to monitor the use of air conditioners." Our team will be arguing that this statement is true because air conditioners are, without a doubt, overused in Hong Kong. We'll also be arguing that the motion is true because air conditioners can cause indoor air pollution, and that we cannot rely on people to limit their use of air conditioners.

According to Friends of the Earth, Hong Kong is the most air-conditioned place on the planet. Even in the hot summer months, people have to wear jackets or sweaters in offices, shopping centers, supermarkets and other air-conditioned places. There's something very wrong if people have to dress for winter when they're indoors, isn't there?

The problem does not exist only in public places. A survey conducted by Friends of the Earth also revealed that twenty-two percent of families kept their homes at a temperature of twenty-one degrees Celsius or below.

To make matters worse, air conditioners consume more energy than any other electrical appliances. In fact, they are responsible for about sixty percent of the total energy consumed in summer. Studies show that if everyone turned their air conditioners up one degree Celsius, it would be 330 million electricity units. And what if people switched off

their air conditioners whenever they were not needed? Just imagine how much energy would be saved!

Some may argue that education can prevent people from overusing air conditioners. The fact is, green groups have long been encouraging people to turn up their air conditioners to twenty-five point five degrees Celsius and to switch them off when they're not needed. How many people really do this?

So the message is clear: establishing laws to monitor the use of air conditioners is essential to help prevent the overuse of these energy-hungry appliances.

Thank you

The final example is a blog entry that is in the written medium and monologic. The writer of this blog introduces his/her shopping experiences during an excursion in Hong Kong. The text is extracted from *Longman Activate New Senior Secondary for Key Stage Secondary 4* (Pearson Education Asia Limited, 2009c: 4).

Blog entry

Shopping and scenery

Sunday 28th July 20\_\_

Yesterday Nina and I checked out Elements, the shopping center in West Kowloon. (By the way, the Hong Kong Island skyline looks spectacular from West Kowloon!) We got

out at Kowloon station, which connects the Tung Chung MTR line with the Airport Express train. Elements is just above the station and there are lots of signs (unlike for Time Square – it's like a maze walking there from Causeway Bay station!). ☺

Anyway, Elements is pretty cool. Apparently it's one of the biggest malls in Hong Kong, and it's got to be one of the most luxurious too. There are lots of gigantic sculptures on the theme of the five elements: air, earth, fire, water and wood. (I was glad I brought my camera!) There's also weird food, an ice-skating rink (I've got to give it a try!) and, of course, lots of designer shops.

Then today my family took the Ngong Ping 360 cable car to Po Lin Monastery. It was my first time taking it, and of course I remembered its past problems. But I didn't need to worry— the scenery was breathtaking and there were no mishaps. We had lunch at the Buddhist restaurant in the monastery. They don't serve meat, and although my mum liked it, my dad and I would have preferred McDonald's! Anyway, it was a nice day out.

Next Sunday, my Dad's planning a family trip to the Hong Kong Wetland Park, but Nina wants me to go with her to Disneyland (again!), so I'm not sure what to do!

After exploring the three contextual parameters (context) of the texts chosen for the textbooks, I will continue to investigate the text types (semantics) of these texts, which will be presented in Chapter 6. As discussed in section 5.4.1, the next stratum below is lexicogrammar that I discuss below. I will use instances in the texts chosen for textbooks to illustrate how I am going to analyze clause complexes in this study.

#### 5.4.6 Lexicogrammar: clause complex

The focus of this study is the transition between grades across the years of primary and secondary schooling.

Let me present two examples of simplexes and complexes before presenting the results.

The following comes from one text in *Primary Longman Express 4A* and provide two examples of simplexes.

My friends and I are different. We like things of different sorts. (Pearson Education Asia Limited, 2010a: 41).

The following is a movie review from *Longman Activate New Senior Secondary Theme book* for Secondary 4 students. It provides two examples of clause complexes.

Jason Bourne (Matt Damon) ...He is a man on the move, travelling from one country to another, dashing through alleys, and jumping over buildings and fences like a dog chasing a rabbit.

However, when he fights, his movements are swift and deadly and his eyes are emotionless (Pearson Education Asia Limited, 2009c: 174).

Using the clause complex system (Halliday & Matthiessen, 2004; Matthiessen (2006), I plan to conduct a detailed analysis of clause complexes in the texts chosen from textbooks, according to 1) TAXIS (hypotaxis or parataxis), 2) FINITENESS (finite or non-finite), and 3) depth of nesting. Figure 5.1 presents the analytical framework of clause complexes I adopt in this current doctoral project. I will introduce these five variables in the following sub-sections, illustrating them with examples from the textbooks. As the structural conjunctions and projected verbs are highly

related to the logic-semantic types of the clause complex, I will introduce them together in section 5.4.6.2.

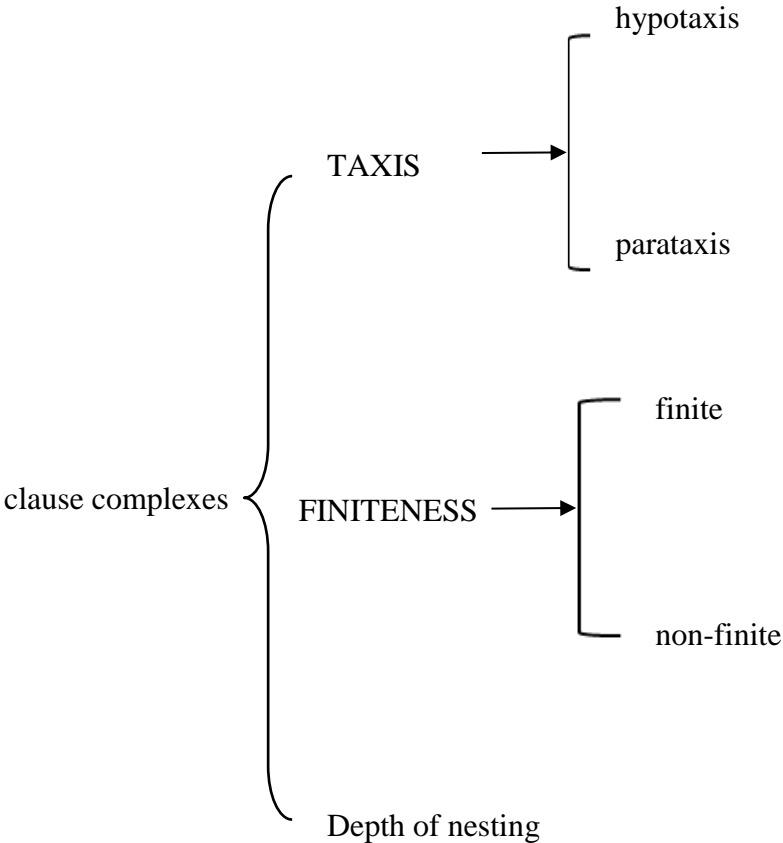


Figure 5.1 An analytical framework for clause complexes

#### 5.4.6.1 TAXIS

First of all, the texts chosen for the textbooks are divided into ranking clauses and the boundaries between the ranking clauses are represented by double vertical lines “||”. The following clause complex is divided into two ranking clauses. This is also an example of clause complex.

We got out at Kowloon station, || which connects the Tung Chung MTR line with the Airport Express train (Pearson Education Asia Limited, 2009c: 4).

This following sentence is an example of a simplex. All the instances of simplexes and complexes are identified and all clause complexes are extracted for further analysis using the analysis framework (see Figure 5.1).

Yesterday Nina and I checked out Elements, the shopping center in West Kowloon (Pearson Education Asia Limited, 2009c: 4).

All ranking clauses in clause complexes are linked by a logico-semantic relation and are interdependent: one unit is interdependent on another unit (Halliday & Matthiessen, 2004). If the two ranking clauses are interdependent in a clause complex they are treated as being of equal status, the relation between these two ranking clauses is one of parataxis, as in:

There are more than 91 million sheep in Australia but only about 20 million people – || that’s more than four sheep per person (Pearson Education Asia Limited, 2009c: 61).

If the two ranking clauses related as interdependent are treated as being of unequal status, the relation between them is one of hypotaxis, as in:

Collecting animal figures is pretty common. But when those animals are roosters, || that’s something else (Pearson Education Asia Limited, 2009c: 6).

Parataxis will be marked as “1” (initiating clause) and “2” (continuing clause) during the process of analysis, while hypotaxis will be marked as “ $\alpha$ ” (dominant clause) and “ $\beta$ ” (dependent clause). Table 5.2 shows primary and secondary clauses in a clause nexus (Halliday & Matthiessen, 2004: 376).

Table 5.2 Primary and secondary clauses in a clause nexus

|           | primary             | secondary           |
|-----------|---------------------|---------------------|
| parataxis | 1 (initiating)      | 2 (continuing)      |
| hypotaxis | $\alpha$ (dominant) | $\beta$ (dependent) |

#### 5.4.6.2 Finiteness

Some clause complexes involve combinations with finite clauses, as in:

Some students said || that it was not well organized, and a couple of students said ||that it was boring (Pearson Education Asia Limited, 2009c: 32).

Some other clause complexes involve combinations with non-finite clauses:

Not recognizing the rights of the indigenous people, || the Europeans took over the land for themselves (Pearson Education Asia Limited, 2009c: 61).

#### 5.4.6.3 Depth of nesting

Many clause complexes are linear sequences of clause nexuses but some with internal bracketing or nesting where what is being linked by a logico-semantic relation is not a single clause but rather a “sub-complex”—a clause nexus in its own right (Halliday & Matthiessen, 2004: 376). I



also analyze all the clause complexes by marking how deep the nesting is. Level 1 refers to the most local relation while level 3 refers to the most global one. Table 5.3 shows an example of analyzing depth of nesting in a sentence: ‘I thought it was cool trick,’ Bobby recalls, and I asked him if he knew how to fold anything else. As introduced in section 5.4.6.1, parataxis will be marked as “1” (initiating clause) and “2” (continuing clause), while hypotaxis will be marked as “ $\alpha$ ” (dominant clause) and “ $\beta$ ” (dependent clause). I also used Halliday and Matthiessen’s (2004) suggested notation to mark the sub-types of logic-semantic relations (three of expansion, and two of projection):

(1) Expansion:

elaborating = (‘equals’)

extending + (‘is added to’)

enhancing  $\times$  (‘is multiplied by’).

(2) Projection:

locution “ (double quotes)

idea ‘ (single quotes) (Halliday & Matthiessen’s (2004: 337)

According to Halliday and Matthiessen’s suggested notation (2004: 379), all the notating symbols are placed “before the number or letter representing the continuing clause in a clause nexus”. In the Table 5.3, level 1 involves two instances of hypotaxis of projecting complexes (of the idea type). Of these two, the first complex “I thought I was a cool trick” precedes a projecting continuing clause in level 2 (of the locution type); the second complex “he knew how to fold

anything else” follow a projecting dominant clause in level 2 (of the locution type). Level 3 involves a parataxis of expansion complexes (of extending type).

Table 5.3 An example of analyzing depth of nesting

| Level 3 | Level 2   | Level 1   |                               |
|---------|-----------|-----------|-------------------------------|
|         |           | $\alpha$  | ‘I thought                    |
|         | 1         | ‘ $\beta$ | it was a cool trick,’         |
| 1       | “2        |           | Bobby recalls,                |
| +2      | $\alpha$  |           | and I asked him               |
|         | “ $\beta$ | $\alpha$  | if he knew                    |
|         |           | ‘ $\beta$ | how to fold anything<br>else. |

# **Chapter 6 Results and discussion I: (Analysis of verbal texts)**

## **6.1 Introduction**

Previous chapters established the theoretical foundation and contextual background of this dissertation. Starting with this Chapter, I will present my analysis and discuss my findings. Chapter 6 reports and discusses the findings from my analysis of the verbal texts contained in the textbooks. Chapter 7 presents my analysis of the visual images in the textbooks and provides an important discussion on the co-construction of meaning in the verbal texts and visual images in the textbooks. Chapter 8 extends the analysis to textbooks used at the tertiary levels by presenting a pilot study using college English textbooks from Mainland China.

I begin this chapter with a contextual-semantic analysis of all the verbal texts in the textbooks, followed by a lexico-grammatical analysis with a particular focus on clause complexing. The results of this analysis are significant for teachers as it will help them to provide pedagogical support to their students and help maintain a smooth transition between grades.

## **6.2 Contextual-semantic analysis of linguistic texts in textbooks used in Hong Kong**

This section will present and discuss the results of the contextual-semantic analysis of linguistic texts in Hong Kong English language learning textbooks by applying a context-based register typology (Matthiessen, 2014) and Hasan's contextual configuration (as outlined in Chapter 4, section 4.2 and section 4.5). I will first present the pilot study conducted to analyze three textbooks used in both Hong Kong and three textbooks used in Mainland China and then discuss

the results of my analysis of 13 textbooks used in Hong Kong across the upper primary and senior secondary school grades.

### **6.2.1 Contextual-semantic analysis of textbooks only for Primary 4, Secondary 1 and Secondary 4, used in both Hong Kong and Chinese Mainland**

In this section, I present the results of the pilot study on the contextual-semantic content in textbooks for Primary 4, Secondary 1 and Secondary 4, used in both Hong Kong and Chinese Mainland schools. This pilot study was designed to test the feasibility of the proposed analytic framework and to estimate what I would be able to achieve within the limited scope of this PhD project. I will later discuss the relationship between the findings of the pilot study and the findings from my analysis of 13 Hong Kong textbooks, which were introduced in Section 6.1.2.

For the pilot study, I chose one textbook from the Primary, Junior Secondary and Senior Secondary grades that was used in both Hong Kong and Mainland China. To maintain the same interval between the grades of textbooks, Primary 4, Secondary 1 (Junior Secondary) and Secondary 4 (Senior Secondary) textbooks used in two learning contexts were selected as subjects of this pilot study. The corpus is made up of a total of 6 textbooks.

As no official textbook is standardized nationwide, (e.g., each school may choose textbooks on their own) I chose textbooks published by two of the most authoritative presses in Mainland China and in Hong Kong—People's Educational Press and Pearson Longman Hong Kong Education (which was renamed Pearson Hong Kong in 2011). The background of the Hong Kong publisher was discussed in Chapter 5 so I will introduce the background of the publisher from Mainland China next.

People's Education Press in Mainland China is a specialized publishing house founded in 1950 under the direct leadership of the Ministry of Education of the People's Republic of China (People's Education Press, 2003). For over 50 years, based on the reform and development of national education undertakings, People's Education Press compiled and published nine sets of teaching materials for Primary 4 to 6, Secondary 1 to 3 (Junior Secondary), and Secondary 4 to 6 (Senior Secondary) students in Mainland China. These materials are in common use nationwide and amount to billions of copies (People's Education Press, 2003).

As noted in Chapter 5, the six textbooks that make up my pilot corpus also contain all the texts consisting of a minimum of four clauses. I do not include texts with more than four clauses used in the exercises or assessment activities. When discussing my results in the following paragraphs, I use "Primary 4", "Secondary 1", and "Secondary 4" to describe the textbooks. I chose this way of labeling to maintain consistency with the Hong Kong curriculum documents.

#### *6.2.1.1 Contextual-semantic analysis of three Hong Kong textbooks*

I analyzed 89 texts from three textbooks used in the Hong Kong Education system. Published by Pearson Education between 2009 and 2011 the books were for use in Primary 4A, Secondary 1A, and Secondary 4.

Using a context-based register typology (e.g., Matthiessen, 2014) Table 6.1 and Figure 6.1 show how the texts can be characterized based on the eight social-semiotic processes in the field variable of context (example texts showing each social-semiotic process can be found in Section 5.4.2). For example, there are eight texts operating in the reporting sector in the Primary 4A textbook. The table shows that the majority of the texts in Primary 4 and Secondary 1 fall under the category of sharing personal experiences and values, and constitute 48% and 75% of the total

texts respectively. The Secondary 4 texts are totally different. The sharing texts only constitute 10.71% while the reporting texts form the majority in the Secondary 4 textbook. I will discuss what particular text types are included in the sharing and reporting texts as well as the tenor relations of these texts to determine the possible learning paths through the school years.

Table 6.1 Texts in three Hong Kong textbooks characterized by eight social-semiotic processes

| Text typology | Primary 4A |      | Secondary 1A |      | Secondary 4 |        |
|---------------|------------|------|--------------|------|-------------|--------|
| Reporting     | 8          | 32%  | 2            | 25%  | 25          | 44.64% |
| Recreating    | 0          | 0%   | 0            | 0%   | 2           | 3.57%  |
| Sharing       | 12         | 48%  | 6            | 75%  | 6           | 10.71% |
| Doing         | 5          | 20%  | 0            | 0%   | 0           | 10%    |
| Recommending  | 0          | 0%   | 0            | 0%   | 7           | 12.50% |
| Enabling      | 0          | 0%   | 0            | 0%   | 0           | 0%     |
| Exploring     | 0          | 0%   | 0            | 0%   | 11          | 19.64% |
| Expounding    | 0          | 0%   | 0            | 0%   | 5           | 8.93%  |
| Total         | 25         | 100% | 8            | 100% | 56          | 100%   |

Of the twelve sharing texts in the Primary 4 textbook, ten depict spoken conversations. Most of the conversations are conducted between friends and family members to share information about photos, to introduce them to new friends, to exchange contacts, or share hobbies.

The Secondary 1 textbook includes six written sharing texts. Half of them are webpages introducing new students and teachers in the class. One of them is a diary entry sharing the

experiences of seeing a concert, and the others include a postcard and an e-mail sharing travelling experiences.

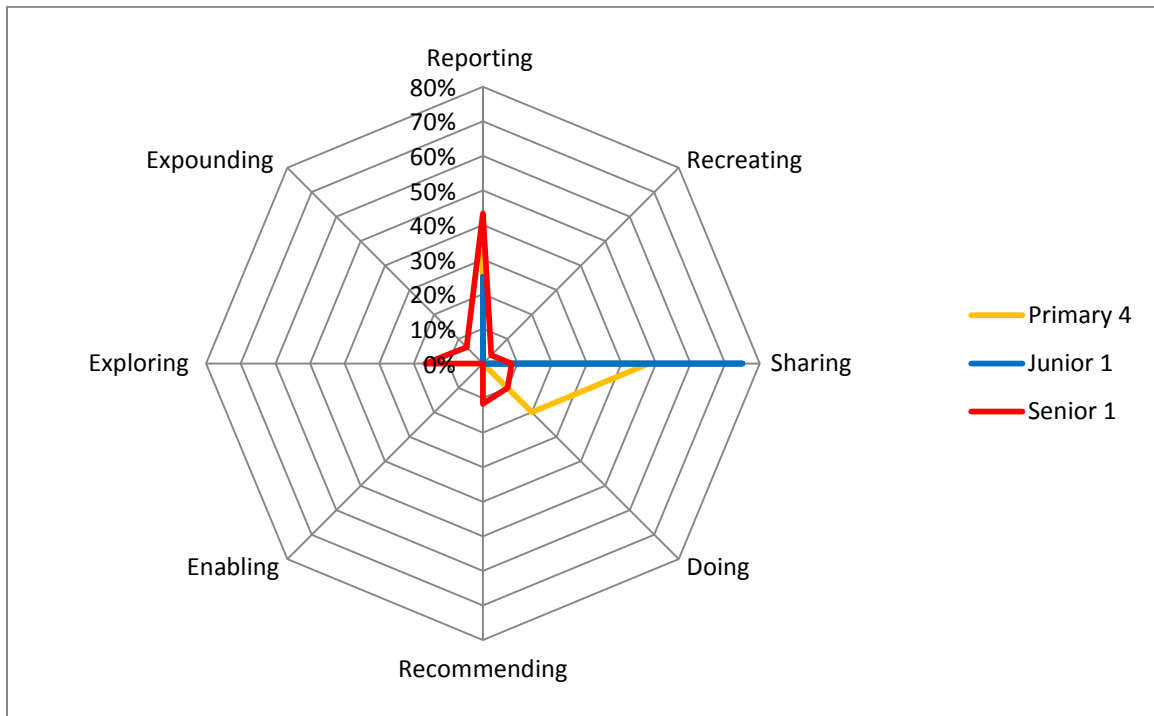


Figure 6.1 Texts in three Hong Kong textbooks characterized by eight social-semiotic processes

(N=89)

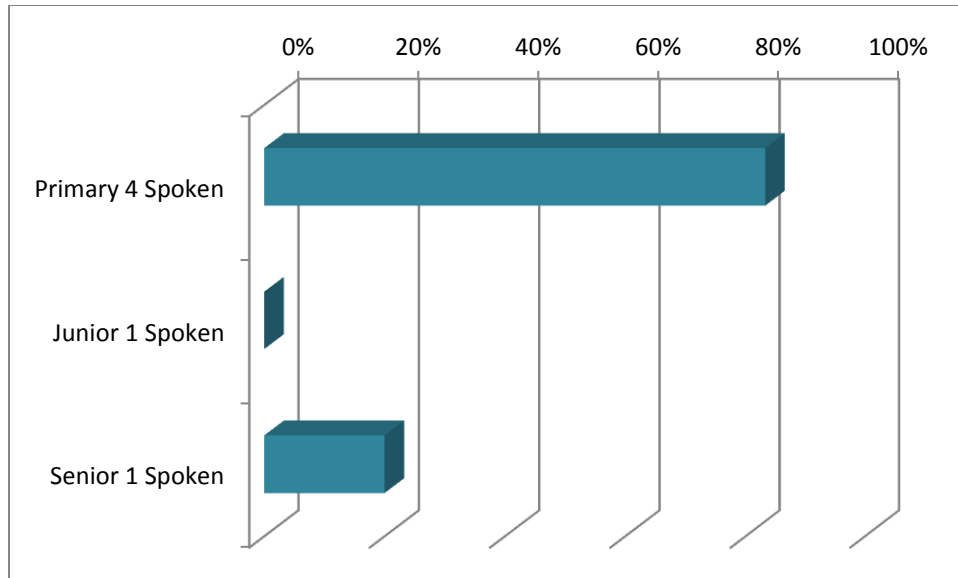


Figure 6.2 Sharing texts featuring spoken discourse in three Hong Kong textbooks (N=24)

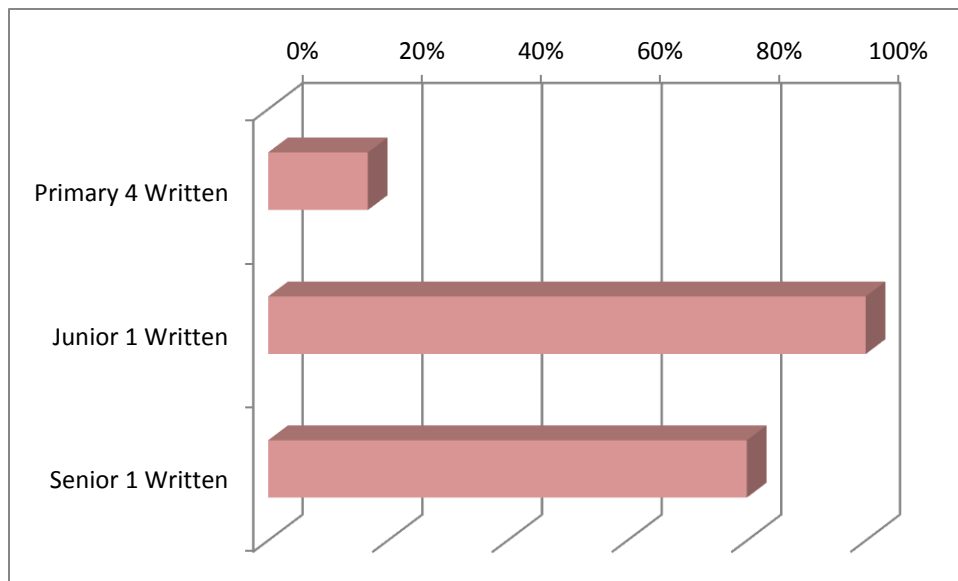


Figure 6.3 Sharing texts featuring written discourse in three Hong Kong textbooks (N=24)

Based on the profiles of the textbooks shown in Figures 6.2 and 6.3, we can reasonably assume that students might experience a challenge moving from predominantly spoken conversation in



Primary school to a focus on written communication in Junior Secondary school such as diaries and letters. This challenge also continues into Senior Secondary school as four out of the six sharing texts in the Secondary 4 textbook are written texts. The tenor relations in the texts in Primary 4 and Secondary 1 are still largely limited to those between family members, friends and classmates. The texts that could be considered exceptions are the webpages introducing new classmates and teachers, which could have members of the general public as readers. Tenor relations in the five texts from the Secondary 4 textbook vary. Two of the texts are personal diaries: one is about travelling experiences and the other about a weekend the writer spent with family. In both situations the tenor relation is between the writer and himself/herself. One of the texts is a personal blog sharing the writer's favourite viral video, which could be considered to be a personal sharing diary or sharing between the writer and the public. The Secondary 4 textbook also includes a TV interview in which young people share their opinions about reality TV shows. In this case the relation would be between the young interviewees and the program viewers. Another sharing text, one which does not have clear tenor relations is an e-mail about a favourite singer that does not specify who it is addressed to. Although the progressive development of tenor relations—from those between family members and friends to those between a writer/speaker and the public—is not obvious, the result demonstrates a progression that students are exposed to texts with more variance in tenor relations in Senior Secondary School textbooks.

More interestingly, we can discern the possible learning path through the years of schooling if we take a close look at the sharing texts in terms of the development from sharing personal experiences in the Primary 4 and Secondary 1 textbooks to sharing personal values and presenting the justifications in the Secondary 4 textbook. Although several texts in the Primary 4

textbook are also used to express the speaker's preferences by presenting his or her hobbies, the purpose of them is more towards facilitating relations between the interactants. But the texts in the Secondary 4 textbooks (a personal blog to share the writer's favourite viral video, an e-mail to share about a favourite singer, and a TV interview for young people to share their opinions about reality TV programs) involve introducing personal preferences and opinions and providing detailed justification. This finding matches with Christie's (2010) results when she investigated the expansion of students' writing abilities across the years of schooling. Christie (2010) found the expansion of the nuance of attitudinal expression in students' writing from simple affect (e.g., "I like . . .") to increasingly nuanced lexical choices across all areas of the lexicogrammar.

Other possible learning paths can be discerned when analyzing the reporting texts found in the three textbooks. Below is a summary of the various text types found in these reporting texts in the Primary 4, Secondary 1 and Secondary 4 textbooks, followed by a discussion of the possible resulting learning paths.

In the Primary 4 textbook, three out of eight reporting texts are written texts recording a conversation and introducing the hobbies of the speaker and his or her friends. They are constructed without specifying the context of the dialogue. We have no idea about the purpose of the texts, who wrote them, and to whom they are addressed. I categorize the written text introducing hobbies as reporting instead of sharing because it is less likely to facilitate relations between speakers and addressees and instead to act as a record and introduction of the speaker's hobbies to his or her friends. The other five reporting texts out of eight are spoken conversations between family members, two of which report events that happened between family members during the speaker's early childhood and three of which report on technological development in Hong Kong 50 years ago. The interesting feature of the latter three reporting spoken texts lies in

the way they report on technological development. Instead of using written passages to introduce technological development, the textbook designer constructed a conversation between a grandson and his grandfather about whether there were digital cameras or mobile phones 50 years ago in Hong Kong. Rather than reporting the situation of the Hong Kong people it is reported that “some people in my class had a camera though.” The subjects reported are restricted and individual. This text can be an example of using concrete individual scenarios to prepare for abstract constructs, such as general concepts about a certain domain of culture.

Two reporting texts are included in the Secondary 1 textbook. Both of them are written texts. One is the biography of a superstar and his family. It is a reporting text as biographies typically chronicle events in a sequence of time. The other one is a magazine article about winter festivals celebrated in Hong Kong. Compared with the reporting texts in primary textbooks, which use individual scenarios to report technology development in Hong Kong, the text in the Junior Secondary textbook begins to generalize the action of a certain group of people in a certain culture. For example, it uses the phrases “Many people in Hong Kong” and “Hong Kong families” to introduce two popular winter festivals (Christmas and Winter Solstice). However, the phenomenon that students are exposed to here is still relevant to their daily life and cultural backgrounds.

In the Secondary 4 textbook, 25 texts, nearly half of the total texts in this textbook, are of reporting texts. These reporting texts vary from biographies to report summaries and historical accounts. The topics of these texts include students’ hobbies that are less popular, problems with depression, the history and culture of Australia, the experiences of an anthropologist and sports stars, and communication in the workplace. This variety of text types in the Secondary 4 could constitute a challenge to students because the text types they are exposed to are less familiar than

what they were exposed before in primary and junior secondary school. Topics are not as closely related to their daily life and cultural backgrounds.

Based on the patterns evident in the data, it is apparent that not only the quantity, but also the variety of text types and the topics of the reporting texts increase from the texts in Primary 4 and Secondary 1 textbooks to the texts in the Secondary 4 textbook. When students enter Senior Secondary school, they are expected to work with this volume of texts.

We can also discern two expected learning paths through the school years by observing the reporting texts in the three successive textbooks: one moves from concrete and individual situations to abstract understandings and observations. For instance, the texts in the Primary School textbooks use individual examples to reflect technological development in Hong Kong while the texts in the Senior Secondary School books are more about the situation of student's depression and effective communication in the workplace. The other learning path moves from exposure to commonsense and domestic knowledge to uncommonsense and educational knowledge construction. Most of the texts in the Primary School textbooks are relevant to students' daily lives but the texts in Senior Secondary School textbooks cover social problems, workplace communication, history and culture.

The expected learning path from concrete phenomena to abstraction echoes Painter's (1996, 1999) findings on children's key development before entering school, which was observed by tracing children's language potentials longitudinally. The other expected learning path is from commonsense and everyday knowledge to uncommon sense or educational knowledge. This is also a major finding of Painter's (1996, 1999) work on pre-literacy development and Christie and Derewianka's (2008) work on school-literacy development. Both research projects address the

relationship between developments in language and the developments that enable students to move to uncommon sense knowledge construction. By mapping out the texts chosen for the school textbooks based on the contexts in which they operate, this doctoral study demonstrates the existence of similar expected development with Christie and Derewianka's study (2008) in the second language learning contexts.

Christie (2010: 153) also found that uncommonsense knowledge construction commences during the period between late childhood and adolescence when children move from the primary to the secondary curriculum. My finding suggests that, in the Hong Kong language learning context, the movement possibly begins in Senior Secondary School. In other words, students face greater challenges in Senior Secondary School when they are exposed to a large amount of varied text types on social problems, workplace communication, history, and culture.

The discussion above is based on a close investigation of the sharing and reporting texts in the three selected textbooks. Now let me present a summary of the major findings on this aspect of the research by summarizing the discussion above and the observation on all the texts in these textbooks.

My results indicate that students may face challenges shifting from exposure to spoken discourse to written discourse as they move to Junior Secondary School. The observation on characterizing the sharing texts by the medium of communication (spoken/written) reveals this result. The results of medium of communication are summarized in Figures 6.2 and 6.3. Instead of being limited to characterizing sharing texts, this result can be tested by characterizing all the texts in terms of medium. Figure 6.4 and Figure 6.5 show the results of the analysis based on whether all the texts are spoken or written. Only 17% of the texts in the Primary 4 textbook are written texts

while 100% of the texts in the Secondary 1 and 91% of the texts in the Secondary 4 textbooks are in the written medium. Teachers may need to equip students to adjust to the shift from exposure to spoken texts at the primary level to exposure to written texts at the secondary level.

The findings from research on the second language learning context appear to be consistent with findings from research on first language learning contexts. When first/second language learners transition from primary to the secondary curriculum students often start to fall behind in learning (Christie, 2010). Several studies on first language learning contexts of the USA, the UK, and Australia identified the similar phenomena. Educators and researchers in the United States refer to it as a “literacy gap” (Strickland & Alvermann, 2004). In the United Kingdom, the National Secondary Strategy was initiated to improve the general performance of students at Key Stage 3 when students are 11 to 14 years old (National Assessment Agency, 2008). In Australia, because of concerns about student development during this transitional phase of schooling, the government provides support to enhance student literacy in the so-called “middle years” (Christie, 2010: 154). As pointed out by Christie (2010: 154), whose research focuses on students’ written output, a better linguistic description of what constitutes mature writing performance may contribute to development of pedagogies to address this problem. Similarly, in this current PhD project, a more comprehensive account of how the different texts to which students are exposed from primary to secondary school will contribute to the development of pedagogy to help students face the challenge in second language learning.

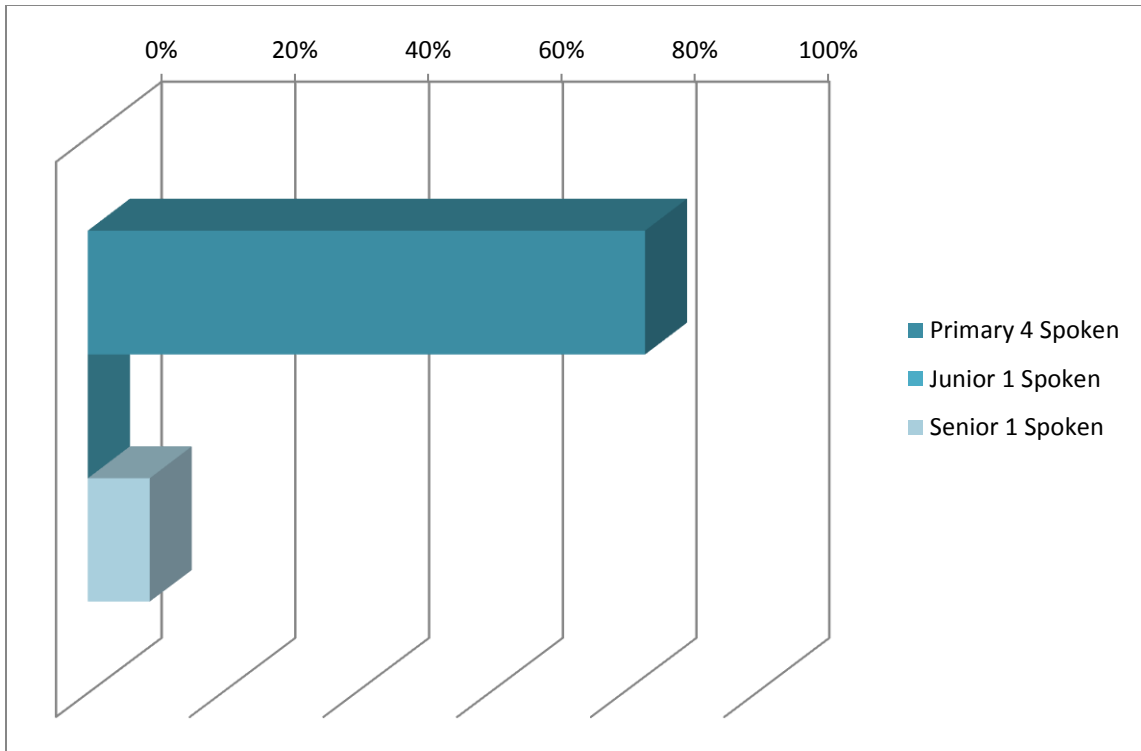


Figure 6.4 Chart summarizing the number of spoken discourse texts in three Hong Kong textbooks (N=89)

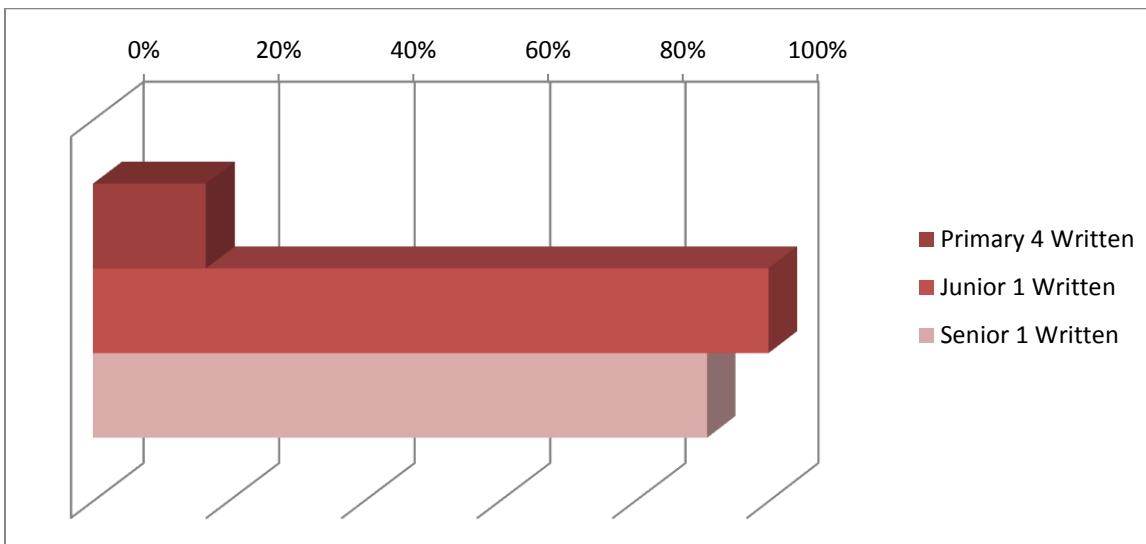


Figure 6.5 Chart summarizing the number of written discourse texts in three Hong Kong textbooks (N=89)

As discussed earlier, students may face pressure to adjust from major exposure to spoken texts to major exposure to written texts in Junior Secondary School. I also found several other difficulties that students may need to overcome when they move from Junior Secondary to Senior Secondary. First, as Table 6.1 and Figure 6.1 show, a greater variety of social-semiotic processes appear in Senior Secondary textbooks. For instance, recommending texts, exploring texts, expounding texts, and recreating texts are all present in the Senior Secondary textbooks. Therefore, students may also face the challenge of being exposed to more varied text types when moving to Senior Secondary School. As I discussed earlier in this section, a comparison of the tenor relations in the sharing texts found in the three textbooks demonstrates that students are exposed to a greater variety of texts in Senior Secondary School. The texts shift from depicting interactions between family members, classmates and friends to interactions between the speaker and blog reader, the interviewees and TV program viewers, and so in. In my observation of sharing texts I also found one possible learning path that starts with the sharing of personal experiences in the Primary 4 and Secondary 1 textbooks and develops into the sharing of personal values and justifying them in the Secondary 4 textbook. Based on my observations of the reporting texts I found two possible learning paths through the school years. One moves from concrete phenomenon to abstraction, the other from commonsense knowledge to uncommonsense or educational knowledge.

#### *6.2.1.2 Contextual-semantic analysis of three Mainland China textbooks*

In this section, I introduce the results of my analysis of 106 texts found in the Primary 4, Secondary 1 (Junior Secondary) and Secondary 4 (Senior Secondary) textbooks used in Mainland China.



The analysis of tenor relations in these texts shows that most of them do not have specific tenor relations either introduced or implied. 42 out of 54 texts in the Primary 4 textbook and more than half of the texts in the Junior 1 textbook did not have specified tenor relations. There was no background information introducing the purpose of the communication, in what situation the speakers and writers undertook their communication, or the relationship between the speakers. For instance, one text described the occupation of an individual's father (People's Education Press, 2003: 81) as follows "Bill's father works in a hospital. He likes his job very much because it is very interesting. He can help people." This example does not specify the writer, the addressee, in what situation the text is written or for what purpose, and appears in a textbook for Primary 4 students. In the case of other texts, the tenor relations between the participants can be inferred from the images besides them. For instance, an image showing several children talking in a classroom setting implies that the relationship between the children is as classmates. Yet, sometimes the images do not provide sufficient information. For example, an image of two children with a window, a plant and a sleeping cat in the background could imply that the children are either friends or siblings. These texts lack context. The same is true of the written texts in the Secondary 4 textbook. For example, text titled "How life began on the earth" is included without informing students that the text is from a scientific article or scientific textbook. As Halliday (1991) points out in his discussion of the notion of context in language education, traditional textbooks provide situational settings, like "in the restaurant," but such material situational settings are not equivalent to contexts of situation (Halliday, 1991: 10). In the textbooks analyzed in this PhD project, texts lack information about the material situational settings, not to mention the context of situation.

Table 6.2 and Figure 6.6 present the results of my analysis of all the texts in the three textbooks used in Mainland China categorized into the eight social-semiotic processes. We can see that a similar variety of social-semiotic processes is evident in these three textbooks, which is different from the change in variety evident in the Hong Kong textbooks as they progress in learning levels. Each Mainland China textbook includes its own exclusive process. The Secondary 4 textbook contains only exploring texts, while the Secondary 1 textbooks only includes recommending texts, and the Primary 4 textbook features enabling texts.

Table 6.2 Texts in three Mainland China textbooks operating in contexts characterized by eight social-semiotic processes

| Text Typology | Primary | Primary | Secondary | Secondary | Secondary | Secondary |
|---------------|---------|---------|-----------|-----------|-----------|-----------|
| Reporting     | 7       | 13%     | 7         | 20%       | 5         | 29%       |
| Recreating    | 6       | 11%     | 1         | 3%        | 6         | 35%       |
| Sharing       | 27      | 50%     | 18        | 51%       | 2         | 12%       |
| Doing         | 6       | 11%     | 4         | 11%       | 0         | 0%        |
| Recommending  | 0       | 0%      | 5         | 14%       | 0         | 0%        |
| Enabling      | 7       | 13%     | 0         | 0%        | 0         | 0%        |
| Exploring     | 0       | 0%      | 0         | 0%        | 2         | 12%       |
| Expounding    | 1       | 2%      | 0         | 0%        | 2         | 12%       |
| Total:        | 54      | 100%    | 35        | 100%      | 17        | 100%      |

When discussing the more tenor-oriented processes in the table and diagram, we can conclude that exploring texts are only available in Senior Secondary textbooks and recommending texts are only used with Junior Secondary students. The Primary4 textbook includes many more sharing texts. In investigating the text types of these texts more closely, I found that they included the sharing of personal preferences and justifying them on topics to do with jobs, animals, rules, and hobbies in both the Primary and Junior Secondary textbooks. The advertisement text type appears in the Junior 1 textbooks in which certain products or services are promoted by presenting their advantages to the addressees. Exploring texts are only included in the Senior 1 textbook. These texts present arguments about whether it is necessary to build a new McDonalds in the community and try to persuade the addressees to accept a proposal to build a new McDonalds. From this we can discern a possible learning path that ranges from expressing personal preferences to friends and family members, promoting products or services for the good of the addressees, to arguing personal perspectives in public.

As we was discussed in the previous chapter earlier (Chapter 4, Section 4.5), the texts of doing are defined as social activities where language and other semiotic systems are brought in to facilitate these activities (Matthiessen, Teruya & Lam, 2010: 179-180). In the ordered typology of systems proposed by Matthiessen (2009) moving from less complex systems to more complex ones, the process of doing is interpreted as a process within a social system. In this process, language and other denotative semiotic systems come in merely to facilitate the process (Matthiessen, 2009: 16). In contrast, the other seven processes operate in contexts that are constituted not only socially but also semiotically so they are the processes within semiotic systems rather than social (Matthiessen, 2009: 16).

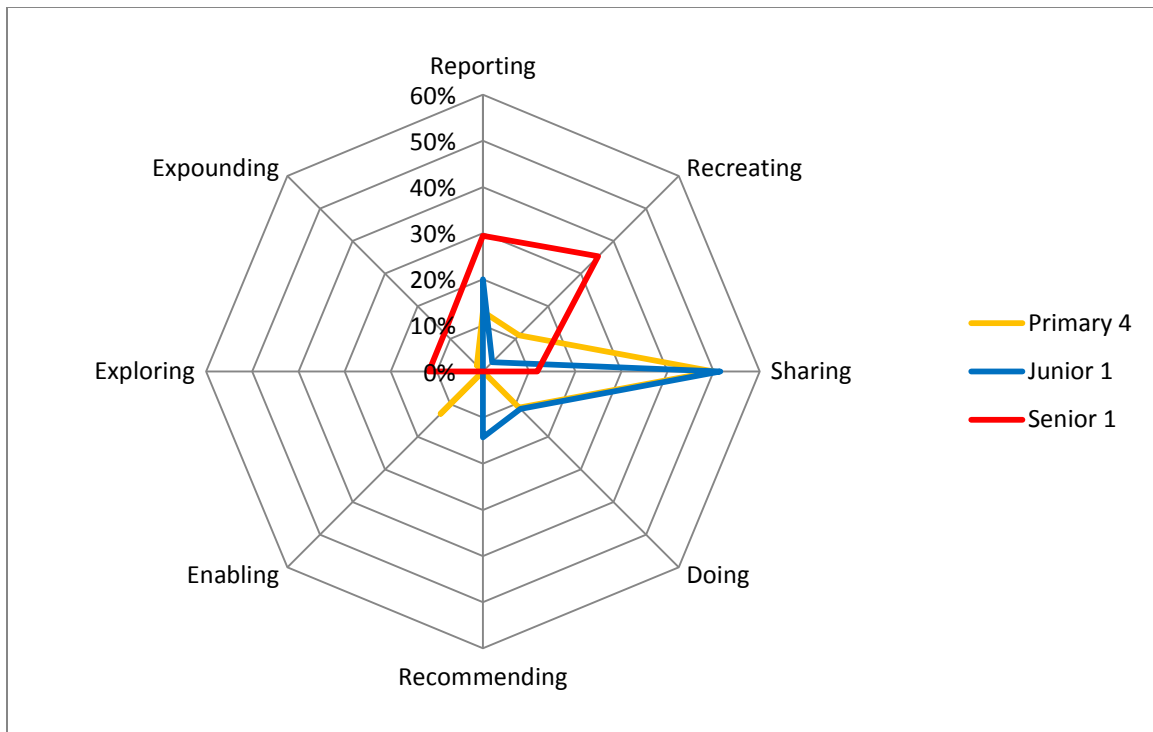


Figure 6.6 Texts in three Mainland China textbooks operating in contexts characterized by eight social-semiotic processes (N=106)

Table 6.2 and Figure 6.6 show that doing texts are not evident in the Senior 1 textbook but a certain amount of doing texts are present in the textbooks for Primary 4 and Junior 1 students. It is possible to discern the learning path for students moving from combined exposure to both social and semiotic processes to purely semiotic processes, which carry or even create meaning rather than only having the feature of value or social order.

Now I move to investigate more closely the sharing and reporting texts in the three textbooks used in Mainland China and compare them to the analysis of Hong Kong textbooks discussed earlier.

Although they were evident in the Hong Kong textbooks, I could not determine the possible learning paths from my analysis of the sharing texts in the sequence of three textbooks used in

Mainland China. In the Hong Kong textbooks, Secondary students had only been exposed to the sharing written texts about travelling experiences, whereas the Primary students in Mainland China were already working with written letters sharing personal travelling experiences in Australia, Russia, USA and Canada. At the Junior Secondary level, students in Mainland China were exposed to a travel diary sharing the experience of a visit to a beach and a museum. At the senior level, they were exposed to the experience of going to the moon by spaceship.

A similarity between Hong Kong textbooks and Mainland China textbooks about the sharing texts is the development from less exposure to written texts in the Primary 4 and Secondary 1 textbook to more exposure to written texts in the Secondary 4 textbook. Figure 6.7 and Figure 6.8 show the percentage of spoken sharing texts and written sharing texts included in Mainland China textbooks. Nearly half of the texts included in the Primary textbook are spoken conversations or short speeches. The same is true with the Junior 1 textbook—more than half of the texts there are spoken conversations or TV shows. But all of the sharing texts in the Senior Secondary textbook are written ones. Although the differences are not as significant as in the Hong Kong textbooks, students may still face the challenge of equipping themselves in this transition.

Other than exploring the sharing texts, I also investigate the reporting texts included in the Mainland China textbooks to discern the possible learning path. The reporting texts in the Primary 4 textbook includes the text reporting the difference between Children's Day in China and in Japan and the texts reporting several people's work experiences. In the Secondary 1 textbook, the reporting text include introductions to certain kinds of animals around the world, a TV show about the lives of Australians and a magazine article introducing a pop star's new look.

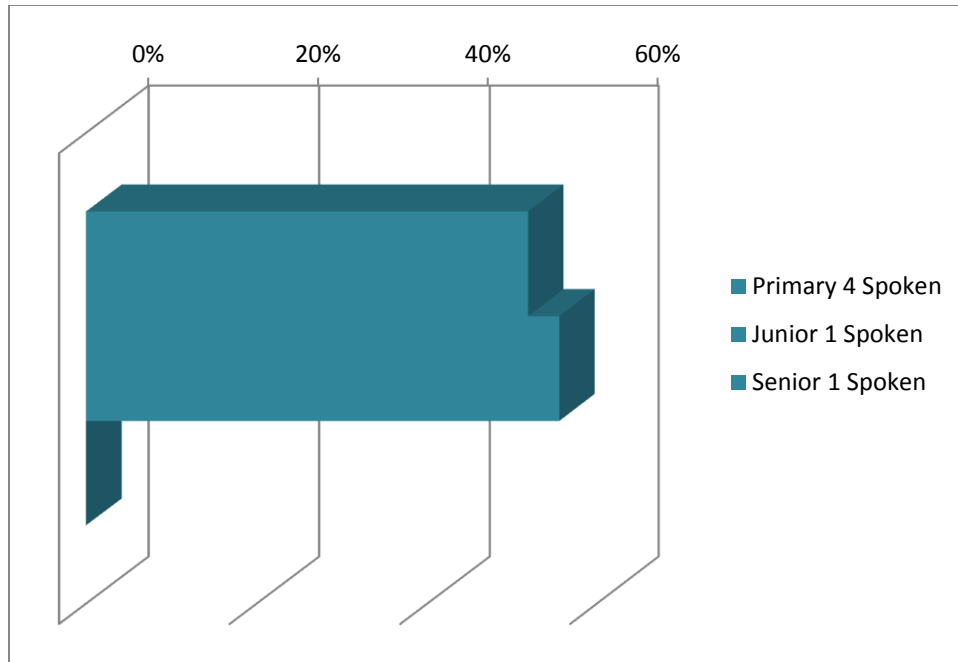


Figure 6.7 Sharing texts featuring spoken discourse in three Mainland China textbooks (N=47)

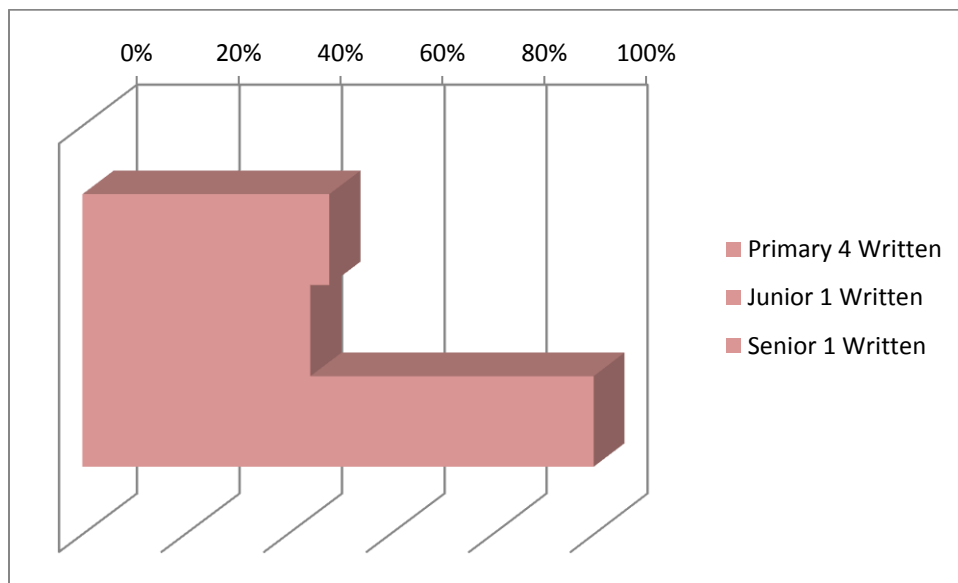


Figure 6.8 Sharing texts featuring written discourse in three Mainland China textbooks (N=47)

Two summaries of what students do during weekends and their perspectives on fashion were also included. The Secondary 4 reporting texts include an introduction to a winter carnival in Quebec,

a biography of Mark Twain and descriptions of experiences such as travel to Canada and a reporter's experience in Nunavut.

As I found with the Hong Kong textbooks, it is possible to discern the learning path through the school grades based on the investigation of Mainland China textbooks. Students are exposed to texts that progress from topics with which students are more familiar (e.g., occupational information and Children's Day) to topics that are less relevant to their daily lives (e.g., Australian life and travel experiences in Canada). In other words, there is a shift from personal experiences to more vicarious experiences. It could be concluded that students' possible learning paths are travel from daily experiences to educational knowledge—information with which most of the students are less familiar. Not only are there fewer reporting texts in the Mainland China textbooks than there are in the Hong Kong textbooks, there is much less variety in the reporting texts. As discussed before, the Hong Kong textbooks let senior secondary students engage with texts containing more abstract concepts. For example, the communication situation in the workplace in the senior textbooks is relatively abstract compared to concrete phenomena such as the travelling experiences represented in the primary and junior secondary textbooks. This progression is not found in the textbooks used in Mainland China. Moreover, texts that Hong Kong students are exposed to are pertinent to social perspectives rather than individual ones. These include texts discussing problems with depression and drug abuse and giving perspectives on environmental protection. Only one text in the Secondary 1 textbook used in Mainland China, however, could possibly have anything to do with a social issue, which in this case was fashion. But even though it related to a social issue, the text is a summary of students' preferences and opinions about different accessories, which is different than reporting the history of fashion or current trends in fashion.

One might expect that the result of the comparison of reporting texts in the Hong Kong and the Mainland China textbooks would be a similar learning path that begins with commonsense knowledge and shifts to uncommonsense or educational knowledge. However, most of the texts in the Mainland China textbooks, even at the senior level are still about concrete phenomena rather than abstractions. Partially because of this, I found that textbooks used in Mainland China afford a smooth transition in terms of the development of reporting texts across the Primary, Junior and Senior Secondary levels. Unlike the Hong Kong Secondary 1 to Secondary 4 textbooks, which quickly shift from daily experience to abstract concepts and social problems, most of the texts in the Secondary 4 textbooks used in Mainland China continue to discuss travel experiences and the experiences of reporters.

In this section I presented the results of my context-based analysis of the texts in the textbooks used in Hong Kong and Mainland China. The results and findings will be further elaborated on with respect to the complementary roles of lexico-grammatical and semantic analysis of these texts in section 6.2.

### **6.2.2 Contextual-semantic analysis of the linguistic texts in 13 textbooks used in Hong Kong**

Based on the results of my pilot study, I extended my analysis to all 13 textbooks used in Hong Kong for students in Primary 4, Primary 5, Primary 6, Secondary 1, Secondary 2, Secondary 3 (Junior Secondary 1 to 3), and Secondary 4 (Senior Secondary) (see Table 5.1). In this section, I will first introduce the results from the context-based register typology analysis (Matthiessen, 2014), which will include example texts to explore the registerial hybridity (which in other words is the indeterminacy among fields of activity) (Matthiessen & Teruya, forthcoming). I will then present the registerial progression of the texts included in the textbooks and discuss how the



progression relates to the findings of previous studies. The second and third section will introduce the results of the analysis using Hasan's contextual configuration and Matthiessen's registerial cartography. Finally the conclusion will discuss how the results of this contextual-semantic analysis relates to the Hong Kong curriculum.

### **6.2.2.1 Field**

The result from analyzing 239 texts is presented in Figure 6.9 and in Table 6.3 and Table 6.4. In this section, I will first introduce the texts from the textbooks based on their different socio-semiotic processes and domains of experience (Matthiessen, 2013; Matthiessen & Teruya, forthcoming). I use a typology of kinds of indeterminacy which I apply to samples found in the textbook corpus to explore registerial hybridity (Halliday & Matthiessen, 1999: 547-562; Matthiessen & Teruya, forthcoming).

Figure 6.9 and Table 6.3 present all the texts operating in contexts characterized by the eight social-semiotic processes found in all 13 Hong Kong textbooks. The results show that the texts operating within the sharing and reporting sectors appear most frequently in all 13 textbooks. In Primary 4 textbooks, the majority of the texts are in the sharing sector and constitute 38% of all 50 texts. Most of these texts represent casual conversations between friends, schoolmates and family members. In the Primary 5 textbooks, the majority of the texts are in the recreating sector and are comprised of short stories and plays. Most of texts in the Primary 6 textbooks are reporting texts and constitute 38.38% of the 36 texts, while the sharing texts constitute 36.11%. In the Primary 6 textbook, students are first exposed to texts in the exploring sector. Two texts operating within the exploring sector in this level are a book review and a movie review. In the Secondary 1 textbooks, the majority of the texts is again texts operating within the sharing sector, and includes personal diaries of excursion experiences and postcards sharing travelling

experiences with friends. Secondary 1 as the beginning of junior secondary and students are first engaged with texts in the expounding sector. The example text for this education level is a general introduction to table tennis. The majority of the Secondary 2 texts operate within the reporting sector, and include reports on survey results or report the biography of a particular film actor. In Secondary 3, the final stage of junior secondary schooling, texts within the reporting sector continue to be the most frequent ones. Similarly, at the senior secondary level, Secondary 4 textbooks include a large number of texts within the reporting sector (including reporting social problems, reporting life stories of stars from different fields and areas, etc.), but also with a certain number of texts from the exploring sector (including book reviews, movie reviews and editorials).

Of all the texts in the 13 textbooks, some texts operate in contexts characterized by a mixture of social-semiotic processes. For instance, it is hard to tell whether one text operates within the sharing sector or the exploring sector. Matthiessen and Teruya (forthcoming) explored this registerial hybridity (indeterminacy among fields of activities) by using a typology of kinds of indeterminacy (the concept of indeterminacy was taken from Halliday & Matthiessen, 1999: 547-562) as follows:

1. ambiguities (“either a or x”): one text can be interpreted as an instance of either of two distinct registers;
2. blends (“both b and y”): one text can be interpreted as a fusion of two different registers;
3. overlaps (“partly c, partly z”): two registers overlap so that certain texts display features of each: they are borderline cases;

4. neutralizations: in certain contexts, the difference between two registers disappears;

5. complementarities: certain texts can be interpreted in contradictory ways in the assignment to registers (Matthiessen & Teruya, forthcoming)

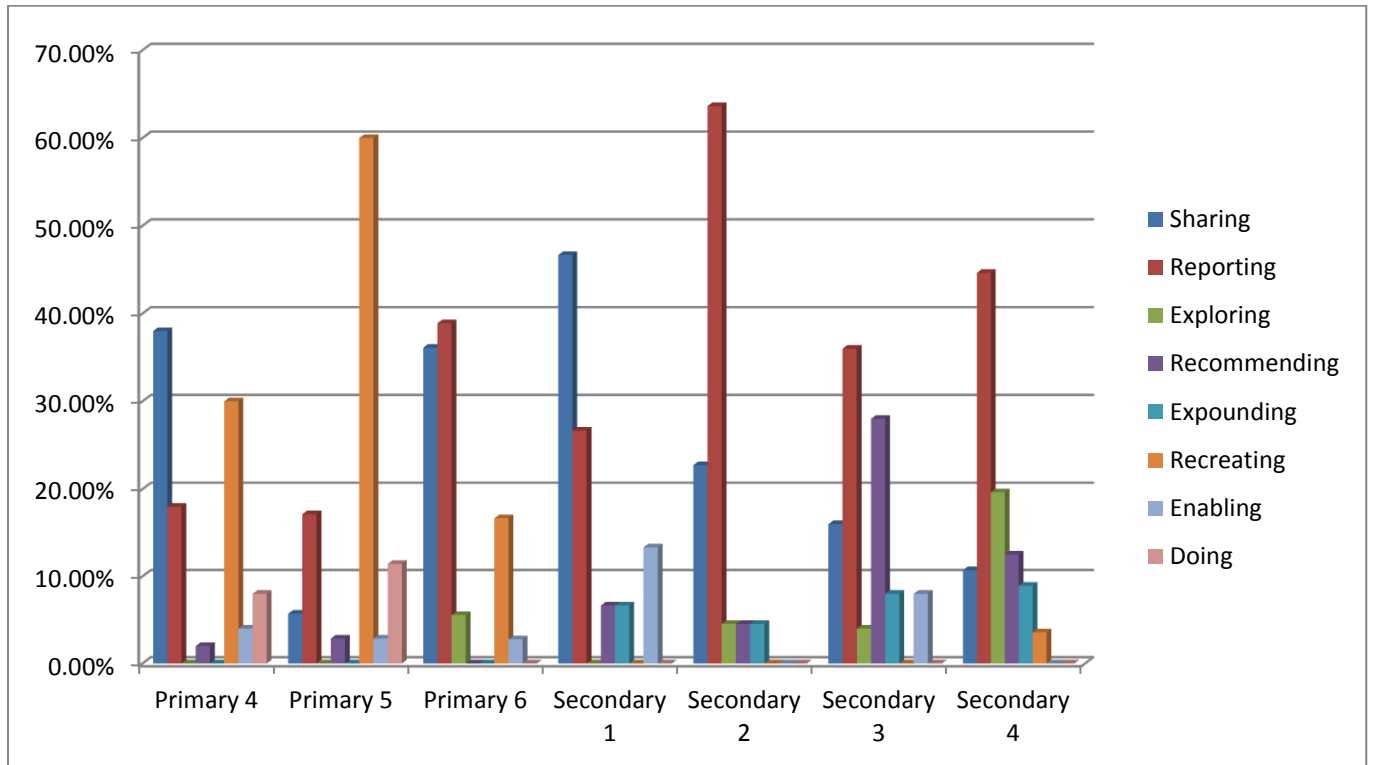


Figure 6.9 The percentage of the eight social-semiotic processes in 239 texts extracted from 13 Hong Kong textbooks

In the process of categorizing the 239 texts from seven Hong Kong textbooks into the eight social-semiotic processes, I found instances of registerial overlaps and neutralization. I will use examples to explore these two aspects. Even though I found some instances of registerial hybridity or indeterminacy, I finally assigned only one social-semiotic process to each of these

instances based on the research objective of this study. I will further explain the reason for assigning a particular socio-semiotic process after presenting these examples.

Let me start with registerial overlaps. In registerial overlaps, two registers intersect so that certain texts display features of each (Matthiessen & Teruya, forthcoming). I will present an example of an editorial from a Secondary 4 textbook (Pearson Education Asia Limited, 2009c: 146) where overlaps occur between texts operating in the “exploring” and “recommending” sectors:

Indoor air quality study is needed urgently

Children and elderly people are, sensibly, advised to avoid outdoor activities on high-pollution days. But is the quality of air inside our buildings much better?

As we report today, a study conducted on behalf of the *Sunday Morning Post* has found that classrooms in three out of four schools monitored have high levels of respirable suspended particulates. This is the type of pollution most harmful to children. Even more worrying is the finding that, at three of the schools, indoor and outdoor pollution levels were almost exactly the same.

As the University of Hong Kong public health expert Anthony Hedley has said, there is no difference in terms of the risk to health between exercising indoors in a high-pollution environment and exercising outdoors. The danger is that schools may not be aware of the health risks in doors.

Clearly, the government needs to reform the existing pollution monitoring system. What's more, the government needs to apply the strict standards set by the World Health Organisation.

A government study of the issue is also needed so that schools—and the public—can be alerted to the potential dangers and be given advice on how to deal with them. In the meantime, improving the use of air conditioning and air filters in schools could be done relatively quickly. The protection of children's health is a top priority. Action should not be delayed.

This editorial starts with exploring whether the indoor quality is better than the outdoor by referring to a study conducted on behalf of the *Sunday Morning Post* and by quoting a public health expert. In the next part of the editorial, the writer also strongly recommends actions that should be undertaken by the government. I categorized this text as operating within the exploring sector because it reviews the issue of indoor air quality by reviewing the facts to do with current air quality and by arguing from the perspective of people and institutions (see definition of “exploring sector” in Chapter 5, section 5.4.3). A more typical example of a text within the recommending sector would provide advice directly and explicitly (e.g., such as instructing the reader to install a filter to improve air quality).

Unlike overlaps, registerial neutralizations are based on the disappearance of differences between two fields of activity that may happen because of the nature of the tenor or the mode of the context (Matthiessen & Teruya, forthcoming). I will use one example of a personal blog (Pearson

Education Asia Limited, 2009c: 146) to explore this registerial neutralization, which blurs the distinction between texts operating in the “sharing” and “exploring” sector.

My favourite viral videos

Viral videos are those silly video clips that your friends send to you by email. Usually when I get them, I delete them without even watching them—I just don't have time to watch another video of a cute kitten. However, I admit there are a few viral videos that have given me a lot of enjoyment. Here are two of my favourites.

The Lion Sleeps Tonight is one of the oldest viral videos out there. It was made around 2001, and now nearly everyone with a computer has seen it. It features an animated hippo and dog singing the old song The Lion Sleeps Tonight. I did some research and found out they're popular cartoon characters in France. Anyway, I like it because of the hippo's sensitive singing and the way the dog annoys him with his dancing. It's hilarious!

I'm not a huge fan of rock music but Canon Rock is really cool. It's an arrangement of Pachelbel's Canon in D major for an electric guitar by a Taiwanese musician, Jerry Chang.

Traditionally, the texts located in the sharing sector are used to share personal experiences and values in face-to-face conversations, while the texts in the exploring sector typically explore public values and positions (Matthiessen & Teruya, forthcoming). Because of new technologies, some channels (e.g., the Internet) make sharing completely possible in public. According to

Matthiessen and Teruya (forthcoming), there is a tendency to blur the distinction between private and public sphere.

In this study, the research objective is to trace the progressive development of texts in the textbooks. For learners, the distinction between texts located within the exploring sector and texts within the sharing sector is significant. Students will not be expected to explore their public values and positions until they are exposed to exploring texts. Because of this significance, I would categorize all the texts aiming to share the writers' preferences rather than offering a comment on particular public topics or reviewing particular movies and books as belonging to the sharing sectors. In the above example the writer shares his or her preference for viral videos, therefore this text would be located within the sharing sector for the purposes of this study.

Table 6.3 Texts extracted from 13 Hong Kong textbooks characterized by eight social-semiotic processes (N=239)

|              | Primary 4 |             | Primary 5 |             | Primary 6 |             | Secondary 1 |            | Secondary 2 |             | Secondary 3 |             | Secondary 4 |             |
|--------------|-----------|-------------|-----------|-------------|-----------|-------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
|              | as total  | as % of all | as total  | as % of all | as total  | as % of all | as total    | as % of    | as total    | as % of all | as total    | as % of all | as total    | as % of all |
|              | number    | images      | number    | images      | number    | images      | number      | all images | number      | images      | number      | images      | number      | images      |
| Sharing      | 19        | 38.00%      | 2         | 5.71%       | 13        | 36.11%      | 7           | 46.67%     | 5           | 22.73%      | 4           | 16.00%      | 6           | 10.71%      |
| Reporting    | 9         | 18.00%      | 6         | 17.14%      | 14        | 38.89%      | 4           | 26.67%     | 14          | 63.64%      | 9           | 36.00%      | 25          | 44.64%      |
| Exploring    | 0         | 0.00%       | 0         | 0.00%       | 2         | 5.56%       | 0           | 0.00%      | 1           | 4.55%       | 1           | 4.00%       | 11          | 19.64%      |
| Recommending | 1         | 2.00%       | 1         | 2.86%       | 0         | 0.00%       | 1           | 6.67%      | 1           | 4.55%       | 7           | 28.00%      | 7           | 12.50%      |
| Expounding   | 0         | 0.00%       | 0         | 0.00%       | 0         | 0.00%       | 1           | 6.67%      | 1           | 4.55%       | 2           | 8.00%       | 5           | 8.93%       |
| Recreating   | 15        | 30.00%      | 21        | 60.00%      | 6         | 16.67%      | 0           | 0.00%      | 0           | 0.00%       | 0           | 0.00%       | 2           | 3.57%       |



The results presented above (Figure 6.9, Table 6.3) show that only Primary 4 and Primary 5 textbooks include texts within the doing sector. These texts include service encounters in restaurants and lost and found notices. However, at the secondary levels, doing texts not are found in the textbooks. Furthermore, texts operating within the sharing sector appear most frequently in all the texts in all the primary levels (Primary 4 through 6). Moreover, all the primary (Primary 4 to 6) textbooks include a certain number of recreating texts. But at the secondary levels (Secondary 1 to 4), only 2% of the texts are recreating texts and they appear in the Secondary 4 textbook. The statistics show that students in the upper primary levels are exposed to texts within doing, recreating and sharing sectors.

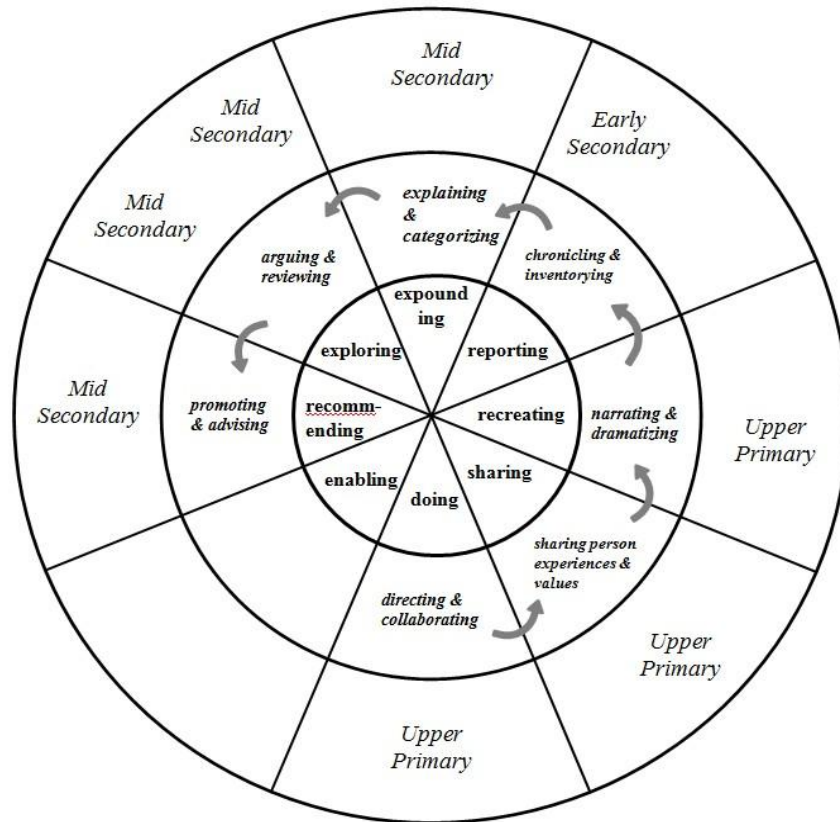


Figure 6.10 Progression of registers in the subject of English from upper Primary to mid Secondary (based on a sample analysis of textbooks used in Hong Kong)

Starting with a secondary level, texts within the reporting sector continue to be in the majority at the secondary levels (Secondary 1 to 4). Texts within the expounding, exploring and recommending sectors appear in higher proportion to the total number of texts in senior secondary (Secondary 4). Only one text within the expounding sector appears in the Secondary 1 textbooks, but 8% of the Secondary 3 texts and 8.93% of the Secondary 4 texts are within the expounding sector. Texts classifiable as exploring and recommending follow a similar pattern. There was only one exploring text in each Secondary 2 and Secondary 3 textbooks, whereas the Secondary 4 textbooks contained 19.64%. One recommending text was found in each Secondary 1 and Secondary 2 textbooks, but 28% of the texts in the Secondary 3 and 12.5% of the texts in the Secondary 4 textbooks operate within the recommending sector.

The data from this analysis can be represented helically (see Figure 6.10) to show students' learning paths in terms of register. The learning path travels from doing, sharing and recreating in the upper primary level, then transitions gradually to reporting in junior secondary, followed by another gradual transition to expounding, exploring and recommending at the senior secondary level. This pattern of progression recalls Halliday's (1996) helical progression of literacy development. What I would stress here is that this is not to be taken as a linear sequence of learning steps, but as a helical progression as set out in Figure 6.11. Although students may be exposed to sharing texts at an earlier level of schooling or to expounding and recommending texts at a later stage of their education, most of the socio-semiotic processes (sharing, reporting, expounding) recur at the higher level of education. Therefore, it becomes pivotal to establish the nature of the socio-semiotic activities in students' earlier years of schooling because these processes will be revisited at later stages. However, instances of texts within the expounding

sector are not found in the primary level textbooks, which may challenge students learning these texts at the very beginning of junior secondary.

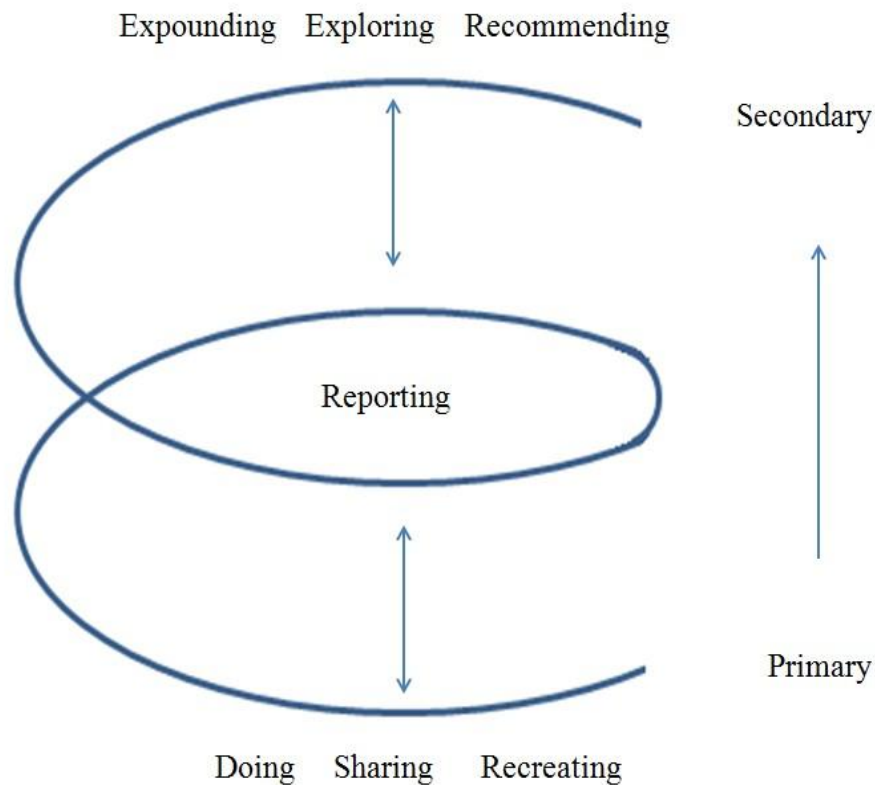


Figure 6.11 Helical progression of register in the subject of English from upper Primary to mid Secondary (based on a sample analysis of textbooks used in Hong Kong)

Just as this study has identified the progression of registers in the subject of English in second/foreign language learning contexts, other studies have proposed progressions in other subjects than English in first language learning contexts. Based on a study conducted by Christie and Derewianka (2008), Matthiessen identified the progression of registers in the subject of history (Matthiessen, 2009: 221-222, see Figure 6.12). He observed that “in history, learners in

primary school start with the transition from stories in the ‘re-creating’ sector to recounts in the ‘reporting’ sector” (Matthiessen, 2009: 221). In primary school, learners are concerned with sequence in time and write stories. When they move to early secondary school, learners begin to write historical accounts. Therefore, learners “have to go beyond temporal sequences to master causal ones as well” (Matthiessen, 2009: 221). By the middle of secondary school, learners move into expounding sector, learning explanations (factorial and consequential ones), which explain “history instead of only chronicling it” (Matthiessen, 2009: 221-222). In late secondary school, expositions and discussions which operate in the exploring sector are added to learners’ registerial repertoire, which involve “internal cause (reasons why one should believe a statement about what happened) rather than simply external cause (reasons why something happened)” (Matthiessen, 2009: 222).

In the subject of science, based on a study by Christie (2012), a student’s learning path in terms of registerial progression is identified as moving from “dialogic reporting” (classroom talk to share learning) in early primary school, to “monologic reporting” (unfolding recounts) in late primary school, to “expounding” (explaining factorial and consequential events) in the middle of secondary school, and then to “exploring” (reporting with the author’s judgment and evaluation) in late secondary school (Guo, 2014).

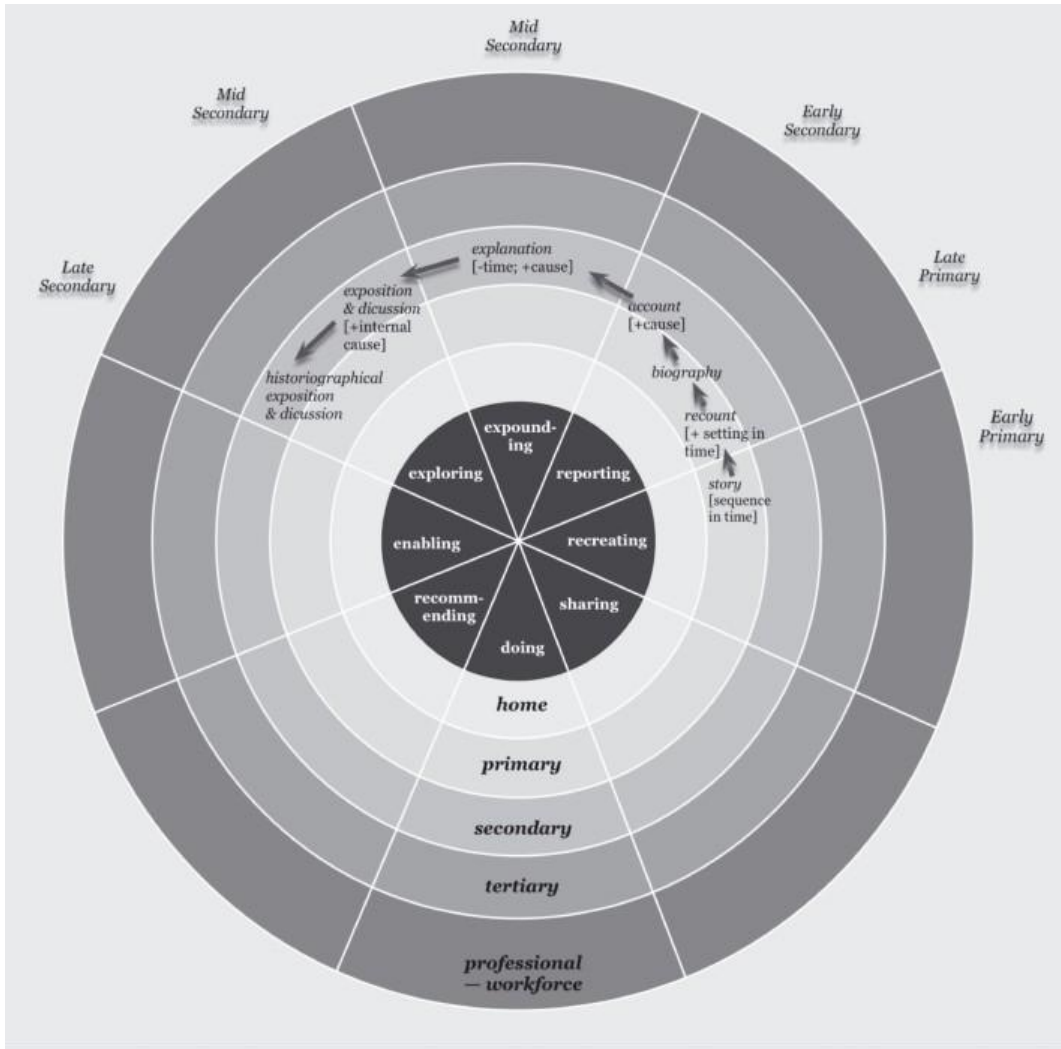


Figure 6.12 Progression of register in the subject of history from early primary school to later secondary school

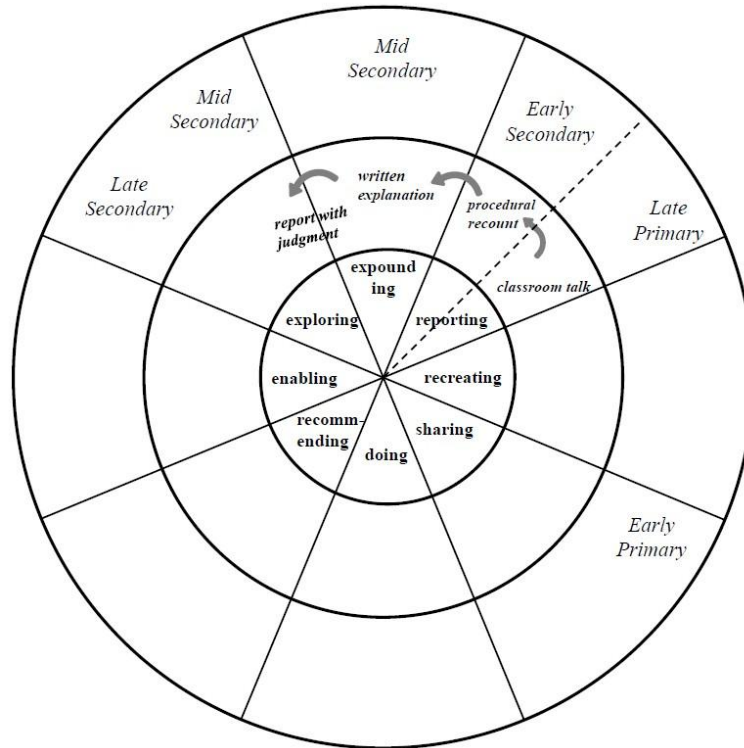


Figure 6.13 Progression of register in the subject of science from early primary school to late secondary school, based on the registerial cartography by Matthiessen (2009) and the ontogenetic study of students' writing development by Christie (2012)

It could be argued that, in these three subjects (English, History and Science), the progression of register starts with sharing and/or recreating, and then moves to reporting, expounding and to exploring, even though “different subjects have different centres of registerial gravity” (Matthiessen, 2009: 222).

A comparison of the results in this section with the pilot study reveals that students face a greater learning challenge in Senior Secondary School (starting at Secondary 4). Texts within the expounding, exploring and recommending sectors constitute a larger percentage of the texts in senior secondary. An examination of the sharing and reporting texts in both studies shows two

possible learning paths. One learning path is development from sharing personal experiences in the primary and junior secondary levels to sharing personal values and justifying them at the senior secondary levels. The other one is from reporting concrete phenomenon and commonsense knowledge in primary and junior secondary levels, to reporting abstraction and uncommonsense or educational knowledge in senior secondary levels.

However, it is not true that texts operating in the exploring sector appear for the first time in senior secondary. They also appear in the Primary 6, Secondary 1, and Secondary 2 textbooks. This finding demonstrates the need to research the textbooks for each grade across the years of schooling rather than choosing samples based on the same intervals.

In the following two sections, I will present my analysis of textbooks using Hasan's (1985) contextual configuration and Matthiessen's (2014) registerial cartography.

#### ***6.2.2.2 Tenor***

I use Hasan's (1985) contextual configuration and Matthiessen's (2013) registerial cartography (see details in Chapter 4, Section 4.2 and Section 4.5) to study two different variables of tenor: institutional roles and social distances. My analysis of 239 texts showed that the institutional roles of these texts changed from institutional roles associated with familiar people like classmates, schoolmates, family members and friends in the primary and early junior secondary textbooks, to institutional roles involving unfamiliar people as students are positioned as general public of journals or articles in later junior secondary and senior secondary education. Social distances also progressed from minimal to maximal distance. I will use two examples to illustrate this progression. The following example is a conversation between family members (Pearson Education Asia Limited, 2010a: 50).

Mum: This is your first birthday, Emma.

Emma: Wow! I could eat with a spoon by myself when I was one!

Eddy: Look at this picture — you still needed some practice!

Mum: Look at your new school uniform,

Eddy: You look smart!

Emma: Look at this one! We could pack our school bags by ourselves.

Mum: Eddy couldn't do it by himself. We all helped him.

Mum: Millie helped too. She climbed the stairs by herself to get a teddy. Then she put it in Eddy's bag.

Eddy: I remember! Everyone laughed at school!

Emma: Mum, when could I comb my hair by myself?

Mum: You could comb your hair by yourself when you were five. Why?

Emma: You were a teenager here but you couldn't comb your hair!

Eddy: Ha ha! They couldn't get dressed properly when they were teenagers. Look at Mum's socks!

Mum: They aren't socks. They're leg warmers. That was fashionable then! This photo isn't for school!

Eddy: Please Mum! My classmates will love it!



In this context, Eddy and Emma are selecting family photos to show their schoolmates and teachers as they talk about the photos with their mother. The three interactants in this text are Eddy, Emma and their mother.. Eddy and Emma are siblings. Their relationship with their mother is children to parent. We can say that the agent roles shown in this text are of family members. Since their relationships are either between siblings or between children and parent, the social distance of this text is minimal. A number of the texts in the primary and junior secondary schools textbooks represent similar institutional roles with minimal social distance. Their agent roles are usually between family members, schoolmates, classmates and friends. However, between late junior secondary and senior secondary school, a number of journal, magazine, and webpage articles are gradually included in the textbooks. Here is an example of a webpage article (Pearson Education Asia Limited, 2009b: 64-65).

#### Wild children

Every now and again, children are found living in the wild. Often these “wild children” are looked after by animals. Why do animals sometimes look after human children? Is it right that these children are then taken from the wild? The topic is a fascinating one and may help us to answer some important questions about what it means to be human.

#### John Ssabunnya’s story

In 1991, a woman in Uganda saw a naked boy living with a troop of wild monkeys. The woman was shocked and quickly told the people in her village about the boy.

When the people of the village tried to take the boy away from the monkeys, he hurled

sticks at them and climbed up a tree. The monkeys fought fiercely to prevent the people from taking the boy away. However, the animals were not successful.

After the rescue, the frightened boy was taken to an orphanage. There he was identified as John Ssabunnya, who had disappeared three years earlier after his mother was murdered and his father went missing. John was only two at the time.

At the orphanage, it was obvious that John could not speak. However, after living there for several months, he slowly began to talk. The workers at the orphanage found out later that he had a beautiful singing voice.

In 2000, when John was fourteen, he toured the UK with a children's choir. Lots of people were interested in his story. "His is a truly remarkable story. It could be made into a film one day," said tour organiser Hillary Cook.

This article is included in a webpage about children who were looked after by animals. The institutional roles in this text would be article readers and writers. Social distances in this text are maximal. A number of webpage, journal, and magazine articles are extracted from the textbooks for late junior secondary and senior secondary schooling. These texts could operate in different socio-semiotic processes, such as reporting or exploring. But their institutional roles and social distances can be very similar. This observation reveals that the progression of tenor in the subject of English moves from between family members, classmates, schoolmates and friends to between article readers and writers, and from minimal social distance to maximal social distance

(see Figure 6.14). In other words, there is a move from personal experiences in primary schooling to more vicarious experiences in secondary schooling. Students learning to take on these institutional roles in the later years of schooling afford them access to the relevant aspects of the meaning potential, equipping them linguistically to communicate in certain contexts.

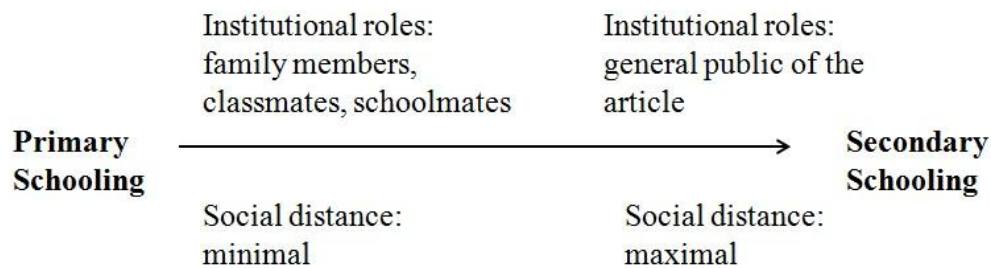
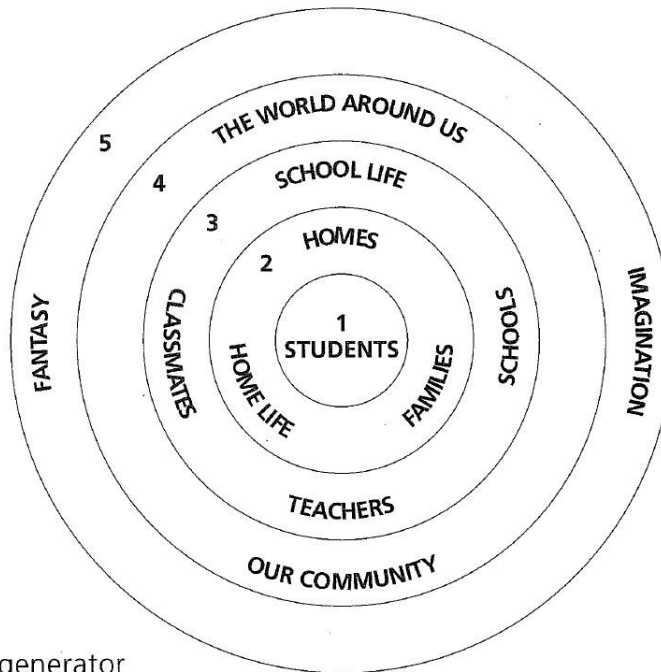


Figure 6.14 Progression of tenor variables in the subject of English from upper Primary to mid Secondary (based on a sample analysis of textbooks used in Hong Kong)

These findings mirror those observed by Matthiessen and depicted in Figure 4.12 (Matthiessen, 2013: 51). Just as Matthiessen’s diagram predicts, the texts in these 239 textbooks also show an expansion of the range of institutional roles from family roles, to neighbourhood roles, education roles and to workplace roles. Estaire and Zanón (1994: 21) proposed a “theme generator,” and recommended that thematic areas in Task-based Approach throughout the curriculum be organized according to whether they are close or remote to the learner. Their “theme generator” is presented in Figure 6.15. As depicted in Figure 6.15, circle 1 starts with students themselves, next circle 2 focuses on home life. Later students will be engaged with circle 4 “the world around us” and circle 5 “imagination.” The results of this doctoral project also echo this theme generator and unpack the tenor variables, which realize the expansion of institutions during schooling.



The theme generator

Figure 6.15 The theme generator

### 6.2.2.3 Mode

In this section, I will investigate whether all the texts included in this project use the spoken medium or the written medium, whether they are dialogues or monologues, and I will offer an analysis of their lexicogrammar in section, 6.3. The analysis results are presented in Figure 6.16 and Figure 6.17. These results echo what I found in the pilot study: we can reasonably assume that students might experience a challenge moving from spoken conversation in Primary school to written texts (i.e. diaries and letters) in Junior Secondary school. This challenge also continues into Senior Secondary school.

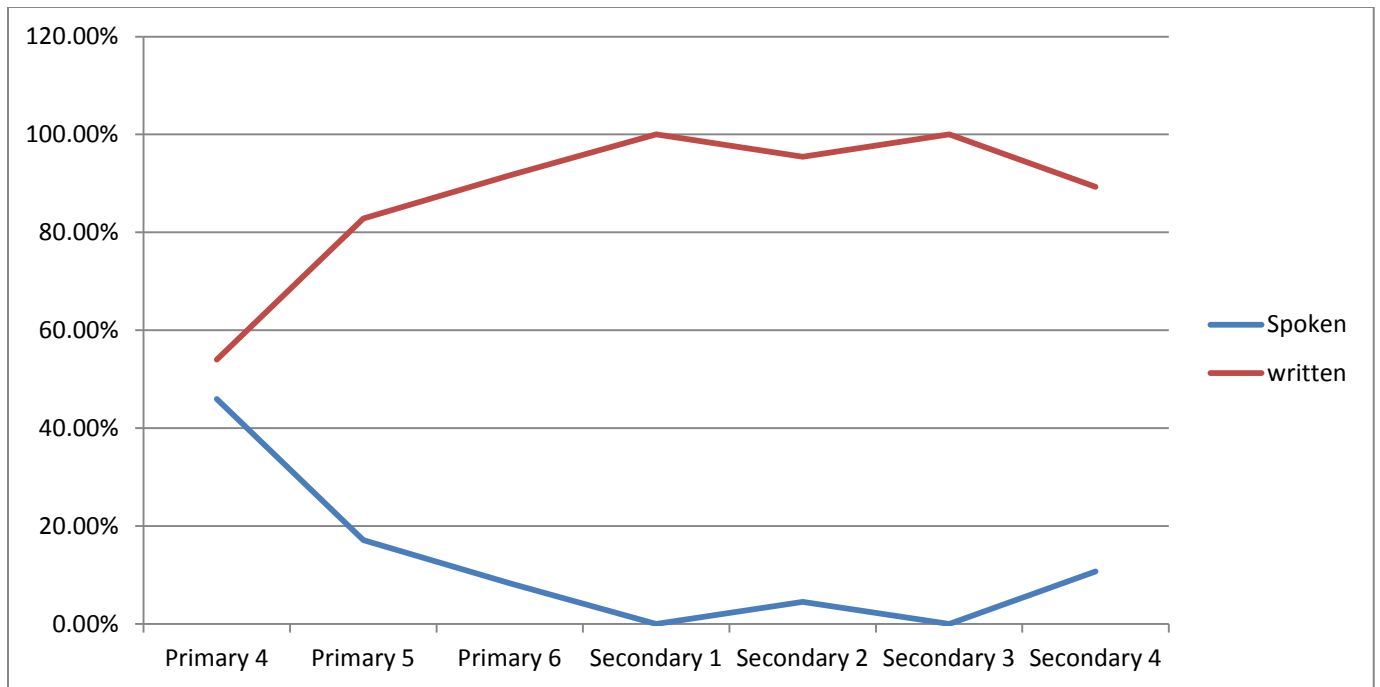


Figure 6.16 Progression of spoken and written texts in the subject of English taken from a sample of upper Primary to mid Secondary textbooks used in Hong Kong.

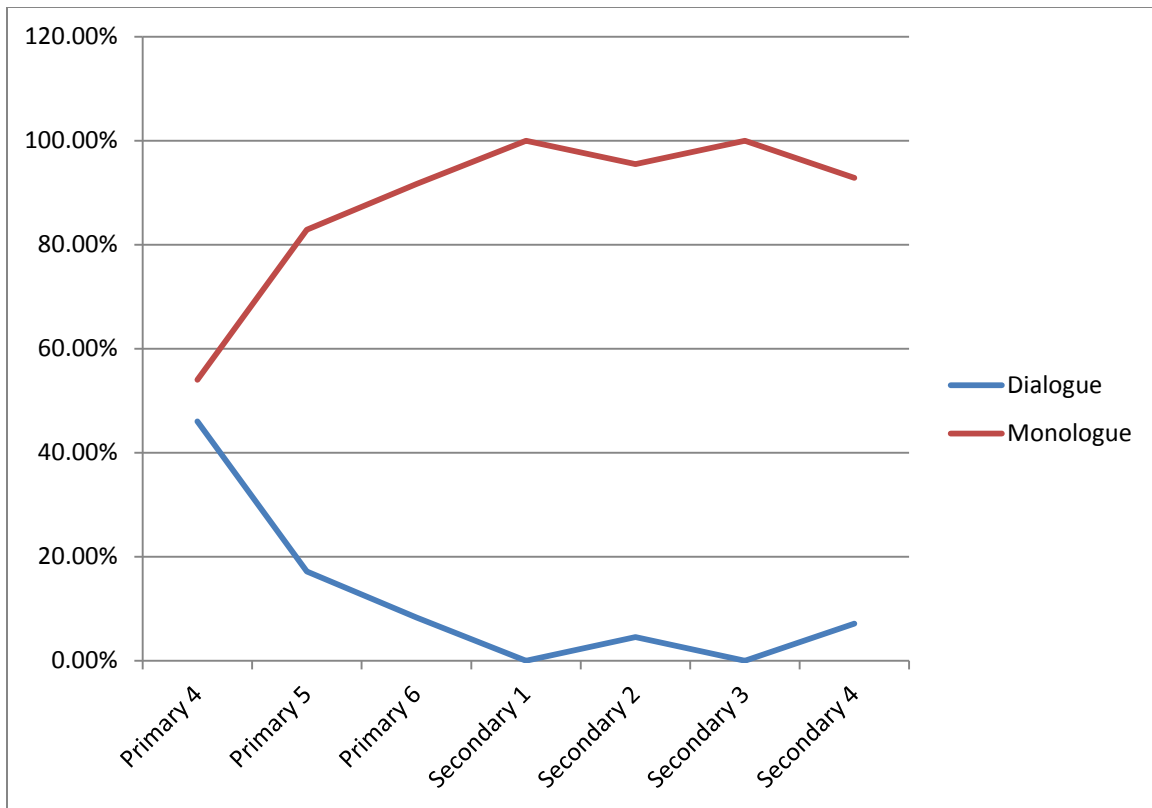


Figure 6.17 Progression of dialogue and monologue in the subject of English from upper Primary to mid Secondary (based on a sample analysis of textbooks used in Hong Kong)

### 6.2.3 Conclusion

In this section, through a sample analysis of textbooks used in Hong Kong, I showed how textbooks are designed to enable students to learn how to make meaning by “adding” new registers, allowing them to engage in new activities (field) in new institutional roles (tenor) with new mediums (mode). I identified the progression of socio-semiotic processes: the texts move from the doing, sharing, and recreating sectors at the primary levels, to the reporting sector at the junior secondary levels, and then to the expounding, exploring and recommending sectors at the senior secondary levels. The progression of tenor moves from institutional roles associated with familiar people such as between family members, classmates, schoolmates and friends, to institutional roles involving unfamiliar people whereby the students are positioned as members

of the general public that read news articles written by professional journalists. The overall progression is from minimal social distance to maximal social distance. The progression of mode is from spoken and dialogue texts at the primary levels, to written and monologue texts at the junior and senior secondary levels. Now I will correlate the results of my textbook analysis to what is stated in the official Hong Kong curriculum (Curriculum Development Council, 2002).

The *English Language Education Key Learning Area Curriculum Guide (P1-S3)* (Curriculum Development Council, 2002) emphasizes the importance of a smooth transition between Kindergarten and Primary school, and between Primary and Secondary School. The document lists the learning targets for each grade (Curriculum Development Council, 2002: 29-37). I identified several learning paths from my examination of the learning targets from Primary 4 to Secondary 4—the same grade levels as the textbooks chosen for this study.

Evidence of the first learning path is found in the Primary 4 to 6 curriculum goal, which is “to provide or find out, organize and present information on familiar topics;” the Secondary 1 to 3 goal, which is “to provide or find out, select, organize and present information on familiar and less familiar topics;” and the Secondary 4 goal which is “to provide or find out, select, analyze, organize and present information on familiar and unfamiliar topics” (Curriculum Development Council, 2002: 31-34).

This targeted learning path, which moves from “familiar topics” in the primary levels, to “familiar and less familiar topics” in the junior secondary levels, and then to “familiar and unfamiliar topics” in the senior secondary levels, corresponds to the possible learning path found in this study: exposure to commonsense knowledge at the primary levels followed by exposure to uncommonsense or educational knowledge at the secondary levels. This study definitely helps to

unpack and enrich the meanings of “familiar” and “unfamiliar” from the three contextual perspectives of field, tenor and mode.

The curriculum also provides evidence for the second learning path, which is that students should be able “to converse about feelings, interests, preferences, ideas, experiences and plans” in Primary 4 to 6; students should know how to “converse and exchange points of view about feelings, interests, preferences, ideas, experiences and plans” in Secondary 1 to 3; and, students should be able to “converse, compare, argue and justify points of view about feelings, interests, preferences, ideas, experiences and plans” in Secondary 4 (Curriculum Development Council, 2002: 31-34).

The targeted learning path defined in the curriculum corresponds to the learning path identified in this current study. It progresses from sharing personal experiences at the primary and junior secondary levels to sharing personal values and presenting justifications at the senior secondary levels. However, another possible learning path found in this study (exposure of concrete phenomenon to abstraction) is not found in the curriculum. Possibly, what the curriculum emphasizes as “more complex” learning targets in Secondary 4 could correspond to the learning path which states that students are able to “organize and carry out more complex and extended events,” “produce or exchange a range of more complex messages both oral and written,” and to “identify and define more complex problems from given information.” But what “more complex” exactly means is not defined in this document.

In the next section, I explore the lexicogrammatical features of all the texts included in the project and try to delineate the development of grammatical complexity using the data. The



findings articulated in the next section will help to elucidate and unpack the meaning of “more complex” as noted in the curriculum.

There are also two interesting observations about the Hong Kong curricula requirements. Firstly, this study found fewer texts operating within the recreating sector in the junior and senior secondary levels. In other words, students are exposed to fewer imaginative texts in the secondary levels. However, the curriculum emphasized that students needed to be able to “give expression to imaginative ideas through oral, written and performative means” at the Secondary 1 to 3 and Secondary 4 levels (Curriculum Development Council, 2002: 33-34). There is a need for closer alignment between the curriculum and the textbooks. Secondly, the texts located within the expounding sector are first found at the junior secondary levels. In other words, students are not exposed to any texts within the expounding sector, which involves explaining why general classes of events take place or categorizing general classes of entities. But, the learning targets for Primary 4 to 6 state that students must be able “to interpret and use given information through processes or activities such as . . . classifying, comparing, explaining [and] . . . drawing conclusions” (Curriculum Development Council, 2004: 68). It is recommended that texts within the expounding sector be provided at the primary levels.

### **6.3 Lexicogrammatical analysis of the linguistic texts in textbooks used in HK**

In this section, we move from the strata of context and semantics to the stratum of lexicogrammar. The aim of this section is to explore the ontogenesis of lexicogrammar, particularly grammatical complexity, in the series of textbooks used during all the years of schooling. As the relations among the strata are realization (Halliday & Matthiessen, 2004: 26),

after exploring the strata of context and semantics in the previous section, this section aims to investigate how the development of grammatical complexity realizes the development of context and semantics.

When Halliday (1987: 327-335) compared different characteristics of spoken and written languages, he proposed two types of complexity “lexical density” and “grammatical intricacy”, the latter of which is referred to as “the patterns of the organization of the clause complex.” Halliday (1996: 105) observed that if we try to reword a written text to a spoken one, “the number of lexemes” would decrease while “the number of clauses” in the sentences would increase. This shows that while the spoken texts attribute a lower degree of lexical density than the written texts, they have a higher degree of grammatical intricacy. It may require two or three clauses in spoken language to correspond to one or more lexically dense clauses in written language (Halliday, 1996: 105). Schleppegrell (1996: 272) also found that while spontaneous spoken language employs “a greater number of finite verbs and clauses linked with conjunctions,” written language tends to “use nominalizations, adjectives, complex verbs, and prepositional phrases to condense information and ideas into single-clause structures.” In other words, written language is less intricate than spoken language. These are key differences between the complexity of spoken language and the complexity of written language. Noticing these differences is essential to understanding children’s language development through the school years. As Christie (2010: 73-81) has found children undergo the challenge of moving from “being able to speak” to “being able to write” when they are between 9 and 12-13 years old. But Christie’s study was conducted in the context of English as a first language. In the context of English as second or foreign language, which is the context of this study, the analysis reported in Section 6.1.2.3 shows that students might experience a challenge moving from being exposed to

mostly spoken conversation in Primary school to being exposed to mostly written texts in Junior Secondary school. The transitional period from speech to writing in ESL/EFL contexts occurs when children move from Primary school to Junior Secondary school, which is at about 12 to 13 years of age. Compared to Christie's (2012) findings, this move from speech to writing for children in both English as a first language and English as second or foreign language context takes place during a similar period—when students are between 9 and 13 years old. But, how this move is presented in successive textbooks and whether or not textbooks help with addressing this challenge are the research questions I address in this section. I am going to use both qualitative and quantitative analysis to present and discuss the development of grammatical intricacy in the series of textbooks used in Hong Kong to teach primary and secondary students.

### 6.3.1 Qualitative analysis

As discussed in the previous section, textbooks for different grade levels include different texts operating within different sectors. In order to control the variables, I am going to present three texts which operate within the same field sector—the reporting field of activity—to illustrate the development of grammatical intricacy in the textbooks.

The first text is from *Primary Longman Express 4A for Primary 4 Students* (Pearson Education Asia Limited, 2010a: 57-58). This text is a spoken conversation between Tim and his grandfather about life in Hong Kong 50 years ago. It operates in both the sharing sector and the reporting sector. We are able to say the text operates within the sharing sector because Tim and his grandfather share their experiences and preferences. We could also argue that the text operates within the reporting sector because during their conversation, Tim's grandfather reports what life was like 50 years before in Hong Kong. According to registerial hybridity typology (Matthiessen,

2014), it is a blend (both sharing and reporting) according to registerial hybridity (see details in Section, 6.2.2.1).

Text 1: Tim is doing a project about life in Hong Kong 50 years ago. He is asking his grandpa some questions.

Tim: Were there mobile phones 50 years ago?

Grandpa: No, there weren't. Nobody had a mobile phone. Telephones weren't even common at that time. Only some people in my class had a phone at home.

Tim: Did anybody have a digital camera?

Grandpa: Nobody had a digital camera! Some people in my class had a camera though.

Tim: Was there an airport when you were a child?

Grandpa: Yes, there was. It was Kai Tok Airport in Kowloon. Look! Here are my old photos! There's the Peak Tram.

Tim: Wow! It's so old!

Tim: Was there a theme park when you were a child?

Grandpa: Yes, there was but you can't find it now. It was closed.

Tim: Were there electronic games when you were a child?

Grandpa: Nobody played electronic games.

Tim: Really? Most of the children in my class have an electronic game!

Tim: What did you do in your spare time then?

Grandpa: I played hopscotch and hide-and-seek.

Tim: Me too! Let's go to the park now and play hopscotch together.

Grandpa: OK. It's good to know that some things last.

This text records the exchanges between Tim and Grandpa on what life was like in Hong Kong 50 years ago. The three hypotactic enhancing clauses in this text are used to request the information about Hong Kong 50 years ago. They are “was there an airport when you were a child?” “was there a theme park when you were a child?” and “were there electronic games when you were a child?” Two paratactic clauses are used to express extensive meanings using “but” as the conjunction in “there was but you can't find it now” to extend adversative facts, and using “and” as the conjunction in “let's go to the park now and play hopscotch together” to add additive information.

Text 2 is extracted from *Longman Activate JSIA for Secondary 1 Students* (Pearson Education Asia Limited, 2011d: 44). This sample text reports the history of pizza, telling readers when and where pizza was first invented.

Text 2: The history of Pizza

Nobody knows exactly when or where pizza was first invented. In fact, people in ancient Egypt, Greece and Rome all ate things like pizza. However, the type of pizza we eat today probably came from Naples, Italy.

In Naples, flat bread called “pizza” was sold all over the city. Since it was cheap, tasty and filling, it was very popular with poor people. When the king and queen of Italy came to Naples in 1889, the queen saw people eating this kind of bread and wanted to try one. This caused alarm because the queen was not supposed to eat the same food as poor people.

Nevertheless, the queen asked a local chef to bake her a pizza. The clever chef baked the bread and added some cheese, some tomatoes and some herbs. The king and queen were very pleased because the toppings were green, white and red—just like the Italian flag! When people heard that this was now the queen's favourite food, this type of pizza became very fashionable.

Text 2 reveals features of written language. The most distinctive features are the textual theme demonstrated by words such as “however” and “nevertheless,” and the marked Topical Theme indicating the location “in Naples.”

Text 2 contains more clause complexes than Text 1, including three projecting clause complexes such as “nobody knows exactly when or where pizza was first invented.” As in Text 1, clause complexes using time are also evident in Text 2 in phrases such as “when the king and queen of Italy came to Naples in 1889, the queen saw people eating this kind of bread and wanted to try one.” However, in this example, the hypotactic enhancing clause starting with the conjunction “when” is a marked Theme of the clause complex if we extend the thematic principle from clause level to clause complex (see details in Halliday & Matthiessen, 2004: 392-395). The dependent clause functions as an orienting context for the dominate clauses unfolding in the two texts. Moreover, in Text 2, we can also find clause complexes with reason that use “because” as the conjunction as in “This caused alarm because the queen was not supposed to eat the same food as poor

people.” Embedded clauses are also found in Text 2 as in this sentence “However, the type of pizza [[we eat today]] probably came from Naples, Italy.”

The grammatical complexity between Text 1 and Text 2 can be summarized as follows. Not only are there more instances of clause complexes in Text 2, they are more varied and include projecting clauses and enhancing clauses of reason. Students are engaged with clause complexes containing more varied relations in Junior Secondary school, indicating a new demand on their ability to make meaning.

The last text, Text 3, is from the *Longman Activate New Senior Secondary Theme Book for Key Stage Secondary 4* (Pearson Education Asia Limited, 2009c: 201). It operates within the reporting field of activity, reporting the personal life of a famous female tennis player.

Text 3: Profile: The queen of tennis

At the amazingly young age of eighteen, Maria Sharapova became the world's number one female tennis player and the world's wealthiest sportswoman. Yet, surprisingly, Sharapova came from a very poor background.

Sharapova was born into a poor family in Russia on 19th April 1987. When she was seven, her father took her to the United States to pursue her tennis career. However, it was very difficult for the family. Sharapova's mother could not join them due to visa problems, and her father had just US\$1,200, so he had to take several jobs to pay for her tennis lessons. However, her parents' amazing sacrifice soon paid off—Sharapova was offered a sports scholarship for her outstanding talent, which eased the family's financial worries.

By 2001, Sharapova was playing as a professional and, in 2004, when she was just seventeen, she won Wimbledon. Two years later, she won the US Open and, in 2008, the Australian Open. Meanwhile, off the court, Sharapova's good looks earned her many modelling assignments.

However, Sharapova doesn't want to be just a model—she also wants to be a role model to young people. “I hope my example helps other teens believe they can accomplish things they never thought possible,” she says.

Text 3 is written for Senior Secondary school students while Text 2 is written for Junior Secondary school students, yet Text 3 contains more Textual themes and marked Topical themes (e.g., “At the amazingly young age of eighteen,” “by 2001,” and “however”). Textual themes and marked Topical themes are used by the author to report events by chronicling them in terms of a time sequence.

Close examination of the clause complexing in Text 2 and Text 3 reveals very interesting differences between the two. Even though the number of clause complexes is similar, the clause complexes in Text 3 are more complex. Many of the clause complexes in Text 3 are linear sequences of clause nexuses but some involve internal bracketing or nesting, where what is being linked by a logico-semantic relation is not a single clause but rather a “sub-complex”—a clause nexus in its own right. This structural feature of clause complexing is defined as the depth of nesting in functional grammar (Halliday & Matthiessen, 2004: 376). Here is an example extracted from Text 3: “I hope my example helps other teens believe they can accomplish things



they never thought possible,” she says. This example of a clause complex consists of four ranking clauses and reaches a depth of nesting of three levels. Table 6.4 shows its depth of nesting. Clause 1.2 and clause 1.3 are in the first level of nesting and their relationship is mental projecting. These two clauses function together as the projected idea of clause 1.1 so they are the second level of nesting on projection. Finally, all three clauses function as a verbal projection of clause 1.4, which is the third level. This example of a clause complex in Text 3 is more complex than the clause complexes in Text 2. Using Halliday’s notion of “intricacy” to delineate this complexity of clause complexing enables us to claim that the clause complexes in Text 3 are more “intricate” than the ones in Text 2. The element that construes the intricacy of a clause complex is the depth of nesting. As such, the deeper the degree of nesting, the more intricate the clause complexes’ structure.

Table 6.4 An example of a clause complex with three levels of nesting

| Level 3 | Level 2  | Level 1  |  |
|---------|----------|----------|--|
| “2      | $\alpha$ |          | [1.1] ‘I hope  |
|         | $\beta$  | $\alpha$ | [1.2] my example helps other teens believe                     |
|         |          | $\beta$  | [1.3] they can accomplish things they never thought possible’, |
| 1       |          |          | [1.4] she says   |

Two instances of three levels of nesting and two instances of two levels of nesting are found in the clause complexes in Text 3, which is much more intricate than the clause complexes found in

Text 2. Consequently, when students move from Primary school to Junior Secondary school exposure to more clause complexes could present a challenge for students at this transitional period. However, from Junior Secondary to Senior Secondary school, the exposure to more intricate clause complexes, including nesting clause complexes, presents an appropriate challenge at this transition.

Other than the intricacy of clause complexing, grammatical metaphor can also be a very important challenge for students. “Grammatical metaphor,” according to Halliday and Matthiessen (1999: 227-292), is a non-congruent realization that turns actions expressed in verb choices into phenomena or things. The term is chosen in contrast to lexical metaphor—a grammatical metaphor that occurs when the usual or congruent expression found in the grammar is varied to achieve a particular meaning. In Text 3, an instance of grammatical metaphor lies in the sentence “Sharapova was offered a sports scholarship for her outstanding talent, which eased the family's financial worries.” If we unpack this sentence, it would mean “Sharapova was offered a sports scholarship for her outstanding talent, so her family did not worry about the financial problems too much.” This instance of grammatical metaphor is very important for it constructs the abstract phenomena “worries” here as an aspect of “uncommonsense” learning. I also found a number of instances of grammatical metaphor in the textbooks for Senior Secondary school students. Christie (2010: 66) identifies grammatical metaphor as one of the significance period in which to measure students’ developmental growth in control of literacy. In the English as a first language learning context, the capacity to use such metaphorical expressions comes at the earliest among children aged 9 (Halliday 1993; Derewianka 2003). Christie and Derewianka (2008) suggest that it appears quite sparingly into adolescence. In this project, where the data is located within English as a second/foreign language learning context, expressions of

grammatical metaphor are only evident in secondary levels. The challenge that students face at the secondary levels anticipates teachers' pedagogical support unpacking and repacking the non-congruent expressions in the textbooks.

This examination of three texts suggests:

1. The number of clause complexes and embedded clauses increased between the primary and junior secondary school texts, Students' learning challenge lies in their exposure to clause complexes with various relations.
2. When moving from junior secondary school texts to senior secondary school texts, students' learning challenge lies in the depth of nesting of clause complexes, and the instances of grammatical metaphor.

Based on the findings presented in section 6.2.2, and the two developments identified above demonstrate how the development of lexico-grammatical features in the texts (particularly the complexity of grammar) support the development from commonsense and everyday knowledge to uncommonsense and educational knowledge. In the next section, I will bring a quantitative approach to my overall analysis in order to amplify my findings.

### **6.3.2 Quantitative analysis: clause complexing development based on the textbooks for nine grades**

In this section, I will extract all the clause simplexes and clause complexes in texts chosen from the textbooks to explore three different aspects of the development of clause complexing across the years of schooling: the frequency of clause complexes, the frequency of clause complexes with different numbers of ranking clauses, and depth of nesting.

### 6.3.2.1 The frequency of clause complexes

This section will explore the frequency of clause complexes in 239 texts extracted from the 13 textbooks. Altogether there are 2447 orthographic sentences in these 239 texts. All 2447 sentences were categorized into either clause simplex or clause complex. Table 6.5 shows the distribution of clauses simplexes and clause complexes across the 2447 sentences selected from the 13 textbooks.

Table 6.5 Distribution of clause simplexes and clause complexes in 2447 orthographic sentences

|                  | Primary<br>4 | Primary<br>5 | Primary<br>6 | Secondary<br>1 | Secondary<br>2 | Secondary<br>3 | Secondary<br>4 |
|------------------|--------------|--------------|--------------|----------------|----------------|----------------|----------------|
| Clause simplexes | 276          | 288          | 286          | 105            | 131            | 143            | 274            |
| Clause complexes | 78           | 169          | 190          | 77             | 99             | 131            | 231            |
| Sentences        | 354          | 457          | 479          | 182            | 230            | 274            | 505            |

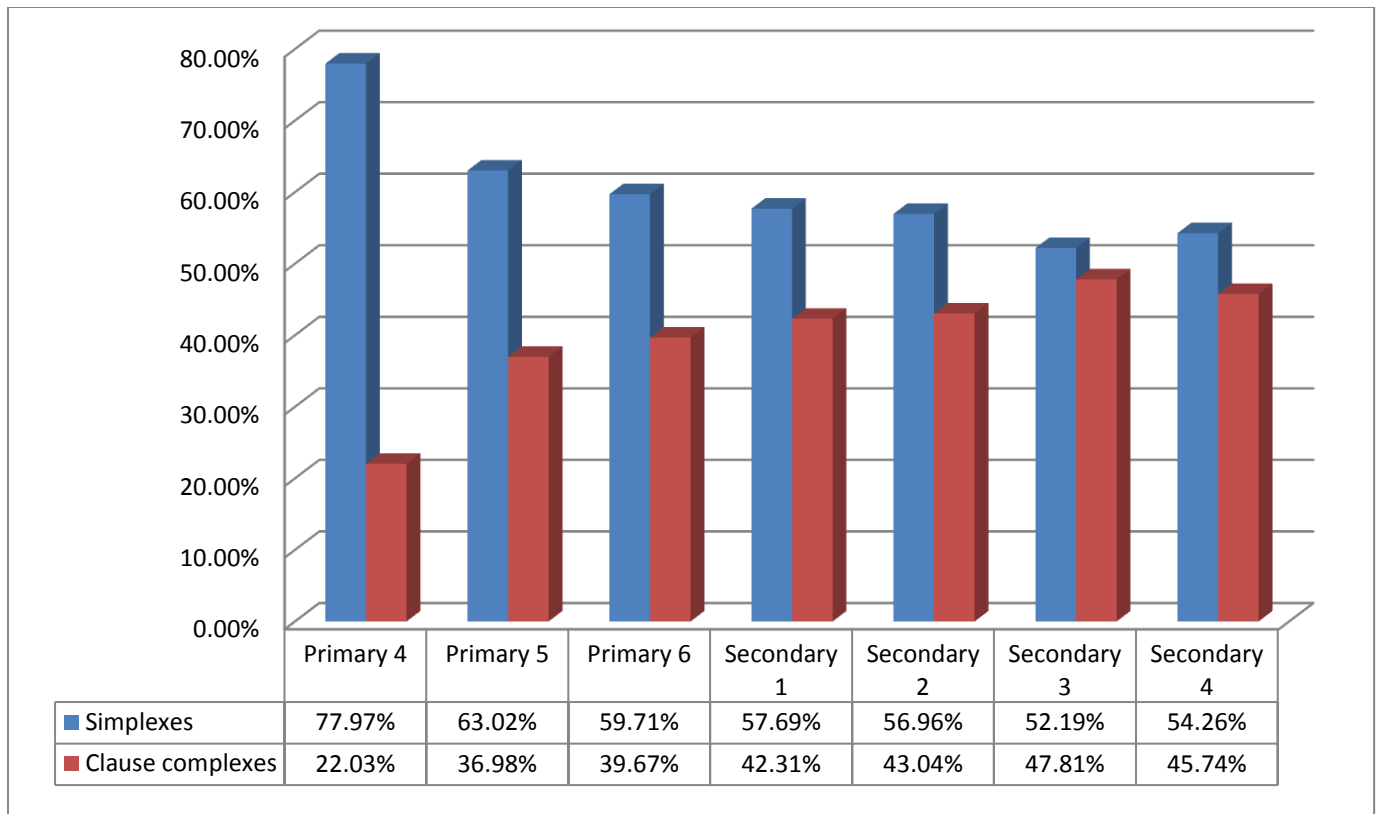


Figure 6.18 Percentage of simplexes and clause complexes (N=2447)

After counting the total number of clause simplexes and clause complexes, I calculated the number of sentences containing clause simplexes and clause complexes by grade (see Figure 6.18). Figure 6.18 shows the gradual increase in the number of clause complexes relative to the number of clause simplexes from Primary 4 to Secondary 3. However, the standard deviation (SD) of the number of clause complexes from Primary 4 to Primary 6 is 0.097273891. The SD of the clause complexes from Secondary 1 to Secondary 3 is 0.029872. Therefore, SD (Primary 4 - 6) is larger than SD (Secondary 1 - 3), which means that the number of clause complexes from Primary 4 to Primary 6 move further away from the mean. We can argue that students will face more challenges learning clause complexes over the years in upper Primary schools than they will in Junior Secondary school. After Primary 4, students may face the challenge of being

exposed to many more clause complexes in Primary 5 and even more in Primary 6. This progression could possibly be related to the progression of mode (see Section 6.1.2.3). In Section 6.1.2.3, I discussed how students are exposed to spoken discourse in Primary 4 followed by a gradual increase in exposure to written discourse starting at Primary 5. A comparison of these two progressions reveals that when students are faced with major exposure to written discourse, they are also exposed to a higher percentage of clause complexes. It is likely that the greater volume of written discourse in textbooks for older learners will result in a larger percentage of clause complexes. This finding is relevant to a long-lasting discussion about clause relations in spoken and written English, which dates back to the last century. However, this result contradicts the argument made by Schleppegrell (1996: 272) that while spontaneous spoken language employs “a greater number of finite verbs and clauses linked with conjunctions,” written language tends to “use nominalizations, adjectives, complex verbs, and prepositional phrases to condense information and ideas into single-clause structures.”

This contradiction may be due to the nature of the scripted spoken discourse in the textbooks. Spoken discourse in the textbooks used in the earlier years of learning are scripted and modified rather than natural. To illustrate this, I quote a spoken text from *Primary Longman Express 4A* (Pearson Education Asia Limited, 2010a: 117-18). The text is located within the “doing” sector of the eight primary socio-semiotic activities (Matthiessen, 2014) (See also section 6.1). The text describes how Emma and Eddy bought snacks and drinks together in the supermarket. Two instances of a clause complex are highlighted. Of the 23 sentences Eddy and Emma use to negotiate what to buy, only two are instances of a clause complex. The reason for excluding some features of spoken spontaneous discourse and limiting the texts to short sentences and

clause simplexes for younger learners might be due to their comprehension and linguistic ability as well as their English language-learning ability at that stage.

Mrs. Poon took the children to the supermarket to buy some snacks and drinks for an outing. She told Emma and Eddy to find the things they like. Then they would meet up at the cashier.

Eddy: Juicy dried mango is healthier than Fruity dried mango. It's cheaper too.

Emma: How much is it?

Eddy: It's four dollars twenty.

Emma: OK. Let's get two packets of Juicy dried mango.

Eddy: How much is a tin of Nibbly nuts?

Emma: It's fifteen dollars fifty.

Eddy: Nibbly nuts are more expensive than Crunchy nuts. Crunchy nuts are only thirteen dollars ten.

Emma: They're the same size but a tin of Nibbly nuts is heavier than a tin of Crunchy nuts.

Eddy: OK. Let's get Nibbly nuts then.

They went to the juice stall.

Eddy: This juice tastes great! I think blackcurrant juice is more delicious than grapefruit juice.

Emma: I think so too. Let's buy a carton. It's only ten dollars.

Then everyone met at the cashier.

Eddy: Look! We've got a lot of snacks and drinks.

Sarah: Let me see. How funny! I've got exactly the same things.

Based on the frequency with which clause complexes appear in the textbooks it is possible to conclude that over the years of schooling there are two stages of language learning during which there is a gradual progression in learning to do with complex clauses. The first stage takes place when students move from Primary 4 to the primary next levels and the second one takes place when they move from Secondary 1 to 3 at the junior secondary levels. During these two stages, students are challenged by exposure to a greater number and frequency of clause complexes. However, at the Primary levels, students face a greater challenge of learning clause complexes than they do at the junior secondary levels.

### **6.3.2.2 Taxis**

It is far from a whole picture if we only look at the number and frequency of clause complexes in the texts. In the following two sections, I am going to use three different aspects of clause complexing development—taxis, finiteness and depth of nesting—to examine different aspects of construing the intricacy of language development during the school years.

The first aspect is taxis. As introduced in 5.4.6.1, all ranking clauses in clause complexes are linked by a logico-semantic relation and are interdependent—one unit is interdependent on another unit (Halliday & Matthiessen, 2004). If two interdependent ranking clauses in a clause complex are treated as being of equal status, the relation between these two ranking clauses is



one of parataxis. If the two interdependent ranking clauses are of unequal status, the relation between them is one of hypotaxis.

An analysis of the extracted clause complexes from the textbooks show that the higher the school grade, the more instances of hypotaxis students are engaged with. Figure 6. 19 depicts the percentage of hypotaxis and parataxis of all the clause complexes in the textbooks. As Figure 6.19 shows, one aspect of construing the intricacy of clause complexes is hypotaxis rather than parataxis. This movement from the major exposure to parataxis to the major exposure to hypotaxis can also be due to the progression from an emphasis on spoken discourse at the primary levels to increased emphasis on written discourse at the secondary levels. Chafe (1986) discusses the clause relations in spoken and written English, arguing that, generally, spoken language is “typically constructed of relatively independent clauses and clause fragments,” and that “often the clauses are linked by “and,” while written language has objects of a complexity,” , as in integrated sentences. The results found in this study echo Chafe’s argument that spoken discourse is typically linked by parataxis and written discourse is typically connected by hypotaxis.

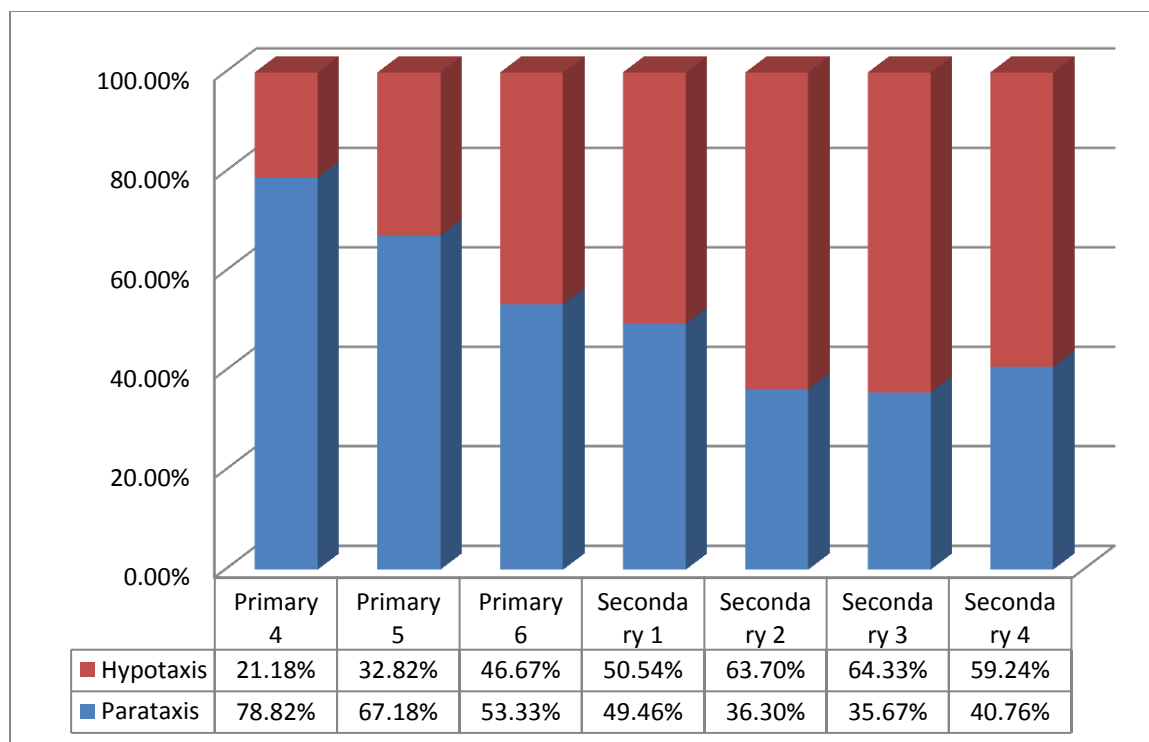


Figure 6.19 Percentage of hypotaxis and parataxis (N=1147)

### 6.3.2.3 Finiteness

The finiteness of all the instances of clause complexes are presented in Figure 6.20. The quantitative data reveals that another aspect useful for construing the intricacy of clause complexes is non-finite instances. We are able to find a gradual development from being mainly engaged with finite clause complexes to being largely engaged with non-finite clause complexes during the years of schooling. In other words, as in the examples presented in Chapter 5, at the primary levels, students are exposed to more examples of finite clause complexes such as in this sentence:

“Some students said || that it was not well organized, and a couple of students said || that it was boring” (Pearson Education Asia Limited, 2009c: 32).

Starting in secondary levels, many more examples of non-finite clauses appear in the textbooks, such as this one:

“Not recognizing the rights of the indigenous people, || the Europeans took over the land for themselves” (Pearson Education Asia Limited, 2009c: 61).

This exploration construes another key component of the intricacy of clause complexing in the textbooks, which is significant for teachers to understand students’ challenge in school learning.

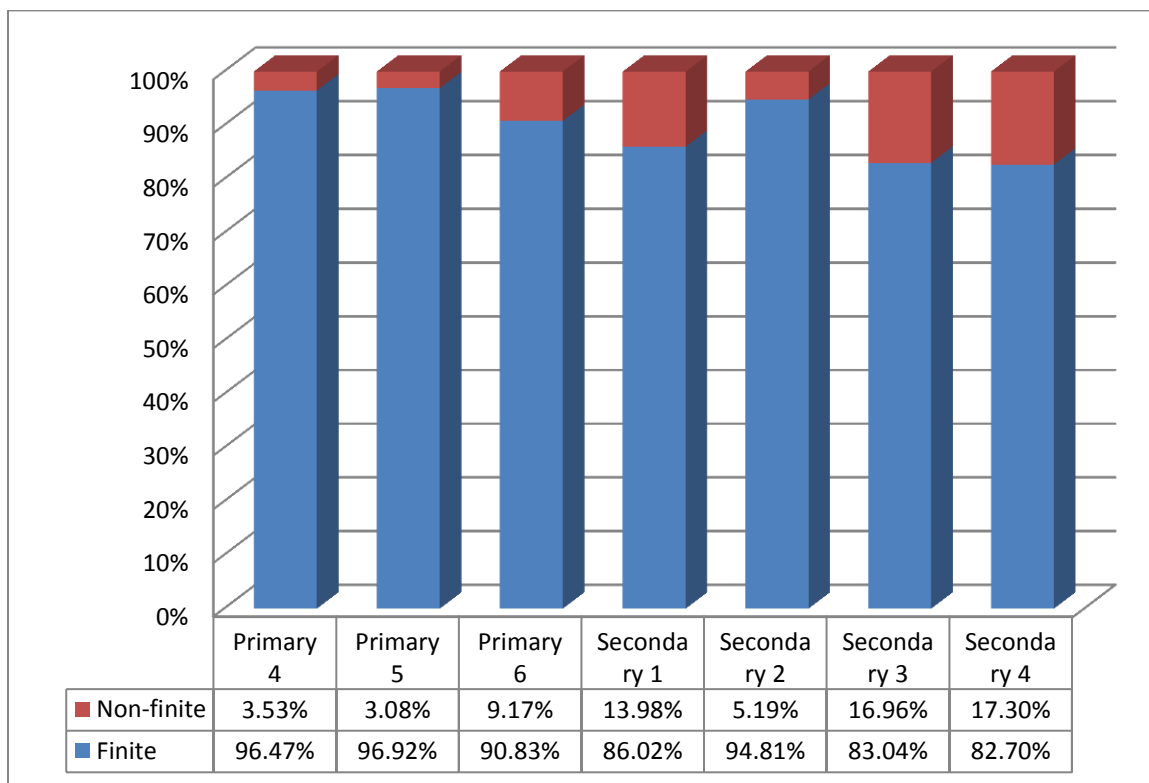


Figure 6.20 Percentage of finiteness (N=1147)

#### 6.3.2.4 Depth of nesting

In addition to TAXIS and FINITENESS, depth of nesting is another aspect of clause complexing. As discussed in Chapter 5, Section 5.4.5.4., many clause complexes are linear sequences of clause nexuses but some involve internal bracketing or nesting where what is being linked by a logico-semantic relation is not a single clause but rather a “sub-complex”— a clause nexus in its own right (Halliday & Matthiessen, 2004: 376). All the clause complexes were analyzed to determine how deeply they are nesting and to calculate the change in frequency of appearance in the texts across the years of schooling.

Using Halliday’s notion of “intricacy” to describe the complexity of different clause complexes, we are able to explicate the depth of nesting. Let me present one example from the textbook to explain the notion of depth of nesting in details.

“If they agree || that you are overweight || and have a problem with pimples, || maybe you ought to see a doctor” (Pearson Education Asia Limited, 2009a: 25).

This above example of a clause complex, extracted from an Agony Aunt letter in *Longman Activate JS3A*, consists of four ranking clauses and reaches a depth of nesting of 3. Table 6.6 shows its depth of nesting. Clause 1.2 and clause 1.3 are in the first level of nesting and their relations are extending. These two clauses function together as the projected idea of clause 1.1 so they are in the second level of nesting of projection. Finally, all three clauses function as the condition of clause 1.4 as the third level of nesting and their relations are of enhancement.

Table 6.6 An example of a clause complex with three levels of nesting

| Level 3       | Level 2  | Level 1 |  |
|---------------|----------|---------|--|
| $\alpha$      | $\alpha$ |         | [1.1] If they agree                    |
|               | $\beta$  | 1       | [1.2] that you are overweight          |
|               |          | +2      | [1.3]and have a problem with pimples,  |
| $\times\beta$ |          |         | [1.4] maybe you ought to see a doctor. |

The example below, extracted from a book report in *Primary Longman Express 6A*, consists of four ranking clauses. However, clause 1.1, 1.2, and 1.3 are at the same level of nesting (see Table 6.7). The relations among them are extending (+). There is another level of nesting between clause 1.3 and clause 1.4 and their relations are enhancing. Therefore, this instance of a clause complex can be categorized as a clause complex with level 2 as its deepest level of nesting.

“The scarecrow wants a brain, || the tin man wants a heart || and the lion wants some courage || because it is always frightened” (Pearson Education Asia Limited, 2011a: 25).

Table 6.7 An example of a clause complex with two levels of nesting

| Level 2 | Level 1  |                                    |
|---------|----------|------------------------------------|
| 1       |          | [1.1] The scarecrow wants a brain, |
| +2      |          | [1.2] the tin man wants a heart    |
| +3      | $\alpha$ | [1.3] and the lion wants some      |

|  |               |                                       |
|--|---------------|---------------------------------------|
|  |               | courage                               |
|  | $\times\beta$ | [1.4] because it is always frightened |

The two examples above (Table 6.6 and Table 6.7) show that, even though a given set of clause complexes have the same number of ranking clauses, they can have different depths of nesting.

I have categorized all the clause complexes identified in my text sample based on their deepest level of nesting. The total number of them is shown in Figure 6.21. Level 1 refers to the most local relation, while Level 5 refers to the most global one.

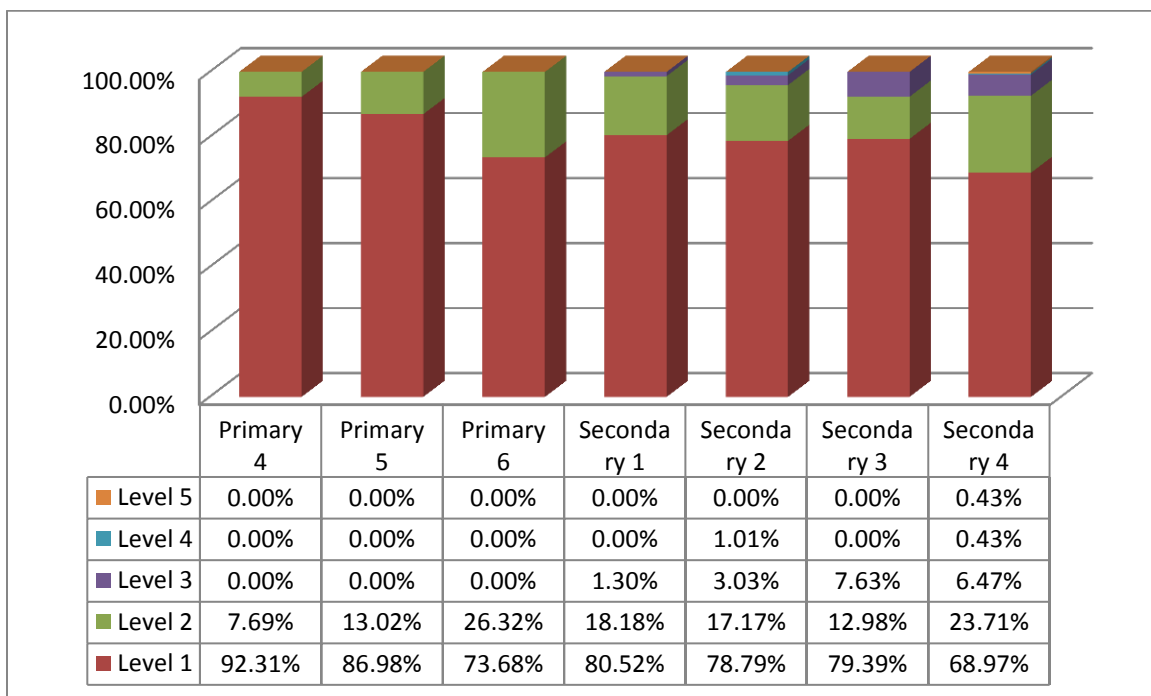


Figure 6.21 Percentage of clause complexes based on depth of nesting (N=1147)

My analysis of the data shows that five levels of nesting is the maximum. Students may face greater challenge of being exposed to the intricate clause complexes. It is essential for teachers to help unpack them and provide pedagogic support during schooling. Let me present two examples

of the most intricate clause complexes and present the possible way of exploring these two examples. Here is an example of a clause complex with seven ranking clauses but with only four levels of nesting. Table 6.8 presents the analysis of its depth of nesting.

The survey also found || that when faced with family conflicts, || twenty percent talked to friends, || while forty percent remained silent, || sixteen percent hit or threw things, || fourteen percent overindulged in food and drink, || and ten percent beat up other people ||| (Pearson Education Asia Limited, 2009c: 89).

Table 6.8 An example of clause complex with four levels of nesting

| Level 4  | Level 3       | Level 2  | Level 1 |  |
|----------|---------------|----------|---------|--|
| $\alpha$ |               |          |         | [3.1] The survey also found                            |
|          | $\times\beta$ |          |         | [3.2] that when faced with family conflicts,           |
|          |               | $\alpha$ |         | [3.3] twenty percent talked to friends,                |
|          |               |          | 1       | [3.4] while forty percent remained silent,             |
|          |               |          | +2      | [3.5] sixteen percent hit or threw things,             |
|          |               |          | +3      | [3.6] fourteen percent overindulged in food and drink, |
| $\beta$  | $\alpha$      | $+\beta$ | +4      | [3.7] and ten percent beat up other people.            |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|--|--|--|--|--|

This example is extracted from a survey report on family relationships in the textbook for Secondary 4, *Longman Activate New Senior Secondary Theme Book*. Even though the clause complex consists of seven ranking clauses, clause 3.4, 3.5, 3.6 and 3.7 function together at the same level to extend clause 3.3. Therefore, the highest level of nesting of this clause complex is level 4. In contrast to this example, the following is a clause complex with six ranking clauses. Every two ranking clauses in this clause complex constitute one level of nesting (see Table 6.9). This example text is extracted from a workshop report in the Secondary 4 textbook, *Longman Activate New Senior Secondary Theme Book*.

Our accountant feels || this profit can be increased in the year ahead || by reducing operating costs, for example, through an increase in the use of volunteer staff, || and by attracting more participants, || which can be done || by offering more courses and workshops ||| (Pearson Education Asia Limited, 2009c: 32).

Based on Figure 6.21, two separate continuities appear in the primary and secondary levels, which is similar with what we found in the previous two sections. Interestingly, I found that when students move from Primary 4 to Primary 6, they are exposed to a maximum of two levels of nesting in clause complexes. However, moving to Junior Secondary school, they are engaged with more levels of nesting in clause complexes. From Junior Secondary to Senior Secondary school, students start to encounter instances of clause complexes with four and five levels of nesting. In other words, in terms of the



depth of nesting in clause complexing, critical period during which students may face the challenges of dealing with much more intricate clause complexes takes place between Junior Secondary and Senior Secondary school. These quantitative results echo the qualitative analysis, which found that when students move from Junior Secondary school to Senior Secondary school, they face the challenge of being exposed to clause complexes with greater depths of nesting.

Table 6.9 An example of a clause complex with five levels of nesting

| Level 5  | Level 4       | Level 3 | Level 2  | Level 1       |  |   |
|----------|---------------|---------|----------|---------------|--|---|
| $\alpha$ |               |         |          |               | [3.1] Our accountant feels   |   |
| $\beta$  | $\alpha$      |         |          |               | [3.2] this profit can be increased in the year ahead   |   |
|          |               | 1       |          |               | [3.3] by reducing operating costs, for example, through an increase in the use of volunteer staff, |   |
|          | $\times\beta$ | +2      |          | $\alpha$      |  | [3.4] and by attracting more participants,    |
|          |               |         |          |               | $\alpha$   | [3.5] which can be done                       |
|          |               |         | $=\beta$ | $\times\beta$ |  | [3.6] by offering more courses and workshops. |

In this section, the depth of nesting, an aspect of the intricacy of clause complexing in textbooks, was discussed. This section provides additional solid support for the results found in the two sections above, which is that two gradual developments take place when students move from

Primary 4 to higher levels within the primary years and when they move from Secondary 1 to 4 within the secondary levels.

### **6.3.3 Conclusion**

Based on the discussion in the four sections above, four major observations emerge from the quantitative data and the qualitative analysis:

Firstly, we are able to identify the intricacy of clause complexes based on three aspects: taxis, finiteness and depth of nesting. Based on quantitative and qualitative analysis, hypotactic clauses, non-finite clauses, and clause complexes with deeper nesting are three manifestations of intricate clause complexes. The higher the grade the students are in, the more instances of intricate clause complexes they are engaged with. In other words, during the years of schooling, students continuously face the challenge of being exposed to clause complexes of different degrees of intricacy. The greater the instances of hypotactic clauses, non-finite clauses, or clause complexes with deeper nesting, the more intricate the clause complexes are. This increasing degree of intricacy suggests that students will be facing the challenge to learn how to read these clause complexes.

Secondly, the increasing number of instances of clause complexes and embedded clauses appearing in the textbooks suggest continuous development within the upper primary levels. This development could also present a considerable challenge to students during their upper primary learning.

Thirdly, continuous development in grammatical intricacy is found at the secondary levels. Unlike at the primary levels, students at these advanced levels are engaged with more intricate clause complexes, which result from a greater number of hypotactic clauses, non-finite clauses

and clause complexes with deeper nesting. Another milestone for students moving from the primary to secondary levels is exposure to instances of grammatical metaphor, which may present students with learning difficulties during secondary level where teachers' pedagogical support is needed.

Finally, it is noteworthy that the two continuous developments are shown grammatically by the increase the grammatical intricacy of clause complexes to some extent, but in very different ways. The quantitative and qualitative analyses complement each other and show that the grammatical intricacy at different learning periods results in different configurations.

These four conclusions could help teachers develop a better understanding of the possible learning difficulties for junior and secondary learners. A large number of clause complexes will be a big challenge for primary school students as they progress through the grade. However, the exposure to a large number of clause complexes is not the main difficulty for secondary learners. They, instead, may face the challenge of having to process a greater number of intricate clause complexes (e.g., hypotactic clause complexes, non-finite clause complexes, or clause complexes with deeper levels of nesting). This difficulty becomes even more challenging at the start of senior secondary school and suggests that secondary school teachers will need to offer pedagogical support to students to help them master the intricacy of clause complexes.

# **Chapter 7 Results and discussion II: the Visual Construction of Knowledge in the textbooks (Analysis of visual images)**

## **7.1 Introduction**

The previous chapter presents the analysis of linguistic texts in the textbooks. As discussed in Chapter 3, apart from linguistic abilities, researchers and educators also emphasize the significance of enhancing students' "multiliteracies", abilities to read images and to relate images to the linguistic text (e.g. Christie, 2012). With the rapid change of textbook' texture from 'the densely printed page' (Kress, 2004) to 'a complex interplay of multimodal elements' (Coffin & Derewianka, 2009), a large number of multimodal linguists attempt to apply existing analytical models to analyze the textbooks multimodally across the curriculum. In this current PhD project, other than focusing on linguistic texts in the textbooks, I also extract all the images of the textbooks, aiming to investigate the visual construction of knowledge in EFL textbooks and develop a social semiotic framework to explicate the ontogenetic development of the representational meaning of visual images in textbooks. This chapter unfolds in the following manner. First, the concept of multiliteracies and visual literacy will be explained in section 7.2, followed by a brief overview of multiliteracies in Hong Kong in section 7.3. Then in section 7.4 I move on to situate our approach within an existing body of social semiotic multimodal studies in the context of education. In section 7.5, both qualitative and quantitative analyses are provided to explore the visual construction of knowledge in textbooks and the ontogenetic change of image structure. In order to further explore the context in which these multimodal resources operate and

relate the image analysis with text analysis presented in Chapter 6, this chapter also investigates the field of experience constructed by the texts and the accompanied images in section 7.6.

## **7.2 Multiliteracies & visual literacy**

As Halliday (1996: 114) points out, the frontier of literacy has moved from writing to other systems of visual semiotic, expanding the meaning-making potential. This foresight was substantiated in the seminal paper by New London Group (2000) under the term “multiliteracies”. This term of “multiliteracies” was produced by the New London Group (2000) to highlight two related aspects of the increasing complexity of texts: (a) the proliferation of multimodal ways of making where the written word is increasingly part and parcel of visual, audio, and spatial patterns; (b) the increasing salience of culture and linguistic diversity characterized by local diversity and global connectedness. As New London Group discussed, there are six design elements in the meaning-making process: linguistic Meaning, Visual Meaning, Audio Meaning, Gesture Meaning, Spatial Meaning, and the Multimodal Meaning. Other modes of meaning are becoming increasingly more important than linguistic modes, because the textual environment today has experienced remarkable changes and we understand the power of them to influence how we think and what we believe (Unsworth, 2001).

Apart from the term “multiliteracies”, there is a concept of “visual literacy” which also attracts scholars’ attention and interests. Wileman (1993: 114) defines visual literacy as “the ability to ‘read,’ interpret, and understand information presented in pictorial or graphic images”. He describes visual thinking which is associated with visual literacy as “the ability to turn information of all types into pictures, graphics, or forms that help communicate the information” (Wileman, 1993: 114). A similar definition for visual literacy was given by Heinich and his colleagues: “the learned ability to interpret visual messages accurately and to create such

messages” (Heinich, Molenda, Russell, & Smaldino, 1999: 64). Sinatra (1986: 5) provides the definition of visual literacy as “the active reconstruction of past visual experience with incoming visual messages to obtain meaning”, with the emphasis on the action by the learner to create recognition. Although a concrete definition of visual literacy is elusive, there is no doubt that the core of its definition is an emphasis on the personal construction of meaning from any type of visual images.

The teaching and learning multiliteracies and visual literacy is becoming significant since students are increasingly surrounded by multimodal forms of texts (Kress, 2003; Unsworth, 2001). From the lightning-fast pace of television programming to the barrage of interactive images on the Internet and in new video games, there’s no doubt that students are now living in a world saturated by multiple forms of media (Williams, 2007). The multimodal construction of knowledge has been the fore of the education research in the last two decades (e.g. Kress, 2003; New London Group, 1996; Unsworth, 2001; Weninger & Kiss, 2013). Kress (2003) also argues that by offering important information beyond what is available in the printed text, visual representations can play an important role in cognitive processing, and it may supplement or even replace the written word. Despite the ongoing interests in the visual construction of knowledge in education, few studies have explored textbooks as the key visual resources in foreign language learning (e.g. Chen, 2010; Weninger & Kiss, 2013, Yang, 2012). On one hand, given the high popularity and common adoption of ELT textbooks for primary and secondary schooling, ELT textbooks are the valuable recourses to explore the teaching and learning multiliteracies and visual literacy at school. On the other hand, as foreign language textbooks are the fundamental carrier of knowledge in primary and secondary schooling in non-English speaking regions, they provide essential data for us to understand how knowledge is constructed

through visual resources. While there are investigations of the interpersonal and textual meanings of textbook images (e.g. Chen, 2010; Royce, 2007), the ideational aspect of the visual construction of knowledge and how this relates to students' ontogenetic development through the schooling years remain unexplored. This chapter of the current PhD project develops the currently dominant qualitative approach to the analysis of images in EFL textbooks by providing both qualitatively and quantitatively aspects of knowledge construction. In this data-based empirical study, all 356 images from the textbooks chosen for this PhD project are extracted and the ontogenetic change of representational meaning is investigated. As introduced in Chapter 5, a sequence of textbooks for primary 4 students to secondary 4 students is the targeted data. The detailed design of analyzing images will be introduced in Section 7.4.

### **7.3 Multiliteracies in Hong Kong Context**

Evidence of the influence of multiliteracies on English language teaching in Hong Kong can be found from the latest Hong Kong curriculum for English language. In the curriculum, exposure to visual elements in learning and teaching is highlighted: pictures and diagrams are mostly associated with pre-reading activities or vocabulary learning, e.g. predicting the content of a text from pictures, matching pictures with word cards, and learning vocabulary by using picture dictionary (Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a: 82). As introduced in Chapter 5, Section 5.2, the aims of overall English Language Education curriculum throughout primary and secondary schooling also include interpretation, use and production of new materials, enabling every learner to prepare for the changing socio-economic demands resulted from advanced information technology (IT) (Curriculum Department Council, 2002; Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a).

In addition, the subject of Visual Art is included as one of the eight key learning areas (KLAs) of primary and secondary schooling, proposed by the Education Bureau of the Government of Hong Kong Special Administrative Region (Curriculum Development Council, 2012)<sup>i</sup>. As Hong Kong is a place of diverse cultures, influenced by a mix of local, Chinese and Western art, it has become increasingly important to enhance Hong Kong students' capability in meeting the multi-cultural needs of society. Hong Kong also has a high penetration of information and communication technologies, with abounding electronic technology, and web-based, digitized and published visual information. Students in Hong Kong need to have a good understanding of how to interpret meanings from these multimodal phenomena in order to meet the needs of the community. The learning objectives of Visual Arts curriculum include developing creativity and imagination, developing skills and processes, cultivating critical responses, and understanding arts in context (Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007b).

English Language, as another KLA of primary and secondary schooling, is recommended to be taught through Visual Arts. As stated in *English language education key learning area curriculum guide (P1-S3)* (Curriculum Development Council, 2002: 83), teachers of English are strongly advised to collaborate with teachers of other KLAs to promote language learning through a cross-curricular approach, with the aim to enable students to learn English more effectively through exposing them to a wide range of themes or topics as well as enhancing subject learning in other KLAs.



Under the curriculum goals for English Language KLA and Visual Arts KLA, we will examine to what extent the multimodal resources in English textbooks are used to enhance students' competence in English language and visual images (i.e. multiliteracies). As the prerequisite step towards multiliteracies, we need to understand the meaning making mechanisms in visual images, so that teachers will be equipped with a metalanguage to explain the images explicitly in their teaching. Therefore, this study will provide a systematic description of visual images based on social semiotic theories, in particular, Kress and van Leeuwen (2006). As Machin (2009: 182) explains, describing visual images with a semiotic theory is "to replace commonsensical terms such as 'evoke' and 'suggest' that we often use with systematic and stable terms that allow us to talk in concrete terms about how such a composition communicates". Such systematic terms, which are crucial for both teachers and students in the construction and unpacking of knowledge, are provided in Section 3. The smooth transitions between primary and junior secondary school, and between junior secondary and senior secondary school are highlighted in curriculum for both English Language and for Visual Arts (Curriculum Development Council, 2002: 26-28; Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007a: 4-5), this chapter also adopts an ontogenetic view, the same view adopted to analyze the linguistic texts in, aiming to identify the longitudinal shift of students' learning over the schooling years.

#### **7.4 Visual Images in English Textbooks: Dimensions of Representational Meaning**

The linguistically informed multimodal approach used in this chapter will draw upon is commonly referred to as systemic functional multimodal discourse analysis (henceforth SFMDA) (e.g. O'Halloran, 2008). It has drawn inspiration from systemic functional linguistics

(Halliday, 1978, 1994; Halliday & Matthiessen, 2004; Halliday & Webster, 2009; Hasan, Matthiessen, & Webster, 2005, 2007). Three theoretical notions of SFL are usually adopted in this SF-MDA approach (Halliday & Matthiessen, 2004: 22-26, 29-31): the first one is that it views semiotic resources as system (Halliday & Matthiessen, 2004: 22-24). The meaning is realized and constructed through making and combining the choices of system. The second notion is stratification (Halliday & Matthiessen, 2004: 24-26). Language is a multi-level strata system consisting of context, semantics, lexicogrammar, phonology, and phonetics. The third is the notion of metafunction (Halliday & Matthiessen, 2004: 29-31). The semantic systems are organized into metafunctional components, which include ideational (construing human experiences), interpersonal (enacting social relations) and textual functions (enabling communication). These three strands of meanings (i.e., ideational, interpersonal, and textual) are simultaneously realized in every instance of verbal communication.

Adopting the theoretical notion of system, we treat multimodal phenomena as semiotic systems of meaning which is realized and constructed by making and combining different choices of system. Applying the notion of stratification that semantic meaning is realized by lexicogrammar for language, we also view multimodal phenomena as semiotic systems of meaning, holding that semantic options are realized in shoot distance, camera angle, framing, etc. (Kress & Van Leeuwen, 2006). SF-MDA also extends the metafunctional diversification from linguistic system to other modes of communication such as visual images (Kress and van Leeuwen, 2006), gesture and movement (Kress *et al.*, 2001), gaze (Lancaster, 2001) and sound (van Leeuwen, 1999).

In the field of visual images, which is the focus of this chapter, Kress and van Leeuwen (1996) have set out a systematic map to analyze multimodal visual-based communicative discourse,

providing a “grammar” of the possibilities of meaning-making available that applies to all forms of visual presentation (Table 7.1). Adopting the notion of ‘metafunction’ (Halliday & Matthiessen, 2004), they define the ideational metafunction of any semiotic mode as the function of representing objects and their relations in a world outside the representational system (representation). Furthermore, any semiotic mode has the interpersonal metafunction to represent a particular social relation between the producer, the viewer and the object represented (interaction). Semiotic mode also has the capacity to form texts, complexes of signs which cohere both internally with each other and externally with the context in and for which they were produced. In other words, different textual meanings of semiotic modes can be realized by different compositional arrangements (composition). This PhD project focuses on the construction of representational meaning.

Table 7.1 From language to visual images

|  |                |               |             |
|--|----------------|---------------|-------------|
| Halliday’s theory<br>of language               | Ideational     | Interpersonal | Textual     |
| Kress and van<br>Leeuwen’s<br>grammar of image | Representation | Interaction   | Composition |

With the impact of systemic functional linguistic descriptions of “visual grammar” (O’Toole, 1994; Kress & van Leeuwen, 1996), some language teachers and researchers have begun to notice the multimodal nature of texts in developing critical literacy practices (e.g. Callow, 1999; Williams, 2007). Unsworth (2001) applies the metafunctional framework of reading images

(Kress & van Leeuwen, 1996) to describe visual meaning-making in school texts in conventional and electronic formats. The practical implementation of teaching and learning activities to develop students' visual literacy is also recommended. However, in the classroom practice, the feasibility of using the technical terms within multimodal analysis discipline like "gaze" and "vertical angle" has been questioned (Williams, 2007).

There is a large number of multimodal linguists attempt to apply existing analytical models to analyze the textbooks multimodally across the curriculum. Guo (2004) developed a theoretical framework for the analysis of two types of visual displays common in biology textbooks (i.e. schematic drawings and statistical graphs) by using O'Toole's (1994) and O'Halloran's (1999) model and applying them to explore the metafunctional meanings of different semiotic elements in the biology texts. Based on multimodal conventions of meaning making that visual and linguistic semiotic modalities are codependent, Baldry and Thibault (2006) investigated how the codependence of verbal and visual recourses in science textbooks produce the multimodal meanings. Coffin and Derewianka (2009) analyzed layout in school history textbooks multimodally by applying Kress and van Leeuwen's (2006) the signifying system. Unlike traditional textbooks such as biology textbooks, history textbooks which are designed to lead students to master knowledge specific to academic disciplines, English language textbooks do not play the same role (Byrd, 2001). It is the language itself learned and practiced in textbooks (Kleckova, 2004). The initial purpose of ELT textbooks is to help students master linguistics skills through the use of different themes in daily life (Kleckova, 2004). Within the area of researching the materials or assessment for the subject of learning language, Unsworth and his colleagues (2006-2008) have researched the factors affecting the difficulty of students' multimodal reading from a focus of relations between text and image. Chen (2010, 2011) worked

on English textbooks used in Chinese Mainland and investigated how the visual and verbal semiotic resources are co-deployed to construe evaluative stance in the textbooks. Different from these previous studies, this chapter presents an empirical study on the representational meanings of images employed in the textbooks from a semiotic perspective. Drawing upon the SF-MDA, I will first explore the different the visual elements realizing representational meanings of visual resources in the textbooks, then adopting an ontogenetic view of these visual elements and trying to identify a longitudinal shift across the years of schooling. As all of visual resources in the textbooks are represented as images both in cartoons and photos, those images which function as illustration of the chosen texts in this project are extracted (See Chapter 5, Section 5.3 for textbooks and data chosen). In total this corpus consists of 356 images, extracted from 13 textbooks for Primary 4 students to Secondary 4 students in HK.

In order to understand the structure of the images across these textbooks, three components which realize representational meaning are analyzed: processes types, participants and settings (See Figure 7.1). The categories of process types proposed by Kress and van Leeuwen (2006) are adopted to group images into narrative processes and conceptual processes. A narrative visual image refers to the one where participants are connected by a vector and they are represented as doing something to or for each other (Kress & van Leeuwen, 2006: 59). A conceptual visual image represents participants in terms of their more generalized and more or less table and timeless essence, in terms of class, or structure or meaning (Kress & van Leeuwen, 2006: 79). In order to obtain a full picture of participants in the images, we are going to explore the participants from three different perspectives: 1) whether participants in the image are presented as individual or group; 2) whether participants in the image are represented specific or generic; 3) whether participants in the image are cartoonic or photography. The first two perspectives are

adopted from the categories of the visual representation of social actors, proposed by van Leeuwen (2008: 143-144), examining whether the participants are depicted as individuals or groups; specific or generic. The third perspective is discussed under “modality” in Kress and van Leeuwen (2006), but it is included in our discussion because it is an important dimension of character representation that shows clear ontogenetic change. The final elements of exploring representational meaning of images are the settings, locative circumstances which relate other participants to a specific participant (Kress & van Leeuwen, 2006: 72). Since the users of our textbooks are the students in Hong Kong, we regard the settings of representing process types operated within Hong Kong as local settings, and those operated outside Hong Kong as non-local settings. Based on this system network, we are going to explore the representational meanings of images in the chosen textbooks from an ontogenetic view, both in qualitative terms and quantitative terms.

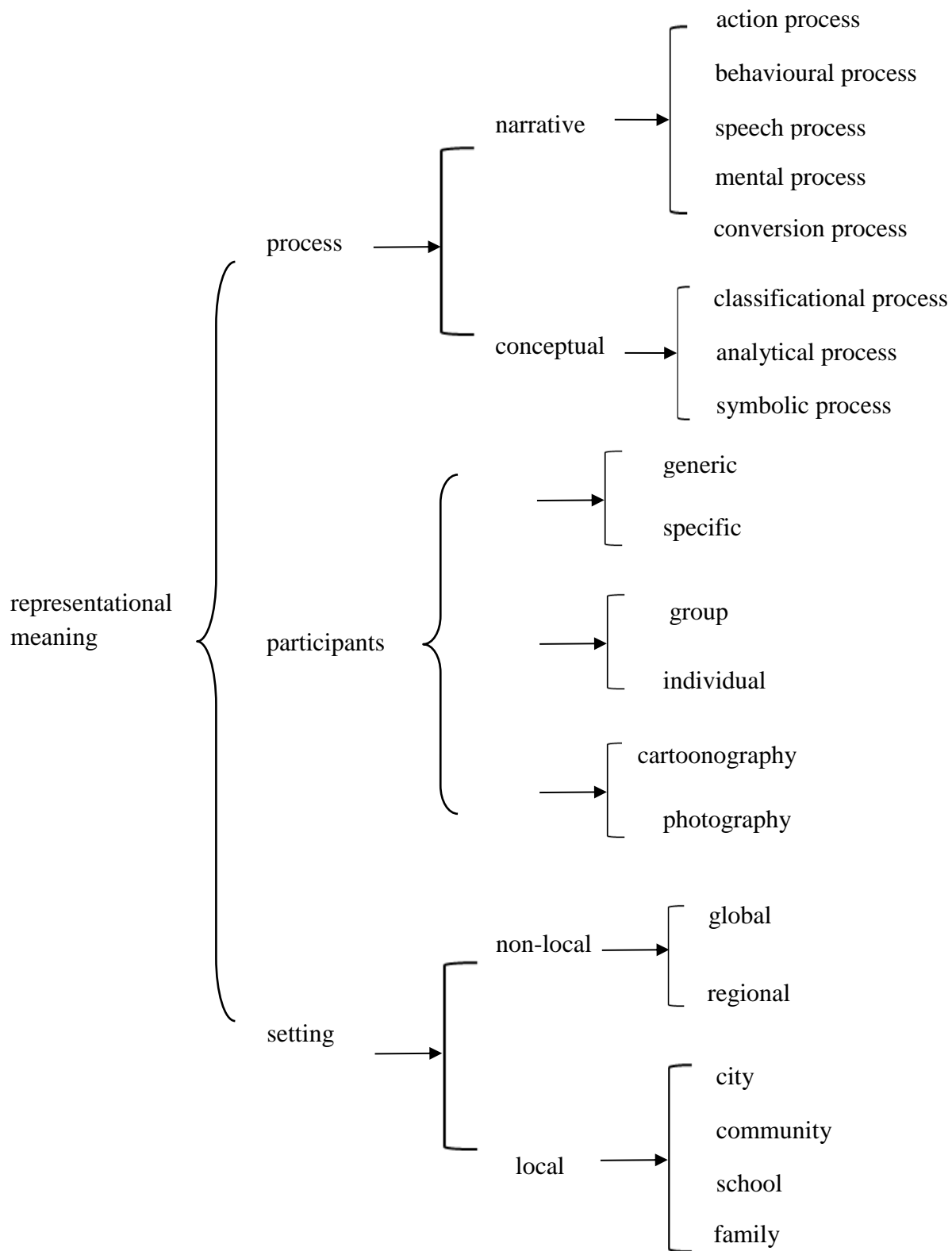


Figure 7.1 Elements for exploring representational meaning of images in ELT textbooks

## 7.5 The Changing Structure of Images: An Ontogenetic Analysis

Drawing upon the dimensions of representational meanings introduced above, we are now able to elucidate the multiliteracies development reflected in the textbooks. It is found that most of the images in primary textbooks represent narrative processes, where participants are depicted mostly as individual and specific, mostly operating with local settings. As for secondary textbooks, most of the images represent conceptual processes, where participants are depicted mostly as group and generic, mostly operating with non-local settings. The findings are elaborated with both concrete examples and quantitative results in this section.

### 7.5.1 Process types

Figure 7.2 is the image included in the textbooks for Primary 4 students (Pearson Education Asia Limited, 2010b: 33), describing the situation when a stronger boy who tried to help a smaller boy who just fell down. The smaller boy explained the reason of his falling in the speech bubble: a naughty boy was chasing him. This image represents two process types together, namely, actional process and speech process. The action of the stronger boy's extending his hand to the slimmer boy represents "narrative action process", and the speech bubble projected by the slimmer boy is an instance of "narrative speech process". Most of the images included in the textbooks for primary schooling are similar with this example. They are mostly depicted in either short stories or daily conversation in family or at school. Most of them use images with "narrative action process" to represent the action between different participants, and use images with "narrative speech process" to project the content of the conversations.



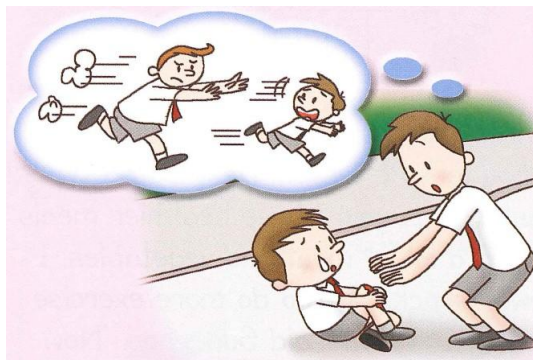


Figure 7.2 An example of “narrative action process” and “narrative speech process”, extracted from the textbook for Primary 4 students

As for secondary textbooks, most of the images involve “conceptual analytical process”. For instance, Figure 7.3 is the photo of Oscar Pistorius, a South African spirit runner, known as “the fast thing on no legs” (Pearson Education Asia Limited, 2009: 202). This photo is used to accompany a biography of Oscar Pistorius in the textbooks, providing a detailed introduction of him. Most images in secondary textbooks are this kind of “conceptual analytical process”, which are portraits of human-being, animals, or objects. They serve as illustrations of the linguistic texts that aim to demonstrate introductions of them. They are designed to provide visual support to the students, letting them have vivid visual photos of what they are required to know about.



Figure 7.3 An example of “narrative analytical process” extracted from the textbook for Secondary 4 students

We also analyzed the development of one particular process type from an ontogenetic view, namely, speech process. Across all the years of schooling, there is a tendency of moving from drawing as projected speech to text as projected speech. Figure 7.4 shows one speech process in Primary 4 textbook (Pearson Education Asia Limited, 2010a: 1). It is included in the text where two friends are talking about their hobbies. One of the speakers said he likes doing crafts, collecting cards and going ice-skating. In this image, three pieces of drawing are used to describe what the speaker said. In Figure 7.5 (Pearson Education Asia Limited, 2009: 173), whereas, what the speaker said is represented as linguistic texts included in a speech bubble.



Figure 7.4 An instance of “speech process” extracted from the textbook for Primary 4 students

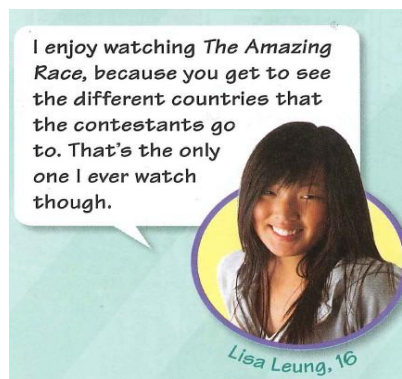


Figure 7.5 An instance of “speech process” extracted from the textbook for Secondary 4 students

Quantitative analysis shows that the process types of images included in primary textbooks are mainly “narrative action process”, “narrative speech process” and “narrative behavioural process”. As for secondary textbooks, most of the images included are “conceptual analytical process” (See Figure 7.6). Figure 7.6 shows there is a movement from “narrative process”, representing actions and movement by human-being, to “conceptual process” from primary levels to secondary levels, representing objects and the portraits of human-being or animals. We could argue that in the early years of schooling, students are exposed to more images representing “what’s happening” between people, which guide them to read and think about “what’s going on”. In the later years of schooling, students are engaged with more images representing “what they are”, which lead them to explore the property of these objects, human-being or animals.

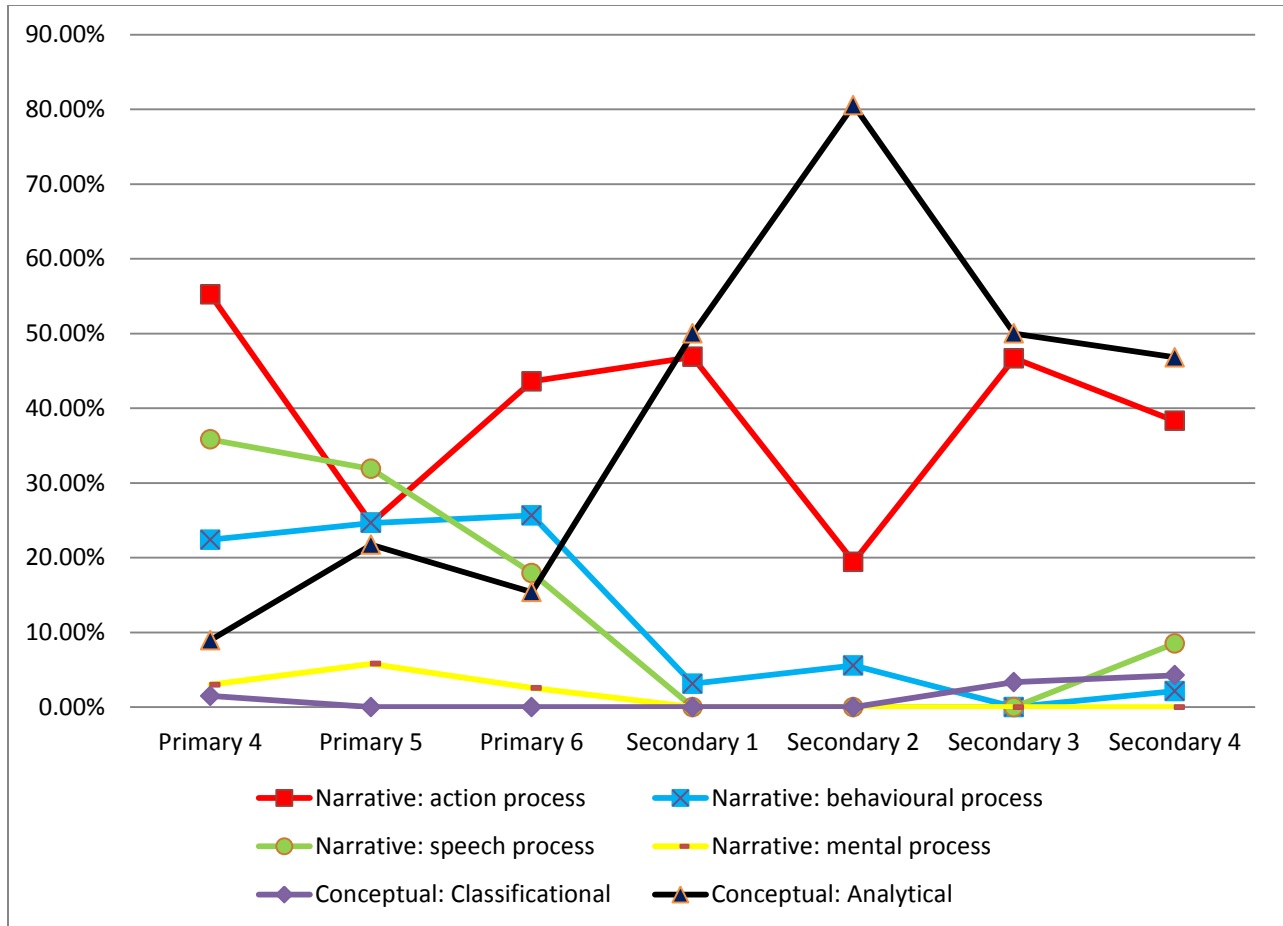


Figure 7.6 Process types of images extracted from textbooks across the years of schooling (N=356 images)

### 7.5.2 Participants

In this section, we are going to explore the representation of participants from three different perspectives: 1) whether they are presented as individual or in group; 2) whether they are represented specific or generic; 3) whether they are cartoonic or photography.

Figure 7.7 is an image from Secondary 2 textbook (Pearson Education Asia Limited, 2011: 64). The linguistic text is used to introduce how Ryan, a Canadian teenager, raised money to build wells for people in Africa. This image is used to depict Ryan and his well, with a caption “Ryan

is very proud of the wells he has built”. Here, “Ryan” is the participant of this image, who is presented as individual character rather than a group of people. Most images included in the textbooks for primary and early secondary schooling are of a similar nature. The participants in the images are depicted as individuals, being used to represent one single character or several characters. The second example (See Figure 7.8) is extracted from Secondary 4 textbook (Pearson Education Asia Limited, 2009: 88). The linguistic text is the first web page of a school of hip-hop, providing the general introduction of this school. The image is placed next to the linguistic text and works as promotional picture to attract new members. The participants in the image are a group of people dancing together. All the participants are “homogenized” and their individual differences are diminished. They are depicted as group rather than individuals. Instead of representing a single or several characters, most of the images included in late secondary schooling are presented as group. When students are exposed to images like these, they are required to observe the similarities of a group of participants rather than exploring individual differences of several participants.

Figure 7.9 shows that participants in most of the images included in primary and lower secondary textbooks are individuated, while participants in most images in late secondary textbooks are in groups. From this perspective, students’ expected knowledge development is identified from exploring concrete individuals in primary school to observing abstract similarities of a group of things in secondary school.

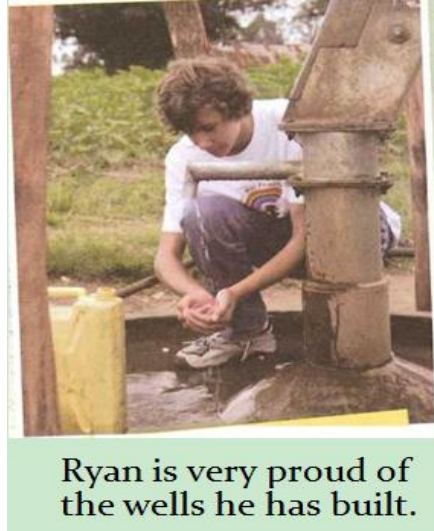


Figure 7.7 An example of participant represented as “individual” extracted from the textbook for  
Secondary 2 students



Figure 7.8 An example of participants represented as “group” extracted from the textbook for  
Secondary 4 students

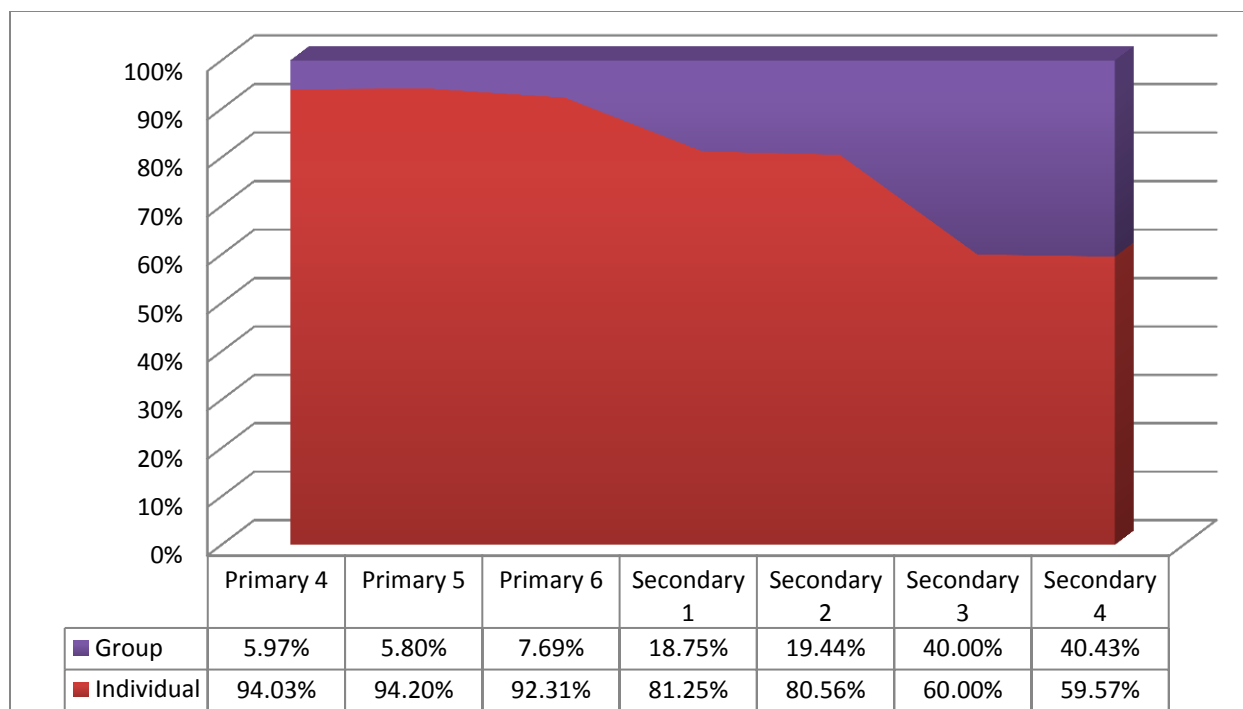


Figure 7.9 Participants (group/individual) in the images extracted from textbooks across the years of schooling (N=356)

Another perspective to explore the participants in the images is whether they are represented specific or generic. Figure 7.10 is an example from primary textbook (Pearson Education Asia Limited, 2010b: 33). The linguistic text is a dialogue between a little story named Simon and a stronger boy named as Superboy and the Superboy is recommending the little boy on how to become stronger. Following the recommendation of the Superboy, Simon finally becomes even stronger than Superboy. This image is used to show that the little boy was able to run faster than the strong boy, after doing a lot of exercises and having a healthy diet. These two participants in the image are represented as specific individuals. Most of the images from primary textbooks are similar to this example, with participants being depicted specific individuals.

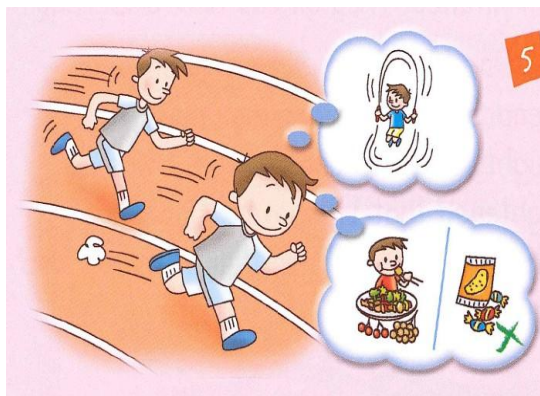


Figure 7.10 An example of participant represented as “specific” extracted from the textbook for  
Primary 4 students

The following image, Figure 7.11, however, is different from the above one. It is extracted from the text which introduces one kind of living creature in Australia, koala (Pearson Education Asia Limited, 2009: 61). The linguistic text demonstrated a general introduction of koala, including their sleeping habits and their furs. The image of koala accompanying the linguistic text is used to give students a vivid picture of this living creature. Therefore, the image represents the animal of koala, rather than this specific koala, that is, participant is depicted generically rather than specially. Most of the images from secondary textbooks are of a similar nature. To some extent, students are expected to view those participants from a generic perspective rather than treating them as specific individuals. Figure 12 shows the statistical results of images included in the textbooks from Primary 6 to Secondary 4. Starting from Secondary 1, most of the images tend to depict their participants generically. In other words, students are gradually expected to learn the generalizations of particular types, rather than only studying specific individuals.





Figure 7.11 An example of participant represented as “generic” extracted from the textbook for Secondary 4 students

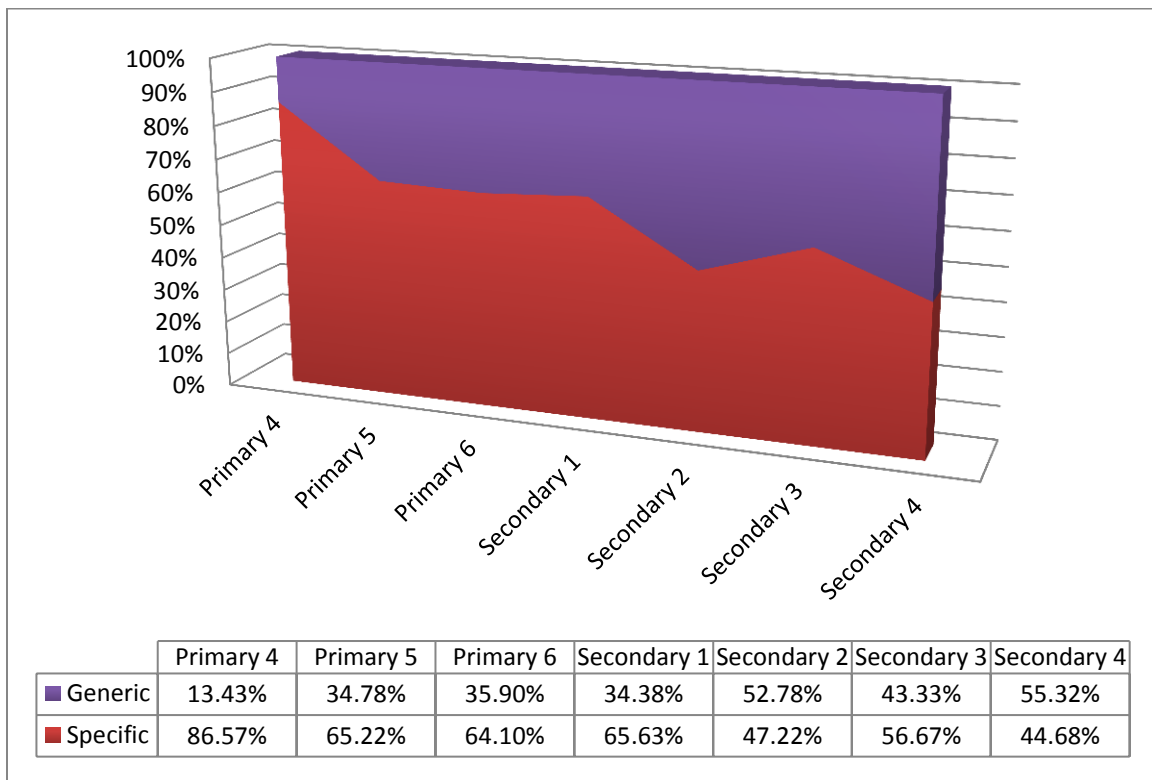


Figure 7.12 Participants (generic/specific) in the images extracted from textbooks across the years of schooling (N=356)

The third perspective to explore the representation of participants is whether the image is cartoonic or photography. Figure 7.10 discussed above is an example extracted from the textbook in primary school, with all the participants in the image presented cartoonically rather than photographically. Nearly all the images in the primary textbooks are similar to this example. Most of the images in the secondary textbooks, however, are presented as real photos. Figure 7.11 discussed above is an example of the image extracted from textbooks for Secondary 4 students (Pearson Education Asia Limited, 2009: 61). The participant in the image is presented as real photos. In other words, through all the years of schooling, students are expected to read cartoonic images in the early years of schooling and then photography images in the later years.

Figure 7.13 shows that most of the images included in the primary textbooks are cartoonic, whereas most of the images included in the secondary textbooks are photography. It is interesting to find that students may face the dramatic changes in Secondary 1 because of the huge shift from primary textbooks to secondary textbooks: 89.74% of images in Primary 6 textbooks are cartoonic, while there are only 9.38% cartoonic images in Secondary 1 textbooks.

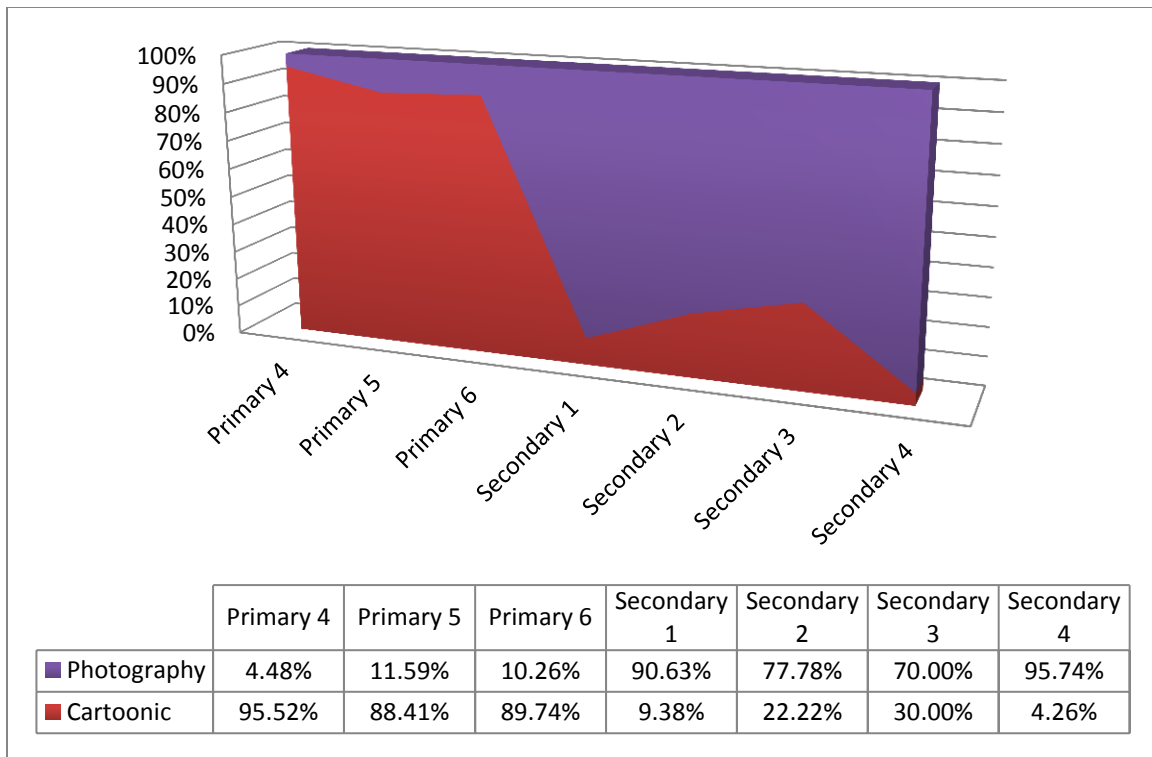


Figure 7.13 Participants (photography/cartoonic) in the images extracted from textbooks across the years of schooling (N=356)

### 7.5.3 Setting

In order to explore the settings of the images included in the textbooks and to trace the developmental path of them across the different years of schooling, we categorize the settings into six categories: the local settings, including the settings of family, school, community, and city; and non-local settings, including regional settings and global setting.

The following example (Figure 7.14) is an image extracted from Primary 4 textbooks (Pearson Education Asia Limited, 2010a: 50). The image describes the situation that two kids are trying to catch the photo in their mom's hands. There is a couch in the background, illustrating they are at their home. Therefore, the setting of this image is categorized as family. Figure 15 depicts three students looking at one photo and happily talking about it. In the background of this image, there

is a stretch of meadow and a basketball stand (Pearson Education Asia Limited, 2010a: 2). The school uniforms of these three students and the basketball stand tell that it is at school where they are having this conversation. The setting of this image is categorized as school. Most of the images in the textbooks for Primary 4 students tend to use settings of family and school.



Figure 7.14 An example of family setting extracted from the textbook for Primary 4 students

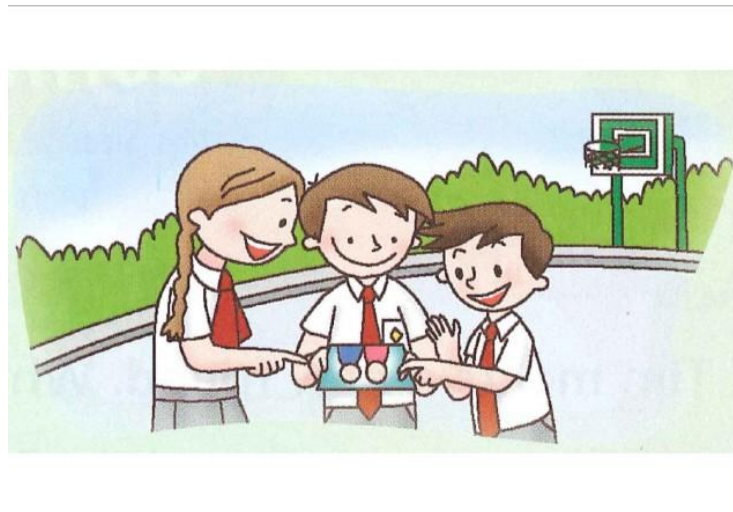


Figure 7.15 An example of school setting extracted from the textbook for Primary 4 students

Other than the settings of family and school, which are familiar to students, there is another familiar category, namely, community, where they develop their interests or hobbies. For instance, Figure 7.16 represents a group of young people who are Cosplay fans (Pearson Education Asia Limited, 2009: 6). The setting of this image describes the community where they are able to share their interests and develop this interest together.



Figure 7.16 An example of community setting extracted from the textbook for Secondary 4 students



Figure 7.17 An example of city setting extracted from the textbook for Secondary 4 students



Figure 7.18 An example of regional setting extracted from the textbook for Secondary 4 students

Figure 7.17 depicts a shopping mall in Hong Kong, which is the local context for the textbook users (Pearson Education Asia Limited, 2009: 4). It is categorized as the setting of city (local).

Other than city settings, some of the images in the textbooks have the settings of other regions.

For instance, Figure 7.18 describes the market of Australia (Pearson Education Asia Limited,



2009: 60). These settings are less familiar to textbook users compared with family, school, community and city. Images that have settings of other regions are classified within the settings of region (non-local).

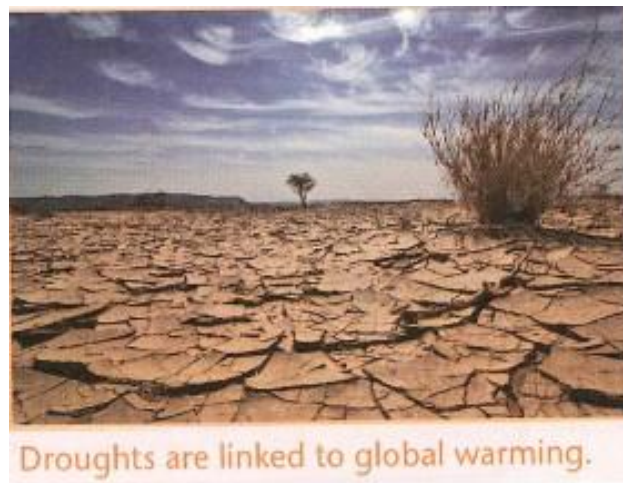


Figure 7.19 An example of global setting extracted from the textbook for Secondary 4 students

The final category is the kind of images which do not depict the settings of any particular place, but the global context. For instance, Figure 7.19 is illustrated with a text introducing the status-quo of global environmental problems, including global warming (Pearson Education Asia Limited, 2009: 144). Figure 7.19 is used to demonstrate one of the possible consequences of global warming, droughts, with the caption of "Droughts are linked to global warming". Both the dry earth and the blue sky is not used for representing the dry earth and the blue sky in any particular place, but for depicting any dry earth and blue sky around the world, addressing that droughts are the global problems. This qualitative analysis will be complemented with the following quantitative analysis, leading to our conclusion and discussion.

It is found that most of the images in primary textbooks operate within local settings (including the settings of family, school, community and city), whereas most of the images in secondary textbooks operate within non-local settings (including regional settings and global settings). Figure 7.20 presents the ontogenetic development of the settings of all the images in our data. There is a very interesting ontogenetic shift within primary textbooks: more images in lower levels of primary textbooks, i.e. Primary 4, operate within local settings (including the settings of family, school, community and city), but more images in higher levels of primary, e.g. Primary 5 and Primary 6, operate within non-local settings (including regional and global settings). This ontogenetic shift from local settings to non-local settings also exists in secondary schooling. More images in junior secondary textbooks (i.e. Secondary 1, 2, 3) operate within local settings, especially in the settings of city. When it comes to senior secondary school (i.e. Secondary 4), most of the images have non-local settings, including regional and global settings. However, the transition between primary school and secondary school does not follow this ontogenetic shift. It is found in primary 6, more images operate within non-local settings (with the setting of region as 41.03% and the setting of global as 25.64%) but in secondary 1, the majority of the images operate within local settings (with the setting of city as 46.88%). This discontinuance from local settings to non-local settings between primary and secondary textbooks implies the ontogenetic shift is helical rather than linear. The ontogenetic development of students' exposure from local settings to non-local settings is a linear sequence of learning steps, but helical progression.



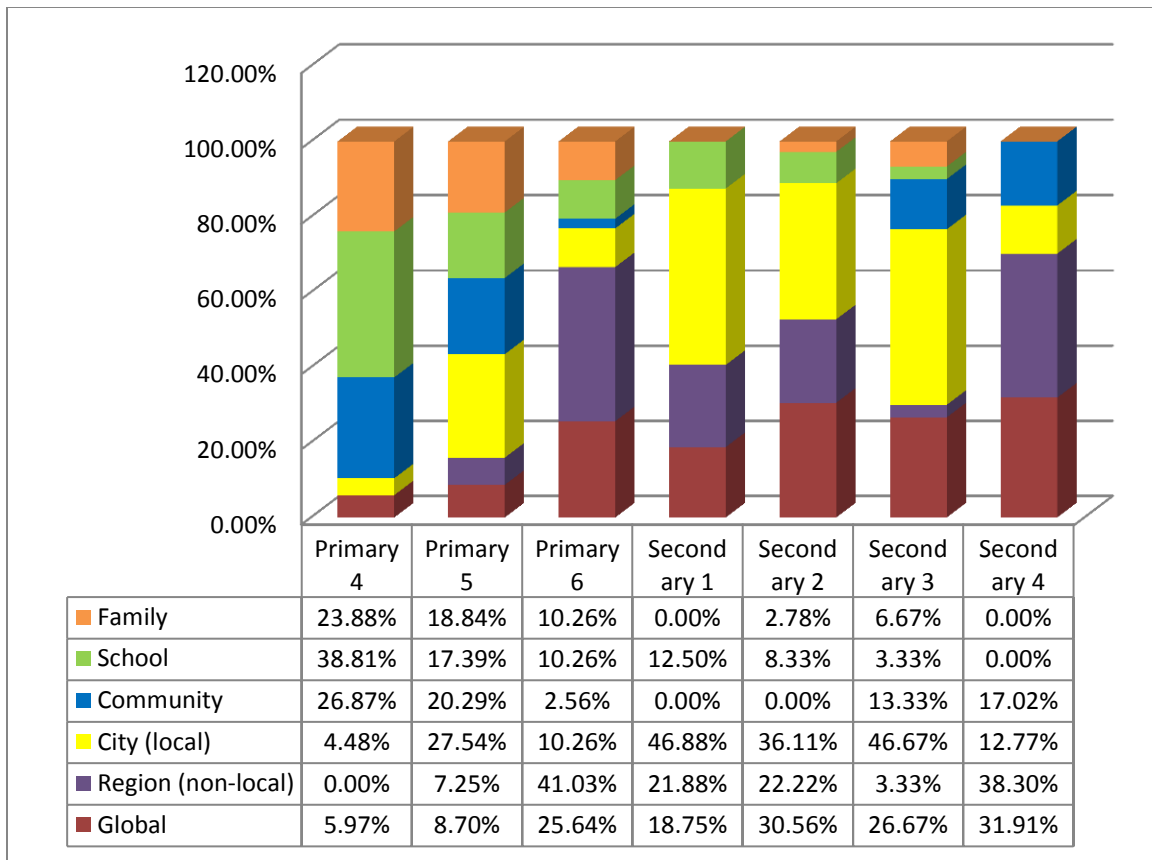


Figure 7.20 Settings of the images extracted from textbooks across the years of schooling

(N=356)

## 7.6 Image Structure and Registerial Change

In order to further explore the knowledge construction of those images in the textbooks, in this section, I move up to the level of register and examine the relations between socio-semiotic activities of the verbal texts and process types constructed by the accompanying images. As presented in Chapter 6, Section 6.1.2.1, all the linguistic texts in the textbooks are analyzed to investigate the socio-semiotic processes that they operate in, based on the eight socio-semiotic processes developed by Matthiessen (2014). All the images analyzed in this chapter are accompanying illustrations of those linguistics texts. In this section, I am going to explore

whether the socio-semiotic processes that verbal texts operate in relate with process types construed by the accompanying images, and how verbal text and images co-construct the ontogenetic knowledge change over the years of schooling. As shown in Figure 6.9 in Chapter 6, the texts operating within the sharing sector constitute the most frequent ones through all primary levels (Primary 4-6). A great proportion of the texts operating within the recreating and doing sectors are included in primary levels, but nearly none is included in secondary levels. Starting from Secondary 2, texts within the reporting sector are the majority (Secondary 2-4). Texts within the expounding, exploring and recommending sectors accounts for a higher proportion when moving to senior secondary (Secondary 4). The ontogenetic trace of the verbal texts in terms of socio-semiotic processes thus is represented moving from doing, sharing and recreating in upper primary level, gradually to reporting in junior secondary level, and then gradually to expounding, exploring and recommending in senior secondary level.

This longitudinal change is co-constructed by process types of images (see details in Section 7.5.1) together with verbal text. For the process types of images included in the textbooks through all years of schooling, there is a progression from “narrative process” which represents actions and movements by human-being in primary levels, to “conceptual process” representing objects and the portraits of human-being or animals in secondary levels. Most of the images with narrative processes are used to “share” and “narrate” “what’s going on” in primary textbooks, while most of the images with conceptual processes are used to “report”, “expound” and “explore” the property of the representing objects, human-being and animals in secondary textbooks. It implies students’ cognitive learning challenge of moving from how to interact with people in the early levels by indicating a number of actions in the images, and then to how to gain educational knowledge in the higher levels by providing different kinds of phenomenon.

The images also contribute to change of the sphere of knowledge from concrete observation, commonsense in early years of schooling, to abstract understanding and uncommonsense in later years of schooling (Figure 21). It can be argued that images as visual recourses in the textbooks play an essential role in knowledge construction through the years of schooling, and call for an in-depth understanding of visual recourses in the textbooks.

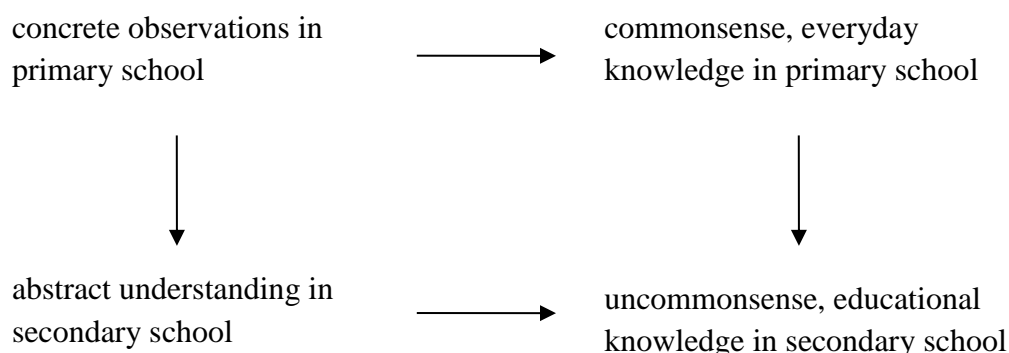


Figure 7.21 the sphere of knowledge changes in schooling

## 7.7 Conclusion

Continuing recent developments in social semiotics that explored multimodal resources in language education, this chapter within this PhD project investigates the representational meanings of visual images in EFL textbooks. Complementing studies that address the interpersonal and textual meanings of the images in textbooks, we developed a semiotic framework that highlights the representational meaning potential of visual images in teaching materials. The explicit framework of image structure enables us to elucidate the ontogenetic change of visual meaning making in language textbooks through all the years of schooling. It is found that the multiliteracies development reflected in the textbooks from primary schooling to secondary schooling in Hong Kong moves from the major exposure to visual images with

narrative process types, where participants are depicted as individuals, specifications and cartoons, operating within local settings, in primary schooling, to the major exposure to visual images with conceptual process types, where participants are depicted as groups, generalization and photos, operating within non-local settings, in secondary schooling. This change at the level of image structure then contributes to the registerial change from narrating to expounding, in accordance with students' cognitive ability and field of experience. The comprehensive investigation, both qualitatively and quantitatively, not only addresses how knowledge is constructed from representation of visual resources in textbooks, but also helps us to gain an in-depth understanding of the ontogenetic processes through which learners engaged with those materials. In the context of Hong Kong schooling, this investigation successfully identified the solid connection between English Language KLA and Visual Arts KLA, leading to the direct application to cross-curricular approach. The ontogenetic shift explored in this project also enables teachers to anticipate potential learning difficulties and to provide appropriate support to students at the different stages.

# Chapter 8 Extending to college textbooks analysis

## 8.1 Towards an ontogenetic and systemic-functional view of College English

### Textbooks

Drawing on the theoretical SFL framework introduced above, this extending study reported in this chapter analyze texts in a sequence of College English textbooks used in China and tends to chart the progression through registers from one level to another. The data of this study is the whole series of four College English textbooks, *New Horizon College English*, for tertiary level students published by Foreign Language Teaching and Research Press between 2011 and 2012, which are used for the first two academic years for university students of non-English majors. All of the 40 texts used for reading comprehension in the successive textbooks with 33,035 words in total are surveyed. This study seeks to determine whether it is possible to discern learning paths through the years of college learning based on the selection of “input” texts. Therefore, the texts chosen for the textbook were first mapped out in terms of two major parameters of field within the context they operate in: the nature of socio-semiotic activities and domain experience, followed by a complementary lexico-grammatical analysis of the 40 texts. The purpose of the analysis is to discuss how meaning-making resources are expanded through the years and identify the potential linguistic difficulties of students’ comprehension (see the detailed introduction of functional grammar in Halliday & Matthiessen, 2004). All of the 40 texts are exported to a database and analyzed according to the principle of functional grammar.

## 8.2 The socio-semiotic activities and the domain of experiences: The move from “the realm of meaning” to “the realm of matter”

All the texts in the database are analyzed to explore their socio-semiotic processes and the domain of experiences they are engaging with. Figure 8.1 demonstrates the analysis result of different socio-semiotic processes students encounter within textbooks. The different domains of experiences, such as life experiences, social issues, engineering, bio-chemistry, are categorized to differentiate the texts with different topical orientation.

Unlike the developmental path identified during students’ learning periods from early primary to later secondary school, which features a path from commonsense, everyday knowledge to uncommonsense educational knowledge (Christie & Derewianka, 2008; Christie, 2012), students in universities are engaged with abstract feelings at the very beginning. In the textbook for College English Level 1, the sharing texts (sharing personal experiences and values), which constitute half of the whole texts in this book, are mainly associated with life experiences describing personal emotions and exploring moral standards. For instance, the text in unit 6 of this book (Zheng, 2011a: 128-130) describes the author’s experience of being a trashman and looked down upon by neighbours and relatives. Likewise, the author of the text in Unit 10 (Zheng, 2011a: 230-232) shares his personal moral standards taught by his parents. All of these texts request students’ abstract understanding of life and society. This is also true of the sharing and exploring texts in the textbook for College English Level 2, but with a more expanded domain of experiences, such as one text that introduces people’s different attitudes toward time in the United States (Zheng, 2011b: 2-4) and another text tells about the love between an athlete and his coach. All of these texts in Level 1 and Level 2 textbooks, which are associated with life experiences and culture, can be identified within the field of sociology, in Bernstein’s terms a

“horizontal knowledge structure” (Bernstein, 2000; Martin & Matthiessen, in press). Halliday (2005) also discusses this as the phenomenal realm of meaning, rather than of matter, that we as human beings inhabit to conceptualize the processes that take place in human consciousness.

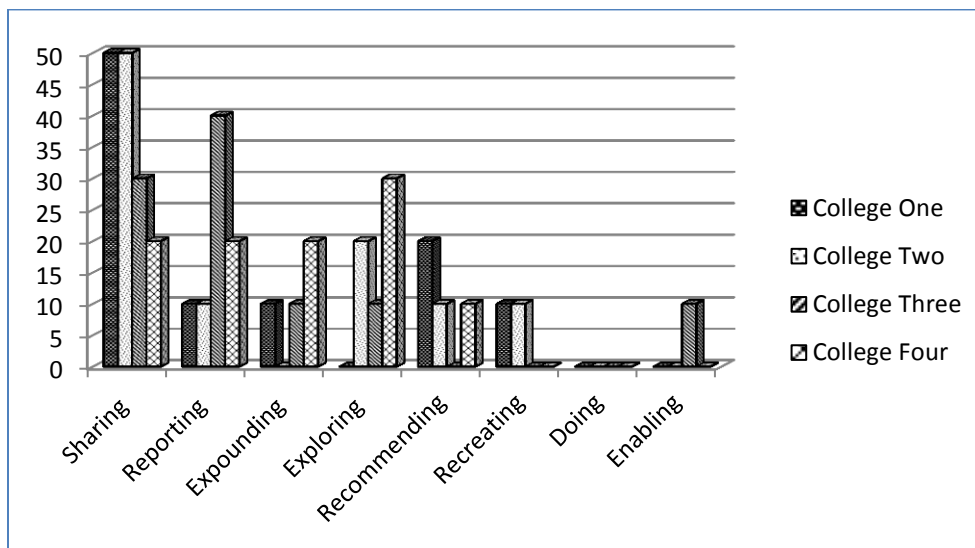


Figure 8.1 A registerial profile (in terms of socio-semiotic processes) of all the texts in New Horizons College English Textbooks used in China.

With regards to the textbooks for College English Level 3 and Level 4, the result shows that students began to encounter more expanding texts and reporting texts at these two levels (see Figure 8.1). Expanding texts in the textbooks of these two levels explain more general class phenomena, such as bio-chemical theory applied in cloning; and reporting texts report particular phenomena, such as the particular historical period of the telecommunication revolution (Zheng, 2011c: 202-204). All these texts could be categorized within the field of natural science and engineering.

The characteristics of these topics from the fields of natural science and engineering can be associated with Bernstein’s terms of “hierarchical knowledge structure” and Halliday’s “the

phenomenal realm of matter”. Moreover, a parallel can be seen with the topics from sociology, which is characteristic of Levels 1 and 2, and Halliday’s term “the phenomenal realm of meaning” (see Table 8.1).

Table 8.1 Domain of experiences of texts in New Horizons College English Textbooks used in China

| Levels for College English Textbooks | Areas of Topics for Texts       | Association with terms   |
|--------------------------------------|---------------------------------|--|
| College Level 1 and Level 2          | Sociology                       | “the phenomenal realm of meaning” (Halliday, 2005: 59)<br><br>“horizontal knowledge structure” (Bernstein, 2000)       |
| College Level 3 and Level 4          | Natural science and engineering | “the phenomenal realm of matter” (Halliday, 2005: 59)<br><br>“hierarchical knowledge structure” (Bernstein, 2000: 161) |

After the completion of the analysis of the socio-semiotic processes and domain of experiences of all the texts in the textbooks, two possible learning paths of the subject of English in tertiary learning become apparent. The first path is the move from sharing to exploring, and then to reporting and expounding. The second one is the move from the realm of meaning to the realm



of matter. English, as a subject of learning language, is engaged with different subject-orientation knowledge with different domains of experiences. Through the years of learning English, students are expected to expand their registerial repertoire from sharing and exploring the realm of meaning to reporting and expounding the realm of matter. However, a central issue that textbook designers and curriculum planners need to take into careful consideration is to what extent could these texts in the textbooks equip these students—non-English majors—with a linguistic ability for their possible future abroad study or vocational tasks.

### **8.3 Lexico-grammatical analysis**

Halliday and Matthiessen (2004) proposed three metafunctions which lexicogrammar of every language are dedicated to, that is ideational, interpersonal, and textual metafunction. Based on the framework of these three metafunctions, the lexico-grammatical analysis was conducted to explore how the linguistic resources of students' reading have been expanded through the years of tertiary learning. This paper also discusses how this information then supports the aforementioned expanded registerial repertoire (see detailed introduction of metafunction in Halliday & Matthiessen, 2004).

#### **8.3.1 Textually: Thematic analysis**

The system of THEME belongs to the textual metafunction of language, which explores the organization of information within clauses and concerns the current point of departure in relation to what has come before in the text (Halliday & Matthiessen, 2004). This point of departure is called Theme and the rest of the message of the clause is called Rheme. The following table presents the Theme-Rheme structure for one example clause in the textbooks (Zheng, 2011a: 3).

Table 8.2 Example of Theme-Rheme Structure

|                          |   |
|--------------------------|---|
| and, more importantly, I | could say anything I wanted in English. |
| <b>Theme</b>             | <b>Rheme</b>                            |

Textual Theme, interpersonal Theme, and topical Theme are identified in Table 8.2. These additional categories identify the elements in the multiple Theme (as opposed to simple) which are textual, interpersonal, or experiential in function respectively.

Table 8.3 Example of Multiple Theme and Rheme

|                |                      |                |   |
|----------------|----------------------|----------------|---|
| and,           | more importantly,    | I              | could say anything I wanted in English. |
| <b>textual</b> | <b>interpersonal</b> | <b>topical</b> | <b>Rheme</b>                            |
| <b>Theme</b>   |                      |                |   |

The thematic analysis result of all the texts in these four textbooks has revealed that the instances of textual Theme decreased when moving from tertiary lower levels (Level One and Level Two) to upper levels (Level Three and Four), while the instances of topical Theme have increased by more than 5% when comparing the results of lower levels and upper levels (see Figure 8.2). Referring back to the results of registerial profile in these textbooks discussed in the above section, this tendency of more textual Theme in the lower level and more topical Theme in the upper level is not that surprising. More textual Themes like temporal conjunctions “*then*” and “*later*” serve to unfold the events in most of the sharing texts in Level One and Level Two. The texts in Level Three and Level Four tend to start with topical Themes straightly more often instead of using textual Theme to introduce the textual relations between sentences. The topical Themes contain key terms which the expounding and reporting texts are about to explain and

introduce to the readers. These findings imply that students in Level Three and Four have to digest the text and infer the logical relations between sentences to a greater extent than at Level One and Two. Additionally, this information also predicts where the learning difficulty will be located, informing the teachers about the need of scaffolding.

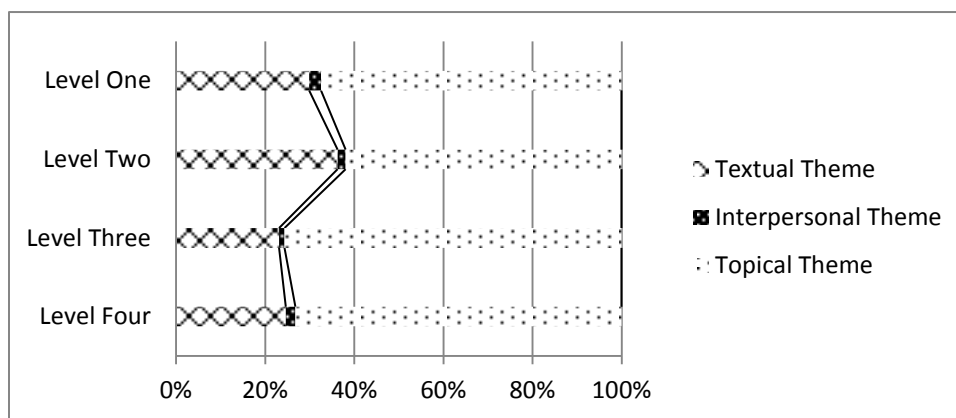


Figure 8.2. The relative frequency of different types of Themes in all the texts in College English Textbooks used in China.

### 8.3.2 Interpersonally: Attitudinal expressions analysis

This section explores the different devices of attitudinal expressions in all the texts across the tertiary levels. Most of the texts in Level One of the College English textbook use “simple adjectives” to realize the author’s attitude:

*So, once again, although for different reasons, I was **afraid** to speak (Zheng, 2011a: 3).<sup>1</sup>*

At upper levels, Modal Adjuncts, often realized by adverbs, are used to add attitudinal color in the text. Sometimes these adjuncts occur at the beginning of a statement as an interpersonal Theme, such as “naturally” in the following example.

*Naturally, the name change didn't cause Debbie/Lynne's professional achievement – but it surely helped if only by adding a bit of self-confidence to her talents (Zheng, 2011b: 129).*

Interestingly, moving towards the upper level of tertiary learning, an increased objectivity of the discourse is found in the textbooks. The non-appearance of the author's identity in the texts of Level Three and Level Four reveals the author's successful detachment of himself from the field and from the potential readers by demonstrating the authority of the sources in these levels.

*One expert believed the situation could be comparable to what occurred in the 16<sup>th</sup> century, when Europeans puzzled over how to classify the unfamiliar inhabitants of Americans, and endlessly debated whether or not they were humans (Zheng, 2011c: 204).*

The analysis in this section has shown that the development of attitudinal expressions in the textbooks has shifted through three stages: (1) the move from the use of adjectives to express personal feelings, (2) to the use of modal adjuncts to emphasize personal evaluation, (3) and then to the use of authority of the sources to evidentialize the information. This development supports the points discussed about expanded registerial repertoire in the above section. The progression shows how interpersonal expressive resources develops to build up the movement from sharing personal feelings, to exploring judgment and evaluation, and to expounding general knowledge by detaching the author himself from the potential readers.

### 8.3.3 Ideationally: Logico-semantic relations analysis

The clause complex is formed by the clauses linked to one another by means of logico-semantic relation (Halliday & Matthiessen, 2004). Compared with studies conducted on the linguistic abilities for secondary school students (e.g. Christie, 2012), this section demonstrates the expansion of logico-semantic resources in the tertiary level found in College English Textbooks. One possible critical point for students' reading comprehension development would be the period when students encompass more non-finite clause complex with implicit logico-semantic relations (see discussion in Halliday & Matthiessen, 2004: 420).

*Unable to engage in many activities, my father still tried to participate in some way*  
(Zheng, 2011a: 55).

*Extremely angered by her remarks, he sued the young man's mother, asserting that she had damaged his "good" name* (Zheng, 2011d: 3).

These examples are presented without any prepositions like *by*, *to*, *even though*, which leave the logico-semantic relations ambiguous and need teachers' support of discussing in the real context.

Another potential reading comprehension difficulty identified is how to process the clause complex with several layers of nesting and embedded clauses:

*Places [[that until recently were deaf and dumb]] are rapidly acquiring up-to-date telecommunications [[that will let them promote both internal and foreign investment]]* (Zheng, 2011d: 80).

The example above presents one simplex containing two embedded clauses, marked as "[[" and "]]", to modify "places" and "telecommunications" respectively. More instances of this type of example are often found in the textbooks. The following is the one of clause complex involving

several layers of nesting and embedded clause.

*In these poor countries, as in American inner cities and on reservations, money that should be spent for food goes instead to the tobacco companies; over time, people starve themselves of both food and air, effectively weakening and hooking their children, eventually killing themselves (Zheng, 2011b: 103).*

Table 8.4 Example of Clause Complex Involving Several Layers of Nesting

|           |           |  |
|-----------|-----------|--|
| <b>1</b>  |           | [1.1] In these poor countries, as in American inner cities and on reservations, money [[that should be spent for food]] goes instead to the tobacco companies; |
| <b>×2</b> | <b>α</b>  | [1.2] over time, people starve themselves of both food and air,  |
|           | <b>×β</b> | [1.3] effectively weakening and hooking their children,  |
|           | <b>×γ</b> | [1.4] eventually killing themselves.   |

Based on the systems of clause complexing (Halliday & Matthiessen, 2004: 373), Table 8.4 shows the taxis and the logic-semantic relations of this clause complex: the paratactic clause complex, notated as “1” and “2”, indicates the causative relation (one category of enhancement, notated as “×”) between where money goes and people’s miserable lives. The continuing paratactic clause 2 is a hypotactic clause complex itself, where β clause [1.3] enhances α clause [1.2] by result and γ clause [1.4] also enhances β clause by result.

Both of these two potential linguistic difficulties demonstrate grammatically where the possible reading obstacles are, which implies the need of teachers’ scaffolding and support.

Some of the hypotactic dependent clauses provide a marked Theme of clause complex by extending the thematic principle—introduced in section 4.2.1—from the clause level to the clause complex. These hypotactic dependent clauses function as an orienting context for the dominate clauses (Halliday & Matthiessen, 2004: 392-395). Table 8.5 illustrates one type of example in the textbook (Zheng, 2011a: 54).

*When I was growing up, I was embarrassed to be seen with my father* (Zheng 2011a: 54)

Table 8.5 Theme in Clause Nexus

|                           |   |
|---------------------------|---|
| When I was growing<br>up, | I was embarrassed to be seen with my<br>father. |
| <b>Theme</b>              | <b>Rheme</b>                                    |

All the Marked Themes of the entire clause complex in the textbooks are extracted and their specific logico-semantic relations are analyzed based the framework of functional grammar (see Halliday & Matthiessen, 2004: 363-440). According to the results shown in Figure 4, in tertiary Level One, Level Two, and Level Three “dependent clause with time” as Marked Theme is often used to unfold the event in most of the sharing and reporting texts. In Level Four, however, “more dependent clauses with purpose, manner and reason” are often used as Marked Theme to illustrate the argumentative relations of the facts in most of the expounding texts. For instance:

*Using data collected by scientists over decades, the writers assembled profiles of hundreds of thousands of individuals from almost 2,000 groups* (Zheng, 2011d: 155).

(Dependent clauses with manner)

*And to ensure the populations were “pure”, the study was confined to groups that were in their present locations as of 1492, before the first major movements from Europe began – in effect, a genetic photo of the world when Columbus sailed for America (Zheng, 2011d: 155). (Dependent clauses with purpose)*

This ontogenesis of Marked Theme in the clause complex, moving from “dependent clauses with time” to “dependent clauses with purpose, manner and reason”, is also the manifestation of SFL’s principle of realization: how contextual meanings are realized in lexico-grammatical resources. Additionally, this ontogenesis supports the registerial profile, which is the movement from unfolding the event in the sharing and some reporting texts to explaining factual events in the expounding texts.

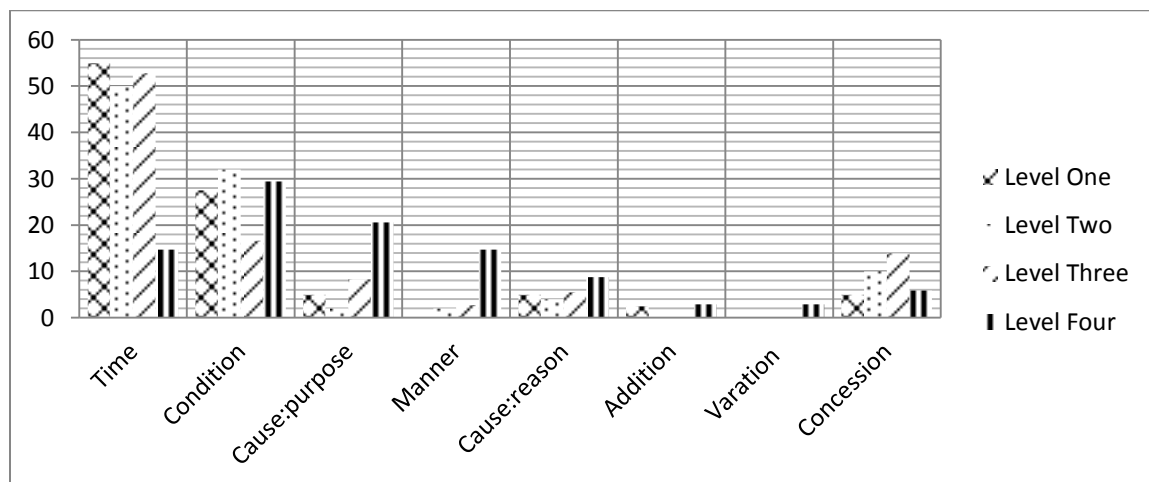


Figure 8.3. Marked Theme in the clause complex: the frequency of dependent clauses of different logico-semantic relations as Marked Theme

## 8.4 Conclusion

This exploratory study of ontogenetic and systemic-functional analysis on College English Textbooks begins to demonstrate some key semantic and lexico-grammatical features that appear



in the textbooks over the early years of learning English at the university level, and further shows how these features change over the various levels. This study reveals what linguistic capacity students need to marshal in order to understand the texts in the textbooks in their tertiary level. Overall, together with the move into more expanded registerial repertoires, more expanded linguistic resources need to be scaffolded through the years of universities. Education programmes are recommended to acknowledge this developmental trajectory involved in the ontogenesis of textbooks. Teachers are encouraged to explore intervening at critical points to support all students at the tertiary level.

This preliminary exploration has presented the potential value of systemic functional linguistics as a socio-semiotic model of language to analyze learning and teaching materials. This socio-semiotic perspective towards language and language learning also has, to some extent, implications for textbooks design, syllabus planning, and curriculum development.

# Chapter 9 Contributions, implications and future research

In this dissertation I conducted an extensive review of research in the area of ontogenesis in the field of systemic functional linguistics, I then established a theoretical framework and applied to my quantitative and qualitative analyses of 239 texts (both verbal texts and visual images) extracted from a series of Hong Kong English language education textbooks. In this final chapter, I bring my research and analyses together and review the most relevant conclusions. I follow this with a discussion of the theoretical contributions and pedagogical implications arising from my research. Lastly, I outline the limitations of my research and propose topics for future research and investigation.

## 9.1 Contribution

In Chapter 2, I reviewed the historical development of the textbook and the syllabus. In particular, I explored how the notion of “situation” was deployed over time and how it developed as systemic functional linguistics developed. I also outlined the contribution of systemic functional linguistics to the development of language education.

Of the available approaches I could have used to investigate language education, I chose an ontogenetic perspective for this study and used it to analyse a series of textbook used in the Hong Kong education system to teach students English in the primary through senior secondary grades. My review of other studies using the same perspective in the field, showed that they focused on contexts (such as the situations in which texts operate) or the lexicogrammar of the texts. I then compared and critiqued these approaches and found we lack the ontogenetic studies that explore

the relations between the contexts and the lexicogrammar of the texts as used in the field of systemic functional linguistics. This doctoral study aims to fill this gap in the English as second/foreign language context.

I also surveyed a selection of the frameworks used to describe the different situational types found in discourse, categorized them based on whether they started “from above” (using contextual variables) or “from below” (using lexicogrammar). This review provided solid justification for using Matthiessen’s registerial cartography framework as the basis for my study because not only does it start “from above”, covering three contextual variables (starting with field of activity and also touching on tenor and mode values), it also offers the potential to explore discourse from different angles such as from the perspective of lexicogrammar or “from below”.

Through my literature review and research and analysis of research on situation and theoretical frameworks, I have for the first time in the corpus of academic research in systemic functional linguistics brought forward this unique analytical lens through which to examine:

- 1) Exploration of the texts and images included in English language teaching textbooks from an ontogenetic perspective. Previous studies (e.g. Chen, 2010) attempted to explore the images in textbooks from an ontogenetic view but few investigated both texts and images in textbooks from an ontogenetic perspective.
- 2) Investigation of the development of language learning in second/foreign language contexts. Matthiessen (2009: 223) claimed that, “learners are developing multilingual meaning potentials, which can be modeled in interesting ways in SFL.” Previous studies explored language learning in first language contexts (e.g. Christie, 2012; Derewianka,

2003; Halliday, 1995; Painter, 1996); however this study contributes to the field by conducting research in the second/foreign language context.

- 3) Application of Matthiessen's registerial cartography to research conducted within the field of education using empirical methods, which resulted in the development of complementary quantitative and qualitative analyses.
- 4) Investigation of the representational meanings of images in English language learning textbooks used in the Hong Kong education system using multimodal discourse analysis as a theoretical foundation. This was achieved by proposing an analytical framework to explore the representational meanings of images in the textbooks. The results enabled analysis and articulation of the visual literacy expected of students throughout their years of schooling.

## **9.2 Educational implications**

The first educational implication of this doctoral study is the progression of contextual-semantic understanding across the years of schooling (see section 6.1). Analysis of the quantitative and qualitative data showed students' learning progresses move from commonsense through to educational language concepts across the years of schooling. The contextual development of the texts in English textbooks follows a helical progression of register from the upper Primary to mid Secondary grades (see section 6.1.2.1).

Another educational implication is to do with students' expected development as the complexity of grammar changes over the years of schooling based on the analysis of students' textbooks. Section 6.2 explicated that students in the primary levels are expected to master more instances of clause complexes and embedded clauses than they are expected to master in the upper levels. However, when students move from the primary to secondary level, rather than being expected

to master more instances, they are expected to master a greater number of intricate concepts such as hypotactic clauses, non-finite clauses, and clause complexes with deeper levels of nesting. Another milestone for students is learning how to use language to present abstract meaning, which takes place as they move from the primary to secondary level and are exposed to instances of grammatical metaphor. This shift in learning expectations is significant for teachers to know about in order to anticipate potential learning difficulties and provide the appropriate pedagogical support in primary and secondary school.

Another educational implication arises from understanding the relationship between learning targets proposed in the currently curriculum and the expected expansion of meaning-making capabilities. Chapter 6 analyzed the verbal texts in the textbooks and identified the change in the fields of experience contained in them. This analysis revealed that the ontogenetic track of the texts in terms of socio-semiotic processes is represented in the move from doing, sharing and recreating at the upper primary levels, gradually changing to reporting at the junior secondary levels, and then gradually shifting to expounding, exploring and recommending at the senior secondary level. The analysis in Chapter 7 showed that in terms of process, textbook illustrations change from narrative to conceptual, in terms of participant they shift from specific to generic, and in terms of circumstance from local to global. The changes in image structure are consistent with the change in text type from narrating to expounding and accords with students' cognitive abilities and fields of experience. Ontogenetic change such as this contributes to change in the knowledge domain from concrete and commonsense in the early years of schooling to abstract and uncommonsense in the later years of schooling. All the longitudinal shifts in knowledge identified in this dissertation are found to be closely related to the learning targets in the current English language curriculum (Curriculum Development Council, 2002: 29-37) (see Table 9.1).

Table 9.1 illustrates the close relationship between the learning targets for different grades in the English language curriculum, the fields of experience of the texts identified in Chapter 6, and the image structures explored in Chapter 7. This dissertation reveals how the verbal texts and visual images co-deploy in the textbooks to construct knowledge throughout the years of schooling. Using a socio-semiotic framework such as the one developed in Chapter 7 to understand image structures demonstrates the potential for integrating multiliteracies into English language teaching and learning and infusing it into the curriculum.

Table 9.1 Relationship between the Hong Kong English Language curriculum and knowledge constructed by both texts and image

| Grade           | Selected Learning Targets From the 2002 Curriculum (Curriculum Development Council, 2002: 29-37)  | Fields of Experience Shown in the Texts                                    | Image Structure in the Textbooks |   |   |
|-----------------|---|--|----------------------------------|---|---|
|                 |   |  | Process types                    | Participants  | Settings  |
| Primary 4 - 6   | <p>to interpret and use given information through processes or activities;</p> <p>to identify ideas in simple spoken and written texts, form opinions and express them;</p> <p>to respond to characters and events in imaginative and other narrative texts through oral, written and performative means.</p>   | <p>doing,</p> <p>sharing,</p> <p>recreating</p>                            | <p>narrative</p> <p>process</p>  | <p>individuals,</p> <p>specific,</p> <p>cartoonic</p> | <p>local settings</p> <p>(family, school, and city)</p> |
| Secondary 1 - 4 | <p>to interpret and use more extensive and complex information through processes or activities such as ordering, describing, classifying, comparing, explaining, justifying, predicting, inferring, summarizing, synthesizing and drawing conclusions;</p> <p>to identify and define more complex problems from given information, consider related factors, explore options, solve the problems, explain and justify the</p> | <p>reporting,</p> <p>expounding,</p> <p>exploring,</p> <p>recommending</p> | <p>conceptual process</p>        | <p>group,</p> <p>generic,</p> <p>photography</p>      | <p>non-local settings</p> <p>(global and regional)</p>  |

|  |            |  |  |  |  |
|--|------------|--|--|--|--|
|  | solutions. |  |  |  |  |
|--|------------|--|--|--|--|



### 9.3 Limitations and future research

Due to the constraints of time and space, this study is limited in terms of research focus and methodological design. For instance, textbooks were the only teaching material investigated in this study, yet other materials, such as the teachers' own supplementary materials, writing on the whiteboard, PowerPoint presentations and videos, also contribute to language acquisition in the classroom. The scope of this study is also limited by the fact that the data comes from textbooks published by Pearson Longman Hong Kong. Other textbooks are widely used in Hong Kong such as those published by Aristo Educational Press and Oxford University Press but were not analyzed for reasons of time and the amount of analysis that can fit into one dissertation.

The methodological design experiences limitation due to the fact that it orients solely on textbooks. Yet textbooks provide only one kind of input to student learning. Further studies could be conducted to explore language development in second/foreign language contexts by comparing student inputs and outputs (e.g., student writing).

### 9.4 Conclusion

While the limitations indicate much work remains to be done, this study offers several theoretical and methodological contributions to textbook research, ontogenetic studies on the expansion of meaning potential in EFL/ESL contexts, and to multimodal studies.

The contextual-semantic analysis of texts contained in textbooks reveals a change in registerial repertoire from narrating and sharing to expounding and exploring across the years of schooling. This change is consistent with both the linguistic features of verbal texts in the textbooks and the image structures of visual images in the textbooks, and accords with students' cognitive abilities and fields of experience. Such ontogenetic change contributes to the change in knowledge

domains from concrete and commonsense in the early years of schooling, to abstract and uncomensensical in the later years of schooling.

The comprehensive qualitative and quantitative investigation conducted in this dissertation, not only addresses how meaning is constructed by both linguistic and visual resources in textbooks, it helps us to gain in-depth understanding of the ontogenetic processes through which learners engaged with these materials. As well, the ontogenetic shift revealed in this dissertation enables teachers to anticipate potential learning difficulties and provide appropriate support to students at different stages. The systematic modelling of the representational structure of textbook illustrations and their ontogenetic change in the EFL context fills a gap in multiliteracies studies, provides a metalanguage to enable teachers to use visual images more effectively, and demonstrates the potential for infusing multiliteracies in the English language curriculum.

As demonstrated in this dissertation, studies on the nature of discourse analysis of English textbooks provide a valuable contribution to education research and language learning. I conclude this dissertation with the hope that it offers a perspective on what students are expected to learn in school, and in so doing, inspire contemplation and action.

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<sup>i</sup> In 2012, Education Bureau of the Government of Hong Kong Special Administrative Region proposed eight KLAs of primary and secondary schooling, including English Language Education, Chinese Language Education, Mathematics Education, Science Education, Technology Education, Personal, Social and Humanities Education, Physical Education, and Arts Education (Curriculum Development Council, 2012a).