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Translation Students' Use of Dictionaries:

A Hong Kong Case Study for

Chinese to English Translation

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ABSTRACT

The use of the dictionary and translation are both common language experiences. The dictionary is an indispensable tool to translating. Yet dictionary skills are grossly neglected in translator training, which assumes that students have acquired all the necessary knowledge and skills before training. In order to reveal the situation in Hong Kong, this case study attempts to investigate the dictionary use pattern of 107 translation students from five local universities for Chinese to English translation, and the dictionary consultation process of four respondents. Triangulation methods were employed: questionnaire survey, interview, think-aloud protocol, and performance exercise. A coding system for think-aloud protocols has been adopted from Thumb (2004), with modifications for Chinese-English dictionary use for production. Results found that most of the respondents had not been trained to use the Chinese-English dictionary, and that they had difficulties in using it for Chinese to English translation. Curricular assessment discovered a gap between student needs in dictionary skills and the curriculum. Pedagogical recommendations are made, and the notion of Dictionary Use Competence is proposed for translation students, while dictionary skills should be treated as a learning strategy across the curriculum from the primary to university levels. The study contributes to the teaching and learning of dictionary skills, with special relevance to Chinese-English translation, and to the research on dictionary use for production in terms of the language combination of Chinese/English, and to the method of introspection.

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This thesis serves as an intellectual sacrifice to God.

Declaration

No part of the material offered in this thesis has previously been submitted by me for a degree in this or in any other University.

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1. Introduction

The dictionary is regarded as a tool that everyone uses since childhood. Its use is supposed to be familiar to all, the process of its use commonly understood. Its skills are so elementary that, in many people's mind, the training of them only belongs in the primary education curriculum. It is not worth occupying any place in the secondary school curriculum, let alone the tertiary. This concept is widely held until the present. However, if asked to explain the use process in detail, even language teachers may not be able to answer satisfactorily.

The dictionary use process is actually very complex, involving different levels of physical and mental operations, which also vary depending on the kinds of dictionary, and the purpose of its use. This area of knowledge falls into the field of applied lexicography, which concerns the study of the dictionary, and research on dictionary use is but one stream. It focuses on the different aspects of the use of the dictionary, including functions of the dictionary, how the dictionary is used for what purposes, users' attitude towards the dictionary, the teaching of dictionary use, and reviews of the dictionary. Fortunately, in recent decades, more attention has been placed on training students to learn to use the dictionary systematically, at least in their native language dictionary. Later still, as the English learner's dictionary became more popular, some scholars began to treat it as another area in dictionary use for development academically and pedagogically. In the last two to three decades, the English learner's dictionary for Chinese users has also drawn attention. It is more in the form of English to Chinese bilingualized dictionary, with the English definitions, examples, and usage notes translated into Chinese. A number of studies on the use of the English to Chinese bilingualized dictionary for reception on the secondary and tertiary levels were done, since it is more widely used. Nevertheless, although less popular than the former one, the Chinese to English dictionary has been neglected. It is in use in secondary schools

and universities in Taiwan, Mainland China, and Hong Kong for production purposes: for translation and for writing in English. It is also used for non-native speakers of Chinese to learn the language. For translators, its importance to Chinese to English translation is the same as that of the English to Chinese dictionary to translating from English to Chinese. There is no doubt that the dictionary is indispensable to translation.

Hong Kong is a city flourishing with translation studies. Over half of its nine universities offer translation programmes from the certificate to postgraduate levels. Considering the significance of the dictionary to translation, one would imagine that it would have a place in the translation curriculum. Nevertheless, universities regard dictionary use as basic skills which should have been treated in the secondary school curriculum. Unfortunately, this is not the case in Hong Kong. The use of the English to Chinese dictionary never finds a proper position in the secondary school curriculum, not to mention the Chinese to English dictionary. There is little formal training in the secondary school classroom, or in the university. Yet students use it regularly. At the same time, electronic and web-based dictionaries have gained more popularity in Hong Kong, yet the research on them, especially their effectiveness for learning, lags far behind their development. With dictionary content in a high-tech product, the skills of the use of the hand-held electronic dictionary do not transfer naturally to students from the skills of other dictionary use, but take time and effort to acquire. This leaves a training vacuum in the continuum of learning for translation students. They have to pick up the skills by trial and error. Without a grip on the skills of dictionary use, their efficiency in translating is at stake.

From such backdrop comes this study, which hopes to draw the attention firstly of teachers, students and curriculum designers to clarify the situation. It is hoped that they

can thus understand more of students' dictionary use patterns and process in Chinese to English translation, and their needs in such training. They can then know what to do to meet such needs. Secondly, it aims to prompt applied lexicographers to research more into this area.

By triangulation, including questionnaire survey, interview, think-aloud exercise and performance exercise, this study explores directly and indirectly Hong Kong translation students' patterns in dictionary use, how they actually use the dictionary for Chinese to English translation, and the pedagogical implications. Over 100 students from 5 local undergraduate translation programmes participated. They were contacted through e-mail, in-class administration of the questionnaire, and individual meetings over a span of four months from December 2006 to March 2007. Substantial amounts of data were garnered consequently. While the first two methods have been widely used in dictionary research, and the fourth popular with studies on language acquisition for many years, the third just began to emerge as a useful instrument in disclosing the mind of the subject in the recent two to three decades. As such, a coding system is adopted from Thumb (2004), who investigated the English to Chinese dictionary look-up strategies of some Hong Kong students for reception. It is modified to suit the purpose of the present study for dictionary look-ups for Chinese to English translation. The use of think-aloud protocols, and the modified coding system for analyzing the protocols can serve as an example for other studies on dictionary use. The results draw out many pedagogical implications, with recommendations for teaching and further research. It was anticipated that, based on similar survey results on English to Chinese dictionary use, few translation students in Hong Kong had been trained in Chinese to English dictionary use. Students had needs in the training, yet their needs were not met by the translation curriculum. There would be much room for improvement on pedagogical

grounds. As the first study on the dictionary use process in Chinese to English translation, it can benefit both translation teachers and students, and contribute to further research in applied lexicography.

Before starting the present study, it is good to understand the research background of this topic in Chapter Two, to see what has been studied, and what not. The background of the case study, Hong Kong translation programmes, and students, will also be briefly introduced. Following the Literature Review, the research statement and questions will be exemplified, supported by the rationale for and design of the methodology in Chapter Three. The research results are presented by themes: how Hong Kong students think that they use the dictionary in translating in Chapter Four, and how they actually use the dictionary for Chinese to English translation in Chapter Five. The pedagogical implications of the results are discussed in Chapter Six, and corresponding recommendations are made in Chapter Seven.

2. Literature Review

The three foci of the research are: dictionary use, the use of the dictionary in Chinese to English translation, and the training of dictionary use for translation students. This chapter is to set the present study against the research background of dictionary use, which is a stream in dictionary research under the discipline of lexicography. Lexicography is the professional process to codify vocabulary, by which dictionaries and other reference works are produced (Hartmann, 2001, pp. 172, 175). It shows how the present study is related to other studies, and its significance. The chapter will begin with the different types of, and some recent developments in the research of dictionary use in general, and will then turn its attention to research on the use of specific kinds of dictionary: electronic dictionaries and bilingual dictionaries, particularly those in the Chinese and English languages. The third major thread is the training of translators in universities pertaining to dictionary skills.

2.1. Research on Dictionary Use

The general-purpose dictionary is esteemed by many, and occupies a very important position in people's minds. The dictionary is regarded as "thesaurus of all the collective knowledge of the society", "guardian of absolute and eternal truth", and "a patriotic emblem" (Béjoint, 2000, pp. 115-139). Yet using the dictionary is an everyday activity that can easily be overlooked; proper understanding can yield more fruitful results.

This part is not to make a historical survey of the development of the research on dictionary use; rather, it will describe and review the types of research on dictionary use. On its history, Cowie (1999), Nesi (2000), Hartmann (2001) and Tono (2001) have provided comprehensive reviews. The first three concentrate on that of English dictionaries for EFL learners, while the latter on dictionary use in general. It is primarily

on their works that the following part is based.

Since the early 1980s, there has been a rapid development of a new field of dictionary-related research, which focusses on dictionary users and uses (Cowie, 1999, p. 176). Although probably not realized by many people, dictionary use is indeed a complex process deserving in-depth investigation from various perspectives. The User as a language learner is already conditioned by the acquisition stages, learning difficulty, and Language One (L1) background. As shown in Figure 2.1 (Tono, 2001, p. 12) below, even though the central figure in the process is the User, actually three other elements, namely the Language, the Lexicographer, and the Dictionary, are in direct or indirect interactions with one another, which generate voluminous research in various areas. The Lexicographer designs the Dictionary with the expectations of the User in mind, while the User can give feedback to the Lexicographer in return by verbal or actual purchase actions. The Dictionary is a product of the Lexicographer with the language data that the latter gleans.

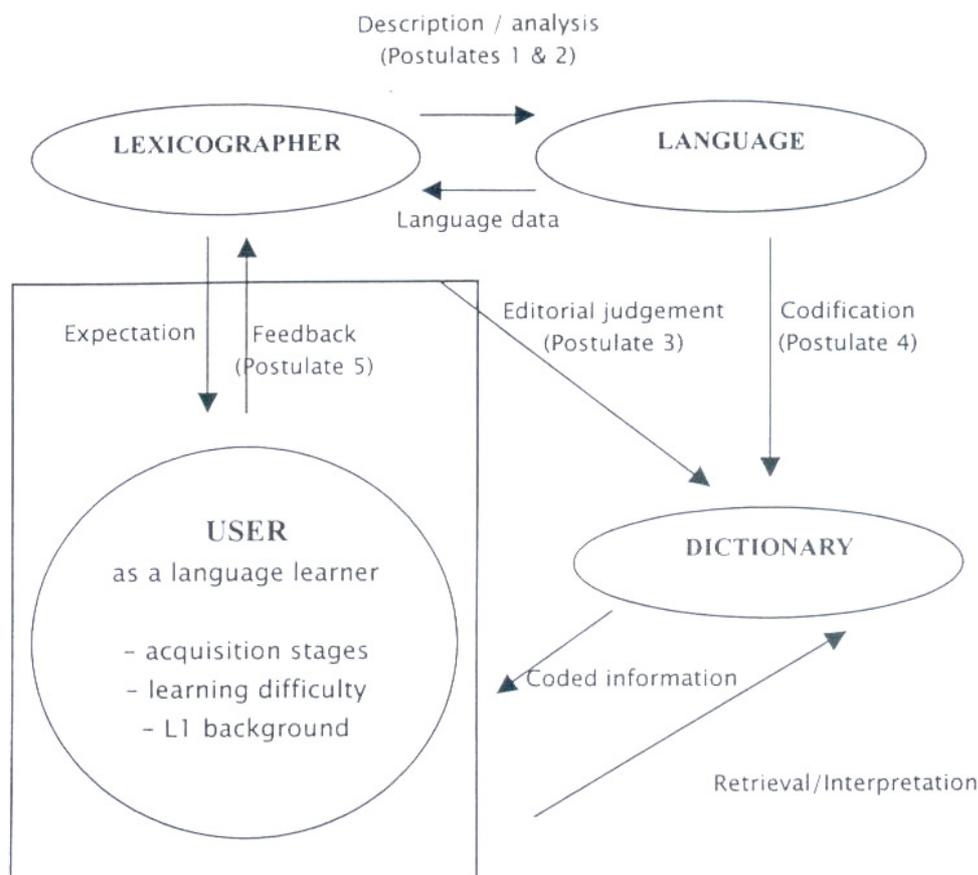


Figure 2.1: Complexity of Dictionary Use (Tono, 2001, p. 12)

If the interaction between the Dictionary and the User is put in perspective, the look-up process that only lasts for a few minutes can be very complex, too (Béjoint, 2000; Nesi, 1999). In Hartmann's words (2001, pp. 90–91), there are seven stages in the consultation process:

- (1) The user realizes that there is a problem arising in the activity that s/he is engaged in, and wants to solve it.
- (2) The user determines which problem word(s) which has/have to be looked up.
- (3) The user selects the most appropriate reference work.
- (4) The user searches for the appropriate headword in the macrostructure of the reference work.
- (5) Having found the appropriate entry, the user locates the sought data in the microstructure of the entry.
- (6) The user extracts the information from the entry.

(7) The user integrates it into the context that prompted the reference process.

There can be repetitions and parallel events on the way from (1) to (2), (3) to (5), and (6) to (7), as illustrated by the following figure. This is a general description of the process. This study shall examine if there is any variation from it in translation students' consultation of the dictionary for Chinese to English translation in Hong Kong.

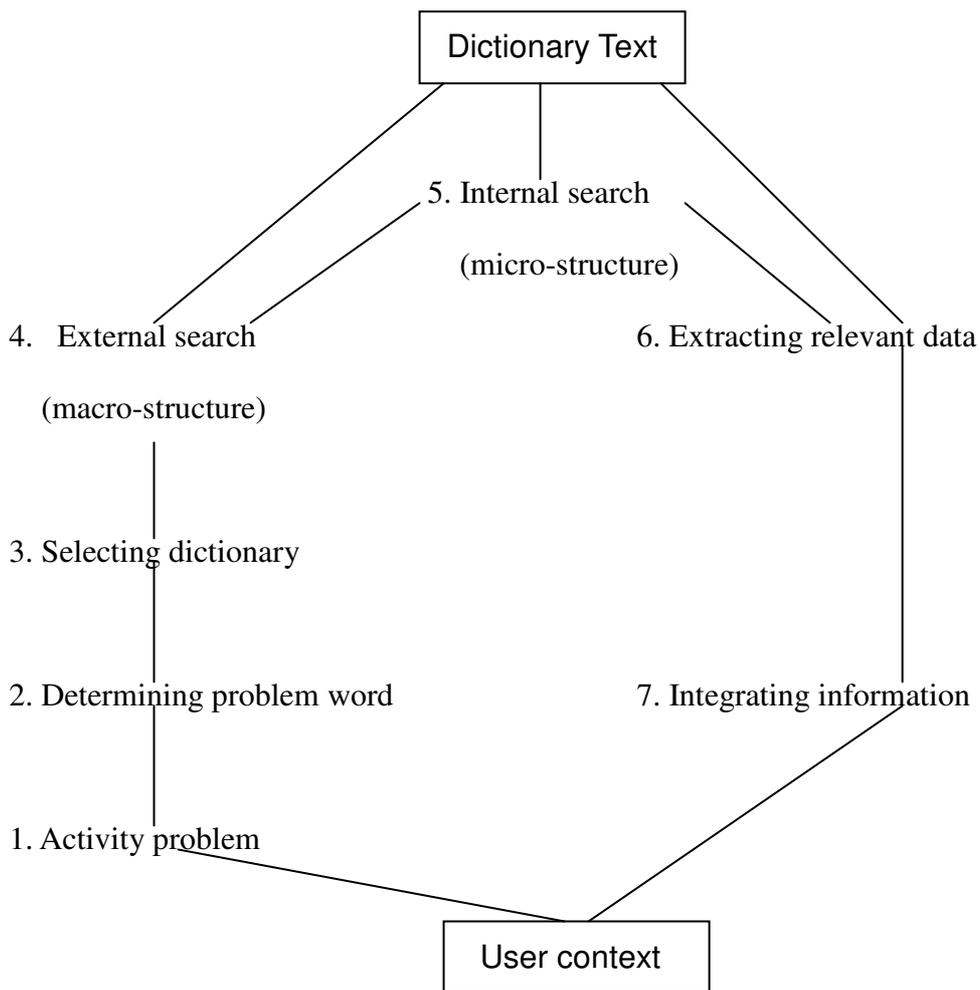


Figure 2.2: Components of the Consultation Process (Hartmann, 2001, p. 91)

Dolezal and McCreary (1996, pp. 125–126; as cited in McCreary and Dolezal, 1999: 110) made an annotated bibliography of the 178 studies on dictionary use in the last thirty-seven years, and divided them into five categories: (1) experiential studies (73 in total); (2) comparative studies (29); (3) users' needs and skills surveys (26); (4) cultural

articles (12); and (5) experimental research (36). The major focus in user research has been on the non-native user of the “learner’s dictionary” (1999, p. 109). While McCreary and Dolezal’s categorization is mainly on the methods, Hartmann (1987, p. 12) concentrated on the subject: the users, and classified the studies by theme, including: (1) the most important types of linguistic information sought by dictionary users (“dictionary typology”); (2) their assumptions and expectations in resorting to the dictionary (“user typology”); (3) the reference needs of the users (“needs typology”); and (4) the training of the users’ reference skills (“skills typology”). These four themes could be subsumed under “users’ needs and skills” in McCreary and Dolezal’s categorization.

Tono (2001, p. 61) makes a more comprehensive list of research areas based on Hartmann’s (1989) and Hulstijn and Atkins’s (1998) summaries:

- (1) History of dictionary use
- (2) The functions of the dictionary
- (3) Dictionary typology
- (4) The image of the dictionary
- (5) The attitudes, needs, habits and preferences of dictionary users
- (6) Variations in use
 - (i) comprehension
 - (ii) production
 - (iii) other test performance
 - (iv) vocabulary learning
- (7) Reference skills
 - (i) comprehension
 - (ii) production
 - (iii) other test performance
 - (iv) vocabulary learning
- (8) Teaching dictionary skills
- (9) Critical comparisons and reviews of dictionaries

Tono (2001, p. 64) further tabulated all the empirical studies on dictionary users since 1962. Among all the studies, questionnaire-based research is the commonest method in the use of English dictionaries, with both the native-speakers and non-native speakers (Nesi, 2000, pp. 3–4; also Tono, 2001, p. 14). Other research methods include test on reading, vocabulary learning, dictionary-using skills (Nesi, 2000, pp. 12–31), and observation (Nesi, 2000, pp. 33–52), among others (Tono, 2001, p. 14).

Cowie made a concise summary of the findings of research on dictionary use (1999, pp. 197–198). The two most relevant ones to this study are as follows.

- (1) Dictionary users are overwhelmingly concerned with meaning, and with those categories of lexical items which present semantic or cultural difficulties.
- (2) Levels of dictionary reference skills are in general extremely low, and many researchers are inclined to attribute these poor levels primarily to a lack of systematic training in dictionary use.

The overview above shows that research on dictionary use is developing, as the importance in more scholarship in dictionary use and its training is being recognized. It is an area in lexicography that is worth exploring, given the status of the dictionary in people's life. Many aspects are studied, yet many others are left understudied. As dictionary use is characterized by a very personal intellectual experience, happening in a particular social and cultural setting, there can be vast differences as regards the language, the kinds of dictionaries and users (Tono, 2001, p. 65), so can be the methods used in studies. In addition, studies from the West occupy a dominant role.

According to the classification list of Tono (2001), the present study concerns itself with (5) the attitudes, needs, habits and preferences of dictionary users; (6.ii) dictionary use for production; (7.ii) reference skills in production; and (8) teaching dictionary

skills. The setting is eastern, with a combination of methods.

2.2. Research on Bilingual Dictionary Use

The above part outlines the recent trends in dictionary use research. This part will be confined, from the research on dictionaries in general, to one of the foci of the present study, the use of bilingual dictionaries, a kind of language dictionary for general purposes: for decoding or encoding a message. Its importance in dictionary use research will be expounded, and its uses elucidated. First, some important terms will be defined.

2.2.1. Definitions

2.2.1.1. A **standard bilingual dictionary** has two object languages, and provides equivalents in the associated cultural environment in the target language for each word and expression in the source language (Hartmann, 2001, p. 44; Tarp, 2002, p. 64). It is bidirectional, consisting of two alphabetical listings, and should meet the encoding and decoding needs of speakers of both languages.

2.2.1.2. A **bilingualized dictionary** consists of a single alphabetical listing, in a language foreign to its intended users. It may be a full or partial adaptation of an existing monolingual learners' dictionary, with varying degrees of bilingualization. The source may be a general advanced-level dictionary or an abridgement of a major work (Cowie, 1999, pp. 193–194; Marelllo, 1998, pp. 295–296).

2.2.1.3. An **active, or production-oriented, bilingual dictionary** is intended to help a user to express a given idea in the target language of the user from the source language in a given context (Hannay, 2003, p. 145). The terms “target” and “source” languages are employed instead of “first” and “foreign” languages because both the

languages involved may or may not be the first language of the user; rather, the language direction in use is more important.

2.2.1.4. A **passive, or reception-oriented, bilingual dictionary** is for understanding a given lexical item in the target language of the user (Hannay, 2003, p. 145).

In this study, the term “bilingual dictionary” will be used in the widest sense to refer to those dictionaries which involve two languages, including but not restricted to that defined in (2.2.1.1) above, with or without two listings of words. Where applicable, the term “bilingualized dictionaries” will be specified to differentiate them from the standard bilingual ones.

2.2.2. The Use of Bilingual Dictionaries

To many people, when a “dictionary” is used by language learners, it means a “bilingual dictionary” (Tomaszczyk, 1983, p. 45). Although monolingual learners’ dictionaries are particularly well developed in English, there is overwhelming evidence for the use of bilingual dictionaries (Atkins and Varantola, 1997, p. 18; Hartmann, 1994, p. 242; Laufer & Kimmel, 1997, p. 362). They are perceived as easy to use, yet often fail to provide the detailed information needed for effective production. Monolingual learners’ dictionaries, although more likely to meet these needs, are used much less widely, because they are perceived as “difficult” (Rundell, 1999, p. 50). People from monolingual cultures tend to think that words in one language should have their equivalents in another language. Therefore, foreign-language learners tend to look for equivalents of their native words in a bilingual dictionary. This kind of misconception is harmful to cross-cultural communication, and the learning of a foreign language, especially if a bilingualized dictionary appears to be the source of equivalents, because

it may further reinforce the learners' pre-conception that the bilingualized dictionary is the authority for translation equivalence (Chen, 1994, p. 272). They feel insecure if they cannot relate the meaning of a foreign word to a meaning in their first language, however good the explanation and the illustrations might be in the foreign language in the bilingualized dictionary (Laufer and Kimmel, 1997, p. 362). The common trend is that as the word search progresses, less use is made of the bilingual and more of the monolingual dictionary (Atkins and Varantola, 1997, p. 35). Nevertheless, even at the advanced level, the bilingual dictionary may continue to be preferred to the monolingual dictionary for a number of study purposes (Cowie, 1999, p. 192; Laufer & Kimmel, 1997, p. 362).

Bilingualized dictionaries for learners of English have been in circulation since the 1960s (Cowie, 1999, p. 194). The first study of foreign users of dictionaries was that of Tomaszczyk (1979; as cited in Cowie, 1999, p. 179). By questionnaire survey, he compared the use of bilingual and monolingual dictionaries by two groups: students, and instructors and translators. It was found that a higher proportion of subjects who owned bilingual dictionaries referred to them for meaning than did owners of monolingual dictionaries. But the highest level of satisfaction with the information provided was registered by the monolingual dictionary owners. He also found that especially at the elementary and intermediate levels, students had a very limited understanding of dictionaries, and consequently used them badly (Tomaszczyk, 1979; as cited in Cowie, 1999, p. 188). To find out if performance errors are due to inadequate skills rather than deficiencies in the dictionaries used, Tono (1984; as cited in Cowie, 1999, pp. 188-189) conducted a study with 402 Japanese university students in an English-Japanese translation exercise, with the texts containing a number of invented words which appeared in specially prepared bilingual dictionaries for the subjects to use.

The study results provide clear evidence of poor standards of retrieval being wholly or largely attributable to low levels of skill.

Atkins, Lewis, Summers and Whitcut (1987) conducted a large-scale research project with 1,140 English-learning French, German and Spanish students, in order to discover how effective a learner of English as a foreign language was when working with a bilingual and/or monolingual dictionary. Students were asked to complete a User Profile Questionnaire in their own language (1987, pp. 31–32), and to do two sets of tests. A project of such scale reaped numerous results. But of particular relevance to the present study is the discovery that 60.4% of respondents had never received any instruction in dictionary use, while only 12.9% had been given systematic training in reference skills (Atkins and Knowles, 1990; as cited in Cowie, 1999, p. 191).

Atkins and Varantola (1997) used a database to record details of 1,000 dictionary look-ups made by 103 people in a translation exercise from various language communities. Their focus was on the strategies of dictionary use, and not on the dictionary users' skills in translation. The participants were not asked to produce a written translation, but simply to look up any expressions that they felt necessary to allow them to translate the passage. It was found that the users gave more weight to the use of bilingual dictionaries than monolingual dictionaries for translation purposes (1997, p. 32). When looking for primary information (an unknown translation), their subjects tended to go to the bilingual dictionary, whereas the monolingual dictionary came into play as their need for secondary information grew (1997, p. 33). It was also discovered that the monolingual dictionary was used more often by users with advanced Language Two skills. One of their conclusions is that dictionary skills must be taught, if dictionary users are to use their dictionaries effectively. Teachers would be better able to

carry out such teaching if they are fully aware of exactly what their students are doing with their dictionaries (1997, p. 36).

Thumb summarized 32 empirical studies on dictionary use, and came up with the following findings on the bilingualized learner's dictionary (2004, p. 32). (1) Many dictionary users are not aware of the wealth of information that their dictionaries contain. (2) Most foreign learners prefer using bilingual dictionaries to monolingual dictionaries because of the comprehensibility of definitions. (3) Foreign learners may benefit from the bilingualized learner's dictionary, because bilingualized studies reported high success rate in dictionary use. (4) Users generally appreciate the juxtaposition of Language Two definitions and Language One translation equivalents in a bilingualized dictionary's entry. The dictionary elicits a variety of look-up patterns which could be a reflection of the users' language preference. (5) Subjects appear to focus more on the Language One part than the Language Two part in the entry.

As defined in 2.2.1 above, the directionality of the bilingualized dictionary is from Language Two to Language One. Empirical studies focussed on the use of Language Two to Language One dictionaries. Studies on the use of Language One to Language Two dictionaries are rare.

2.2.3. Introduction to the Chinese-English Dictionary

The above part introduces some research results of bilingual dictionary use, regardless of the language combinations of the dictionaries involved. Chinese to English bilingual dictionaries are one focus of the present study, but they are different from the "bilingual dictionaries" in the strictest sense. They are usually not an adaptation of any monolingual Chinese dictionaries. Thus, the name "bilingualized dictionaries" is also

inappropriate. This kind of dictionary can be aimed at both the learners of Chinese as a foreign language (e.g., DeFrances, J., Ed., *ABC Chinese-English Comprehensive Dictionary*, 2003; Liu Dah-jen, Ed., *Liu's Chinese-English Dictionary*, 1978), and native Chinese who use the English language. But Chinese users remain the majority. Therefore, most dictionaries of this kind are designed for encoding purposes: translating or writing. This kind of dictionary has its unique features, and thus the research on its use differs from that on other bilingual dictionaries, and even from English-Chinese dictionaries. Before delving into this area, it serves for better understanding to provide a brief introduction to the special features of this kind of reference.

The characteristics of the Chinese language dictate the organization of the Chinese-English dictionary. A Chinese character may be a word, a morpheme or a syllable: two or more characters may be a morpheme, a word, or a phrase (Wu, 2004, pp. 51-52). Most Chinese words are formed by multi-characters, and the words are searched for under the head character (i. e., the first character in the word) as an entry. Furthermore, Chinese does not belong to phonography but to ideography, that is, the pronunciation of a word cannot be derived from the way that it is written (Wu, 2004, p. 49). It cannot be arranged alphabetically as English. For transcribing Chinese sounds into the Latin script, *Hanyu Pinyin* is devised. It was adopted as the official system in the People's Republic of China in 1958, and has since become a standard form used by news agencies as well as education institutions (Kan, 1995, pp. 1-2). Every pronunciation in Putonghua has four possible different kinds of tones: the first, the second, the third, and the fourth (Young, 1984, p. 32).

While dictionaries published in Mainland China and Hong Kong use *Hanyu Pinyin*, those published in Taiwan may use the Taiwanese Romanization system (e.g., Hu

Wan-ruo ed., *A Chinese-English Dictionary of English Collocation*, 2003). Besides *Hanyu Pinyin*, many Chinese-English dictionaries combine various access methods, mostly by the radical system, and/or the system by the number of strokes of each character. Some others apply a special system unique to its own dictionary, which is not commonly known to the general readers (e.g., Liu Dah-jen ed., *Liu's Chinese-English Dictionary*, 1978).

Regarding contents, in addition to entries, many contain indices by strokes, and/or radicals, and/or *Hanyu Pinyin*, a preface, as well as a user guide. There can be comprehensive appendices, including tables of abbreviations, an introduction to the Chinese language, the basic information of the People's Republic of China (e.g., the cities and provinces, ethnic minorities), besides Chinese history and culture (e.g., the dynasties, the heavenly stems and earthly branches in the Chinese tradition, and Chinese musical instruments) (e.g., Department of English Dictionary Compiling Team, Beijing Foreign Language University, *A Chinese-English Dictionary (Revised Edition)*, 1995). These features are bilingual in some dictionaries (e.g., Shen Shan-hong ed., *A Chinese-English Dictionary with Cultural Background Information*, 1998). Those using a special system of access detail the design of the system, and index it (e.g., The Editorial Team, *A Practical Dictionary of Chinese in Graphic Components (Chinese-English Edition)*, 2002). There can also be other appendices for international standards and organizations, e.g., the standard measurements, Briticisms and Americanisms, ranks in Chinese, U.S. and U.K. armed forces, and the countries, peoples and capitals in the world. There are a few examples of English-Chinese and Chinese-English bidirectional dictionaries (e.g., Liu Qing-shuang, Yang Feng eds., *A Large English-Chinese/Chinese-English Dictionary*, 2002). The scale of a dictionary can be so large as containing 11, 000 head characters, and 200,000 entries (Wu

Guang-hua ed., *A Comprehensive Chinese-English Dictionary (Second Edition)*, 1999).

A Chinese word has lexical, grammatical, and figurative meanings. In a Chinese-English dictionary, all three meanings are equally important. In the organization of an entry, the dictionary mostly provides English and / or Chinese definitions, English equivalents of the Chinese words, and usually with English examples. These illustrations are important, because if they are carefully chosen, often the usage, collocations and grammar of the words under search can be effectively and efficiently demonstrated (Creamer, 1987, p. 238). A few of them code the words grammatically (e.g., DeFrances, J., Ed., *ABC Chinese-English Comprehensive Dictionary*, 2003). Exceptional examples may list the synonyms and antonyms of the head word (e.g., *English-Chinese/Chinese-English Dictionary*, 2004).

Figure 2.3 below comes from the web-based *Lin Yutang's Chinese-English Dictionary of Modern Usage* (《林語堂當代漢英詞典》) (<http://humanum.arts.cuhk.edu.hk/Lexis/Lindict/>, accessed on 5th June 2008). The extract illustrates how an entry (“愛”, “ai4”, love) in a Chinese to English dictionary is arranged, with the radical (“心”), number of strokes (13), *Pinyin* (“ai4”), grammatical denotations (e.g., “N”, “v.i.”), definitions (e.g., “仁愛: kindness to fellowmen”), and “equivalents” (e.g., “愛護: cherish”). As it is a web-based version, pronunciation demonstration is also available (denoted by the icon “”).

愛 	1169C50 90.82	部居 	畫數 13	ㄞˋ [ai4] ㄝˊ .	同音字	中文字源 	國語辭典 	KanjiBase 	CEDICT 	粵音集成 
<p>Love: 仁愛 kindness to fellowmen; N. 博愛 universal love, broad love for mankind: 愛惡 or 愛憎 love and hatred; 戀愛 love affair.</p>										
<p>(1) To like, be pleased with, be fond of: 喜愛 to like (person, place, painting, etc.); 愛好 [ai4hao4]↓.</p> <p>(2) To love (lover, parents, etc.): 戀愛 to be in love; 愛慕 [ai4mu4]↓; 可愛 lovable, lovely; 心愛 to love tenderly: 所心愛的人 the beloved; V.i. 溺愛 to be infatuated with (mistress, etc.) or to indulge and spoil children; & t. 寵愛 to be fond of especially (one person); 愛莫能助 would be glad to help but cannot; 愛己及物 extend love of self to others.</p> <p>(3) To care for, to cherish: 愛惜, 愛護 [ai4xi2], [ai4hu4]↓.</p> <p>(4) Be prone to, liable to: 愛哭 (child) cries most of the time; 愛笑 always ready to smile or laugh; 天熱東西愛壞, 天冷花就愛死 things spoil easily in hot weather, and (many) flowers wither away in cold.</p>										

Figure 2.3: An Extract of the Entry of “愛” in Lin Yutang’s Chinese-English Dictionary of Modern Usage (<http://humanum.arts.cuhk.edu.hk/Lexis/Lindict/>)

2.2.4. Research on the Chinese/English Dictionary

The research cited in Section 2.2 on bilingual dictionary use has drawn data from various language combinations, but not from the language pair of Chinese and English. The following puts this in perspective, albeit more on the English-Chinese direction, because of its much larger volume of studies than on the Chinese-English direction.

So far as numbers are concerned, over the past 50 years, more than 1,800 bilingual dictionaries have been published in China, of which nearly 70 percent are English-Chinese/Chinese-English bilingual dictionaries (Zhang and Huang, 2000; as cited in Li, 2003, p. 91). In Chan's survey of lexicography in Hong Kong from 1841 - 2004, English-Chinese dictionaries seem to have the largest share of the language dictionary market, which amount to 109, and are 100% more than Chinese-English dictionaries, with a total of 55. These two types of works take up more than 59.2% of the language dictionaries published in Hong Kong (2005, p. 13).

Although China has a very old and distinguished dictionary culture, which dates back to the Han Dynasty (2nd Century B.C. to 2nd Century A.D.) (Richter, 1995, p. 404), little is known about its current trends in dictionary ownership in general (Survey Team, 1999), and dictionary use among university students in particular (Hartmann, 2001, p. 144). In the past, as Li (1998, p. 62) pointed out, most of the lexicographical studies were carried out on bilingual dictionaries between Western languages; those pertinent to Asian languages were limited. This situation began to change after the establishment of the Asian Association for Lexicography (ASIALEX) in 1997. Since then, a number of user studies on dictionaries between Western and Asian languages appeared. Among these, dictionaries between English and Chinese are one of the most studied subjects. In China, academic interest in lexicography is intense, with national and regional lexicography associations cropping up (Creamer, 1995, p. 100). Huang (1994, p. 235) counted the Chinese articles published since 1982 on the methods of compilation of bilingual dictionaries. The figure for Chinese-English dictionaries up to 1994 is 16. No recent data are available.

In most English classes, the teacher requires students to look up new words and

expressions in their (predominately bilingual) dictionaries, which students take as the authority for the meaning and use of words. This, to some extent, shows the important role of bilingual dictionaries among Chinese learners. Nevertheless, many bilingualized dictionaries in China are far from satisfactory from the language learning point of view, because most try to offer translation equivalents without giving necessary cultural information for the understanding and the use of words (Chen, 1994, p. 278).

Taylor and Poon (1994) studied 10 Cantonese/English dictionaries currently available in Hong Kong, and surveyed some learners and tutors of Cantonese on their use of these dictionaries. These features were reviewed (1994, p. 253) with respect to: (1) the stated aims of the dictionaries; (2) the methods of access, and the Romanization systems used; (3) the contents; and (4) the range and organization of entries. Their conclusion is that, English-speaking learners of Cantonese could be said to be moderately well served by the choices of existing dictionaries, although major improvements remain to be made, e.g., in the inclusion of usage notes and illustrations (Taylor and Poon, 1994, p. 265). However, this kind of dictionary differs from the one in the present study, which concerns itself with the written form of Chinese being Putonghua. Cantonese is a spoken variety, quite distinctive phonologically, lexically and grammatically from the northern variety of Chinese on which the written language is based. Some of the sounds in Cantonese have no relationship to any characters, and hence may not be easily representable (Taylor and Poon, 1994, p. 251). Cantonese-English dictionaries are primarily for foreign learners of Cantonese, but are seldom used by native Cantonese-speaking dictionary users. Thus, their target readers are different from most of those of the Chinese-English dictionary mentioned in Section 2.2.3.

The overviews in Sections 2.3 and 2.4 set the backdrop for the present study. The Chinese-English dictionaries that Hong Kong translation students use carry features distinguishable from English-Chinese bilingualized dictionaries, and even Cantonese-English dictionaries. Research on dictionary of the language combination of English and Chinese is developing in the recent decade. It is closely related to the research on dictionary use, as has been demonstrated in Figures 2.1 and 2.2 in Section 2.1.

2.2.5. Research on Chinese/English Dictionary Use

Many research findings have revealed that learners in general are ignorant of what can be found in dictionaries, and how to use them to meet their needs (Chi, 2003, p. 356). Taylor (1988) investigated the dictionary use pattern of 122 students of one local tertiary institution by questionnaire survey. It was discovered that 50% of the subjects used a bilingualized English-Chinese dictionary, and their choice of dictionary was influenced by their teachers in schools. They used it mainly for word meanings, but the least for grammatical information. Their major difficulties in dictionary use were pronunciation symbols, and choosing the right meaning of words. The most discouraging factor to using the dictionary was the amount of time taken to consult a dictionary.

Li conducted a single-sheet questionnaire survey regarding dictionary users' opinions and their interactions with dictionaries with 801 respondents from the teachers and students at a university of science and technology in Mainland China (1998, p. 63), with a follow-up experimental translation test with 61 participants of the survey. It was a study with special reference to learners of English for specific purposes. Participants in the translation test recorded the words that they looked up in their dictionaries. Since

her study was the closest in relevance to the present one, the results are reported here in detail for comparison.

The average number of dictionaries owned by each respondent of the survey was four. Less than half of the sample had Chinese-English dictionaries. When they considered buying a dictionary, the primary concern was the inclusion of examples, followed by the number of entries. The size of the dictionary, as well as the price, were of little concern. Most deemed a dictionary of less than 40 yuan (equivalent to about 3 pounds) acceptable, and regarded frequent use of dictionaries highly necessary or necessary. Women used dictionaries more often than men. Looking up the meaning of words was the number one reason for using dictionaries, followed by spelling check and etymology. Most learners had not any formal training in bilingual dictionary use. Many secondary teachers in China thought that it was not necessary to teach bilingual dictionary use, while university teachers regarded it as part of the secondary education curriculum, resulting in a training gap. More than half of the respondents considered it necessary for language teachers to teach reference skills. The users' reference skills were found to be rather elementary, leading to mistakes in translations. Both the participants of the questionnaire and the translation revealed that semi-technical words and idioms were the most difficult to handle. Li's study results support the notion that many problems in dictionary consultation could be avoided if the users have acquired some basic reference skills. She also reports positive relations between English proficiency and dictionary use. Constant consultation of dictionaries indicated a lack of confidence. In her view, the printed dictionary, due to limited space and slow presentation, would eventually give way to electronic dictionaries, which store large quantities of information, and can be accessed instantly by multimedia technology, and made pocket-portable.

Li's study provides a valuable reference point for the present study, in that both conducted questionnaire survey and translation exercise to explore the dictionary use patterns of English/Chinese learners/users. Yet her background lay in Mainland China with about 800 general EFL learners in a university on a much larger scale, while the present one focuses on about 100 Hong Kong translation students, with emphasis on the Chinese-English orientation. For analysis, she used what the subjects had written in the translation exercise, while the present one explores the dictionary consultation process more from subjects' think-aloud protocols. In addition to the translation exercise, the validity of the present study is enriched by interviews.

Jiang and Wen (1998, p. 16) conducted a questionnaire survey with 40 English teachers in 30 tertiary institutions in Mainland China, without full explanation of the methodology. Their results show that the subjects had not received any training in the use of English-Chinese or Chinese-English dictionaries. Yu's study (1999) focussed on 328 undergraduates from a few universities in Guangdong Province on the use of English-Chinese and Chinese-English dictionaries. The results indicate that about 20% of the subjects used Chinese-English dictionaries, compared to 70% using either English-Chinese learners' dictionaries or English-Chinese bilingual dictionaries (1999, p. 89). His survey lay more emphasis on English-Chinese dictionary use than the Chinese-English one. Instances of the weaknesses of many of these quantitative studies were that the methodology was unclear, and the survey questions were addressed to using various kinds of bilingual dictionaries, not distinguishing the language direction.

Fan (2000) conducted a survey with 1,076 first year undergraduate students of seven local tertiary institutions on their bilingualized (E-C) dictionary look-up behaviour. Her instruments were a vocabulary learning strategy questionnaire, and the

Word Levels Test by Nation (1990). She concluded (2000, p. 133) that the overwhelming majority of students used bilingualized dictionaries, and found them useful. Yet most students in fact made limited use of them. She recommended (2000, p. 134) that it was of utmost importance for teachers to introduce to students the various types of dictionaries available in the market in addition to bilingualized ones, e.g., the monolingual.

Thumb's study (2004) involved 18 university students from a university in Hong Kong for formulating their English-Chinese dictionary use strategies, with the following research methods: English comprehension exercise, thinking-aloud, observation, follow-up questionnaire, and simulated recall interview. Her results and methodology are highly relevant to the present study, which will be further explored in the Methodology chapter. What differs is that her focus is on English-Chinese dictionary use for reception, while the present on Chinese-English dictionary use for production.

Li (2003) randomly selected 127 students from three local tertiary institutions in Hong Kong to conduct a questionnaire survey on English-Chinese learners' dictionaries. The emphases were on their personal experiences with English-Chinese bilingual dictionaries, and their perceptions of some topical issues in the compilation of this kind of dictionary. Results of the study show that the most important criteria in selecting an English-Chinese dictionary were, in order of importance, a large number of headwords, clear and accurate definitions, and good illustration of usage (Li, 2003, p. 96). In this regard, his results are similar to those of Li (1998) with Mainland Chinese university students. Four fifths of them used electronic or web dictionaries, and one third reported frequent use of it. The most often used dictionaries of this kind were Instant Dict (*Kuai Yi Tong*), Besta (*Hao Yi Tong*), Kingsoft (*Jinshan Ciba*), OECD (on-line),

dictionary.com, and Dr Eye (*Yi Dian Tong*) (Li, 2003, p. 101). Most of the respondents used an English-Chinese dictionary for reading/translating, followed by finding the usage of words and phrases, as well as shades of meaning of known words. The most often cited weaknesses of these dictionaries were insufficient or inappropriate examples, poor illustration of usage, and insufficient number of headwords. Nevertheless, the students were generally satisfied with the English-Chinese bilingual dictionaries on the market (Li, 2003, p. 99). Over 90% of the students indicated that they did not have any training of dictionary skills. Approximately two-thirds considered it unnecessary to have any training, and about one-third deemed it necessary (Li, 2003, p. 104). Nonetheless, in his opinion, teachers and lexicographers had a different understanding of “dictionary use” from that of students (Li, 2003, p. 106). In the respondents’ minds, knowing how to use a dictionary meant how to look up a word in a dictionary for meaning, spelling, and/or pronunciation in most cases, whereas for teachers, it is how to make more effective use of dictionaries that is required. The conflicting views show that this aspect in students’ learning is not properly treated in the curriculum.

Chi (2003) carried out a research project on students’ habits and choices when using dictionaries to assist their English learning, on the content and methodology to teach or learn dictionary use, and on the effectiveness of explicit teaching of dictionary skills for improving students’ reference abilities. 248 university students did the questionnaire, and 15 of them attended the interviews. All of her subjects owned at least one dictionary, with about one third owning a combination of monolingual English and bilingualized English-Chinese dictionaries, and another one third owning these two and an electronic dictionary (Chi, 2003, p. 46). Two thirds of them used the dictionary all the time, very often and quite often during term time. Only one third of them had been taught how to use a dictionary to assist their learning of English. Two thirds were

willing to join workshops on dictionary use training (Chi, 2003, p. 50). Her other research method was to teach students selected dictionary use items, and do pre-test and post-test with them. Her conclusion is that explicit teaching of this proved to be effective, and her subjects highly appreciated the knowledge and skills imparted to them. She called for more research to investigate whether poor teaching is the reason for students performing poorly in reference knowledge and skills (Chi, 2003, p. 106).

Overall, apart from the research above, most studies on Chinese and English dictionary use are generally not properly documented, and many key concepts in them are adopted without proper definitions or necessary clarification. The user studies with references to English-Chinese bilingual dictionaries have been mostly related to mainland Chinese users. The needs of those users outside Mainland China seem to have been under-explored or not explored at all (Li, 2003, p. 93). The needs of various user groups differ, and thus future user studies should focus more on the specific needs of smaller groups or individuals (Li, 2003, p. 108). At the same time, research on Chinese-English dictionary lags far behind that on other dictionaries (Wu, 2004, p. 49), as evidenced by the overview above. If evaluated according to the list of research areas on dictionary use by Tono (2001, p. 61) mentioned in Section 2.1, the existing studies only centre around the attitudes and needs of the users, use for reception, as well as dictionary typology, while all the other areas are ignored, including the reference skills for production, and the pedagogy of dictionary skills. As regards methodology, the commonest method is questionnaire survey. The use of think-aloud protocols in exploring the Chinese/English dictionary use patterns of Chinese users is rare, if existent at all.

2.2.6. Interim Summary

Research on bilingual dictionary use extends from research on dictionary use in general, but it is an important stream, considering the popularity of the learner's dictionary, and the bilingualized English-Chinese dictionary in the Chinese communities in particular. Most research supports that, for reception purposes, the bilingual dictionary is a more preferred reference than the monolingual one for various reasons. Yet many users look for Language Two equivalents for their Language One words in the entry. Dictionary information is underused, and their use is not efficient. Most users have not been trained how to use the bilingual dictionary in schools. Numerous studies have pointed out that the lack of it is the cause to ineffective use of the dictionary, although more studies are needed to provide empirical support for more convincing claims.

Research on the English/Chinese bilingual dictionary is on the rise, although mostly on its typology, functions, or use for reception. A few are on the reference skills, fewer still on the effectiveness of dictionary use training. The English-Chinese language direction remains the prime concern of most research. The Chinese-English direction, with special features in the dictionary, is grossly over-looked.

2.3. The Use of Electronic Dictionaries

The following type of dictionary is mentioned not solely on account of the language direction itself, but of the medium, in the light of its increasing popularity. Recent research surveys (Chi, 2003; Li, 1998; Li, 2003) found that the hand-held electronic dictionary, and indeed the web-based dictionary, is gaining acceptance among students, and has become one of the reference tools that they often use. Its prominence in students' reference skills cannot be exaggerated. Below is a general review of its development.

2.3.1. The Development of Electronic Dictionaries

An electronic dictionary is a “hyper-reference” implementation, an electronic aid that offers immediate access to reference information with a clear and direct return path to the target information (Aust, Kelley & Roby, 1993, p. 64). Hartmann and James even cite as examples spelling checkers and thesauruses in word processors, multilingual terminology databanks, translation systems etc. (2000, p. 47) Compared with traditional printed resources, the electronic dictionary can provide a greater range of lexical information. Additional types of information, such as thesaurus, corpus, and lexical relationship information, can be made available. Another major feature is the availability of diverse exploration paths (Cumming, Cropp and Sussex, 1994, pp. 369, 371).

Electronic dictionaries can be stored and accessed in a number of different ways. They can be stored on a hard disk or a CD-ROM for use with a desk-top computer, which makes it more portable than a dictionary-sized book, and able to supply many times the quantity of information (Nesi, 1999, p. 56). By electronic means, the search can allow the user to locate every occurrence of a word or combination of words within the dictionary, thus retrieving multi-word units, collocations, and groups of definitions in similar wording (Nesi, 1999, p. 62). The advantages named by the 10 electronic dictionary users from Warwick University in Nesi’s study (1999, p. 58) are: the dictionaries were easy to carry around and use; sound was available; and they provided a variety of routes for searching; they could be expanded and/or linked to other applications; and the database contained extra information. Yet they complained that more information was needed than their electronic dictionaries contained. Since some of these dictionaries provide information based on the original hard-copy bilingual dictionaries, the defects of the latter are still present in the former (Sharpe, 1995; quoted

in Nesi, 1999, p. 59). The device could be a motivation for the users to look up a large number of unknown words out of curiosity, as they can just key in the letters of the words (Gulliot and Kenning, 1994; quoted in Nesi, 1999, p. 64). Classes with access to a computer can benefit from some electronic dictionary features such as exercises, pictures, usage information, etc., and the consultation process is more visible and open to discussion (Nesi, 1999, p. 64).

Notwithstanding the merits mentioned above, in their study of the growing use of bilingual electronic dictionaries in Hong Kong, Taylor and Chan (1994; as cited in Nesi, 1999, p. 57) reported that the English teachers they interviewed were rather doubtful about their use, and all of them would have preferred their students to consult printed dictionaries. Many of the student users agreed that printed dictionaries were more detailed and more accurate than their electronic ones. Although the comments of hand-held dictionary owners suggest that learners appreciate the speed and ease of electronic lookup, it is still uncertain whether fast searching is instrumental to the learning process (Nesi, 1999, p. 64). More empirical support is needed. Nonetheless, given the increasingly sophisticated needs of dictionary users, it can be argued that the future of dictionary making lies in electronic dictionaries for their large capacities and provision of multiple functions (Li, 2003, p. 108). The education of dictionary users will be modified when computerized dictionaries become more available and widely used (Béjoint, 2000, p. 168).

They are particularly popular in Hong Kong, Taiwan and Japan, as the technology is available, and many users can afford the high prices (Chi, 2003; Li, 2003; Nesi, 1999: 57). The Consumer Council of Hong Kong did a survey of the 16 types of commonly used voice electronic dictionaries on the market (2006, pp. 36–43). The price ranges

from several hundred to nearly three thousand Hong Kong dollars, produced in Mainland China, Taiwan or Thailand. The greatest stock of Chinese-English word entry is 244,900 (Besta model no. 8600). Their functions include: monolingual English, English-Chinese, Chinese-English, monolingual Chinese dictionaries, and other bilingual dictionaries in combination with Chinese, e.g., Japanese, Korean, French, Russian, German, Italian, Malay, Spanish; specialized dictionaries of commerce, law, medicine, marketing, finance, biology, chemistry, etc.; encyclopaedia, other special language dictionaries, e.g., idioms, proverbs, slangs, glossaries for IELTS and GRE; as well as different Chinese input systems.

Although the term “electronic dictionary” encompasses a variety of devices and technology, considering the popularity among local students, this study focuses on the hand-held (pocket) electronic device, and the web-based version of the dictionary, while the dictionary stored in the hard drive of a computer or a CD-ROM, or some other electronic forms will not be mentioned. In the following discussion, whether the point is related to the hand-held electronic dictionary, the web-based dictionary, or both, will be specified.

2.3.2. Research on Electronic Dictionary Use

As the use of the hand-held electronic dictionary is a relatively recent phenomenon, related studies are few. They were mostly on its effectiveness to the user’s search purposes with similar methods employed to those in other dictionary use studies. Most of the findings lend support to the convenience that the various electronic features could provide to the users, allowing them faster search results (Aust, Kelley & Roby, 1993; Chang, 2002; Diab and Hamdan, 1999, p. 297; Winkler, 2001). Aust, Kelley & Roby’s (1993, p. 64) study involved 80 undergraduate foreign language learners, who took part

in a comparison of online electronic aid and conventional paper dictionary use on the measures of consultation frequency, study time, efficiency, and comprehension. They found that readers consulted hyper-references much more frequently than comparable paper references. Because hyper-references offered more efficient access, they appeared to lower the “consultation trigger point”, thereby increasing the learners’ appetite for elaboration. Easy access to references should benefit students by encouraging them to become actively involved in learning. Findings from their study suggested that hyper-references might reduce the overall study time. Yet users needed to familiarize themselves with the presentation of information on screen. They also needed to discover the different features and facilities that the CD-ROM dictionary offers (Winkler, 2001, p. 239). Electronic dictionaries on CD-ROM often have a complex hyper-textual macro-structure, and each one is organized differently, so even expert dictionary users need to learn how to access information in a new product (Nesi, 2003, p. 379).

Overall, more research has to be done to explore the effects of hand-held electronic dictionary use on language learning, and how such dictionaries are used, or how they might be used (Nesi, 1999, p. 63). Even if users are familiar with their tools, it is how the tools are used in accomplishing their tasks, be it for reception or production, i. e., users’ reference skills, that determines whether these tools facilitate or hinder them in completing their language tasks in terms of efficiency.

Electronic dictionaries are relevant to the present study, as many students in Hong Kong use them for their Chinese to English translation, although they mostly contain the information from already published dictionaries. Thus, the shortcomings of the print dictionaries can still be found in those electronic products, and may influence the user. At the same time, the search practice is conditioned by the functions of the device, and

consequently students' use of the dictionary as well. The hand-held electronic dictionary use patterns of some Hong Kong students will be explored in the present study. The process of their use of web-dictionaries, which are mostly the internet versions of the printed ones, and is an even more recent phenomenon, will be revealed in the think-aloud exercise. This gradual shift of the use of print dictionaries to electronic dictionaries is noteworthy, as it carries implications for both language learning and teaching. It is to this area that the present study can contribute, particularly on its use in translating.

Translation software will not be discussed, since it is dictionary use that is under investigation in the present study, and the software is still far from common among students.

2.4. Research on the Training of Dictionary Use

Retrieval skills and knowledge of how to find a suitable dictionary to meet one's needs do not come naturally to students. This implies that they would have been able to identify their own needs, to understand the innovative features found in current dictionaries, to match them with the claims made by various dictionaries, and to successfully pick the right dictionary/ies to use for a particular task. The assumption goes further in that students will teach themselves how to use a particular type of dictionaries, and thus be able to use them to solve their problems. Finally, they would have been so satisfied with the dictionaries that they want to keep on using them in their learning (Chi, 2003, p. 360). The school system assumes that reference skills are transferable and self-evident (Nesi, 2003, p. 387). That means there is an assumption that they could fully control the consultation process as described in Figure 2.2. But research on dictionary use quoted so far has shown the opposite. Pedagogical

lexicographers widely believe that dictionary use needs to be taught explicitly, so that more users benefit from the rich resources in dictionaries (Chi, 2005, p. 65).

One of the most important purposes of dictionary use training is to ensure that learners use them to lessen their dependence on the teacher, without merely transferring their dependence from the teacher to the dictionary (Beattie, 1973, p. 162). If they have been taught how to use a dictionary effectively, they will become more competent language users. At the same time, their self-esteem will increase, since they will be in a better position to solve problems for themselves. If teachers know that a class can use a dictionary effectively, they can deal with more important problems than items of vocabulary (Berwick & Horsfall, 1996, p. 33). The teaching of dictionary use is not only beneficial to users, but, in the long run, to the advancement of lexicography as well. The better users and buyers of dictionaries know their tools and products, the more publishers feel the pressure to improve dictionary quality (Hausmann, Reichmann, Wiegand, et al, 1989, p. 212).

There are three means to user instruction: user's guides, workbooks, and lessons (Hartmann, 2001, p. 93). Béjoint (2000, p. 168) reckoned that the last one is the most efficient way to educate dictionary users, as part of the normal curriculum. It cannot simply be another item on the language syllabus (Cowie, 1999, p. 191). Although formal classroom teaching of dictionary use is not much practised, some experiments indicate that it works (Tono, 1984, 1987; Griffin, 1985, etc.; as cited in Béjoint, 2000, p. 168). Yet at the same time, Tono (2001, p. 13) held this view with some reservations: it seems to be still an empirical question whether this kind of dictionary training is effective or not; and if so, learners of what levels are encouraged to receive such training.

Many studies of dictionary use conclude with the remarks that, in order to make dictionary use more effective, the training of reference skills is indispensable. On this, various researchers have made their contributions to how it could be achieved.

Presented in 1989, Hausmann, Reichmann, Wiegand, et al's opinions are echoed by later studies. They summarized (1989, p. 208) the findings of some recent studies, and found that the reasons for teaching dictionary use were fourfold: (1) some information in the dictionary is often misunderstood; (2) some information in the dictionary is underused; (3) users think that the lexical items provided in the definitions in the dictionary are equivalent to the words that trigger the look-up, and that the dictionary can never be wrong; and (4) the users are not aware of the variety of dictionaries and their differences. In consequence, they suggested what dictionary skills should be taught, and how they could be taught (1989, pp. 210–211).

Gates surveyed formal instructions in dictionary-making, history, and use between 1925 – 1979 (1979; as cited in Gates, 2003, p. 124). He (2003) did a survey as a sequel of the teaching of lexicography in different parts of the world in 1979 – 1995, with data gathered from newsletters, interviews, letters, and a questionnaire to university teachers who were interested in lexicography. The teaching could be as short as workshops, short-term courses, and summer schools, or courses subsumed under other curricula, or even diploma and degree programmes in lexicography. The training was found in Australia, Brazil, Germany, India, Japan, Norway, the Netherlands, South Africa, Spain, Sweden, the U.K., the U.S., etc. Take the graduate diploma in lexicography offered by the University of Exeter in 1989 - 1992 as an example, the specialized optional courses included the history of lexicography and national traditions, terminology, electronic dictionaries, bilingual lexicography, advanced syntax and semantics for

dictionary-making, dictionaries and word-formation, dictionary criticism, the learner's dictionary, dictionary technology, neologisms, as well as lexical data structures (Gates, 2003, p. 140).

Nesi (2003) conducted an e-mail enquiry with list members of five groups of teachers or researchers related to linguistics or English. Responses were received from 35 lecturers, who taught one or more of the following subjects: linguistics, and different modern languages/English, mostly from U.K. universities, and also from Australia, some European and Asian countries. Most of her informants reported dictionary skills training on professional courses, in first year programmes, or in an isolated series of lectures, rather than as regular input throughout a student's university life (Nesi, 2003, p. 387). Four major themes emerged from her discussion with informants. (1) Students entered university with poor dictionary skills. (2) There was insufficient dictionary-skills training at university level. (3) Some dictionary training tasks were unpopular with staff and students. (4) The teaching of dictionary skills was believed to be important (Nesi, 2003, pp. 387-389).

In Mainland China, dictionary training is structured into seven stages to enable primary school children to obtain a systematic knowledge of dictionaries and reference skills in the National Chinese Syllabus (Li, 1998, p. 62). It has been speculated that the early training in the use of Chinese dictionaries leads to a rather strong dictionary awareness among Chinese university students. This is evidenced by the high rate of ownership and the users' attitudes towards dictionary use (Li, 1998, p. 67). As their counterparts in Mainland China, Hong Kong students also revere the dictionary. Starting from primary school, each pupil is required to have a Chinese dictionary.

In regard to English learning, the study of Tsui and Bunton (2002) drew data from more than a thousand language-related messages posted over a two-year period on an Internet-based computer network for English language teachers across Hong Kong. A conclusion drawn is that the dictionary was treated as more authoritative than the native speaker of English (Tsui and Bunton, 2002, p. 65). Dictionaries used to lack an official status in local primary and secondary English curricula. The training of their use might have been non-systematic, if not altogether overlooked (Chi, 2003, p. 357). Teachers who believe that dictionary use should be taught may feel helpless, since they may not have the knowledge and/or skills themselves to teach students how to use dictionaries. Those who attempt to teach despite all the possible constraints may find themselves busy preparing their own materials, and trying hard to squeeze the training into an already tight syllabus (Chi, 2003, p. 358). Luckily, there has developed a slow yet gradual attention to this negligence. Developing dictionary skills is stated in the English curriculum of secondary 1 to secondary 5 (Curriculum Development Council, 1999a, p. 17). The curriculum for secondary 6 – 7 suggests that learners at this level should learn to use the dictionary to find out the less frequent, unusual or rare meaning and special usage of a word in the text. They should also develop more extended dictionary strategies to find out the usage of different words (Curriculum Development Council, 1999b, p. 12). Yet in its context, it is not specified that the dictionary skills are on monolingual English dictionaries, bilingualized English-Chinese dictionaries, or both.

Compared with Chinese dictionary training, however, the instruction given to Chinese students in the use of bilingual dictionaries is limited. It cannot be assumed that with prior training in the use of Chinese dictionaries, students would have little problem in using English dictionaries, as there are a number of significant differences between the language pair of English and Chinese, and between the two dictionary styles. It

would be of great help to the Chinese user if the skills learned for the use of monolingual Chinese dictionaries could be transferred and applied to the use of bilingual and monolingual English dictionaries (Li, 1998, p. 63). Further research is needed to establish how this could be applicable.

2.4.1. Interim Summary

Most dictionary use research concludes that to improve the effectiveness of dictionary use, training of dictionary skills is the key. Yet it is not commonplace in language curriculum, at least not on bilingual dictionary use. Some studies experimented with the training of dictionary use, and reported positive results. However, support is not overwhelming. Research on both the training *per se*, and the effectiveness of the training is scant. In English-Chinese dictionary use training, the rare and significant study was done by Chi on its use for reception (2003). As there are dictionaries of different language combinations, used for various purposes by disparate groups of users, so should there be research on these areas, including Chinese-English dictionary use for production.

2.5. Dictionary Use and the Training of Translators

As one of the foci of the thesis is the teaching of Chinese-English dictionary use to translation students, it is worth introducing, in this last part of the literature review, how dictionary use is indispensable to translating, the training of translators, and that of translation students in Hong Kong in particular, before linking it to the use of Chinese-English dictionaries in translation. Whether a dictionary is used effectively or not has more to do with translators than the dictionary itself, and the translators usually acquire their dictionary skills while still in schools, where the training of using the dictionary, or the lack of it, influences them. The following will explore the training

needs of translators regarding the use of dictionaries, and if these needs are addressed in their training.

2.5.1. Dictionary Use and the Translator

Translation is rendering the meaning of a text into another language in the way “that the author intended the text” (Newmark, 1988, p. 5), or from the reader’s perspective, “in such a way that the receptors in the receptor language may be able to understand adequately how the original receptors in the source language understood the original message” (Nida, 1984, p. 119). The translation process can be described in three stages: (1) translation-related reception of the source language text; (2) transfer of text from the source language into the target language; (3) translation-related production of the target language text (Tarp, 2004, p. 31). The translator can be viewed as an advanced learner of the foreign language who faces problems identical in nature to those encountered by learners of the same level (Abu-Ssaydeh, 1991, p. 66). Dictionary use is almost inevitable in translation. In the process of translation, reference needs arise, both factual and linguistic, which the translator attempts to meet mainly by consulting dictionaries and other reference works (Hartmann and James, 2000, p. 146). It has been claimed that up to fifty percent of the time spent on a translation task is devoted to consulting various types of reference sources. Thus, in terms of cost effectiveness, not only is it relevant to study the reference sources themselves; it is also important to identify more exactly the contribution that they make to the translator’s decision-making process. Furthermore, it must be remembered that not only lexical information is sought in the sources consulted by the translators. Individual needs vary a great deal, ranging (particularly in Language One to Language Two translation) from equivalent, grammatical collocation, lexical collocation, examples, idiomatic usage, para-structure, text structure, stylistic information, to encyclopaedic information

(Varantola, 2003, p. 337). This can be illustrated by Figure 2.4.

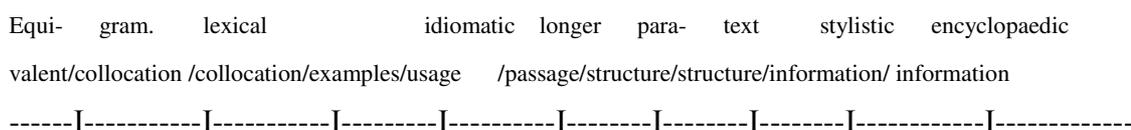


Figure 2.4: The Continuum of Information Needs (Varantola, 2003, p. 339)

The training of translators undoubtedly leads them to be wary of possible translation traps: only when they have obtained multiple confirmation from various sources would they be satisfied that their choice is a correct or adequate one for the particular context (Atkins and Varantola, 1997, p. 26). One of the key differences between student or trainee translators and practising freelance professionals lies in how they deal with unfamiliar words. The former tend to rely heavily on dictionaries, and particularly bilingual dictionaries, while the latter are more reluctant to do so, and use them more sparingly (Fraser, 1999, p. 25). Professional translators, particularly those working in literary translation, agree that, while monolingual learners' dictionaries proliferate, the ideal dictionary for the translator is yet to exist. The basic problem is that any dictionary operates with lexemes in isolation, but actually functions for words in individual texts and in varying contexts. The conventional bilingual dictionary is even more problematic, because it is based on a principle which is now being increasingly probed and called into question: that of interlingual equivalence (Snell-Hornby, 1995, pp. 537–538). The dictionary provides one or more “equivalents” for the foreign language headword, which—according to the current presuppositions of bilingual lexicography—are expected to fit into the translated text (Zgusta, 1984). It is, however, common knowledge among professional translators that a translated text is not merely a string of dictionary equivalents, and that the relationship between languages and cultures is far more complex than can be expressed by lexical equivalence.

Translators work with concepts and terms in context; terminologists isolate terms from context, i. e., de-contextualize them, and then associate them to concepts (Sager, 1992, p. 112). Dictionary translation is usually bottom-up processing, from word to sentence. A sentence used in exemplification is contextualized in a restricted sense (Zhao and Huang, 2004, p. 180). It is a different case with general translation, because it is usually top-down processing, from text to sentence to word.

Translators usually find more useful information in monolingual dictionaries, where words are defined and explained as part of the linguistic and cultural background in which they are embedded. However, this does not mean that lexical material could not be arranged bilingually and contrastively in such a way that it would help the translator in choosing the best word or phrase to fit the particular text concerned. The problem is rather that lexicographers are still unfamiliar with the very sophisticated demands and specialized needs of the professional translator, whom they still tend to see as a kind of language learner, and publishers are reluctant to venture into what they see as a risky field with a limited market. The result is that translators have to use various dictionaries designed for other types of users (Snell-Hornby, 1995, pp. 539–540). Monolingual dictionaries—together with bilingual dictionaries the other way round, e.g., Language Two to Language One—when translating from Language One into Language Two, and vice versa—are so far the best ones to provide solutions to a number of problems frequently popping up during the translation process (Tarp, 2002, p. 60). Nonetheless, translators still use bilingual dictionaries more often than monolingual dictionaries (Abu-Ssaydeh, 1991, p. 66).

The above situation anticipates a translation dictionary, one designed to assist the user in solving problems in the translation process (Tarp, 2002, p. 66). The

translator-oriented dictionary has to be self-contained as a guide to language use, i. e., it must list all the semantic, syntactic, collocational, grammatical and stylistic information that the translator needs, so as to use the vocabulary component with a native speaker's skill (Abu-Ssaydeh, 1991, p. 73).

It can be seen that translators have sophisticated and constant needs of the dictionary. While the monolingual dictionary is more satisfying in use than the bilingual one, translators still use the latter more often, as their job involves interlingual communication. The process of their use of these dictionaries should be further explored, so their needs could be more clearly identified, and consequently, met.

2.5.2. The Training of Translators

Recent translation theory is concerned with two phenomena. (1) The theory was product-oriented. A written text in a target-language as the result of a translation process has traditionally been described and analyzed by a comparison with the respective source-language text. (2) The theory was mainly competence-oriented, and focussed on translators' internalized knowledge (Lörscher, 1995, p. 884). In defining translation competence, theorists focus not only on its product, but also on the processes involved, which implies that translation is a skill that can be trained and investigated in terms of relevant strategies and/or competencies (Latkowska, 2006, p. 210). "Strategies" is a term which has been used to refer to both conscious and unconscious procedures, to both overt tactics and mental processes (Séguinot, 1991, p. 82). Given that the strategies enhance performance within limits delineated by proficiency and metalinguistic awareness, translation performance is primarily indicative of the underlying competencies, linguistic and metalinguistic, and only secondarily of the strategy/ies used (Latkowska, 2006, p. 213).

The training methodology of translation can be divided into three areas or levels (Kiraly, 1995, p. 37): (1) a theoretical foundations level, emphasizing the multi-disciplinary theoretical origins of translation pedagogy, and providing a teachable model of translation process and competence; (2) a methodological level, based on a model of how translation processes and competences can be learned or acquired, which serves as guiding principles for the teaching of translation; and (3) a practice level which puts into implementation the methodology theory in the classroom through specific curricula, syllabi, evaluation schemes, text selections, and other teaching practices.

On the practice level, student translators are often expected to start from the source-language elements, and transfer the text sentence by sentence, or, more frequently, phrase by phrase, or even word by word. This text is then polished stylistically, until it looks acceptable (from the translator's personal point of view) for the communicative situation for which it is intended. This "bottom-up" process works from the linguistic text-surface structures to conventions, and finally to pragmatics. As such, it is highly dependent on the translator's own stylistic preferences, and the limitations of their linguistic and translational competence. This has several drawbacks, not only in translation practice, but particularly in translation teaching. In the bottom-up approach, translating is seen as a code-switching operation where lexical or syntactic equivalences play the most important part. Students are thus tempted to keep as close to the source-text structures as possible, which leads to linguistic transfers and mistakes even when translating into one's native language. At the same time, students often neglect how the text as a whole functions in its communicative situation. Moreover, a decision taken at a lower level often has to be revised when reaching the next level (Nord, 1997, p. 67).

With respect to the impact on dictionary use, students trained in the “bottom-up“ approach pay more attention to the word-level, neglecting the pragmatic and cultural aspects of the text. They search for “equivalents” from the bilingual dictionary, which, as discussed above, presented to them in a readily usable manner, and hence reinforce the students’ expectation and practice.

It is in the writer’s knowledge, as well as his own learning and teaching experience, that many translation classes in Hong Kong are conducted in this “bottom-up” approach. On the word level, students often expect that there are “standard” equivalents, no matter the types of texts, be they technical or literary. They expect the “silent” teacher (the bilingual dictionary) or the human teacher to provide them with standard “answers” to the original words under translation, forgetting that very often the “equivalents” depend on the context, register, and target audience of the text. This is a gap that proper pedagogical lexicography can fill. Otherwise, this attitude to dictionary use will prevail, and will affect the quality of students’ translation.

Instead, in functional translation, problems should be dealt with in a top-down way. This means that the translation process should start on the pragmatic level by deciding on the intended function of the translation. The translation type then determines whether the translated text should conform to source-culture or target-culture conventions with regard to translation style (Nord, 1997, p. 68). Students should not merely be taught how to make good use of the dictionary, but also how to use the tool well for their translation purposes.

2.5.3. Research on the Training of Translators in Hong Kong

There has been little study on the design and planning of translation curricula in Hong

Kong, and yet curricula most directly affect the quality of translators trained by translation programmes (Li, 2001, p. 85). One of the few and early examples is Chau's (1984), who tested the effectiveness of grammatical, cultural and interpretive teaching models in translation pedagogy with students by experimental data. It was found that the suitability of these teaching models depended on the language levels of learners, and the models' popularity among students also varied (Chau, 1984, p. 228). Another is Liu's study (2001), although he analyzed the general trends in the curricula of the seven local tertiary institutions instead of focussing on a particular area of training. Among his conclusions, he observed (2001, p. 68) that the seven institutions in general put more emphasis on the Chinese/English languages, and the cultural aspects than on translation. After the return of Hong Kong to China in 1997, the demand for English-Chinese translation is said to have reduced, while that for Chinese-English translation rises. Therefore, there is need to increase training in Chinese-English translation (Liu, 2001, p. 75).

From the perspective of graduates, Li's study (2001) sheds light on the needs of students, and the (in)adequacy of the study programmes. He did a questionnaire survey with 42 professional translators in Hong Kong, and a follow-up interview with 12 selected informants in 1998 - 1999. According to the respondents, one of the greatest challenges that they faced at work was to choose the right style for translating a particular text. The right style, for them, consisted of the proper format, register, and terminology for a particular type of text (Li, 2001, p. 87). This echoed the finding of Lee-Jahnke (1998, p. 25), although within a European setting. What the European employers usually disliked about the intern students was that very often they did not find the right language register. Another challenge reported by the informants in Li's study was that they did not know where to find the references to help with their

translation. Finding references here includes both seeking references for the subject matter, as well as the terminology in the target language, but not exclusive to language dictionaries. They reported that they were very seldom taught how to find related references in completing a translation assignment (Li, 2001, pp. 87–88). It was assumed by many teachers that finding reference materials was fairly easy, but reported otherwise by the translators (Li, 2001, p. 88).

One conclusion drawn from the study (Li, 2001, p. 94) is that teaching students how to seek references seemed to be overlooked in translation teaching. Therefore, it was time that teachers, particularly those teaching specialized translation courses, took up the responsibility to inform students of useful references in translating texts of different subjects. It would also be of great help to students if they could be aware of the web sites of some international, regional and national translation and interpretation organizations, various translation links and on-line discussion groups. His other conclusion was that the development of translation and interpretation programmes lagged behind the socio-political changes, and hence behind the translation market as well. In order to ensure that translator training programmes fully meet students' needs, needs assessments should be conducted regularly, and curricula reviewed accordingly (Li, 2005a, pp. 114–115). To him, many translation programmes in operation today have, to a large extent, been based on teachers' assumptions about translation and translation teaching, rather than the needs of the learners (Li, 2005a, p. 101).

Li (2005b) did a curriculum analysis of the 7 undergraduate translation programmes in Hong Kong, with special attention to the specialized translation courses, such as commercial translation, government document translation, science and technology translation, mass media translation, and legal translation. He discovered

(2005b, p. 62) that these courses were the core ones in all the seven translation programmes in Hong Kong tertiary institutions, and they were usually the most popular among students. It is advised (Li, 2005b, p. 70) that, in the effort to help students to develop decision-making and problem-solving abilities to tackle translation problems, students must be informed of, and become acquainted with the reference tools for each kind of professional translation (Li, 2001, p. 88). A review of the specialized translation course descriptions shows that Lingnan University was the only one that explicitly required students to have such knowledge.

It is seen that research on the training of translators in Hong Kong is scarce. Little is on the pedagogy, and still less on particular subjects. It is high time that studies on particular areas and skills in translation came to the fore, and pedagogical effectiveness be measured. The existing research has the curriculum design and student needs as foci.

2.5.4. The Evaluation of the Curricula of Translation Programmes in Hong Kong with Respect to the Training of Dictionary Skills

Regular needs assessments should be conducted for review of translation programmes (Li, 2005a, p. 115). This study attempts to evaluate if the translation curricula in Hong Kong tertiary institutions meet the needs of students in relation to dictionary use skills. But before that, the importance of curriculum evaluation and needs assessment must be highlighted.

Curriculum evaluation is the systematic collection and analysis of all relevant information necessary to promote the improvement of a curriculum, to assess its effectiveness, as well as the participants' attitudes within the context of the particular institutions involved (Brown, 1989, p. 223). It is generally agreed that curriculum

design should be based on learner needs. A need is considered to be a discrepancy or gap between “what is”, or the present state of affairs in regard to the group and situation of interest, and “what should be”, or a desired state of affairs (Witkin and Altschuld, 1995, pp. 4, 9). The data can come from archival, communication, and analytic sources (Witkin and Altschuld, 1995, pp. 48–49). The assessment of knowledge and skill needs for an existing process should involve subject-matter experts, job incumbents, supervisors, and other related internal or external customers (Gupta, Sleezer & Russ-Eft, 2007, p. 85). The common purposes of knowledge and skills assessment can include: (1) learner analysis; (2) subject-matter analysis; (3) attitude towards existing training programmes; and (4) quality of existing training programmes (Gupta, Sleezer & Russ-Eft, 2007: 86).

The objectives of a needs assessment are twofold: (1) to identify the needs of the learners not being met by the existing curriculum; and (2) to form a basis for revising the curriculum, so as to fulfill as many unmet needs as possible (Oliva, 2005, p. 209). The scope of needs ranges from: (1) the needs of students in general; (2) the needs of society; (3) the needs of the particular students; (4) the needs of the particular community; and (5) the needs derived from the subject matter. The curriculum evaluation adopted in the present study is the needs assessment. It is with this that the curricula of translation programmes are assessed below.

In assessing the quality of existing translation training programmes in Hong Kong, Li (2005b) has done a curriculum analysis on the seven local undergraduate translation programmes. Yet his focus was more on specialized translation courses. This evaluation confines itself to reference skills for translation. In Appendix 10.1 are all the uploaded curricula of the undergraduate translation programmes offered by six local universities

out of a total of nine. They are the Chinese University of Hong Kong (CUHK), City University of Hong Kong (CityU), Hong Kong Baptist University (HKBU), Lingnan University (LingnanU), the Open University of Hong Kong (OUHK), and the University of Hong Kong (HKU). Since the focus of the study is the training of dictionary use in these curricula, all data concerning the operation system, including the number of credits, whether they are core or elective courses, are not specified. One backdrop of translation education in Hong Kong is that most of the students enter the university with their Advanced-level certificate qualification. The translation programme is pitched at the undergraduate level.

CityU does offer an elective course Terminology (<http://www.cityu.edu.hk/cityu/prgm/index.htm>), with the aim “to lay the foundations for understanding and applying to translation the concepts and techniques of the terminologist”. The course objectives are: “On completing this course, students should be able to: understand the principles and methodology of the discipline of terminology, as applied to translation; and design and produce practical monolingual and bilingual glossaries in selected fields of specialization.” The syllabus incorporates the following elements: history of terminology, terminology and translation, terminology and related disciplines, methods of retrieving terms and effective use of dictionaries, nature and definition of terms, formation of words, translating English neologisms, and translating terms in specialist areas.

Although not stated in the programme aims, CUHK offers an elective course “Lexicography and Translation”. It “studies the history of lexicography in China and in the West, examines the strategies of dictionary compilation and discusses how dictionaries can be effectively used in translating. Printed and electronic dictionaries are

both covered, and emphasis is given to C-E & E-C bilingual dictionaries” (http://traserver.tra.cuhk.edu.hk/eng_programmes.html#).

The HKU curriculum includes an elective course, “Choice of Words” in Translation, which “takes a new semantic approach to the analysis of different types of word meaning in a text” (<http://www.hku.hk/chinese/undergraduate/c1h1i7.html>). It bears the most relevance to lexicography.

Recently, HKBU started to give proper treatment to handling terminology in one course titled “Translation Knowledge 1: Principles and Methods” (<http://tran.hkbu.edu.hk/undergrad.asp>). There is no specific course in the LingnanU programme that helps to foster students’ skills in dictionary use. However, in the course descriptions of the elective Translation for Science and Technology, and Translation for the Media (E-C & C-E), the use of reference tools is mentioned (<http://www.ln.edu.hk/tran/>). In the OUHK curriculum, the course Introduction to Translation contains one topic for the use of language references (http://www.ouhk.edu.hk/WCM/?FUELAP_TEMPLATENAME=tcGenericPage&ITEMID=CC_COURSE_INFO_908492&BODY=tcGenericPage).

The above analysis suggests that, given the general needs for training in dictionary use in students, there seems to be a gap between the curricula and student needs. Only CityU, CUHK, and HKU attempt to cater for these needs in their programmes with a course. HKBU, LingnanU, and OUHK have given some consideration to this aspect, with an item in one course in the whole programme. This by no means indicates that one is superior to the other on account of the presence of this kind of training. It all depends on the programme aims. But most if not all of the curricula give some weight

to specialized translation, preparing students for their future professional development, which, inevitably, involves sound foundation in translation reference skills. It is to this that the translation curricula in Hong Kong should give more due attention.

2.6. Summary

The Literature Review starts with an introduction to the research on dictionary use, with summaries of the subjects and methods involved, and the major findings in the last few decades. Then the review is confined to the research on two types of dictionary: bilingual dictionary and hand-held electronic dictionary. Most of it was on the bilingual dictionary for learners of English, who predominantly preferred the bilingual dictionary to the monolingual English dictionary, with the primary search aim for word meaning. Research findings show that levels of dictionary reference skills are in general extremely low, resulting in ineffective use of dictionaries, and it is mostly attributed to a lack of systematic training of dictionary use (Cowie, 1999, pp. 197–198; Fan, 2000; Li, 1998; Li, 2003). Some research supports positive result of systematic teaching to effective dictionary use (e.g., Chi, 2003). But before they could provide suitable training for students, teachers have to be aware of the latter's needs. Use of the hand-held electronic dictionary is a relatively new phenomenon. It is yet to find out if the tool is instrumental to language learning and use.

The focus is further refined to the dictionary of the language combination of Chinese to English. It is found that rare is research on this kind of dictionary for specific purposes, e.g., translation. The dictionary is an indispensable tool to translation, yet under the commonly adopted “bottom-up” teaching approach, translation students tend to use the dictionary for “equivalents” to the original on a word-to-word level, without due regard to the context, and at the expense of the overall style and function of the

whole text. The curricula of translation programmes of six Hong Kong universities are examined to review if importance is given to the training of dictionary use to their students. While graduates and teachers agreed that the training of reference skills is necessary (Li, 2001), the curricula fail to meet that need.

This research background calls for studies on: (1) the profile, skills and needs of translation students in dictionary use for production purpose; (2) the use of electronic reference tools in translating; and (3) how translation programmes could help meet the needs of students in dictionary use for Chinese to English translation. Considering that students may or may not have proper training of dictionary skills, it awaits further exploration into the differences in these two groups of students pertaining to the perception to and practice in dictionary use. No single study has been devoted to investigating the patterns and process of how translation students use the dictionary for Chinese to English translation, what their training needs are, if they are met, and how they could be met. The timeliness of this study lies in the fact that it shall contribute to the improvement of translation training in relation to the reference skills that students need, and to research in pedagogical lexicography.

The next chapter shall introduce the research needs in this subject area out of this backdrop, and how the research was conducted.

3. Methodology

3.1. The Case for this Research, and Research Statement

3.1.1. The Significance of the Present Study

The Literature Review has shown that there has been research on dictionary use skills for specific purposes, e.g., for translation with translation students, albeit with other language combinations. Studies on how translation students used the English to Chinese dictionary for reception can be found, although not many, as the use of the English-Chinese dictionary is common from the secondary school to the professional levels. The methods used were mostly questionnaire survey and interviews. The research results demonstrated that Chinese students were seldom taught how to use the English-Chinese dictionary, and dictionary use training was needed.

This study distinguishes itself from previous ones in that rarely are there systematic studies on the use of the Chinese-English dictionary for production. Hong Kong translation students are taken as a case study. With the same language combination of English and Chinese, there are many more translation students in Mainland China, Taiwan, and some other parts of the world than in Hong Kong, with a mere population of about seven million people. Yet significance rather than number is a hallmark of case studies, offering the researcher an insight into the real dynamics of situations and people (Cohen, Manion and Morrison, 2000, p. 185). Hong Kong is chosen for the convenience of data collection, in which the present writer resides. It is also a place with many choices of translation training in terms of levels and programmes. In addition to the undergraduate programmes of the six universities surveyed in the Literature Review, there are numerous certificate, diploma, sub-degree, and post-graduate degree programmes in translation in this city, mostly with the language combination of Chinese and English. Hong Kong translation students have a

special need for the use of the Chinese-English dictionary, and study on it is justified, as dictionary use differs tremendously in kind, language, purpose, and culture (Tono, 2001, p. 65). Such in-depth study of individual dictionary users as a part of a small-scale research project can reveal micro-concepts such as individual perspectives, personal constructs, and definitions of situations in relation to dictionary use in a particular environment (Tono, 2003, p. 401). The needs of various user groups differ, and thus user studies should focus more on the specific needs of smaller groups or individuals (Li, 2003, p. 108). At the same time, research on Chinese-English dictionary lags far behind that on other dictionaries (Wu, 2004, p. 49).

This will be the first study devoted to investigate: (1) the Chinese-English dictionary user profile of Hong Kong translation students, including the use of electronic reference tools; (2) the process of how they actually use their reference tools in translating from Chinese to English; and (3) the effectiveness of their use. The methods include not just questionnaire survey and interview, but also a think-aloud protocol, and a performance exercise, so as to show a more comprehensive profile of the students. The investigation results will lead to an exploration of the pedagogical needs in translation; and of the effectiveness of the training to meet those needs, if the training is already present in translation programmes.

Previous studies cited in the Literature Review all reach the same conclusion that a very low percentage of tertiary students were instructed to use the dictionary, no matter in which language under study; and that there is a serious gap in learners' need in this aspect (e.g., Atkins and Varantola, 1997; Cowie, 1999; Thumb, 2004). This situation is also found in Hong Kong (e.g., Fan, 2000; Li, 1998; Li, 2003). The present study will benefit the teachers and students of translation in Hong Kong. They could understand

more of students' process in using dictionaries in Chinese to English translation, their needs thereof, and find out what could be done to improve the situation (Atkins and Varantola, 1997, p. 36). Another contribution will be in revealing how some students use electronic reference tools. If the training needs in dictionary use are identified, changes in the curriculum of translation training could be propounded (Li, 2005a, p. 115). This concerns all the stakeholders in the training: the student, the teacher, the department, the training institution, the employer, the profession, and the community at large. Third, publishers of this kind of dictionary will have more concrete data as reference to better meet their customers' needs. Fourth, the pedagogical lexicography circle will have one more Asian case of the student profile in dictionary use, and of how the process of dictionary use could be explored by think-aloud protocol, which is still a relatively new research method in this area.

3.1.2. The Research Statement

The research will focus on the whole process of dictionary use in Chinese to English translation: (1) how Hong Kong translation student users think they use the dictionary in translating from Chinese to English; (2) how they actually use it; and (3) the results of the use. (4) The results will then be discussed for their implications for translation teaching.

The answers to these major questions can help portray the user profile of translation students of the Chinese-English dictionary. The questionnaire survey is a very popular data collection method. In addressing these questions, reference has been made to similar studies (e.g., Atkins, Lewis, Summers and Whitcut, 1987; Jiang and Wen, 1998; Li, 1998; Li, 2003; Taylor, 1988; Yu, 1999). The following sub-questions in the questionnaire shall help constitute the whole picture.

- A. How do Hong Kong translation students view monolingual and bilingual dictionaries, and the use of dictionaries?
- B. How do they choose Chinese-English dictionaries?
- C. Which kind of dictionary in terms of language combination do they use more often for Chinese-English translation: monolingual or bilingual?
- D. Which kind of dictionary in terms of language direction do they use more often for Chinese-English translation: English-Chinese or Chinese-English?
- E. How do they think about their teachers' perception to their need of bilingual dictionary use instruction?
- F. Have they ever been instructed about how to use the Chinese-English dictionary?
- G. Do they think that they need to receive any bilingual (English/Chinese) dictionary use instruction?
- H. If they have taken a course on dictionary use or applied lexicography, do they find it helpful to their translation?
- I. How important should the teaching of dictionary reference skills be? Should it be just an item in a translation syllabus? Or should it take up a substantial part, e.g., a separate course?
- J. How do they use different dictionaries (monolingual, bilingual, and electronic) in translating?
- K. How do they choose the "right" words from the dictionary in translating?
- How does bilingual dictionary micro-structure affect the performance of its users in translation (Al-Ajmi, 2002, p. 120)?
 - What kind of information are they looking for? What is the most helpful component in the dictionary entry? Do they find what they look for? Are they satisfied with what they get?
 - What do they consider if the dictionary cannot provide the translation

“equivalents” for their use?

- When do they use a Language Two monolingual dictionary?

L. Do they have any difficulty in using Chinese-English dictionaries?

Sub-questions (A) – (L) correspond to major question (1), as respondents answer from their memory of how they use the dictionary. Questionnaires, however, only give reports of informants’ actions, which may not be accurate. Sub-questions (J) to (L) can also be answered by observing how respondents participate in an actual translation exercise, which relate to major question (2). The translations of respondents become the results of their use of dictionaries in the exercise, in correspondence to major question (3).

The user profile depicted from these answers can be compared with those user profiles of other dictionaries from other regions for other purposes. The dictionary use steps observed during the translation exercise can be put in comparison to those from, for example, Thumb’s study (2004), while the translations as the results of dictionary use serve as verification of the user profile, and the steps.

Students’ needs in dictionary use training analyzed from these results shall become the yardsticks to evaluate the adequacy of the translation curriculum in Hong Kong, which leads to the question of what could be suggested for better dictionary use pedagogy, the fourth focus of the research.

3.2. The Approach in Dictionary Use Research

This study applies an interpretative approach, in which one gathers many pieces of information about relatively few subjects, and is more concerned with the explanation in terms of meanings and understandings held by the subjects than the cause *per se*

(Erickson, 1991, p. 339). Quantification and statistical analysis plays a subordinate role at most (Hammersley, 1998, p. 2). Data are drawn from various sources, but observation and relatively informal conversations are usually the primary ones (Hammersley, 1998, p. 2), and the methods observe effects in real contexts (Cohen, Manion and Morrison, 2000, p. 181). Interpretative methods are especially useful when the objects of the research are routine, and are taken for granted by the participants (Erickson, 1991, p. 348). The “ordinariness” of dictionary use, whose complexity is neglected by many (Béjoint, 2000; Hartmann, 2001; Nesi, 1999), falls exactly into this category. A major disadvantage of interpretative methods is that they are so labour-intensive that only small numbers of subjects can be studied in detail at any given point in time (Erickson, 1991, p. 351). From this perspective, the present study does not attempt to claim an ability to be generalized to a specific population; instead, the findings are relevant from the perspective of the user of these findings.

In response to the four foci of the research into dictionary use in Hartmann’s time (1987, p. 12), sub-question (K) in the Research Question in Section 3.1.2 tries to identify the specific categories of linguistic information perceived as important by particular groups of dictionary users. Sub-questions (A) – (D), (J) seek to shed light on the users themselves, and on their assumptions and expectations in turning to the dictionary. Sub-questions (J) (from actual situation) and (K) investigate the activities when a dictionary is used. Sub-questions (E) – (I), (L) explore the reference skills which users have developed, or need to develop, to use their dictionaries more effectively, and evaluate teaching programmes designed to enhance such skills.

Emphasizing the importance of relevance, reliability and replicability (3Rs) of research, Hartmann (2001, pp. 77, 94–95, 120) lists the following limitations of research

on dictionary use. (1) The number and scale of user studies is still too small. (2) The types of dictionaries studied are mostly general dictionaries, both monolingual and bilingual, in contexts of formal learning. (3) On account of the diverse methods employed and the settings, the comparability of the studies is low. (4) The generalizability of the results of the studies is limited. (5) Many factors and variables of dictionary use have hardly been studied at all, e.g., differences in personality, attitudes, and learning styles. (6) Research on dictionaries devoted to languages for special purposes is little. The present study does not intend to break through all the above limitations. It only involves about 100 subjects on bilingual dictionaries for formal learning. Yet it investigates the use of dictionaries for a special purpose, translation. The process of using the dictionary, including the web-based dictionary, shall be observed, which is hitherto under-explored. The results of the survey and the performance exercise by think-aloud protocol can be compared with similar studies mentioned in Section 3.1.1.

In terms of methodology, Wiegand (1998; quoted in Hartmann, 2001, p. 115) describes six different types of studies from the point of view of a social science research approach: (1) observation of dictionary users' choices and actions; (2) written surveys of users' opinions by questionnaire; (3) exercises to test the users' knowledge and performance; (4) laboratory experiments; (5) content analysis of interviews; and (6) verbal protocols.

Given the scope and nature of the present study, the second, third, fifth and sixth methods mentioned by Wiegand above are employed, namely, questionnaire to collect general data of the users, interview to help verify the information collected, observation (think-aloud protocol) to explore the process of use, and performance exercise to find out the results of consultation. It is hoped that through this triangulation of qualitative

and quantitative methods, the study could observe the 3Rs criteria advocated by Hartmann (2001, p. 120): relevant, reliable and replicable, although the sample remains relatively small. The more the methods contrast with each other, the greater the researcher's confidence in the study's reliability and validity (Cohen, Manion and Morrison, 2000, p. 112). Why these methods are chosen will be expounded in the following sections.

The above overview gives a general picture of the research methodology on dictionary use. It can be seen that there is still vast room for exploration, considering the relatively short history in this area, when compared with other lexicography streams, such as dictionary history, dictionary criticism, and dictionary structure. It is both in the subject area and the comparability of results that this study can further contribute to the research on dictionary use.

3.3. The Instruments Used in this Research: Questionnaire, Interview, Think-aloud Protocol, and Performance Exercise

3.3.1. From the User's Perspective: Questionnaire and Interview

The questionnaire is adopted as an instrument in this study, because it can most easily garner a large amount of data from respondents. This provides a general profile of how translation students in Hong Kong use the dictionary for Chinese-English translation. Yet the findings are "indirect", for they only record what the respondents think happens in dictionary use instead of what actually happens (Tono, 2001, p. 67). In addition, while the use of questionnaire survey on dictionary use is the most popular, it also receives the most criticisms. First, the researcher can never be sure of how much the subjects understand the questions (Béjoint, 2000, p. 147); the researcher and the respondent may not share the same terms of reference (Nesi, 2000, p. 12). Second, the

answers may only reflect what the subjects thought that they should answer, rather than what they actually do (Béjoint, 2000, p. 147). Crystal (1986, p. 76) criticizes that the retrospective questions in many questionnaires rely too much on the respondents' memories.

However, these limitations are present in all questionnaires, not just in this research. Using triangulation of methods can help verify the answers from the questionnaire, e.g., by interviews. Interviews are employed because they can provide more in-depth answers to the research questions. As well, it is believed that as the topic of the study is of intrinsic interest to translation student informants, they would be willing to answer the questions. Thus, the interviews and questionnaires will more likely be completed successfully, hence enhancing its validity (Oppenheim, 1992, p. 105).

3.3.2. From the Researcher's Perspective: Think-aloud Protocol

3.3.2.1. Think-aloud Protocol as Research Instrument

There has been an increasing interest in studying the translation process since the mid-1980s (Li, 2004, p. 301), and empirical investigation of the process seems to be especially important for three reasons. (1) Only on the basis of empirical studies of translation performance using a process-analytical approach can hypotheses on what goes on in the translator's head be formed (Lörscher, 1995, p. 885). (2) Empirical studies of translation performance will yield general insights into language processing, about aspects of the mental processes of speech reception and speech production. They therefore permit valuable insights into the cognitive organization of the learner's linguistic knowledge of the mother tongue, of the foreign language, and the differences between the two (Krings, 1987, p. 173). (3) It can make use of the knowledge of the translation process for teaching translation (Lörscher, 1995, p. 885).

The think-aloud protocol has become the main research instrument for such empirical investigation. Translating is often accompanied by “inner speech”, as one can easily verify by self-observation, or by observing the lips of a translating person, when he or she is not “speaking”. The thinking-aloud technique does not require any abstraction, selection or inference processes. The informants only report whatever comes into their minds, while they are translating. In this sense, the technique is more consistent with their actual behaviour in translation work than other methods, such as the retrospective technique (Lam, 1995, p. 907). Generally, subjects do not immediately reach optimal solutions in translation. In searching through their memories, they activate informational networks, thus producing interim solutions. The step-by-step nature of translational problem-solving is a further favourable pre-condition for thinking-aloud to yield many reliable data on the on-going mental processes (Lörscher, 1995, p. 887). One should, therefore, expect a high degree of validity for such data (Krings, 1987, p. 166). The data are especially suited to uncover individual differences in the translation procedure of the subjects, thereby avoiding the wash-out effect of large samples (Krings, 1987, p. 173).

The use of this method of investigation is supported by the theory that information acquired by being attended to in the execution of a task is held in short-term memory and, while there, remains accessible to the subject, and, hence, to the researcher. Such an approach adds a new perspective to experiments in human behaviour, because the subject becomes a co-observer (Kiraly, 1995, pp. 39-40). The data available for analysis is by its nature indirect, for it is to be used to investigate unobservable mental processes. All accounts have these features: (1) they give access to the processes actively and consciously involved in carrying out a particular task; but (2) they do not give access to

automatized processes (Fraser, 1996, p. 67). Many highly over-learned processes operate automatically, thereby wholly unconscious, and thus no account can be given. Students or language learners are consistently reported to produce introspective data focussed more on lexical choice, grammatical restructuring, or the unfamiliarity of particular idioms than on broader translation strategies (Fraser, 1996, p. 71).

Think-aloud protocol manuals require that prior training be provided for research subjects. Such training not only gives the subjects an opportunity to practise and familiarize themselves with the method, but also gives the investigator an opportunity to train the subjects to verbalize but not interpret their thoughts (Li, 2004, p. 308). Before the subjects start with their translation, the task which they are to perform must be explicated (Lörscher, 1991, p. 39). The subjects produce their translations in situations in which generally they have neither any linguistic nor any non-linguistic contact with the only possible communication partner, the test leader. Nevertheless, it can be assumed that implicitly, in the minds of the subjects, the test leader is the addressee of the utterances produced (Lörscher, 1991, p. 57).

Thinking aloud makes demands on the subject's short-term memory capacity. It involves asking a translator to translate a text and, at the same time, to verbalize as much of his or her thoughts as possible. The performance is generally recorded on audio- or videotape (Fraser, 1996, p. 66). In order to make the observed phenomena accessible to further investigation, they have to be transcribed. The transcripts are segmented into "sense"-units, i. e., stretches of language, which suggest more or less discrete mental processes. After segmentation, the researcher labels those "sense"-units, which appear to represent comparable thought processes with the same description (Olk, 2002, p. 124).

There is nonetheless some difficulty in obtaining introspective data (Mann, 1982, p. 89). Subject training may bias the data towards the experimenter's desires and expectations, whereas no training may result in the loss of potentially relevant information through the subject's ignorance. The demands made on retrieval from short-term memory by the subject are likely to result in the loss, or addition, or change of information to the processes or strategies under investigation. Introspection demands that the subject observe the contents of their own mind, and infer from this observation the processes in operation. This suggests that the subject has a meta-cognitive awareness which is sensitive and developed enough to be able to do this. When subjects are asked to use any of these techniques, they are being asked to do something which they are not accustomed to doing. This is likely to make them stressful.

3.3.2.2. The Case for Think-aloud Protocol in this Study

Kiraly (1995) points out that some researchers do not agree on the reliability and validity of subject verbalizations. The use of introspective data for the investigation of mental processes has been severely criticized by a few language researchers, notably Nisbett and Wilson (1977), and Seliger (1983). Nisbett and Wilson argued that conscious awareness is limited to the products of mental processes, and cannot reflect the processes themselves. But the problem is that no satisfactory definitions of product and process in terms of mental events exist (White, 1980, p. 105; quoted in Kiraly, 1995, p. 40). Seliger (1983; quoted in Kiraly, 1995, pp. 40-41) questioned the reliability of introspective data. His claim is that we cannot know to what extent such data reflect processing, or simply result from subjects guessing or inferring after the fact. This criticism may be valid for delayed or even immediate introspection, but true introspection, or thinking aloud, occurs simultaneously with the observed behaviour, so there should be no room for guessing or inferring. Sin (2002, p. 42) criticized that

switching our focal awareness to our thinking process will disrupt the whole translation task, and as a result, distort our thinking process. Nonetheless, even if verbal reports are necessarily incomplete or possibly distorted, and do not reveal everything, what they do reveal is important. Translation processing is probably a mix of conscious and subconscious processes—a mix that may change as translators proceed through their training, and become more professional (Kiraly, 1995, p. 41). Professional translators, in comparison with non-professional ones, have reached a much higher degree of automatization in translation. This is why translation students are chosen as subjects instead of professionals in this study. There is one more reason for adopting this “think-aloud” approach. It is assumed that oral text production, i. e., think-aloud protocols, would yield more data allowing conclusions about the underlying production process than would written text production, i. e., the rendition. In the latter type of language use, there is probably a stronger tendency to record the result of the production process (Lörscher, 1991, p. 35).

Despite the possible inadequacy of this method, it is still useful to study the process of dictionary consultation in translating. The information provided by the think-aloud data is not equally abundant for all features of the translation process. Wherever the information is scarce, the thinking-aloud data can be complemented by other kinds of data that provide the missing information (Krings: 1987, p. 174). Although it is advised that post-interviews be carried out in order to accomplish a fuller picture (Lam, 1995, p. 916), given the scale and aim of the present study on the dictionary consultation process but not translation strategy, the results of consultations, i. e., the written translation, will be used for complementation.

3.3.3. Performance Exercise: Written Results

Test-based research can enable the researcher to prove or disprove hypotheses, providing more reliable data (Nesi, 2000, p. 31). In test-based studies, subjects are asked to perform various tasks: translating, composing, and reading, while they can freely use the dictionary (Nesi, 2000, p. 53). One defect in this method is that it is difficult to create a situation where the dictionaries under study are used in a natural way. The design of the test may be biased towards the functions already available in those dictionaries. Also, it measures the end-product of dictionary use rather than the process. It does not explain the causes of the results (Nesi, 2000, p. 32). It is here that observation-based research, the think-aloud protocol, can help fill the gap, as it observes the process of dictionary consultation. Since the process rather than the result of the exercise/test is under scrutiny, so the issue of possible bias towards the functions already available in dictionaries is not material. A performance exercise is designed instead of a test, so that the respondents would not feel the pressure from the associations of taking a test. As the written work is for comparing the results of reference consultation with the process evidenced by the think-aloud protocols, no mark is given to the translated text. This is stated clearly to the student participants.

The above discussion has demonstrated the pros and cons of the four research instruments: questionnaire, interview, think-aloud protocol and performance exercise employed in this case study. Triangulation is used for investigating the user profile of the dictionary, and the process of its use for translation, so as to increase the validity and reliability of study results. It may be the first study employing these four methods regarding Chinese to English dictionary use, which can also contribute to the methodology research of lexicography. The following shall introduce how the designs of the four instruments help address the research statement.

3.4. The Designs of the Research Tools

3.4.1. The Design of the Questionnaire

The structured questionnaire with 24 questions is divided into three parts: (1) general dictionary use, and Chinese to English dictionary use in translating; (2) Chinese to English dictionary use training; and (3) personal background (See Appendix 10.2). The questionnaire is an indirect means to understand why and how people do something. It is expected that the answers to these questions can help sketch the user profile of the Chinese-English dictionary in the way that the student respondents think they use the dictionary for translation. All of the sub-questions in Section 3.1.2 are mentioned in the questionnaire.

Part I of the questionnaire asks for general information about dictionaries that translation students own, what they consider when buying a hand-held electronic dictionary, and why they use them. Questions 1, 3 to 5 all mention the hand-held electronic dictionary, as it is very popular among Hong Kong students. Question 2 explores students' attitude towards the dictionary. Then the questionnaire enters the core of the study: how students use the Chinese-English dictionary while translating. Questions 6 – 8 are about the background of students' use of this kind of dictionary. Questions 9 – 12 concern the process of dictionary use in translating. Since the research focuses on writing (translation), not speaking (interpreting), the pronunciation element in dictionary use is excluded. The answers of this part provide a backdrop on which the analysis of the answers to Parts II and III can be based. This is the funnel approach (Oppenheim, 1992, p. 110), as it starts off with broad questions, and then progressively narrows down the scope of questions.

Part II explores subjects' background in Chinese to English dictionary use training,

and their views on it. Since Question 17 about students' attitude to dictionary use training is very important to the topic, Questions 18 and 19 are set to follow it up from different angles (Oppenheim, 1992, p. 147). Question 19 enables subjects to make an overall evaluation of their skills in using the Chinese-English dictionary, thereby linking the former Parts and the need for training together. Question 20 is open for subjects to express anything pertaining to the topic. Part III is to gather information on the subjects' personal background, which can help discover if any of it could be related to their answers above. It is hypothesized that as students advance in their year of study, they should be more sophisticated in using the Chinese-English dictionary. The gender effect is yet to be found. The first language of subjects affects how they understand Chinese, while their English examination results in matriculation may imply their attitude to and reference skills in using the English dictionary. This Part is placed near the end of the questionnaire, so that the subjects would feel more at ease about releasing their personal information (Oppenheim, 1992, p. 109).

The questionnaire items require three types of answer: ticking boxes (Questions 1 – 19), short answers (Questions 17, 19), and short comments (Question 20) (Stark, 1999, pp. 61–62). Closed questions (e.g., multiple choices) allow easy coding, while open questions make room for free responses (Cohen, Manion and Morrison, 2000, p. 248).

A Chinese version is translated by the writer for subjects' easy understanding (See Appendix 10.3). Although all local translation students are supposed to be proficient in English, some English technical terms in lexicography may hinder their proper response. Therefore, Chinese, as the first language of all subjects, is adopted in the survey. The written responses given in the questionnaire will be translated into English, and analyzed.

3.4.2. The Design of the Interview

The 14 questions set in the interview form (see Appendix 10.4) are based on the questions in the questionnaire, which help constitute the portrait of how translation students think that they use the Chinese-English dictionary for production. The structured approach ensures verification of some of the answers from the questionnaire. Besides, given the use of triangulation, with four research methods, unstructured interview would occupy too much space of the study. To make use of the advantage of interview, the questions selected from the questionnaire are those that demand more elaboration. In Question 3 of the interview form, in addition to the wording in the questionnaire, the interviewer would further ask why the informant uses one type of dictionary rather than the others in Chinese-English translation. Questions 11 – 14 in the interview form are for personal background, so that the information can be related to the answers from individual interviewees. Again, a Chinese version of the interview form is provided (see Appendix 10.5), which is even more important for interview than for questionnaire, so that students can freely express their feelings and thoughts verbally in their first language.

3.4.3. The Design of the Think-aloud Exercise

This instrument would help garner data on how subjects actually use the dictionary in translating from Chinese to English. They would receive prior training before attending this session. The transcripts of the think-aloud protocols would be sent to the participants for verification before further analysis. The data-driven approach is adopted in this method (Cohen, Manion and Morrison, 2000, p. 110). The researcher will interpret the meaning after obtaining the findings, and make constructs, i. e., the relations between variables (Boyatzis, 1998, p. 30). The categories for the constructs to be used in analysis would be meaningful to the participants themselves, i. e., they would

reflect the way in which the participants actually experience, and construe the situations in the research (Cohen, Manion and Morrison, 2000, p. 110). Their dictionary skills in the translation process reflected in the protocols should reveal whether there is inadequacy in their training programmes in meeting their needs.

3.4.4. The Design of the Performance Exercise

A performance exercise is designed for tapping think-aloud protocols from the participants when they are using the dictionary for Chinese to English translation. Their dictionary search results should culminate in the completion of the performance exercise, i. e., a piece of rendition, which can help verify the protocols. A short piece of Chinese, with about 200 characters, was chosen from one of Louis Cha's (alias Jin Yong) martial arts novels: *Fox Volant of the Snowy Mountain*, first published in 1959. (See Appendix 10.11 for the Chinese original, and a published English translation. It has been shortened after the pilot study.) Jin's martial arts novels are hugely popular among the Chinese communities in the world. They have been translated into English, Indonesian, Japanese, Korean, and Vietnamese. The student participants must have heard of his name, and may have read his works before. The story is set in the Qing Dynasty, with historical and cultural elements to be handled. Characterized with Jin's style of classical Chinese (e.g., 臻 [reach], 迭 [constantly], 名不虛傳 [live up to one's far-famed sobriquet], 難解難分 [the battle unfolds...without either side gaining much advantage]), the use of titles (金面佛 [the Gilt-faced Buddha]), and the lexicon of martial arts (e.g., 招數 [move], 精妙 [immaculate], 功力火候 [martial dexterity], 拆開 [dissolve], 大俠 [knight-errant]), the text should prompt the students to consult the dictionary, and to consider how to make use of the information given (Al-Ajmi, 2002, p. 121). It is believed that this popular genre of writing could interest students. Since it is not to test the translation strategies of subjects, the message of the selected

text is straightforward. An authentic text is selected, for it is the best way of “getting into the culture”, its facts, beliefs, values, modes of behaviour, without the interpretive bias of an outsider reporting on the culture (Byrnes, 1991, p. 210). Another reason for this culture-bound text is that, very little research seems to have been conducted for investigating how students cope with the intercultural dimension of translation (Olk, 2002, p. 121). This aspect of the data should shed light upon how to meet students’ training needs in using the Chinese-English dictionary for translating cultural elements. Given its length, it was estimated that the subjects could finish the exercise within 45 minutes.

Both methods of verbalization and the performance exercise would be carried out on the same occasion.

3.5. The Language Background and Language Learning Culture of Hong Kong Students

This case study targets at Hong Kong translation students. To allow thorough understanding of their views, preferred ways of learning, and translation performance to be investigated in the study, more background about Hong Kong students should be introduced, including how they learn, and what they learn, in special relation to language.

English and Chinese are the official languages of Hong Kong. But the ordinance passed in 1974 does not specify any particular variety of Chinese as the official language. According to the 2006 by-census (Census and Statistics Department, 2006, p. 39), Cantonese remained the language of the majority, spoken by 96.5 percent of the population. Hong Kong is not only faced with what could be termed a tri-cultural

situation (strong local Cantonese identity, a former British colony, and its return to the Chinese rule in 1997), but also a challenging trilingual cross-current of languages: Cantonese, English, and Putonghua (Deeney, 1995, p. 113).

The “culture of learning” is defined as learners’ expectations, attitudes, values and beliefs about what to learn. Tertiary students in Hong Kong use a “narrow approach” (Kember and Gow, 1990), or the “deep memorizing” approach (Tang, 1991, pp. 318-319), which comprises the sequence: “understand—memorize—understand—memorize”. This is attributed to the fact that students are taught in English, and this is a way of reducing working memory load in a foreign language. Evidence indicates (Gow, Balla, Kember, and Hau, 1996, p. 119) that the higher education system in Hong Kong has not succeeded in promoting the deep and achieving approaches which are necessary building blocks for independent thinking. Deep motivation, achieving strategy, enthusiasm, interest in study, and competitive drive all declined from the first to the final year, accompanied by a narrowing of the focus of study over the three-year period in university.

In the English-learning scenario, surveys conducted in Hong Kong (Lin and Detaramani, 1998; Pennington & Yue, 1994; Pierson, Fu & Lee, 1980; Richards, 1994) show that although secondary school and university students have little integrative motivation towards the study of English, their instrumental motivation for learning English for academic and career purposes is very high. Yet at the same time, although all Hong Kong students start to learn English from kindergarten, native speakers of Cantonese in Hong Kong are under enormous pressure not to use English for intra-ethnic communication. Indeed, it has been pointed out in many studies that native speakers of Cantonese need to have a “legitimate” reason for speaking in English

among themselves (Li, 1996, p. 17). Such is part of their English-learning profile. It has been argued that English is more a foreign language to Hong Kong students than a second language, as they only use it in certain spheres of their lives: academic, the media, and entertainment. In their daily life, Cantonese is the *lingua franca*, and standard Chinese the written means of communication.

3.6. The Pilot Study, Revised Designs of the Research Tools, and Expected Results

A pilot study was carried out with two subjects on 18 and 23 November 2006 for around one hour respectively. They were final year students of a higher diploma programme in translation and interpretation of a local private tertiary institution: one was female, the other male. The purpose of the pilot study was to put the design of the questionnaire into trial, to check whether the questions were clear, the wording appropriate, and the length suitable. For the translation performance exercise and the think-aloud exercise, the pilot study aimed to examine if subjects could finish the text given the level of difficulty and the length, within one hour. As the researcher was new to the “think-aloud” research method, the pilot study also enabled him to observe what could be improved when the actual study was conducted.

As a result of the pilot study, the questionnaire was slightly revised in wording, while the translation text shortened to about 150 words. Since it was anticipated that the future subjects would be unfamiliar with the think-aloud exercise, a list of guidelines was drafted to help them familiarize themselves with the requirements of the exercise before attending the research meeting. The Chinese version of the list was made available to subjects. An additional short passage of about 70 Chinese characters was prepared for subjects to practise thinking aloud. They could stop once they felt

confident about it. The short passage was taken from the same work as the “main text” for the performance exercise. Their performance in translating this “pre-text” was not transcribed or analyzed. The “pre-text”, and the guidelines are found in Appendices 10.8 - 10.10. The Consent Forms for data collection in both English and Chinese, together with the Letter for Permission for Conducting Research with Students in University, can be found at Appendices 10.6, 10.7, and 10.12.

For the questionnaire, 100 students were targeted. It is about one third of the total population of undergraduate translation students in Hong Kong. Four students out of the 100 questionnaire participants would be selected to attend the interview, the performance exercise, and produce the think-aloud protocols. The access to all the participants relied on the recommendations of the departments of the universities concerned. The suggested selection criteria of inviting subjects for interviews, performance exercise and think-aloud exercise were: they must come from both genders; they could be of different years of study; and they could be of disparate English standards. The timing of data collection were scheduled around January to February 2007.

It was expected that the translation students in Hong Kong commonly use the hand-held electronic dictionary for translating, while at the same time also possess the printed Chinese-English dictionary for reference. Most of them look for English equivalents to the Chinese original from the Chinese-English dictionary for translation. Only some of them use the monolingual English dictionary for information not provided in their bilingual dictionaries. It was believed that apart from those who have taken the bilingual lexicography course in their translation programmes, few have been instructed on how to use the bilingual dictionary in general, and the Chinese-English dictionary in

particular. They may not realize their needs for dictionary use instruction, as Li's study (2003, p. 104) shows. But for those who were trained before, they should realize the necessity and the usefulness of the training. In general, there should still be room for improvement in their dictionary use skills in translating, and this points to the need for training, and the inadequacy of their present curricula. The results of the interview and the performance exercise should lend further support to the profile portrayed above.

3.7. How the Research Methods were Administered

The data collection period went from December 2006 to March 2007. The total number of participants was 107, out of all the full-time undergraduate translation students from five local universities. The table below details the different numbers of subjects with each of the four research instruments, and the numbers of subjects from each of the five participating universities.

Research Instrument	Number of participants	Where the participants came from				
		*U1	U2	U3	U4	U5
1. Questionnaire survey	107	7	13	7	34	46
2. Interview	4	0	2	1	0	1
3. Think-aloud exercise	4	0	2	1	0	1
4. Translation exercise	4	0	2	1	0	1

*U: University.

Table 3.1: The Numbers of Participants with Different Research Instruments

All the four participants of research instruments 2 – 4 also joined the questionnaire survey. How the instruments were actually administered is sketched below.

3.7.1. Questionnaire Survey

Six university departments which offered translation programmes as of 2006 were contacted for circulation of the questionnaires either through the university intranet, or through face-to-face in-class administration. All Year Two to Three translation majors were targets, as they might have taken a course in lexicography in their present study years if it was offered in their study programmes. One department refused access to its students, without giving a reason. 27 questionnaires were collected through e-mail from Universities 1 - 3; while 80 questionnaires were collected in two classes from Universities 4 - 5, with the presence of the respondents' lecturers. Altogether 107 questionnaires were received. The low response rate through e-mail was common among on-line survey research. At the same time, December to February was a period that students attended their semester examinations, and enjoyed their public holidays and semester break. It was speculated that they had lower motivation to be involved in data collection for a stranger. The majority of questionnaires were therefore garnered from in-class administration.

In contact with University 4, the teacher requested that the questionnaire should delete Questions 13 to 15 for her students. The three questions ask if the respondents have ever received Chinese-English dictionary use training, and if their teachers are aware of their difficulties in Chinese-English dictionary use. The writer consented to this, as this also reflects the attitude of a teacher to dictionary use training in the translation curriculum. Its implications will be discussed later. The questionnaire version for University 4 is thus 3 questions short of that for all other respondents. Altogether, there were only 73 respondents to Questions 13 – 14, and 18 respondents for Question 15. Only those who answered “yes” to Question 14: “Have you ever been taught how to use Chinese to English dictionaries in your secondary or university

education?” should proceed to answer Question 15: “If you have received any instruction in Chinese to English dictionary use, do you find it useful to your translating?”

The table below shows the numbers of respondents to each question in the questionnaire survey.

Question number	Number of respondents
1 - 12	107
13 - 14	73
15	18
16 - 21	107

Table 3.2: The Number of Respondents to Each Question in the Questionnaire Survey

In retrospect, it became clear that students might have different use habits with the hand-held electronic dictionary, and the web-based dictionary. They might use both types of dictionary, either one of them, or none. For example, for Question 6, respondents who chose Option G (“Other”) might use most often some other printed dictionaries not listed in Options A – D, or the web-based dictionary. It would serve the research purposes better should student users’ habits of the printed dictionary, the hand-held electronic, and the web-based ones could be discovered separately. These issues had not appeared in the piloting phase. But in the Chinese wording of the questionnaire (e.g., Question 12), the (hand-held) “electronic dictionary” (“電子詞典”) is clearly distinguishable from the “web-based dictionary” (“網上詞典”) to Hong Kong respondents. They would not mix up with the two concepts.

3.7.2. Interviews

The interviews were conducted from December 2006 to March 2007, with four native Cantonese-speaking interviewees from Universities 2, 3 and 5, who were all respondents of the questionnaire survey as well, with one from Year 2 of her study, and three from Year 3. Three of them were female, and one male, with Use of English in the Advanced-Level Examination results ranging from grades A to D. They also participated in the think-aloud exercise and the translation exercise. On individual students' level, since there was a respondent who had received dictionary use training in a course, and the others not, differences in their dictionary use skills could be compared for any connection to the training, or the lack of it.

As the translation exercise lasted much longer than the interview, it was easier to recruit participants by providing remuneration. All the four subjects accepted the open invitation to the interview on their own initiative. It was known to them that their participation in the three research methods would be rewarded monetarily. The interviews were conducted at the campuses of the respective students, recorded and transcribed with their consent and verification. The full Chinese versions of the interview transcriptions of subjects, as well as the English translation, can be found in Appendix 15.

3.7.3. Think-aloud and Translation Exercises

Right after the interviews, the translation exercise was carried out at the same spot with the four subjects individually. They “thought aloud” while translating. Each subject was given a sheet of guidelines for both exercises, and a consent form was duly signed. For them to familiarize themselves with thinking aloud while translating and consulting dictionaries out of their own choices, they had a short “warm-up” translation exercise,

which came from a different paragraph of the same source as the translation exercise. The warm-up exercise was not transcribed. After about 15 minutes in the warm-up exercise, when the researcher found the subjects ready, they were stopped. The think-aloud exercise was recorded and transcribed. The transcription was later verified by the subjects through e-mail within weeks.

3.8. Summary

This chapter presents the research purpose, which is to attempt to explore the whole picture of dictionary use in relation to: (1) how Hong Kong translation students think they use the dictionary in translating from Chinese to English; (2) how they actually use it; and (3) the results of the use. (4) The results will then be discussed for pedagogical implications for translation. It is hoped that the case study could contribute to the research fields of applied lexicography and translation pedagogy, and particularly to the Hong Kong translation training scene.

The trends in the methodology in dictionary use research are introduced, and the design of and rationale for employing the four instruments explicated, with special emphasis on the think-aloud protocol, which is a relatively new tool compared with the other three, namely questionnaire survey, interview, and performance exercise. After the pilot study, and corresponding revision, they were put into use to collect data from December 2006 to March 2007. The 107 respondents of the survey were contacted through the translation departments of five local universities, four of which also participated in the research with three other instruments.

The bulk of data from these four instruments were analyzed, and their significance will be presented in the following chapters.

4. How do Hong Kong Translation Students Think They Use the Dictionary in Translating?

From what has been found from the questionnaire and interviews, with 107 and four translation students respectively, a general profile of how they thought they used the Chinese-English dictionary can be portrayed. It pertains to their general dictionary use patterns, their use of the dictionary in translating from Chinese to English, their training thereof, and their use of the electronic references in translating. Hence implications are drawn.

4.1. General Dictionary Use

Overwhelmingly, subjects considered the dictionary important to very important to translating (88.85%). (Table 4.1) The number before the question in each table signifies the original order in the questionnaire. The quotations come from interviews with respondents.

1. How important do you think is dictionary to translating? (Standard Deviation:0.692)	
A. Not important.	0%
B. Somewhat important.	11.2%
C. Important.	29.9%
D. Very important.	58.9%

Table 4.1: The Importance of Dictionary Use to Translating

It can “*make translation more accurate*” (S4) (“S” stands for “Subject” hereafter.), and “*remind you how a word is used*” (S3). In specialized translation, one can check up the technical terms with the dictionary (S1). Subject Two thought that as “*we don’t know how to express ourselves*”, he even “*had to check up almost every single sentence with the dictionary in Chinese-English translation*”.

In buying a hand-held electronic dictionary, functions were given the highest priority, followed by price, other factors, brand name, and recommendation by others, while weight comes last. Significantly, 19.6% of subjects insisted on not buying any hand-held electronic dictionary. They were those who chose option G. (Table 4.2)

2. If you buy an electronic dictionary for translation, what is your priority of consideration? (Write 1 in the box for the most important, 2 and the following numbers for decreasing importance.) (Standard Deviation)	
A. Price	2.13 (0.897)
B. Functions	1.37 (0.61)
C. Brand name	2.9 (1.026)
D. Weight	4.03 (0.848)
E. Recommendation by others	3.83 (1.392)
F. Others	2.71 (2.289)
G. I don't buy any electronic dictionary.	1.76 (1.947)

Table 4.2: Priorities of Consideration in Purchase of an Electronic Dictionary

More than one third (34.9%) of the students had never used a hand-held electronic dictionary in the recent year, while one fifth (20.8%) used it all the time. (Table 4.3)

3. How often do you use the electronic dictionary for translating in the recent year? (1.526)	
A. Never	34.9%
B. Once in a while	28.3%
C. 1 – 2 times/week	10.4%
D. 3 – 4 times/week	5.6%
E. All the time	20.8%

Table 4.3: Frequency of Electronic Dictionary Use

In buying a printed Chinese to English dictionary, the number of entries (77.6%) tops the consideration list, closely followed by whether the dictionary provides the information that the buyer wants (71%). Price (56.1%) and recommendations by others, mostly by teachers, come next (52.3%). (Table 4.4) This is comparable to Li's results

with mainland Chinese students (1998: 66).

4. If you buy a printed Chinese to English dictionary for translation, what are your considerations? (You can choose more than one option.)	
A. Price	56.1%
B. The number of entries	77.6%
C. Whether it provides the information that I want	71.0%
D. Brand name of the publisher	46.7%
E. Recommendations by others	52.3%
F. Others	1.9%
G. I rarely use the printed Chinese to English dictionary.	0.9%

Table 4.4: Priorities of Consideration in Purchase of a Printed Dictionary

Among the printed Chinese-English dictionaries that they most often used, no single brand dominated the market. Almost one third (31.8%) of respondents most often used dictionaries not listed in the options. The percentage may also include some who used the web-base dictionary more than other types of dictionary. Taking the lead among the five listed printed dictionaries is *New Age Chinese-English Dictionary* (23.4%), although three others are not far behind in popularity. Considering that respondents could choose more than one option in their answers, and their high regard for the quantity and quality of information in buying a printed dictionary, these few dictionaries might have been one of the many close choices in their use. What made them use one more often than another may just be due to the recommendations by their teachers. One tenth of the students used various brands of hand-held electronic dictionary more often than printed Chinese-English dictionaries. (Table 4.5)

5. What is the Chinese to English dictionary that you use most often? (You can choose more than one option.)	
A. <i>English-Chinese/Chinese-English Dictionary</i> (Commercial Press) (《英漢-漢英詞典》，商務印書館)	17.8%
B. <i>The New Chinese-English Dictionary</i> (Shanghai Jiaotong University Press) (《新漢英辭典》，上海交通大學)	12.1%
C. <i>New Age Chinese-English Dictionary</i> (Commercial Press) (《新時代漢英大詞典》商務印書館)	23.4%
D. <i>A Chinese-English Dictionary (Revised Edition)</i> (《漢英詞典》，修訂版，商務印書館)	14%
E. <i>Far East Chinese-English Dictionary</i> (The Far East Book) (《遠東漢英大辭典》，遠東圖書公司)	2.8%
F. Electronic dictionary	10.3%
G. Other	31.8%
H. Not sure	15%

Table 4.5: The Most Often Used Chinese-English Dictionary

In accessing their Chinese-English dictionaries, the most used system was Putonghua *Pinyin* (48.6%), while the traditional radical system was preferred by about one third (34.6%). Consistent with the finding in Question 5, about one fifth of the students (17.8%) most often typed into the electronic / web-based dictionary for search. This percentage is greater than the 10.3% for Option F, who used the hand-held electronic dictionary most often, in Question 5 (Table 4.5), because some of those who chose Option G for using the web-based dictionary in Question 5 would choose Option E in Question 6. (Table 4.6)

6. What is your most used access system to your Chinese-English dictionary? (Some subjects chose more than one option.)	
A. <i>Hanyu Pinyin</i> .	48.6%
B. The radical system.	34.6%
C. The number of strokes of a character.	12.1%
D. Cantonese Romanization.	0.9%
E. Direct typing/writing into the electronic/web dictionary.	17.8%
F. Others	2.8%

Table 4.6: *The Most Used Access System to the Chinese-English Dictionary*

Among all the features, the respondents were most familiar with the access methods of their dictionaries. Other features, including the basic structure of an entry (45.8%), the symbols in an entry (31.8%), and the appendices that the dictionaries contain (30.8%), are much less known. (Table 4.7)

7. How familiar are you with your most used Chinese to English dictionary, including electronic dictionary? (You can choose more than one option.)	
A. I read the preface/introduction/user's guide.	15.9%
B. I know what appendices it contains, if any.	30.8%
C. I know what access methods are available.	86.9%
D. I know most of the symbols in an entry.	31.8%
E. I know the basic structure of an entry.	45.8%

Table 4.7: *Familiarity with the Chinese-English Dictionary*

4.2. Chinese-English Dictionary Use in Translating

While translating, most surveyed Chinese-English dictionary users picked the “right” word by considering the context of the original (86%), and by choosing any likely word(s) from the example(s) (78.5%). In general, it was mainly based on “experience”, or the intuition about English: “*When you read English a lot, you will know how it flows*” (S3); “*Based on my experience in using English, and my own writing style, I will decide which word to choose*” (S4). Subject Two would go to the extreme “*to find a*

noun for a noun, a verb for a verb....It's more often than not that I can find a word with the same part of speech". But significantly, one fifth (22.4%) made guesses or chose from the first English "equivalent". (Table 4.8)

8. How do you usually choose the "right" word from the Chinese to English dictionary for translation? (You can choose more than one option.)	
A. By guessing.	16.8%
B. By choosing from the first English "equivalent".	5.6%
C. By choosing any likely word(s) from the example(s).	78.5%
D. By considering the context of the original.	86.0%
E. Others	7.5%
F. Not sure.	1.9%

Table 4.8: How to Choose the "Right" Word from the Chinese-English Dictionary

In dictionary look-up, they mainly searched for equivalent word(s) to the Chinese original (83.2%), the usage of the English "equivalent word(s) (63.6%), and examples (50.5%). This is especially true to Subject One: *"for technical terms, I just directly take the words provided by the dictionary."* (Table 4.9)

9. What do you look for in a Chinese to English dictionary for translating? (You can choose more than one option.)	
A. Equivalent word(s) to the Chinese original.	83.2%
B. Grammar of the Chinese original.	27.1%
C. Usage of the English "equivalent" word(s).	63.6%
D. Example(s).	50.5%
E. Cultural information of the Chinese original and the English "equivalent".	36.4%
F. Others	0%

Table 4.9: What to Look for in the Chinese-English Dictionary for Translating

If their look-ups did not succeed in a Chinese-English dictionary, they would mostly turn to another printed or electronic / web-based dictionary (85%). About one

third would turn to a monolingual English or Chinese dictionary (39.3%), or to an English-Chinese dictionary (36.4%), or find an expression from one's own mental vocabulary (28%). (Table 4.10)

10. What do you usually do if what you look for in a Chinese to English dictionary is not found? (You can choose more than one option.)	
A. Turn to another printed or electronic, or web-based Chinese to English dictionary.	85.0%
B. Turn to an English or Chinese monolingual dictionary.	39.3%
C. Turn to an English to Chinese dictionary.	36.4%
D. Find an expression from one's own vocabulary.	28.0%
E. Others	12.1%

Table 4.10: What to Do if What Looked for in the Chinese-English Dictionary is not Found

Their commonest sequence of checking up words for Chinese-English translation was this: they would first pick up the Chinese-English dictionary. If there were words in the entries that they were uncertain, be they the English “equivalents” to the original word(s), words in the definitions or examples, they would then turn to the English-Chinese dictionary for the Chinese meaning. After having realized the meaning, if they were not satisfied, they would further search in the monolingual English dictionary for homonyms, and other information of the English words under consideration, e.g., usage, or more examples of how the English words were used. Or alternatively, having found many words close in meaning from the Chinese-English dictionary, they would directly “*check them up with the E-E dictionary*” (S4), for “*more precise definitions*” (S1), without turning to the English-Chinese dictionary, and see “*if it is the way that the native speakers use the expression*” (S1). (Table 4.11)

In contrast with the use of English to Chinese dictionary for reception, more often

than not, translation students used several dictionaries for a translation task: Chinese-English dictionary, English-Chinese dictionary, and monolingual English dictionary, not to mention hand-held electronic or web-based dictionaries, the monolingual Chinese dictionary, and other references in less frequency or popularity. It seems that, as the original language is students' first language, they did not find much need in consulting the monolingual Chinese dictionary. To more or less extent, all subjects used on-line resources in their look-ups, no matter on-line dictionaries or search engines, e.g., Yahoo on-line dictionary, and *Cambridge Advanced Learner's Dictionary*. They were chosen for their quick response, timely update of expressions, and for Subject Two, the large vocabulary in the web-based dictionary. In relation to the results of Question 3, where more than one third of the students had never used a hand-held electronic dictionary in the recent year, it seems that they were more receptive to the web-based dictionary than the hand-held electronic one. The reasons behind deserve further investigation.

11. In decreasing order of frequency, from 1 to 6, which kind of dictionary do you use most often in Chinese to English translation? (Standard Deviation)	
A. Printed Chinese to English dictionary.	1.95 (0.61)
B. Printed English to Chinese dictionary.	2.84 (1.325)
C. Printed monolingual English dictionary.	3.32 (1.365)
D. Printed monolingual Chinese dictionary.	4.79 (1.21)
E. Electronic dictionary.	3.74 (1.899)
F. Web-based dictionary.	2.20 (1.532)

Table 4.11: Dictionary Type Most Often Used for Chinese to English Translation

Their greatest difficulties in using Chinese-English dictionaries were: failing to find the “equivalent” word(s) for translation (61.7%): “*Very often you have to think of a more elegant word from the one suggested, or one better fitting the context....The words suggested by the dictionary may not be suitable.... it only gives you an idea about which*

words can be used” (S2); not knowing how to use the English “equivalent” in context (53.3%); and the information that they needed was not given (38.3%). Some reported having difficulty with the access method, not knowing the “Pinyin, or the radical, or the simplified Chinese of the character under search” (questionnaire remark; hereafter “Q”). Only 5.6% of them claimed to have no difficulty at all. (Table 4.12)

12. What are your difficulties in using Chinese to English dictionaries for translation? (You can choose more than one option.)	
A. Can't find the “equivalent” word(s) for translation.	61.7%
B. Don't know where to locate the Chinese headword.	15%
C. Don't know how to use the English “equivalent” in context.	53.3%
D. Don't understand the meaning of the English “equivalent”.	29.0%
E. The examples are not helpful.	29.9%
F. The information that I need is not given.	38.3%
G. Others	2.8%
H. No difficulty. (Go to Question 14.)	5.6%

Table 4.12: Difficulties in Using the Chinese-English Dictionary for Translation

Slightly over half the respondents considered themselves efficient users of the Chinese-English dictionary. (Table 4.13) The term “efficient” is not defined in the questionnaire or interviews. The definition was left with the respondents to decide. According to the on-line *Cambridge Advanced Learner's Dictionary*, “efficient” means “working or operating quickly and effectively in an organized way”; while “effective” means “achieving the result that you want”. Some respondents thought that being familiar with the search method, and finding the headword was being efficient in dictionary use: “know Pinyin”, “know the arrangement of entries, and the search methods”, “fast and easy to use web-based dictionaries” (Q). Still, there were some who judged being efficient as finding the words for translation: “can find a good translation from my dictionary” (Q); “I can find out the word for my look-up very quickly, and can make the decision about which meaning to use among all those offered....I can think up

an associated Chinese word for further look-up for the English” (S1).

19. Do you consider yourself an efficient user of the Chinese to English dictionary?	
A. Yes.	57.9%
B. No.	41.1%
Missing data: 1	

Table 4.13: Self-evaluation of Being an Efficient User of the Chinese-English Dictionary or Not

For those who did not consider themselves efficient in dictionary use, not knowing the search methods, and taking a long time to find the entry are measures of low efficiency: “not familiar with Pinyin”; “don’t know the arrangement of the dictionary, so have to search entry by entry. It’s time-consuming to use printed dictionaries” (Q). Again, not finding suitable words for translation is also deemed by some as inefficient: “takes long time to read all the explanations of the entry” (Q); “sometimes the words found aren’t suitable....The words I found from the dictionaries were supposed to be equivalent to the Chinese....meaning, usage all fit....So very often, I spend quite some time on the look-up, but the results aren’t satisfactory” (S2). This could be a very discouraging factor to using the dictionary (Taylor, 1988, p. 89).

4.3. Chinese-English Dictionary Use Training

Half of the respondents (51%) thought that their teachers were not aware of their difficulties in using the Chinese-English dictionary, while 39.2% were not sure about it. (Table 4.14)

13. Do you think that your teachers are aware of your difficulties in using Chinese to English dictionaries? (base number: 73)	
A. Yes	9.8%
B. No	51.0%
C. Unsure	39.2%

Table 4.14: Students' Perception of Whether Teachers are Aware of their Difficulties in Using Chinese-English Dictionaries

Two thirds of them (75.3%) had never received any training in using dictionaries of this language direction in secondary schools or universities. Only 15.1% recalled of their training, while 9.6% were unsure. (Table 4.15)

14. Have you ever been taught how to use Chinese to English dictionaries in your secondary or university education? (base number: 73)	
A. Yes	15.1%
B. No (Go to Question 16.)	75.3%
C. Unsure (Go to Question 16.)	9.6%

Table 4.15: Experience of Being Taught how to Use Chinese-English Dictionaries in Secondary or University Education

If the training was provided in university, it was mostly concluded in one to two lessons, and rarely was a whole course devoted to it. *“In university, it was mentioned that you had to use dictionaries, and some methods were suggested. In literary translation, which Chinese-English dictionaries were better for the works of certain periods [was introduced]”* (S1).

These 24.7% out of the 73 respondents to Questions 14 and 15, i. e., 18 students, mostly judged their training to be somewhat useful to very useful (77.8%). But it was not so to Subject Two, who took one such course in Year One: *“It was more like teaching you how to make a dictionary than how to use it in practice. I didn't find it*

useful.” (Table 4.16)

15. If you have received any instruction in Chinese to English dictionary use, do you find it useful to your translating? (base number: 18)	
A. Not useful	11.1%
B. Somewhat useful	50%
C. Useful	16.7%
D. Very useful	11.1%
E. Unsure	11.1%

Table 4.16: Usefulness of Chinese-English Dictionary Use Training to Translation

41.1% out of 107 students did not think that they needed any instruction for Chinese-English dictionary use, while one third (33.6%) answered affirmatively, leaving one fourth (25.2%) undecided. (Table 4.17)

16. Do you think that you need any instruction for Chinese to English dictionary use?	
A. Yes	33.6%
B. No	41.1%
C. Unsure	25.3%

Table 4.17: Perceived Need for Instruction for Chinese-English Dictionary Use

To those who answered positively in the questionnaire survey, they found themselves *”still not familiar with the dictionary”*, or Putonghua Pinyin, and wanted to *“know how to use the dictionary more effectively”*, e.g., in finding out *“suitable ‘equivalent’ words or expressions”*. Subject Two thought it especially necessary for fresh translation students: *“They don’t know which dictionaries are good. This is the first point. Second, they don’t know which dictionaries can serve certain purpose....I didn’t realize that I had to consult several dictionaries when I first studied translation.”*

For those who answered negatively, some thought that the training was not able to teach

them anything, as *“it is rather convenient to use the dictionary nowadays. It’s very user-friendly”* (S4). Some believed that *“practice makes perfect. One can learn it oneself”* (Q), while some others did not think training could help them solve all difficulties, as *“even after training, the dictionary may not contain the information that I want”*, and *“one still does not know the usage of the C-E equivalent words”* (Q). There is an extreme view that *“dictionary consultation is what everyone knows”* (Q). Some were not certain whether they needed the training. One of the reasons is that, in translation, *“the most important is language competence”* (Q). Another is that *“needs vary. It’s difficult to meet them all in a training class”* (Q).

More than half the respondents (54.3%) believed that dictionary use instruction was somewhat important in the translation curriculum, and one third (33.3%) even found it important to very important. (Table 4.18)

17. How important is dictionary use instruction in the translation curriculum?	
A. Not important	7.6%
B. Somewhat important	54.3%
C. Important	25.7%
D. Very important	7.6%
E. Unsure	4.8%

Table 4.18: The Importance of Dictionary Use Instruction in the Translation Curriculum

From the pros side, *“training enables students to use it more effectively, so as to raise the efficiency and quality of translation”* (S2). On the cons side, *“there are some other things more important....the approach to handling certain genre; or the writing skills....to avoid the mistakes made by non-native users”* (S1); *“we know how to use it”* (S4); *“Dictionary skills can be learnt in primary and secondary schools; it can be ignored in university”* (Q).

Should Chinese-English dictionary use skills be taught in their translation programmes, they would prefer the following topics: how to look for the “right” word(s) for translating (79.4%), introduction to the variety of Chinese-English dictionaries, and how to choose a suitable dictionary (68.2%), e.g., “*if a particular dictionary provides special functions, then there may be a need for guidance for use*” (S3), and how to make the most from a dictionary (63.6%). Close to half also chose to learn how to compile one’s own Chinese-English glossary, while less than one tenth was interested in the history of the Chinese-English dictionary. (Table 4.19)

18. If Chinese to English dictionary use skills are to be taught in your programme, what topics should be included? (You can choose more than one option.)	
A. Introduction to the variety of Chinese to English dictionaries, and how to choose a suitable one for oneself.	68.2%
B. How to make the most from a dictionary.	63.6%
C. How to look for the “right” word(s) for translating.	79.4%
D. The history of the Chinese to English dictionary.	7.5%
E. How to compile one’s own Chinese to English glossary.	43.0%
F. Others	1.9%

Table 4.19: Topics to be Included in Chinese-English Dictionary Skills Training

The results are consistent with those of Li’s (2003). Similarly, the majority of his respondents had not had any training of dictionary skills, yet about two-thirds did not feel the need for it. They also thought that knowing how to use a dictionary simply meant how to look up a word in a dictionary, but not effective use of it.

4.4. The Effects of Certain Factors on the Survey Results: Year of Study, English Examination Results, Gender, and University

The effects of some background factors of the respondents on the survey results of some questions are checked for any possible statistical significance with SPSS, including their

years of study, their English language results in the Advanced-Level Examination, their gender, and their university (Tono, 2003, p. 406). As all subjects had Cantonese as their first language, without other first language for comparison, the possible effect of this factor on survey results cannot be gauged. For easy reference, the full questions are repeated as follows. The questions are chosen for their conjectural relevance to the factor concerned.

Question 3: How often do you use the electronic dictionary for translating in the recent year?

Question 13: Do you think that your teachers are aware of your difficulties in using Chinese to English dictionaries? (Base number: 73)

Question 14: Have you ever been taught how to use Chinese to English dictionaries in your secondary or university education? (Base number: 73)

Question 15: If you have received any instruction in Chinese to English dictionary use, do you find it useful to your translating? (Base number: 18)

Question 16: Do you think that you need any instruction for Chinese to English dictionary use?

Question 17: How important is dictionary use instruction in the translation curriculum?

Question 19: Do you consider yourself an efficient user of the Chinese to English dictionary?

The findings are shown below, followed with discussion.

4.4.1. University

For easy reference, the distribution of the number of respondents to the questionnaire survey is repeated below. (Table 4.20)

Total Number of Respondents	Where the Respondents came from				
	*U1	U2	U3	U4	U5
107	7	13	7	34	46

*University

Table 4.20: The Number of Respondents from Each Participating University to the Questionnaire Survey

Results show that the university factor is not significant to respondents' answers to the above questions. Whether the respondents came from a university that offered training in dictionary use or not is not important. One possible reason may be that the overall percentage of respondents who had received such training is so low, only 15%, that its effect on the questionnaire answers is insignificant. (Table 4.21)

	Q13	Q14	Q15	Q16	Q19
Chi-square	9.134	10.819	1.687	1.133	10.982
Degree of freedom (df)	4	3	3	4	4
Asymptotic Significance (asym. sig.)	0.058	0.013	0.640	0.889	0.027

(Kruskal Wallis Test)

Table 4.21: The Effect of Respondents' Universities on Certain Questionnaire Results

4.4.2. English Language Results in Advanced-Level Examination

It was found that about one third of all respondents obtained Grade D in the Use of English examination, while about two thirds got Grade C or above. (Table 4.22) As background information, according to the Hong Kong Examinations and Assessment Authority (2009), Grade D is equivalent to the range of overall IELTS band score of 6.03 – 6.50, Grade C to the range of 6.51 – 6.91, Grade B to the range of 6.92 – 7.40,

and Grade A to the range of 7.41 – 8.30.

In Question 3, over 40% of the former group of respondents used the hand-held electronic dictionary over three times a week regularly in the recent year. This contrasts with the latter group, with about 20% or less of them used it that often. This seems to indicate that students with lower grade in English examination tended to use the hand-held electronic dictionary more. No previous research has found such correlation. But it was observed from the writer's past teaching experience that students with higher English standard tended not to use the hand-held electronic dictionary so often. The explanation for this phenomenon is yet to be explored in further study.

Other results show no significance whatsoever with students' grades in the English examination results.

24. Use of English result in the Hong Kong Advanced-Level Examination	
A Grade	3.7%
B Grade	15%
C Grade	46.7%
D Grade	29%
E. Others	5.6%

Table 4.22: Use of English Results in the Hong Kong Advanced-Level Examination

	Q3	Q16	Q19
Chi-square	12.941	0.412	6.150
Df	3	3	3
Asym. Sig.	0.005	0.938	0.105

(Kruskal Wallis Test)

Table 4.23: The Effects of Respondents' Use of English Results in Advanced-Level Examination on Certain Questionnaire Results

4.4.3. Year of Study

Slightly more than one third of all respondents were in their Year 3 of undergraduate studies, their final year, while the other two thirds in their second year. (Table 4.24)

21. Year of study in university	
A. Year 1	0%
B. Year 2	64.5%
C. Year 3	35.5%
D. Year 4	0%

Table 4.24: Respondents' Years of Study in University

	Q3	Q13	Q14	Q15	Q16	Q17	Q19
Chi-square	0.110	0.754	2.379	0.978	3.832	0.743	7.679
Df	1	1	1	1	1	1	1
Asym. Sig.	0.740	0.385	0.123	0.323	0.050	0.389	0.006

(Kruskal Wallis Test)

Table 4.25: The Effect of Respondents' Years of Study in University on Certain Questionnaire Results

Statistical significance was found with the results of Questions 16 and 19. (Table

4.25) In Question 16, about 40% of Year 2 students thought that they needed instruction for Chinese-English dictionary use, while about 35% thought negatively, and about one fifth was unsure. On the contrary, less than one fifth of Year 3 students thought that they needed to receive this kind of instruction, and about half considered it unnecessary. Slightly more than one fifth of them were not sure of it. In Question 19, Year 2 students who considered themselves inefficient users of the Chinese to English dictionary were slightly more than those who answered positively. However, about three thirds of Year 3 students regarded themselves efficient, while only one third answered negatively. Nevertheless, this could not lead to the conclusion that as students could develop their reference skills over the years, the translation curriculum could get rid of such training, as some curricula presumed. Training of essential skills should remain the most direct and effective means to meet student needs, especially in the foundation year of study.

4.4.4. Gender

Over four fifths of the respondents were female, while less than one fifth male. This percentage more or less corresponds to common perception of the student gender ratio in this discipline in Hong Kong. (Table 4.26)

22. Gender	
A. Male	17.8%
B. Female	82.2%

Table 4.26: Gender of Respondents

No statistical significance was found between the genders in their answers to the above question. (Table 4.27)

	Q3
Asym. Sig. (2-tailed)	0.865

(Kolmogorov-Smirnov Z)

Table 4.27: The Effect of Respondents' Genders on Question 3 Results

4.5. Implications

4.5.1. Students' Knowledge of their Working Dictionaries and Working Languages

Hanyu Pinyin is very important to translation students. Not only because most Chinese-English dictionaries are from Mainland China, but also because *Hanyu Pinyin* should be more convenient than other access systems, e.g., by radical or strokes of the character, if the students are using the printed Chinese-English dictionary. Whenever they are unsure of the Putonghua pronunciation of the character under search, or their *Pinyin* (i. e., the spelling) is wrong, they can switch to using the methods by radical or strokes. But as most Chinese-English dictionaries are printed in Mainland China, if they do not know the simplified version of the characters, or are unfamiliar with the radical or stroke-counting systems, failures pursue. This would be frustrating, and a hindrance to efficiency. From this light, it is clearly seen that, as Putonghua is not the first, or even the second language of the students, there is one more step for them to look up with the Chinese-English dictionary than with the English dictionary, and consequently, one more possible hurdle to reaching the headword. To be efficient in using their tools, they should have in their good grasp these three access methods, especially *Pinyin*. Secondly, less than half of the respondents were familiar with the basic structure and most symbols in an entry, as well as the appendices it contains, if any. This means that many of them were not able to fully tap the resources of their tools, no matter whether it is the dictionary as a whole, or the information in an entry. This can be partly accounted for by

the fact that less than one fifth of them had read the preface or user's guide of the dictionary. If they could not fully understand the functions and designs of the dictionary, it is not surprising that sometimes they failed to find what they sought from the dictionary. It is not that the dictionary does not give, but that the user does not know how to take. The finding is similar to that of Fan's (2000) survey with 1,076 first year undergraduate students of seven local tertiary institutions on their English-Chinese dictionary look-up behaviour, and many other research findings (e.g., Chi, 2003, p. 356; Thumb, 2004, p. 32).

In terms of the procedures of dictionary consultation for translating, the translation students would check for the entry of the Chinese original in the Chinese-English dictionary in translating, and then turned to the English-Chinese dictionary for any unfamiliar words in the entry. Sometimes, they would then seek help from the monolingual English dictionary for the full definition and usage of those words. Figure 4.1 illustrates their pattern in using dictionaries in translating.

The Dictionary User, in this case a translation student, identifies a problem word for search in a Chinese-English translation assignment (Step 1). The User first selects a Chinese-English dictionary (Step 2a), then approaches the dictionary for English "equivalent" word(s), first in the macro-structure (Step 3), then the micro-structure of an entry (Step 4). If the "equivalent" is found, and the User is satisfied with it, the search will end there (Step 5). If the User does not understand the meaning of the "equivalent", and/or if s/he does not know how to use the word(s), s/he will select an English-Chinese dictionary (Step 6a), and check it up with the English-Chinese dictionary for meaning (Steps 7a, 8a). S/he may also select a monolingual English dictionary (Step 6b) for usage information (Steps 7b, 8b). If what s/he wants is found, and it satisfies the User,

the search may stop (Step 9a). Or if the User is not satisfied with the “equivalent”, s/he may want to find another “equivalent” (Step 9b), either by turning to another Chinese-English dictionary (Step 2a), or by searching for another headword in the same dictionary (Step 3). S/he may also look for another “equivalent” in the same entry in the Chinese-English dictionary (Step 4), and then go through the process again. Alternatively, s/he may find an equivalent from his/her mental lexicon (Step 2b), and go through Steps 6a to 9a or 9b. There is no exclusivity to either one route. It is more likely that the user freely uses them as s/he thinks fit. Altogether, there are possibly 14 different steps for a user to take, not to mention repeated steps, should the first look-up for an “equivalent” to the problem word fail. It is not specified in Figure 4.1 whether the language dictionary is a printed one or an electronic/web-based dictionary. If it is a hand-held electronic dictionary, the User can access all the language dictionaries installed.

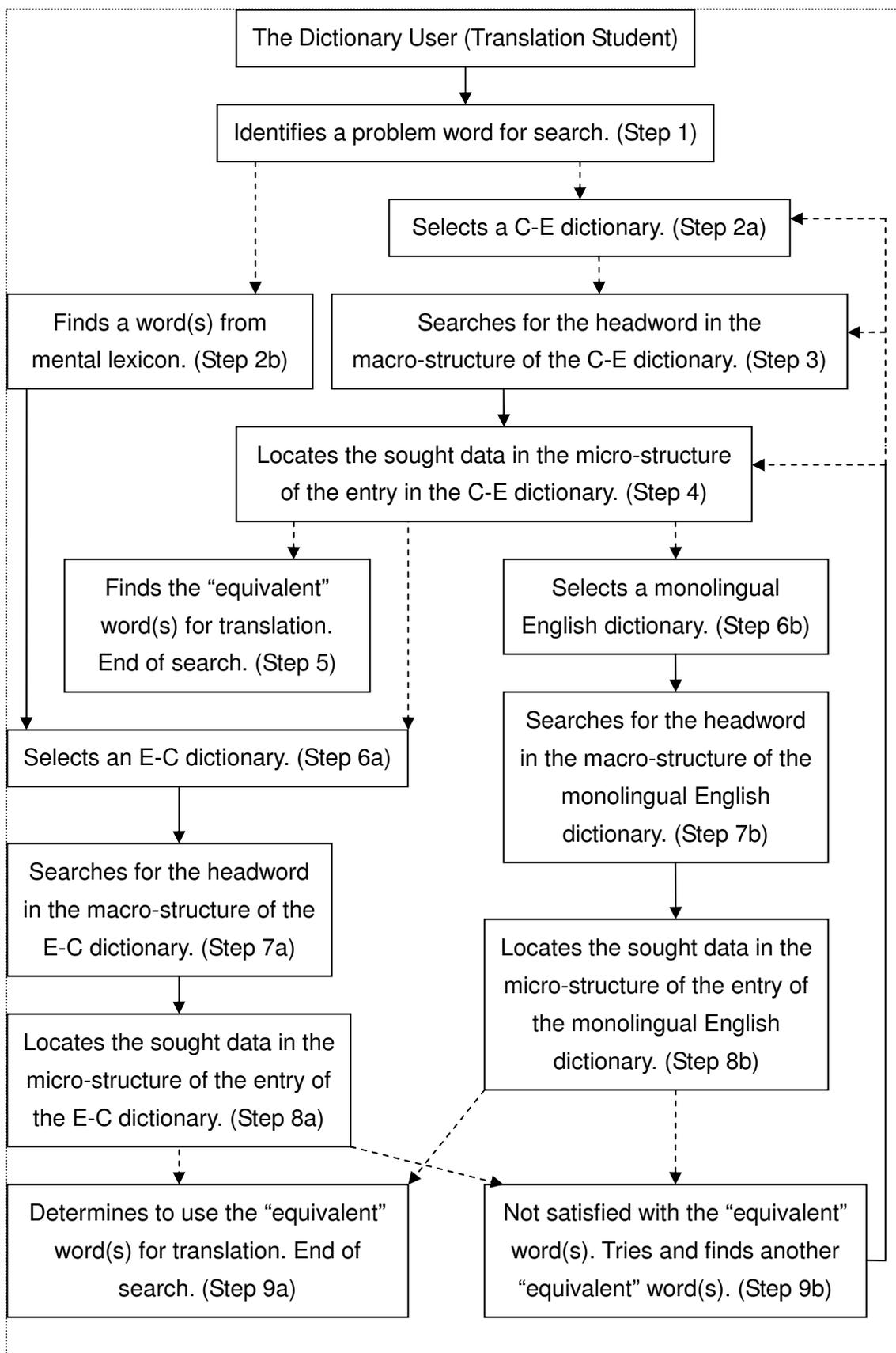


Figure 4.1: Typical Procedures of Dictionary Consultation of a Hong Kong Student for Chinese to English Translation

Hartmann's 7 Stages	Corresponding Procedures of Dictionary Consultation of a Hong Kong Translation Student
1. The user realizes that there is a problem arising in the activity that s/he is engaged in, and wants to solve it.	Step 1 (in Figure 4.1)
2. The user determines which problem word(s) which has/have to be looked up.	
3. The user selects the most appropriate reference work.	Steps 2a, 6a, 6b
4. The user searches for the appropriate headword in the macro-structure of the reference work.	Steps 3, 7a, 7b
5. Having found the appropriate entry, the user locates the sought data in the micro-structure of the entry.	Steps 4, 8a, 8b
6. The user extracts the information from the entry.	Steps 5, 9a
7. The user integrates it into the context that prompted the reference process.	

Table 4.28: A Comparison between Hartmann's (2001) Seven Stages in the Dictionary Consultation Process, and the Corresponding Procedures of Dictionary Consultation of a Hong Kong Student for Chinese to English Translation

In comparison to Hartmann's (2001, pp. 90–91) seven stages in the dictionary consultation in general, the process of the use of dictionary in translating Chinese to English by the students in this study is more complicated. This can be illustrated by Table 4.28. The main differences lie in Hartmann's Stages 3 – 7. In Stage 3, a translation student in Hong Kong may consult the Chinese-English dictionary (Step 2a), or try and find an expression from the mental lexicon (Step 2b), and then consult the English-Chinese dictionary (Step 6a), or a monolingual English dictionary for confirmation of the English meaning or for usage information (Step 6b). While Steps 2a to 4 correspond to Stages 3 to 5 in Hartmann's model, the consultation process in Steps 6a to 8b will repeat Stages 3 and 5. In Stages 6 and 7, the translation student may re-take Steps 2a or 3 or 4, instead of Steps 5 or 9a, if s/he is not satisfied with the expression found in the English-Chinese dictionary, or the monolingual English one

(Step 9b).

In one word search, the user may have to consult dictionaries of three different language directions, and in various media: printed, electronic, and web-based. There may be a number of look-ups with these tools. Alternatively, they may resort to their mental lexicon. That means they have to be familiar with these different kinds of dictionary, and apply the skills to use them accordingly. The more kinds of dictionary they use, the more demanding it is on their knowledge and skills. One kind of dictionary that has not been mentioned by the respondents is the monolingual Chinese dictionary. The following table illustrates the kinds of dictionary and resources that can be involved in students' translation process from Chinese to English.

Printed	Electronic	Web-based
Chinese-English Dictionary		
English-Chinese Dictionary		
Monolingual English Dictionary		
Monolingual Chinese Dictionary		
Mental Lexicon		

Table 4.29: The Kinds of Dictionary/Resources Possibly Involved in the Chinese to English Translation Process of Hong Kong Translation Students

As seen in the Literature Review, it cannot be assumed that the skills of using one kind of dictionary are transferrable to another kind. The user must be very sophisticated with all the skills with these dictionaries to guarantee efficient use; otherwise, the quality and completion of the task is at stake. This is a model applicable to the general translation students in Hong Kong. The think-aloud protocols from the subjects reveal

that students of disparate backgrounds may have minor changes in the process. They also demonstrate that inadequacies in skills hamper their rendition quality.

Another implication is that their English proficiency was of paramount importance in the process, including their mental English lexicon. If their English proficiency does not allow them to cope with their task, i. e., when their mental English lexicon fails them, they would have to consult the dictionary very often, and not just one dictionary, but three dictionaries. This is further supported by the survey results that over half of the respondents did not know how to use the English “equivalent” in context, while about a third did not understand the meaning of the English “equivalent”. Their difficulties call for the use of other language dictionaries.

A serious gap, and an obvious absence, is the monolingual Chinese dictionary, which the respondents used the least in Chinese to English translation. As Chinese is the first language of the respondents, they might have considered themselves reasonably competent in the original language, thus feeling less necessary to consult it. But this thinking may not be justified, as the think-aloud protocols in Chapter 5 show. Unnecessary or misdirected searches follow inadequate understanding of the original Chinese, hence dampening the efficiency of dictionary use, and, of the translation process.

4.5.2. Students’ Attitude towards Using the Dictionary

The respondents’ greatest difficulty was to find the “equivalent” word(s) for translation. Subject Two sought equivalents of the Chinese original words, not just semantically, but also in parts of speech and in usage. This is prevalent among language learners in using the bilingualized learner’s dictionary, as they expect to find equivalents to the foreign

language. This attitude is found in the translation students when they used the Chinese-English dictionary. The underlying concept is that most, if not all, of what is in one language can be found in another, regardless of the context and language background (Chen, 1994, p. 272), and they regard the dictionary as the (ultimate) authority of language(s) (Tsui and Bunton, 2002, p. 65). This finding is in line with many other studies conducted with the English to Chinese dictionary (e.g., Li, 1998; Taylor, 1988).

Another factor is their lack of confidence in their competence in English, such that they dared not render the original Chinese into their own word(s), but relied on the “authority” for word(s). A third factor may possibly come from their translation training. If they had been trained in the “bottom-up approach”, i. e., translating from word to sentence to paragraphs, they would isolate the original word(s) from context, translate sense-to-sense, and would go to the extreme as what Subject Two held, “*I guess without the dictionary, I couldn’t translate anything*” (Question 1, Interview). The problem with this attitude was recognized by Subject Two, “*I spend quite some time on the look-up, but the results aren’t satisfactory*” (S2), for the results that he expected were equivalents not just in sense, but also in grammar and usage. The outcomes are twofold: (1) spending too much time on look-ups for “equivalent word(s)” which may not exist, and hence affecting translation efficiency; (2) putting too much emphasis on isolated meaning of individual word, neglecting its meaning in context, thus affecting the translation quality. Actually, their own experience in dictionary consultation taught them something otherwise: “*It [The dictionary] only gives you an idea about which words can be used*” (S2). Instead of relying on the dictionary, they could use their mental bilingual lexicon: “*I can think up an associated Chinese word [of the original] for further look-up for the English*” (S1).

Some thought that familiarity with the search method, and finding the headword, was being efficient in dictionary use, and vice versa. This concept hindered them from acquiring more advanced skills in dictionary use. The access method and the speed in finding the headword are but rudimentary. As dictionary consultation aims at finding the wanted information for solving translation problems, how to choose the information from the entry is the next step, which is more complicated. In reference to Figure 4.1, this means that they would be satisfied with reaching Step 3, neglecting the skills required in the steps afterwards. Their concept would lead them to make light of the importance of dictionary use training, as they thought that they had acquired all that the training could offer. However, on the contrary, about two thirds of the survey respondents indicated that they were not able to find the “equivalent” word(s) for translation. It drives home the point that they should first realize their need in training in this aspect, before being instructed on the skills in choosing suitable words for translation.

The results resonate with those of Li’s (1998). Her respondents from Mainland China also considered frequent use of dictionaries necessary. Most had not any formal training in bilingual dictionary use. Secondary school teachers thought it unnecessary, while university teachers positioned it to the secondary school level. Many respondents of this study held the same view. Li also reports positive relations between English proficiency and dictionary use. Constant consultation of dictionaries indicated a lack of confidence. Similarly, only a very minority of respondents in Chi’s (2003, p. 50) and Li’s (2003, p. 104) studies were ever taught (English/Chinese) dictionary skills.

4.5.3. How do Students Use the Electronic Dictionary in Translating?

This study pays special attention to students’ use of the hand-held electronic dictionary,

for it is becoming more prominent in their dictionary use, while its study remains preliminary in pedagogical lexicography. Both the questionnaire survey and interviews have attempted to explore how respondents thought they used the hand-held electronic dictionary. The user profile and the significance are discussed below.

If students were to buy a hand-held electronic dictionary, they would consider, in decreasing order of importance, the functions (including whether the functions of the dictionary can be updated on-line) first, then the price, other factors (like the number of entries), brand name (e.g., Collins, Oxford), recommendations from others (mostly teachers and friends/classmates), and lastly the weight. Significantly, about one fifth of respondents did not consider buying any hand-held electronic dictionary. It is noteworthy that one third of respondents never used a hand-held electronic dictionary in the recent year. More than one fifth used it only once in a while, while another fifth used it all the time. There seems to be a dichotomy of views towards using the hand-held electronic dictionary among some students. Some relied on it as much as, or more than, on the printed dictionary, while some other simply refused to use it. The resistance to using it may come from their teachers: *“My teachers in primary and secondary schools...were all against using the electronic dictionary. Even if I consulted the official web site of Oxford, they still considered it unreliable. Only printed dictionaries were reliable”* (S4). Some found that it may contain a larger vocabulary than the printed ones, and is updated more quickly, not to mention the ease and pace in use, and in obtaining search results: *“actually Yahoo on-line dictionary has a large vocabulary”* (S2); *“The on-line dictionary is very efficient. Right after your input, results are shown in an instant”*; *“Not because I trust on-line dictionaries very much, but because they are updated more quickly, with neologisms. Even if I can’t find them from on-line dictionaries, very often I can find them from Wikipedia”* (S4). Their views echo those of

Aust, Kelley & Roby's (1993, p. 64) undergraduate respondents.

Another Hong Kong respondent wrote, "*why not promote the use of electronic dictionary? It is the prevailing phenomenon of the world*" (Q). For those students who are not familiar with the Putonghua *Pinyin* access system, "*they don't want to use those dictionaries by that searching route....people choose to use the on-line dictionary. They won't find it handy when they have to turn to printed ones*" (S1). This is especially the case when it comes to examinations, when the use of hand-held electronic dictionary or web-based search engines is normally disallowed.

Presently, it seems that many students used both the printed and electronic dictionaries. The former one still featured predominantly in their translation experience. Only 1% of respondents rarely used it (Question 4). In sharp contrast, about one third of respondents had never used the hand-held electronic dictionary for translating in the recent year (Question 3). This might partly be attributed to the influence of their teachers. Over half of the respondents would consider mostly their teachers' recommendations in buying a printed dictionary; and as can be seen in interviews (S4, Question 5), the use of the hand-held electronic dictionary was discouraged in secondary schools. This result coincides with the finding of Taylor and Chan (1994; as cited in Nesi, 1999, p. 57), which shows that the English teachers interviewed would have preferred their students to consult printed dictionaries. Even a decade later, this general attitude still prevails. But given the wide spread use of the hand-held electronic dictionary, if teachers deny its use, and thus not teaching how to use it in class, that would leave a training gap. As seen in Section 2.3, this technological product involves special skills for use. If the skills are not acquired properly, as different electronic dictionaries have their own ways to accessing information (Nesi, 2003, p. 379), it would

consequently affect students' translation quality and speed.

In buying a hand-held electronic dictionary, respondents of the survey regarded its functions the most important. But in buying of a printed one, the total number of entries, and whether it provides the information that the respondents wanted were the most important (Question 4). Functions are important for electronic dictionaries, but not for printed ones. The price factor ranks the third in the considerations of both kinds of purchase. This result is in line with those from Nesi (1999), Chi (2003), and Li (2003). Nevertheless, teacher recommendations were not very influential. This is understandable, given that teachers might discourage the use of the hand-held electronic dictionary, and might not be so familiar with it as to offer any suggestion. In this regard, it is left to the students to make the judgment in purchase, with at least 16 common types of products on the market (Hong Kong Consumer Council, 2006). As this questionnaire survey does not ask for the most popular brands of hand-held electronic dictionary used, there is no comparison to those found in Li's study (2003, p. 101).

4.6. Summary

The chapter starts with the survey and interview results, from which 107 translation students and four interviewees revealed how they thought they used the dictionary for Chinese to English translation. The following patterns can be seen.

In using the printed Chinese-English dictionary, students should be proficient in the three commonest access methods, namely radicals, the number of strokes, and *Pinyin*, especially the last method. Less than half of the respondents were familiar with the macro-structure of the dictionary, and the micro-structure of an entry, rendering them unable to make full use of the dictionary. In the Chinese to English translation process,

the students would first approach the Chinese-English dictionary for possible English “equivalents”, the semantic side of the word. The English-Chinese dictionary, as well as the monolingual English dictionary, were supplementary in use; or they would resort to their mental lexicon. Overwhelmingly, they preferred using the bilingual (Chinese-English) dictionary to the monolingual dictionary, as most other studies found (e.g., Atkins and Varantola, 1997; Thumb, 2004, p. 32). The dictionaries that they used may be the printed ones, or the hand-held electronic, or web-based ones.

The English proficiency was of paramount importance in the process, including their mental English lexicon. Even if they had found the English “equivalent” expression, one third of them cited having difficulty understanding its meaning, and over half found it difficult to use the English in context. Higher English proficiency could help them make fewer consultations of dictionaries. The monolingual Chinese dictionary was rarely consulted. This would affect their translation efficiency and quality should they misunderstand the Chinese original. Their lack of confidence in their competence in English made them rely on the dictionary for word(s). They would spend much time on look-ups for “equivalent word(s)”, and place much emphasis on isolated meaning of individual word, neglecting its meaning in context. In consequence, both the translation efficiency and quality are affected. Some interpreted efficiency in dictionary use as being familiar with the search method, and able to find the headword, disregarding the importance of proper dictionary use training.

The research results about the use of hand-held electronic dictionary agree with all those done previously (Aust, Kelley & Roby, 1993; Chang, 2002; Winkler, 2001): the users enjoyed the convenience that various electronic features could provide, allowing them faster search results. They were able to afford the relatively higher prices of the

hand-held electronic dictionary. In the purchase, they considered the recommendations of friends more than teachers', as the latter normally discouraged its use. There are two extremes in its popularity. Most respondents had experience in using it, and a small portion used it frequently. Yet about one third rarely or never used it. One of the contributive factors to this phenomenon is teachers' reluctance in recommending it to their students. Another noteworthy finding is that students with lower grades in the Advanced-Level English Examination tended to use the hand-held electronic dictionary more. The reasons behind this are yet to be studied. More research has to be done to explore the effects of hand-held electronic dictionary use on language learning (Nesi, 1999, p. 63), and the patterns of its use for translation.

The survey and interview results mostly coincide with expectations. Most of the small percentage of respondents who had prior dictionary use training appreciated its usefulness for their translation studies. But an interview informant (Subject Two) revealed that the training design might not totally match their expectations and needs, constituting a call for evaluation of the effectiveness of such training.

How translation students actually used the dictionary for production purpose will be explored in the next chapter.

5. How do Hong Kong Translation Students Actually Use the Dictionary for Chinese to English Translation?

From the questionnaire survey and interviews, a general profile of how translation students use the dictionary for translation has been sketched. The actual process of how they use the dictionary for Chinese to English translation will be revealed from students' verbalizations, and their translations. But a system to analyze the think-aloud protocols produced in verbalization must first be established.

5.1. The Coding Method

According to Bernardini (2001, p. 251), a major problem with think-aloud protocol studies has been the lack of an established research paradigm, resulting in a rather loose treatment of methodological issues, or researchers setting their own categorizations without a theoretical framework. Another difficulty is assessing the comparability of texts belonging to different text types.

This study adopts the inductive approach, in which the search for patterns is based on the information being studied. The concepts or models being discovered and built are subject to change during the process of inquiry (Boyatzis, 1998, pp. 30-31). It will build on prior research that has established valid codes. The codes take into account the "context" of the raw information in their wording and syntax. They are then reviewed and rewritten for applicability to the raw information, so as to determine the reliability and validity (Boyatzis, 1998, pp. 37, 44).

Thumb (2004) studied the English-Chinese dictionary look-up strategies of 18 university students, who were asked to use the bilingualized (English-Chinese) dictionary that they habitually used during the think-aloud session. Thinking aloud was

employed as the major method for collecting verbal data. Stimulated recall interview was carried out to achieve the goal of data triangulation, with “follow-up” questionnaires and observations to collect additional data. Hers is a systematic think-aloud coding scheme especially related to dictionary look-up. To the knowledge of the writer, there is no other coding scheme of bilingual dictionary “look-up operation codes” with think-aloud data. Its strength lies in the fact that it not only allows the researcher to interpret the think-aloud data by making qualitative statements about dictionary look-up behaviour, but also to make judgments about trends or inclinations that different users exhibit through quantification (Thumb, 2004, p. 108). Its weaknesses are twofold: (1) some codes only apply to Romanized languages, but not to ideographic languages like Chinese; (2) they are more for reception than production, the process of which involves different considerations and operations. This research shall adopt her system, albeit with some modifications, as the language direction of the dictionary, and the focus of study are different. Her focus is on the dictionary look-up strategies for reading, while this one is on the relevance of the look-up patterns to students’ translating and training. The changes are expounded below in detail.

To Thumb (2004, p. 58), there are three types of mental operations in dictionary look-up: (1) **executive operations**, which refer to the physical and verbal actions in the look-up task; (2) **cognitive operations**, which focus on thinking about the word in the reading text, or about the headword in the dictionary text or both; (3) **meta-cognitive operations**, which concentrate on thinking about the look-up itself.

The coding scheme, based on Thumb’s (2004, pp. 62–65), has been modified for this research purpose. As her subjects used the English-Chinese dictionary for deciphering the meaning of an English passage, those codes related to the English

features of the target words from the comprehension passage are sifted. Those related to Language Two to Language One equivalents in the English-Chinese dictionary are reworded to Language One to Language Two in the Chinese-English dictionary. Since the purpose for dictionary look-up is for translating the original text in the present study, but not just comprehending, the words “reading text” in some codes are changed to “original text”. A few new codes pertaining to the translation process, but not particularly to any translation strategies, the use of the Chinese-English dictionary, as well as dictionaries of other language directions, are created. The scheme is laid out at Appendix 10.13.

The newly introduced codes to Thumb’s system for this research purpose, the reasons, as well as examples of think-aloud protocols with these codes, are listed in the table below.

Coding 1: executive operations before/during dictionary look-up	
(RAEN)	Referring to Absence of Entry: referring to the absence of an entry of target headword in dictionary text.
	Reason: It is not unusual that a headword under search is not found in a Chinese to English dictionary.
	Example: Subject Four, Segment 22: “There is no such character on page 142. It’s strange. The simplified form should be like this, but it is not found.”
Coding 2: cognitive operations before/during dictionary look-up	
(SSR)	Searching by Strokes: searching by strokes and/or radical of the target Chinese headword
	Reason: It is an access method particular to the Chinese-English dictionary
	Example: Subject Four, Segment 20: “I use the index to search for “e4dou4”, for I don’t know the simplified version of the character “e4”. I am now searching the radical table. I turn to page 142 for a likely radical, but I am not sure if I can find the word.”

(RED)	Rejecting Definitions: rejecting L2 translation equivalent and/or L2 definition in dictionary text which is/are considered not fitting the original text
	Reason: In the Chinese-English dictionary, L2 (English) equivalents or definitions are available. They are usually looked for ready use by translators; rejected when considered not suitable for translation.
	Example: Subject One, Segment 30: “‘Kungfu’ suggests strongly to foreigners that it is like that of Bruce Lee’s, like ‘ <i>Wing Chun</i> fists’. It doesn’t suit the context here. I won’t use ‘kungfu’....”
(T)	Translating.
	Reason: The activity for which the dictionary look-up is made.
	Example: Subject Three, Segment 26: ”His feats”... I think of... “His feats were not refined”.
Coding 3: meta-cognitive operations before/during dictionary look-up	
(PLT)	Planning for translating
	Reason: It is especially for the translation purpose.
	Example: Subject Three, Segment 10: “‘Zhuan2xia4yi2shu1xiu1xi2er2cheng2, zhao1shu4....’ [Babbling] I will start to translate.”
(SLD)	Switching Language Dictionary: switching/using another language dictionary for the search for the target word
	Reason: The translator may use dictionaries of other language combinations for Chinese to English translation.
	Example: Subject Two, Segment 47: “I have to check up with the E-E dictionary, with Cambridge on-line E-E dictionary.”
(SED)	Switching Electronic Dictionary: switching/using electronic or web-based dictionary for the search for the target word
	Reason: The translator may use both the printed dictionary and electronic or web-based ones for Chinese to English translation.
	Example: Subject Two, Segment 47: “I have to check up with the E-E dictionary, with Cambridge on-line E-E dictionary.”

Table 5.1: A List of Newly Created or Modified Codes to Thumb’s (2004) System for Dictionary Look-up for Chinese to English Translation

Although Thumb's coding system is very sophisticated, some codes are not applicable to the present research topic, as they are pertinent to comprehending an English text with the bilingualized English-Chinese dictionary. In contrast, the present case is on translating from Chinese to English mainly with the Chinese-English dictionary. Also, in the present think-aloud protocols produced by the four subjects, some operations were not used by them, and consequently, those codes are abandoned. A table listing all the unused codes and the reasons can be found at Appendix 10.14. The numbers of codes in Thumb's system and those of the present study are summarized in the following table, so as to show the extent of disparity between the two.

Coding system	Thumb's	Of the present study		
		Adopted from Thumb	Newly created	Total
Coding 1	17	8	1	9
Coding 2	25	9	3	12
Coding 3	9	6	3	9
Total	51	23	7	30

Table 5.2: The Numbers of Codes in Thumb's (2004) System and Those of the Present Study

The present coding system has adopted about half of Thumb's codes, with about one fourth newly created for the productive purpose of dictionary look-ups.

Having established the codes, the next stage is to analyze the protocols. There are generally four main steps: (1) segmentation of the protocols; (2) coding of the segments; (3) search for patterns in the coded segments; and (4) revising the coding scheme, if necessary, and examining it for new patterns. Researchers usually segment their

protocols into various units: lines, phrases, clauses, basic processes, and episodes (Thumb, 2004, p. 38). The following shall expound how the protocols are segmented into various units, and how they are coded. The patterns in the coded segments, and their significance, shall then be elucidated.

5.2. The Dictionary Use Process in Chinese to English Translation as Analyzed by Think-aloud Protocols

Originally set out to finish a translation task while thinking aloud, not all the subjects reached the target. Subject One completed the task in 31 minutes; Subject Three in 24 minutes. Subject Two left one third of the original piece uncompleted in 57 minutes, while Subject Four did not pen a word within one hour. The latter two subjects were stopped by the researcher, as one hour was considered a reasonable period to complete the piece, with adequate think-aloud data for the analysis of dictionary use patterns. Consideration must be made to the fact that the subjects might not make the same efforts or behave in the same manner in the performance exercise as they would do in normal circumstances. Besides, the longer the time required for translating, the lower the probability of getting accurate and complete data (Lam, 1991: 143; as quoted in Lam, 1995, p. 915). Given the large bulk of data, and limited space of the thesis, only the first 15 minutes of their think-aloud protocols are recorded here. It is understood that as the dictionary look-ups for the translation task were not complete, the overall patterns of dictionary use of the subjects could not be sketched. But it is believed that the data available here could still shed light on their Chinese-English dictionary use profile, with supporting data from other research methods. Although Subject Four failed to complete the translation exercise, she has produced abundant think-aloud protocols in the dictionary use process for analysis. At the same time, her failure in the exercise is an indication of her lack of efficiency in dictionary use, which serves as a salient point for

discussion.

To illustrate how the segments are analyzed and coded, two examples are taken from Subject One’s think-aloud protocols:

Think-aloud protocol segment	Executive operations	Cognitive operations	Meta-cognitive operations
8. “Bi4jing4qian4que1”... ”gong1li4huo3hou2” is an abstract concept. I have to change it to a common English expression.	RT		PLT
42. “Zhao1shu4” can be rendered as “movement”, I think. “Movement and posture” is better. ”The movement and posture he learnt were of high standard.”		CD, T	

Table 5.3: An Extract of Think-aloud Protocols from Subject One

In segment 8, Subject One referred to the text (RT: Referring to Text) when she read aloud the sentence under consideration, “Bi4jing4qian4que1”... ”gong1li4huo3hou2”. She then planned on how to tackle the translation task there (PLT: Planning for Translation). In segment 42, she was translating (T: Translating) the original text, and chose the suitable definition from what she had found from the dictionary (CD: Choosing Definition). In order not to press them into verbalization, the subjects were allowed to pause at their own discretion, indicated by ellipsis (...), because frequent intervention on the part of the experimenter might distort the cognitive processes of the subjects (Krings, 1987, p. 162).

The think-aloud protocols are rendered into English, broken into segments, and the operations that they employed before or during their look-up tasks are analyzed. Please

see Appendix 10.16 for the entire text. The dictionary use patterns are constructed by the coded segments.

In the first 15 minutes of their think-aloud protocols, the four subjects rarely made affective utterances (Laukkanen, 1996, p. 270). Remarks of ambiguity and uncertainty are also seldom found (Tirkkonen-Condit, 1997, p. 79).

5.2.1. A Portrait of How Four Hong Kong Students Used Dictionaries in a Chinese to English Translation Exercise

To a large extent, the think-aloud protocols validate the results of the questionnaire survey, reflecting the ways that Hong Kong students use dictionaries in Chinese to English translation, as well as their translation strategies. For cross-reference, the portrait is depicted in the same themes as those from questionnaire survey results. The words in { } presented below signify the Putonghua enunciated by the informants. Chinese words under search and originally in Cantonese are Romanized in the *Pinyin* system in quotation marks in the English transcripts.

5.2.1.1. Students' Knowledge of their Working Dictionaries and Working Languages

The subjects searched by *Pinyin*, strokes, and radicals of characters. (“Seg” stands for “segment” below”.)

S1, Segs23, 24, 38:

Then it is “wu3gong1”. I am still using the *NACED* by *Pinyin*. “Wu3gong1” starts with {wu3}, {wu3}, {w-u}. {W-u}, “wu”, “wu”, “wu”, “wu3shi4dao4”; “gong1” starts with [g].... It uses the stroke system: two three four five six, eight strokes. Eight strokes, with the radical “shou3”, on page 171, 171, 171.

S3, Seg6:

I am using the C-E dictionary. {Yi2shu1}, searching by Putonghua *Pinyin*....

However, both Subjects Two and Four were not familiar with these access methods, thus had to spend extra time on finding the headword. Subject Two input the Chinese characters into a web-based dictionary for the *Pinyin* of a name.

S2, Segs3, 29 – 30:

And I don't know the Putonghua *Pinyin* and pronunciation of “Fei1” in “Hu2 Fei1”. Now I input “Hu2 Fei1” into Yahoo on-line dictionary. It usually provides Putonghua *Pinyin*: [F-e-i].

When Subject Four used her Chinese-English dictionary, as she was not familiar with simplified Chinese, she had to search the headword by index. She searched in vain more than once.

S4, Segs42 – 44:

We have now come to the next. Next is “yi2shu1”. I am using the printed version of *CED*, searching for the character of “yi2” by index. I am not very good at using a dictionary in simplified Chinese characters. I am searching the simplified form of the radical of “yi2shu1” by index.

All subjects would read the different “equivalents”, the usage and examples in an entry.

S1, Segs44 – 45:

“Gong1li4”, “gong1”, “gong1”, “gong1”...I see “efficacy”, effectiveness, efficiency”, or “skill”, “ability”. There is one example sentence: “gong1li4hen3shen1de0ge1chang4jia1”. The English is “a singer of high standard”.

S2, Seg26:

I see one translation example in Yahoo dictionary. The Chinese is: “Wo3men0jing1li4le0chang3e4dou4, cai2ying2de0sheng4li4”. The English is “We have a grim struggle”.

All but Subject One used the English-Chinese or the monolingual English dictionaries for meanings of definitions either from the Chinese-English dictionary, or from their mental lexicon. Subject One did the translation exercise at a corner of a college library, without her usual reference tools close at hand, so she just used two Chinese-English dictionaries.

S3, Segs36 – 37:

I have thought up a word, “yield”. I am checking with the E-C dictionary...[Babbling]....”tou2xiang2”, I think it isn’t suitable.

S4, Segs31 - 32

Let me use *OAL* [*Oxford Advanced Learner’s Dictionary*] to check up these words. First, “hardship”. It means: “a situation that is difficult and unpleasant because you don’t have enough money, food and clothes.” “E4dou4” is not like that.

Just as the survey results indicate, students tended not to use the monolingual Chinese dictionary. Subjects Two and Four referred to it a few times in the whole translating process, while Subjects One and Three did not mention it at all.

S2, Segs 19, 28:

I don’t quite understand the Chinese meaning of “die2”. I will try on Yahoo dictionary. There is Chinese definition, and I can figure the meaning out.... But then it comes to “yi1fan1” in Chinese. The Chinese quantifier “fan1” is absent in English. I guess I will use “a grim struggle” from Yahoo dictionary.

S4, Segs14, 29, 30 – 31:

I will check up the meaning of “die2”. I am not clear about its meaning.... I should first check up “e4”, “dou4” next.... It’s better to check up “jian1xian3”. The definitions include: “hardships and danger, perilousness”. Let me use *OAL* to check up these words. First, “hardship”.

However, it does not mean that Subjects One and Three did not need to use it. If Subject One were certain of the meaning of “gong1li4”, she would not have adopted

“efficacy” as its translation.

S1, Segs44, 48 – 49:

“Gong1li4”, “gong1”, “gong1”, “gong1”...I see “efficacy”, effectiveness, efficiency”, or “skill”, “ability”.... ”Although his”...[babbling] Well...I think I will use the word “efficacy”. ”Although his efficacy is bounded by age, and was not of high calibre”.

Subject Three missed conveying the meaning of “die2” in her rendition. It is uncertain whether she had overlooked it in the process, failed to tackle it because of misunderstanding, or avoided it deliberately.

That the original is in the students’ native written language may have made them feel the use of the monolingual Chinese dictionary much less necessary than the English dictionary. But to transmit the message of the original accurately, it is not uncommon for professional translators to consult the monolingual dictionary in their native tongues. It seems that the students under-estimated the importance of and thus underused the monolingual Chinese dictionary in Chinese to English translation. This is consistent with the survey result which showed that it was the least used dictionary, among others, by students when translating from Chinese to English (See Table 4.11).

5.2.1.2. Attitude towards and Strategies in Using the Dictionary in Translating

All but Subject Three approached the translation task by reading the text first, spotting the problem words for search, and at the same time, planning how to handle those words.

S1, Segs1, 2:

I will read the text once first. “E4dou4” has to be checked up for any English expression.

S2, Segs1, 2:

I will read the text once first. I will see and highlight the words that I don't know, and check them up with the dictionary. "Zhe4yi1fan1e4dou4", I figure that there must be better words to express this "e4".

S4, Seg4:

When I first read the original, I also underlined those words that I have to check up. I underlined "e4dou4". The meaning in Chinese is not difficult. I just wonder how to describe fighting fiercely in English, about the wording.

All the subjects considered the context of the original, with their prior linguistic knowledge, when choosing the right word(s) from an entry, or picking alternatives from their mental lexicon.

S1, Segs18 – 20:

I find the entry {e4}, and see the word "e4dou4". There are two definitions: "fierce fight", or "ferocious fight", "ferocious feat fight". I think "feat fight" is like two people boxing, not quite suitable here. I guess it is okay to use "fierce fight".

S2, Seg70:

Now it comes to "zhuan2xia4". For the time being, I use "left by". But the meaning of "zhuan2xia4" is a little different from "left".

S3, Segs18 -19:

"Jing1miao4", the word I have in mind is "miraculous"...
{Jing1miao4}... "exquisite". The dictionary gives me the word "exquisite".

S4, Segs26, 40:

As I can't find the simplified form of "e4", I go to Yahoo for it.... I have been thinking a word: "wicked". "Wicked" means "morally bad". I think there is no association with "moral".

Subjects One, Three and Four also made use of their topical knowledge of the text in translating when consulting the dictionary.

Subject One, Seg30:

“Kungfu” suggests strongly to foreigners that it is like that of Bruce Lee’s, like “*Wing Chun* fists”. It doesn’t suit the context here. I won’t use “kungfu”....

Subject Three, Segs 1 – 2:

I learnt about this piece before. I am checking up “feat” with the E-C dictionary.

Subject Four, Segs17:

In the fiction, “Jin1mian4fo2” refers to the golden complexion, yet chevalier and kind deeds of “Miao2 Ren2feng4”. That’s why people nicknamed him “Jin1mian4fo2”. I read the story before, so I know the background. I think I will translate it literally, or add an explanation in brackets or a footnote.

In the process of translating, when they encountered problem words, they would turn to dictionaries for help. Alternatively, they would also attempt to search for words from their mental lexicon, and might consult the dictionary for confirmation of the meaning or usage afterwards. All the occurrences are listed below.

Subject One, Segs. 6: “Yi2shu1”, “yi2shu1”, I guess using “will” should be alright.

Subject Two, Seg. 16: “Jing1li4yuan3sheng4guo4dui4fang1”, I think “jing1li4” may be translated by “stamina”.

Subject Two, Seg. 20: ...“zhai1kai1” may be translated by “solve”.

Subject Two, Seg. 33: I am thinking whether to use “meet” or “encounter” for “ou3yu4”. But I feel both words aren’t suitable.

Subject Three, Seg. 18: “Jing1miao4”, the word I have in mind is “miraculous”....

Subject Three, Seg. 36: I have thought up a word, “yield”. I am checking with the E-C dictionary....

Subject Four, Seg. 5: “Yu4guo4”, I am thinking whether to use “had never been experienced”, or “had never been encountered”.

Subject Four, Seg. 7: I will check up “xiu1xi2” as well. Should it be “practice” or “learn”?

All but Subject One would further confirm their conjectures with either the English-Chinese dictionary, or the Chinese-English one. Subject One used “will” for “yi2shu1” directly in her rendition.

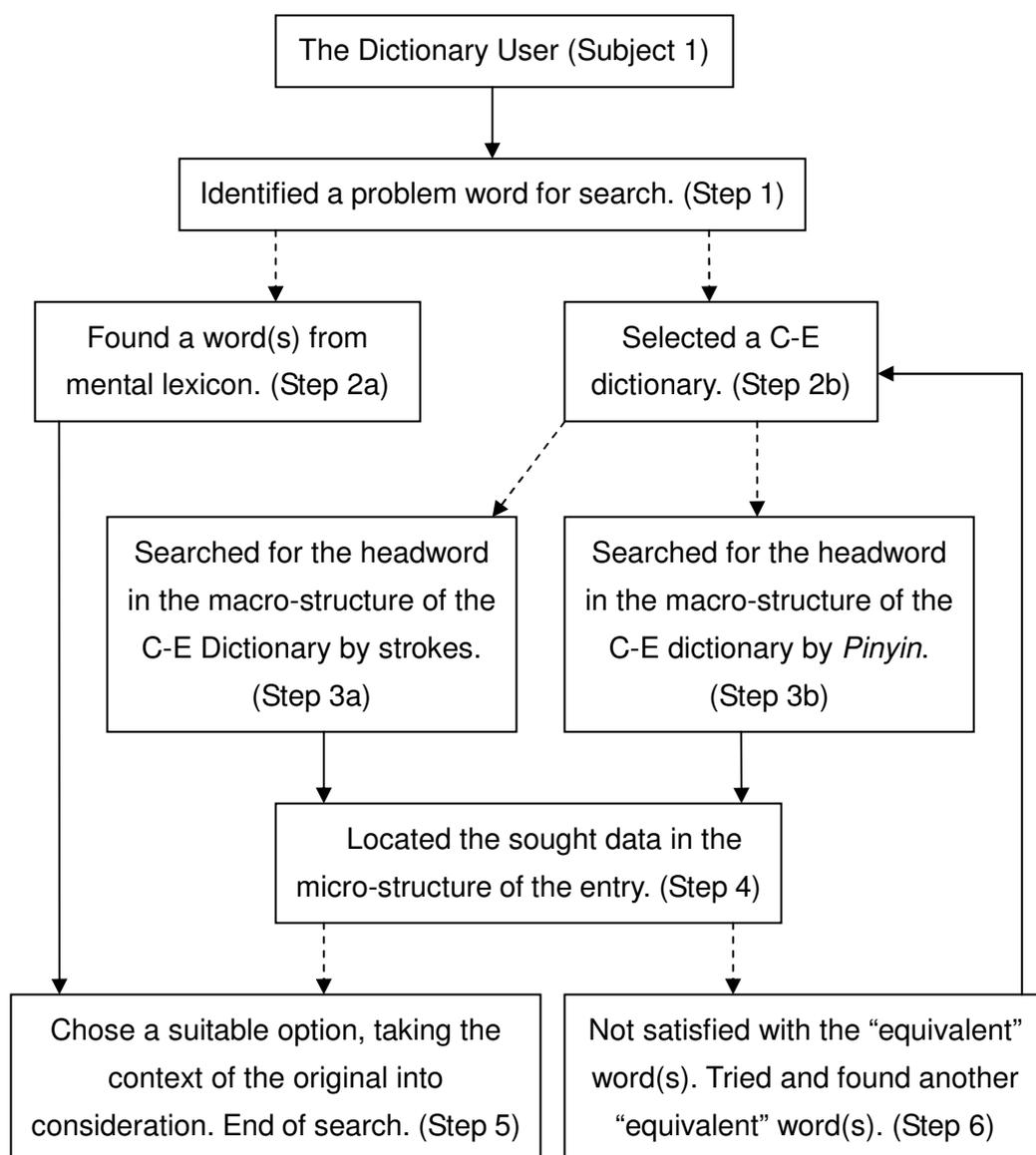
The following depicts the individual differences in subjects' attitude towards and strategies of dictionary consultation for translation.

5.2.1.2.1. The Dictionary Use Process of Subject One

When Subject One checked up with the dictionary, she considered the semantic side more. A typical case can be found in Segs23 – 30. She first used *Pinyin* to search for the headword from her printed Chinese-English dictionary (Seg24: “*Wu3gong1*” starts with {wu3}, {wu3}, {w-u}. {W-u}, “wu”, “wu”, “wu”, “wu3shi4dao4”; “gong1” starts with [g].). Then she read the English equivalents or definitions from the entry (Seg27: *Three expressions are listed: “martial arts, wushu”, that is a transliteration by Pinyin; and “kungfu”.*), and chose a suitable option, taking the context into account (Seg30: “*Kungfu*” suggests strongly to foreigners that it is like that of Bruce Lee’s, like “*Wing Chun fists*”. *It doesn’t suit the context here. I won’t use “kungfu”....*). Then came her translation of a clause (Seg31: “*All his ability in martial arts was acquired from his father’s will.*”). Two other examples can be found in Segs32 – 36, and Segs52 – 58. Without using the English-Chinese dictionary, and the monolingual English dictionary, her process was much simpler than the one in Figure 4.1, with only eight steps compared with 14 steps in the latter. This is shown in Figure 5.1, and the sample think-aloud segments of the steps are listed in Table 5.4. With fewer steps to take in the process, there leaves no doubt why she could finish her translation task much faster than Subjects Two and Four.

One observation from her use of dictionaries is that she chose to use *New Age Chinese-English Dictionary (NACED)* (2004), and *Chinese-English Dictionary (CED)* (1989). Both of them are general language dictionaries, the former has 2,176 pages, while the latter has 520 pages, published much earlier than the former. She did not bring

along all the dictionaries that she most regularly used, except *NACED*. *CED* was casually picked up from the shelf in the college library that she was in. Considering that *CED* is of the same type of dictionary, published much earlier and shorter in length than *NACED*, it seems that she was not conscious and discriminate enough of the dictionaries that she used; otherwise, she should have chosen another one that was complementary to the functions of *NACED*.



(The dotted lines indicate alternative routes.)

Figure 5.1: The Typical Dictionary Consultation Process of Subject One for Translating a Chinese Item into English

Step	Example segment
1: Identified a problem word for search.	16: First, I will check up “e4dou4”.
2a: Found a word(s) from mental lexicon.	6: “Yi2shu1”, “yi2shu1”, I guess using “will” should be alright.
2b: Selected a C-E dictionary.	16: I am using <i>New Age Chinese-English Dictionary</i> [hereafter the <i>NACED</i>].
3a: Searched for the headword in the macro-structure of the C-E dictionary by strokes.	38: It uses the stroke system: two three four five six, eight strokes. Eight strokes, with the radical “shou3”, on page 171, 171, 171.
3b: Searched for the headword in the macro-structure of the C-E dictionary by <i>Pinyin</i> .	17: “E4dou4” is {e4}.
4: Located the sought data in the micro-structure of the entry.	19: There are two definitions: “fierce fight”, or “ferocious fight”, “ferocious feat fight”.
5: Chose a suitable option, taking the context of the original into consideration. End of search.	20: I think “feat fight” is like two people boxing, not quite suitable here. I guess it is okay to use “fierce fight”.
6. Not satisfied with the “equivalent” word(s). Tried and found another “equivalent” word(s).	36: Maybe I can find a substitute for “trick”. Maybe I can check up “zhao1shi4” for a close equivalent

Table 5.4: Example Segments of the Steps in Subject One’s Dictionary Consultation

Process in Figure 5.1

5.2.1.2.2. The Dictionary Use Process of Subject Three

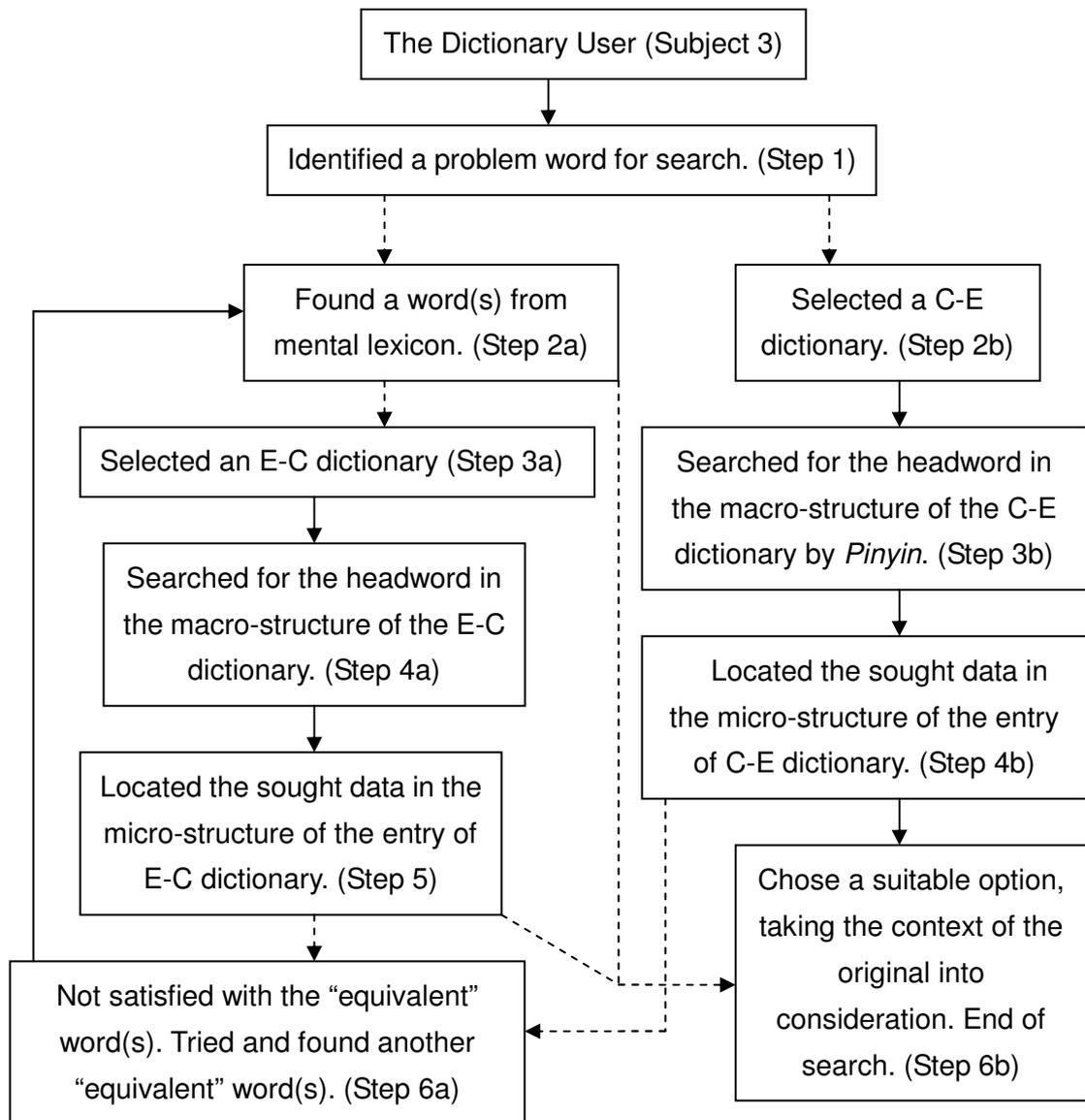
Subject Three’s process was similar to Subject One’s, only that the former verbalized less of how she came to choose one suggested expression from the dictionary rather than the others (e.g., Segs6 – 9, Segs27 – 29). She used one more type of dictionary than Subject One: the English-Chinese dictionary. Compared with the steps outlined in Figure 4.1, Subject Three only took ten possible steps in the dictionary consultation process, again, much simpler than a typical translation student. This is illustrated by Figure 5.2. Sample think-aloud segments of her steps are listed in Table 5.5.

This is congruent with both subjects' attitude to the use of dictionary in translation as reflected in the interviews:

Subject One: I can find out the word for my look-up very quickly, and can make the decision about which meaning to use among all those offered. (Question 9)

Subject Three: ...the C-E dictionary won't teach you how to choose the word, but just list out all the English words. (Question 2)
I usually get what I want. (Question 9)

Both of them treated the dictionary as a vocabulary bank to tap the necessary information for translating. Significantly, both of them were in Year 3, having Grades A or B in the Use of English examination, and regarded themselves efficient users of the Chinese-English dictionary. In their performance exercise, without all their usual tools, the steps that they took are much fewer than their counterparts' from the survey, as described in Figure 4.1. They seldom resorted to the English-Chinese dictionary or the monolingual English dictionary, making their search much shorter and quicker, thus enhancing efficiency.



(The dotted lines indicate alternative routes.)

Figure 5.2: The Typical Dictionary Consultation Process of Subject Three for Translating a Chinese Item into English

Step	Example segment
1: Identified a problem word for search.	11: “E4dou4”, I have to check it up....
2: Found a word(s) from mental lexicon.	36: I have thought up a word, “yield”. I am checking with the E-C dictionary....
3a: Selected an E-C dictionary	2: I am checking up “feat” with the E-C dictionary.
3b: Selected a C-E dictionary.	6: I am using the C-E dictionary.
4a: Searched for the headword in the macro-structure of the E-C dictionary	3: “Feat”...
4b: Searched for the headword in the macro-structure of the C-E dictionary by <i>Pinyin</i> .	6: {Yi2shu1}, searching by Putonghua <i>Pinyin</i>
5a: Located the sought data in the micro-structure of the entry of E-C dictionary.	3: “Feat”...”feat” can mean Kungfu, “move”.
5b: Located the sought data in the micro-structure of the entry of C-E dictionary.	7: I found it. It says “surviving works”, “posthumous work”, “collected writing”.
6a. Not satisfied with the “equivalent” word(s). Tried and found another “equivalent” word(s).	37: [Babbling]...”tou2xiang2”, I think it isn’t suitable.
6b: Chose a suitable option, taking the context of the original into consideration. End of search.	4: I think it can mean “zhao1shu4”.

Table 5.5: Example Segments of the Steps in Subject Three’s Dictionary Consultation Process in Figure 5.2

5.2.1.2.3. The Dictionary Use Process of Subject Four

Subject Four’s search process for an English equivalent to the Chinese original was similar to that of Subjects One and Three. But she spent much more time accessing the headword, as she was unfamiliar with the access methods to the dictionary, namely *Pinyin*, simplified Chinese, radical and strokes of characters, resulting in a number of

failed look-ups, e.g., Segs22, 25. Also, when she found the suggested expressions in an entry, she would very often make some other look-ups for the meaning of the English expressions. This means that she would make several look-ups in one search, while Subjects One and Three finished one search by one look-up. One typical search is in Segs20 – 41 for the English of “e4dou4”, which consists of 8 look-ups:

Seg20: I use the index to search for “e4dou4”, for I don’t know the simplified version of the character “e4”.

Seg23: Then I check up the radical “xin1”.

Seg26: As I can’t find the simplified form of “e4”, I go to Yahoo for it.

Seg29: It’s better to check up “jian1xian3”.

Seg31: Let me use *OAL* to check up these words. First, “hardship”. Seg34: “Perilous”. It means “very dangerous, hazardous”, about experience.

Seg37: Let’s first check up “difficult”.

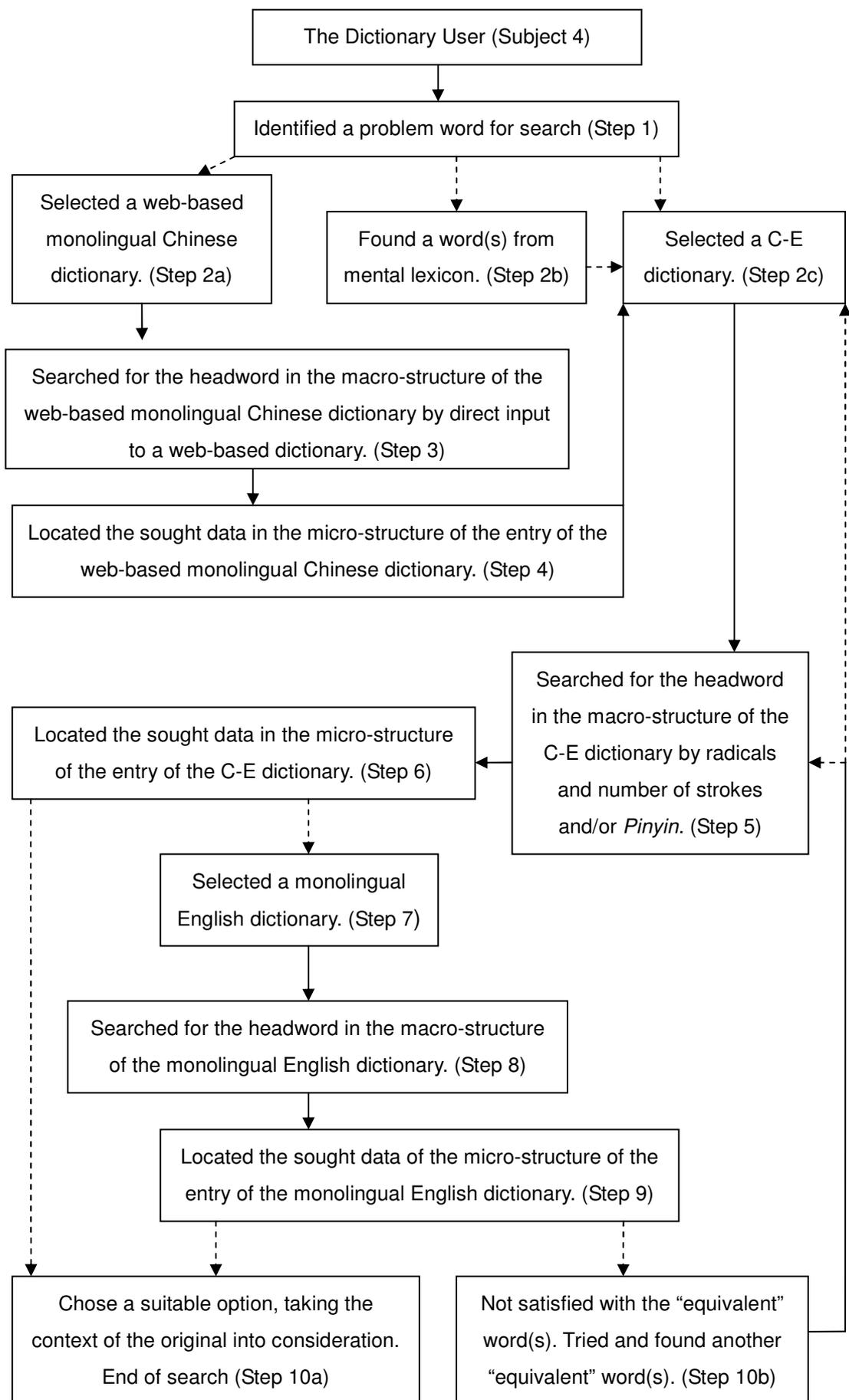
Seg40: I have been thinking a word: “wicked”. “Wicked” means “morally bad”.

Her process of using dictionaries for translating from Chinese to English can be illustrated by Figure 5.3, with the sample think-aloud segments listed in Table 5.6. She took a few more steps than Subjects One and Three in accessing the Chinese-English dictionary by radicals, or the number of strokes, and in using the monolingual English dictionary for information of the words provided in the Chinese-English dictionary. In addition to the printed dictionaries, she also used web-based dictionaries widely. Compared with the process in Figure 4.1, she took 13 possible steps, without using the English-Chinese dictionary. There is no wonder why she took more time than Subjects One and Three in the task, and eventually even failed to complete it.

She considered herself an efficient user of the Chinese-English dictionary, as “*the on-line dictionary is very efficient*” (Question 9, Interview). But if a successful search is defined as finding the information that one wants, it seems that she needed to make

many look-ups to finish one search, in contrast to Subjects One and Three. This could partly be explained by the fact that Subject Four was one year junior than Subjects One and Three in her study, which means that she might be less experienced in dictionary use for Chinese to English translation. She also had the lowest grade in the Use of English examination among the four subjects.

Figure 5.3: The Typical Dictionary Consultation Process of Subject Four for Translating a Chinese Item into English (The dotted lines indicate alternative routes.)



Step	Example segment
1: Identified a problem word for search.	7: I will check up “xiu1xi2” as well.
2a: Selected a web-based monolingual Chinese dictionary.	(Segment made after the first 15 minutes of the exercise, not found in the Appendix) I use <i>Guoyudacidian</i> [<i>The Mandarin Dictionary</i>] of the Ministry of Education to check it up with.
2b: Found a word(s) from mental lexicon.	7: Should it be “practice” or “learn”?
2c: Selected a C-E dictionary.	19: I am using <i>A Chinese-English Dictionary</i> of Foreign Language Teaching and Research Press [hereafter <i>CED</i>] for look-up.
3: Searched for the headword in the macro-structure of the monolingual Chinese dictionary by direct input to a web-based dictionary.	(Segment made after the first 15 minutes of the exercise, not found in the Appendix) <i>Guoyudacidian</i> doesn’t show me “die2yu4”, but it tells me about the meaning of “die2”.
4: Located the sought data in the micro-structure of the entry in the web-based monolingual Chinese dictionary.	(Segment made after the first 15 minutes of the exercise, not found in the Appendix) It means “lun2liu2, jie1lian2, lü3ci4”.
5: Searched for the headword in the macro-structure of the C-E dictionary by radicals and number of strokes and/or <i>Pinyin</i> .	20: I use the index to search for “e4dou4”, for I don’t know the simplified version of the character “e4”. I am now searching the radical table.
6: Located the sought data in the micro-structure of the entry in the C-E dictionary.	30: The definitions include: “hardships and danger, perilousness”.
7: Selected a monolingual English dictionary.	30: Let me use <i>OAL</i> to check up these words.
8: Searched for the headword in the macro-structure of the monolingual English dictionary.	30: First, “hardship”.
9: Located the sought data of the micro-structure of the entry of the monolingual English dictionary	32: It means: “a situation that is difficult and unpleasant because you don’t have enough money, food and clothes.”

10a: Chose a suitable option, taking the context of the original into consideration.	35: I think “perilous” should be a suitable choice, because it says, because “hazardous” says something “involving risk or danger”. This is quite suitable.
10b: Not satisfied with the “equivalent” word(s). Tried and found another “equivalent” word(s).	32: “E4dou4” is not like that.

Table 5.6: Example Segments of the Steps in Subject Four’s Dictionary Consultation Process in Figure 5.3

5.2.1.2.4. The Dictionary Use Process of Subject Two

Subject Two made the most look-ups, and was also the most dependent on the dictionary among all subjects. He was partly aware of his dependence: “*I guess without the dictionary, I couldn’t translate anything*” (Question 1, Interview); “*meaning, usage all fit*” (Question 9, Interview); “*What is in the dictionary should be right*” (Seg27). He relied on the dictionary as authority, and expected to find equivalents from the Chinese-English dictionary for ready use in his translation, not only semantically, but also in usage. Similar to Subject Four, he also made several look-ups for one search. For instance, in the search for “wu3gong1” (Segs38 – 50, 52 - 60):

Seg39: I will try on Yahoo on-line dictionary to see if there will be any good result.

Seg43: Now I start to search in the *NACED*. I am now searching [w], the third tone.

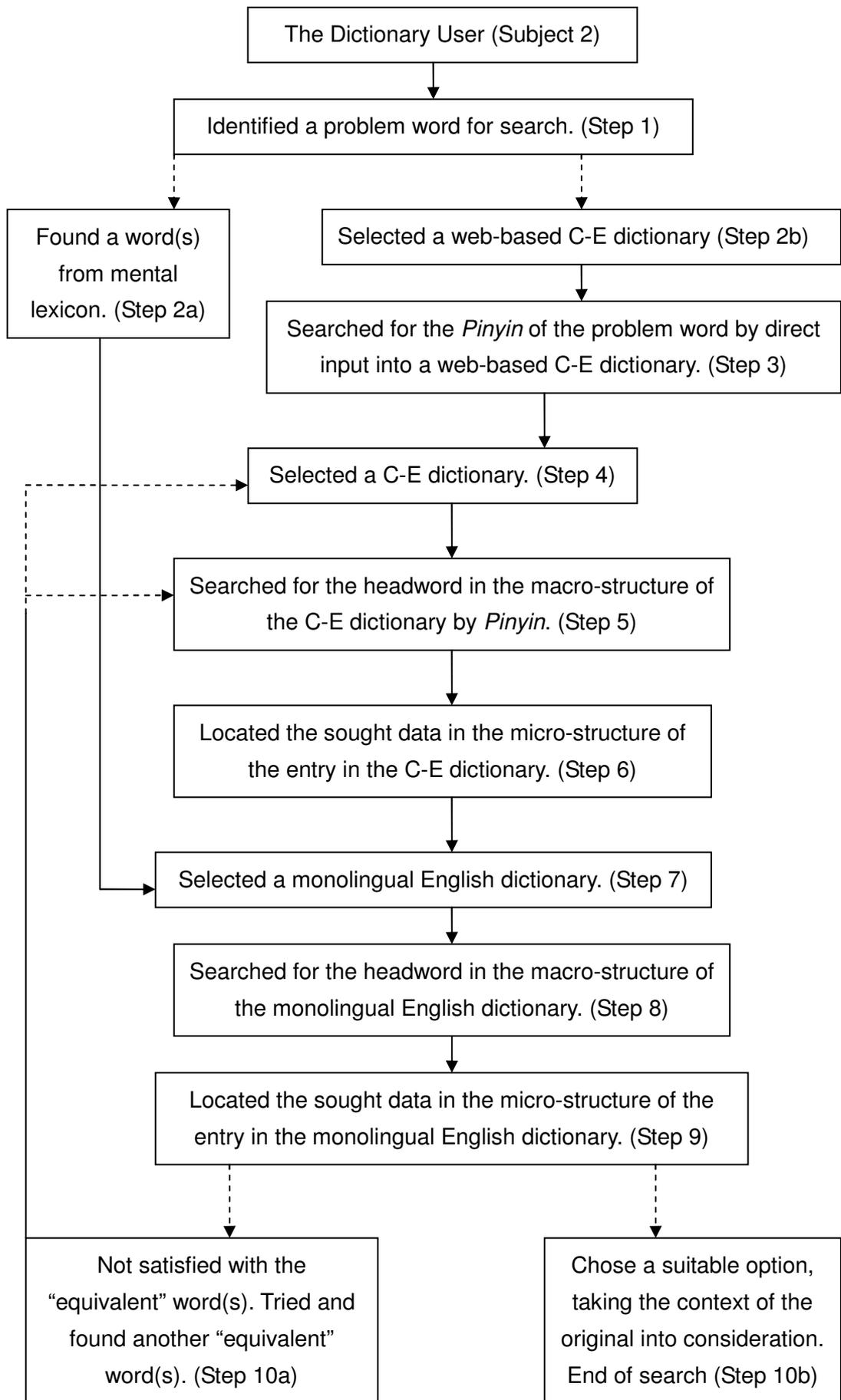
Seg47: I have to check up with the E-E dictionary, with Cambridge on-line E-E dictionary.

Seg56: I will see if there is any example from the E-E dictionary, and how it is used. I am on Cambridge E-E on-line dictionary.

He did not consider himself efficient in the use of Chinese-English dictionary, for “*I spend some time on the look-ups, but the results aren’t satisfactory*” (Question 9, Interview). His process of using the dictionaries for translating a Chinese item into

English is similar to that of Subject Four, as depicted in Figure 5.4, with 12 possible steps altogether. The sample segments of his steps are listed in Table 5.7. Similarly, he also did not use the English-Chinese dictionary. But instead of using *Pinyin*, the stroke and radical systems to access the entries in the printed Chinese-English dictionary as Subject Four did in Step 5, he simply input the Chinese characters to the web-based dictionary, which he made frequent use throughout the process, thus saving much time in search.

Figure 5.4: The Typical Dictionary Consultation Process of Subject Two for Translating a Chinese Item into English (The dotted lines indicate alternative routes.)



Step	Example segment
1: Identified a problem word for search.	24: Then I start with “e4dou4”.
2a: Found a word(s) from mental lexicon.	33: I am thinking whether to use “meet” or “encounter” for “ou3yu4”.
2b: Selected a web-based C-E dictionary.	29: Now I input “Hu2 Fei1” into Yahoo on-line dictionary.
3: Searched for the <i>Pinyin</i> of the problem word by direct input into a web-based C-E dictionary.	29: Now I input “Hu2 Fei1” into Yahoo on-line dictionary.
4: Selected a C-English dictionary.	43: Now I start to search in the <i>NACED</i> .
5: Searched for the headword in the macro-structure of the C-E dictionary by <i>Pinyin</i> .	43: I am now searching [w], the third tone.
6: Located the sought data in the micro-structure of the entry in the C-E dictionary.	45: In the entry there is a definition: “military feats”.
7: Selected a monolingual English dictionary.	66: I am searching on Cambridge on-line E-E dictionary.
8: Searched for the headword in the macro-structure of the monolingual English dictionary.	65: I don’t know the meaning of “posthumous” in “posthumous papers”. I have to check it up from the dictionary.
9: Located the sought data in the micro-structure of the entry in the monolingual English dictionary.	67: One of the definitions says that it is an adjective, meaning “happened after a person’s death”.
10a: Not satisfied with the “equivalent” word(s). Tried and found another “equivalent” word(s).	73: Apart from “left”, others like “hand down, pass, summon” aren’t suitable.
10b: Chose a suitable option, taking the context of the original into consideration. End of search.	68: It seems right.

Table 5.7: Example Segments of the Steps in Subject Two’s Dictionary Consultation

Process in Figure 5.4

Both Subjects Two and Four’s performance in the use of dictionaries show their dependence on the dictionary, which may be due to their lack of confidence in their own

language competence, but not laziness (Horsfall, 1997, p. 7), as they were willing to make more look-ups for a search than Subjects One and Three. In addition to taking fewer steps for each word search, the latter pair's more successful performance may be connected to their self-confidence and trust in their own abilities (Laukkanen, 1996, p. 263). At the same time, all four of them tended to look for English equivalents from the dictionary for the Chinese original. This is especially noticeable in Subjects Two and Four, which treated the bilingual dictionary as the authority for translation equivalence.

Students' attitude towards the dictionary echoes the summarized findings of Hausmann, Reichmann, Wiegand, et al. (1989, p. 208) in three ways. (1) They underused some information of the dictionary. (2) They thought that the lexical items provided in the definitions in the dictionary are equivalent to the problem words under search. (3) They were not aware of the variety of dictionaries and their differences, as in the case of Subject One in using the two Chinese-English dictionaries.

Thumb (2004, p. 68) proposes seven look-up strategies in her study of students using the English-Chinese dictionary for reception: ignoring, assuming, minimizing, checking, paraphrasing, stretching, and maximizing. As the focus of the present study is on how students use the Chinese-English dictionary for production, which differs in the language direction of the dictionary, and the purpose of dictionary use, the proposed strategies cannot be applied here.

5.2.1.2.5. Interim Summary

All but Subject Three read the text first, and then planned how to approach the translation task before starting to consult the dictionary. They then checked the problem words with the Chinese-English dictionary by either *Pinyin*, radicals, the number of

strokes, or by inputting the Chinese characters to the web-based dictionary for access to the related entries. In the entry, they would read the English “equivalents” or definitions, together with the examples. For Subjects Two and Four, they would very often refer to the monolingual English dictionary for the meaning and usage of the English expressions found in the Chinese-English dictionary. All four of them used their prior linguistic knowledge, and some with their topical knowledge, to choose the right expressions from the entries, with the context of the original in consideration.

With lower English standards, both Subjects Two and Four had greater reliance on the dictionary, and made more look-ups by using the web-based dictionary than the other two subjects. Both Subjects One and Three were more efficient in finding what they wanted from the dictionary. Subjects Two and Four met with more failures in finding the headwords, and took more steps in completing a search for English expressions for the problem word. It could be concluded that, in Chinese to English translation, among the four native Chinese students, the better the English standard, the more efficient in dictionary use, the more confident in their own lexicon, and the less reliant on the dictionary. Nonetheless, although all four of them were supposed to be advanced language learners, they still used the bilingual dictionary more than the monolingual one, which is consistent with the findings of Atkins and Varantola (1997: 32), Laufer and Kimmel (1997, p. 362), and Cowie (1999, p. 192).

5.2.1.3. How do Students Use the Electronic / Web-based Dictionary in Translating?

Neither Subjects One nor Three used the hand-held electronic dictionary. Before the translation exercise, they were told that they could bring whatever dictionaries they usually used, and even their notebook computer for web-based dictionary; or they could choose to work at a place in the university where workstations were available. But they

chose to use two printed dictionaries. In the surveyed population, they belonged to the majority of students who had Grades C or above in their Use of English examination, and used the hand-held electronic dictionary less than 3 times a week in the recent year.

Both Subjects Two and Four chose to do the translation task at a workstation in their universities. Subject Two used the web-based dictionaries very frequently. In the first 15 minutes of his translation task, he made 16 look-ups with the on-line dictionaries. In the whole translation exercise, in addition to one printed Chinese-English dictionary: *New Age Chinese-English Dictionary*, he used two on-line monolingual English dictionaries: *Cambridge Advanced Learner's Dictionary*, *Merriam-Webster Online Search* (thesaurus); two on-line Chinese-English dictionaries: Yahoo on-line dictionary, and *Lin Yutang's Chinese-English Dictionary of Modern Usage*.

As he was not familiar with Putonghua *Pinyin*, before he turned to the printed dictionary, he would input the original Chinese character to the web-based dictionary by a Chinese word processing system (Cangjie) for the *Pinyin*:

S2, Seg42:

I will use the *NACED* [*New Age Chinese-English Dictionary*]. I am now inputting “wu3” of “wu3gong1” into Yahoo on-line dictionary, for it will give me the Putonghua *Pinyin*. I am not sure which tone the character is of. It says the third tone.

The web-based dictionary helped him use the printed Chinese-English dictionary by providing the Putonghua *Pinyin* to him, although it took him some extra time.

Subject Four also used the web-based dictionary frequently. In the first 15 minutes

of her translation task, she made eight look-ups with the web-based dictionary. The on-line dictionaries that she used in the whole translation exercised were: two on-line Chinese-English dictionaries (Yahoo on-line dictionary, *Lin Yutang's Chinese-English Dictionary of Modern Usage*), one on-line monolingual English dictionary (*Oxford Advanced Learner's Dictionary*), and one on-line monolingual Chinese dictionary (*Guoyudacidian*, 1998). As mentioned in her interview, she would first check up with a printed Chinese-English dictionary (*Chinese-English Dictionary*, 1995). If she failed to find the headword either because it was not included in the dictionary, or she was not sure of the access paths by *Pinyin* or strokes, she would then turn to on-line Chinese-English dictionaries:

S4, Seg26:

As I can't find the simplified form of "e4", I go to Yahoo for it.

There was a special case in the second half of her translation process, which is not recorded in the think-aloud protocols in the Appendix. She had some difficulty in inputting the Chinese character “解” (jie3) to the computer, because the Chinese processing method that she was familiar with (Jiufang) was not available at the computer at the university library. She then accessed *Guoyudacidian* on-line to find the whole idiom (“難解難分”, “nan2jie2nan2fen1”), and then used the “cut and paste” function to input the four characters to Yahoo Chinese-English dictionary. This shows that even in using the web-based dictionary, if the user is not familiar with any Chinese input method on the computer, s/he will have to spend some more time finding ways to input the characters to the dictionary. Another case was that the server once did not function, so her look-up failed for a time, and she had to try again later.

It is seen that the web-based dictionary was very important to these two students,

and the printed dictionary appeared to be supplementary only. It indeed enhanced their efficiency in their look-ups. Their higher number of look-ups may be due to the frequent use of web-based dictionaries, whose efficient access lowers the “consultation trigger point” (Aust, Kelley & Roby, 1993, p. 64). But it also occupied more of their time in the translation process. This contrasts with Subjects One and Three, who chose not to use the electronic/web-based dictionary at all. Although it was much faster to use than the printed dictionary, there would be technical problems either with the input method, in the case of Chinese, and with the functioning of the computer.

According to the subjects’ answers to Question 5 of the Questionnaire (“What is the Chinese to English dictionary that you use most often?”), and Question 3 in the Interview (“Which kind of dictionary do you use more often in Chinese to English translation? Why?”) (See Section 10.15 for the Interview transcripts), all four of them accessed the dictionaries that they used most often (See Section 10.17 for the exact titles), although they did not have access to the full range of dictionaries that they might have used, and worked at a setting different from their normal ones. Subject One employed *The New Age Chinese-English Dictionary* (2004). Subject Two consulted *The New Age Chinese-English Dictionary* (2004), Yahoo on-line dictionary, and the on-line *Cambridge Advanced Learner’s Dictionary*. Subject Three’s reference tool was the *Chinese-English Dictionary* (1995). Subject Four was used to accessing on-line dictionaries, and specified the on-line *Oxford Advanced Learner’s Dictionary* as one of them. All of them reported that they seldom or never used the handheld electronic dictionary. Although both Subjects Two and Four employed the Yahoo on-line dictionary quite often, throughout their think-aloud protocols, there is no mention of their being aware or using its function of paragraph translation. This shows that their dictionary usage at the performance exercise was not much different from their normal

one, and thus enhances the validity of the study results.

5.2.2. How do Students Use the Dictionary to Handle Intercultural Elements in Chinese to English Translation

In translation, a culture-specific item exists as a result of a conflict from any linguistically represented reference in a source text which, when transferred to a target language, poses a translation problem due to the non-existence, or to the different value of the given item in the target language culture (Aixelá, 1996, p. 57). There are two basic categories of culture-specific items from the point of view of the translator: proper nouns and common expressions (Aixelá, 1996, p. 59). Within the text, the treatment of a cultural-special item also depends on the textual function that it plays in the source text, as well as its situation within it. The function of the translated item in the target text needs not be the same as in the original (Aixelá, 1996, p. 69). There are various translation strategies to handle these cultural-special items, which include cultural borrowing, literal translation, definition, cultural substitution, lexical creation, deliberate omission, compensation, combinations of these procedures and a footnote (Harris, 1996, p. 174). In the language pair of Chinese and English, there is often a lack of semantic equivalence of cultural lexis between them. But there may be complicated overlaps or embeddings among the conceptual meanings of particular words, either within Chinese or within their supposed English equivalents (Cortazzi and Shen, 2001, p. 126).

Extracts from subjects' think-aloud protocols are taken to demonstrate how they used the dictionary to handle cultural terms in Chinese-English translation. Linguistically and culturally, all the four subjects are native Cantonese-speaking Chinese, with English as their second language. Their English cultural knowledge was presumably mostly picked up in the school and the media, like most Hong Kong

students.

Four-character idioms are common expressions inherited from classical Chinese.

“Nan2jie3nan2fen1” in the original text is one example.

S1, Segs9, 55 – 58:

I guess four-character idioms like “nan2jie3nan2fen1” may be found from the dictionary.... There is one explanation, whose usage is similar to my case here. It says, “reached the”.... “The chess game reached the stage where the players were locked in a stalemate.” I will see if this can be used here. “This is why they were locked in a stalemate.”

“Wu3gong1” is a term unique in the Chinese culture. There is no total English equivalent.

S2, Segs41, 45 – 51:

I am thinking hard on how “wu3gong1” can....In the entry there is a definition: “military feats”. I feel that “feats” should be fine, for westerners call the skills and techniques “feats”. But I am not sure. I have to check with the E-E dictionary, with Cambridge on-line E-E dictionary.... I am thinking if “feat” is a right word. If it is, I will use it. I will say “He learn”, ”He learnt all the feats”.

S3, Segs15 – 17:

“Wu3gong1”...”wu3gong1”...”wu3gong1”, I will check it. {Wu3gong1}.... Here it shows “military accomplishment”. I find another meaning: “stage fighting”. “His fighting feat”, I guess I will write “his fighting feat”.

“Jin1mian4fo2” is a title to a character in Jin Yong’s novel. Literally meaning “Gilt-faced Buddha”, it depicts a common scene of the statues in many Buddhist temples in China. Again, it is a non-existent proper noun in English.

S4, Segs16 – 17:

The inner meaning of “Jin1mian4fo2” may not be found in the dictionary. In the fiction, “Jin1mian4fo2” refers to the golden complexion, yet chevalier and kind deeds of “Miao2 Ren2feng4”. That’s why people nicknamed him “Jin1mian4fo2”. I read the story before, so I know the background. I think I will translate it literally, or

add an explanation in brackets or a footnote.

It can clearly be seen that all four subjects sought semantic information from the dictionary. In Subject One's case, there is no special cultural information for "nan2jie3nan2fen1". But for "wu3gong1" and "Jin1mian4fo2", there could be cultural background behind them. The dictionaries that Subjects Two to Four used do not provide such information. Subject Two mentioned his consideration of his potential English readers' response, while Subject Four pondered upon the strategies in translating it. But none of them revealed how they considered the functions of the cultural items in the original text and in the target English text. This may be partly due to the fact that the passage at hand is just an extract from a novel, and the student translators were not reminded that the translation of the Chinese text into English serves the same purpose as the original, a novel for amusement and appreciation. Another reason may be that they focussed on the single cultural item, while neglecting the item's function in the whole text. This finding coincides with that of Olk (2002), whose subjects (19 British university students, and 19 German university students) appeared to approach the culture-specific items not so much as a part of a text, but as isolated language items in their written translations. Olk (2002, p. 39) concluded that this fixation on relatively small translation units may be to some extent didactogenic, i. e., the result of teaching practice which focuses the students' attention in translation on micro-level features. This over-emphasis on the equivalents of individual words contributes to students' reliance on the dictionary.

Lai (1998, pp. 140-141) propounds that, as martial arts fiction in English translation is virtually a new literary genre of writing, the translator should try out innovative strategies in handling the unique cultural features, e.g., a new lexicon, omission, amplification and notes, abridgement and adaptation. The objective is

production of a good Chinese adventure story in a style found enjoyable by the general reader in the West. It is demanding to translate such genre without due study of it, and guidance on the translation strategy. Nonetheless, Lai's insight implies that there should be flexible use of the dictionary in translating cultural elements for the purpose of the text. Tackling them word by word, as in the approach of the subjects, is but one strategy. Should the Chinese to English dictionary provide more cultural information on the original expression and the corresponding English expression, the user could have a wider perspective on how to handle it. It is the same inadequacy in the Chinese to English dictionary that Chen (1994, p. 278) found in Mainland China.

5.2.2.1. Interim Summary

In translating cultural items, none of the subjects gave thought to their functions in the original text and in the target English text. This over-emphasis on the equivalents of individual words accounts for students' reliance on the dictionary. For dictionary users, there should be flexible use of the dictionary in translating cultural elements for the purpose of the text. For lexicographers, the Chinese-English dictionary should be compiled to provide more cultural information on the original expression and the corresponding English expression to facilitate translation.

5.3. How Efficient are Students' Use of the Dictionary in Translating from Chinese to English?

5.3.1. The Measurement of Students' Dictionary Use Efficiency in Translating

Efficiency in the use of Chinese-English dictionary in translating is measured by whether the search in the Chinese-English dictionary could help achieve the basic aim of completing the translation task, and of conveying the original message by English

within the time set for the task. In this case, it was translating the original text in about one hour. As only the first 15 minutes of subjects' think-aloud protocols are analyzed, it is difficult to make an overall judgment on their efficiency; yet their renditions could shed light on it. The translation strategies in the performance exercise will not be considered. The number of search from the dictionary is only confined to words searched from the original, but not those in the process of finding the English, e.g., the meaning of the English expressions from the dictionary, or from one's mental lexicon, disregarding the number of look-ups in one search. In reference to Figure 4.1, this means excluding those searched in Steps 6a to 8b from the English to Chinese dictionary, as well as from the monolingual English dictionary.

Translation quality assessment is conducted in different approaches. There are models with a quantitative dimension (e.g., discourse analysis model, teleological model, Canadian Language Quality Measurement System), and non-quantitative models (e.g., descriptive-explanatory model, functionalist model, *skopostheorie*) (Williams, 2004). The performance exercise is not for a comprehensive evaluation of the overall translation standard of the subjects, but for validating the think-aloud protocols in the translation process, with a focus on the results of dictionary word search. Therefore, none of the models would be adopted in the following analysis. Rather, it aims to find out the results of word searches, and to gain an idea of the general translation standard of the end product for which the word searches were done.

The subjects were expected to complete the translation task in about one hour. In 31 minutes 24 seconds, while "thinking aloud" at the same time, Subject One finished the whole piece of translation from the original, while Subject Three completed the task in 24 minutes 19 seconds. Subject Two managed to translate about two thirds of the

original text in 57 minutes, from the beginning up to "dan4jun1zai4ji2wei1ji2xia4yi3qiao3miao4zhao1shu4zhai1kai1." Having spent 1 hour 17 seconds on the task, Subject Four failed to produce a word. She devoted all of her time searching for and pondering over the English words for translation. In other words, according to Krings (1986; as cited in Tirkkonen-Condit,1990, p. 382), both Subjects One and Three completed the three stages of the translation process: the preparatory stage, which is before the subject produces the written translation; the writing stage, when the written translation is produced; and the editing stage, when the written product is finalized. Subject Two reached the second stage, while Subject Four never went beyond the first.

The translations of Subjects One to Three, along with the titles of the dictionaries that the four students used, could be found at Appendix 10.17. There is no grading of the translation, for the purpose of the exercise is to provide a written record of the results of subjects' dictionary search for analysis. While it is important to record the process of the dictionary look-ups, the analysis would not be complete without the end product of the task being written. The quality of a piece of translation involves not just dictionary skills, but language competence, translation strategies, time management, subject matter knowledge, etc. Moreover, a research setting that was unnatural to subjects might have caused some anxiety in them, and in turn influenced their performance. Assessment of the translation quality of subjects' exercises would mislead the reader directly to associate the dictionary skills to their performance in translation. Rather, the renditions will be assessed for the efficiency of their dictionary use in terms of both their word search and the result, as well as their dictionary consultation operations.

5.3.2. Dictionary Use Efficiency of Individual Students in Translating in Terms of Word Search

Subject One made ten searches of the original words for English expressions from the Chinese-English dictionary (Table 5.8) in about 31 minutes. She completed the exercise fittingly, with just a major semantic flaw in translating “Ta2wu3gong1zhuan2shi4...er2cheng2” by “All his ability in martial arts was acquired from his father’s will”.

Original	Adopted expression
1. “E4dou4”	fierce fight
2. “Wu3gong1”	martial arts
3. “zhao1shi4”	movement and posture
4. “gong1li4”	efficacy
5. “Nan2jie3nan2fen4”	locked in a stalemate
6. “qiao3miao4”	with great finesse
7. “fen4li4”	spirited attack
8. “zhai1dou4”	resisted
9. “ming2bu4xu1zhuan2”	reputation is well deserved
10. “Jin1mian4fo2”	[not found in dictionary]

Table 5.8: Subject One’s Searched Words in the Original, and the Results in Translation

In 57 minutes of his translation time, Subject Two searched for 18 English expressions. (Table 5.9) He omitted “gong1li4huo3hou2”, “yi2wei4zhen1shang4cheng2”, “die2”, and the last Chinese sentence, “Hu2 Fei1 fen4li4...zai3yi3bai4le”. As a whole, he has omitted about one third of the original in his translation. While his overall rendition is faithful in meaning to the Chinese, and

readable in language, the expression “was still immature at his age” can hardly render adequately “gong1li4huo3hou2yi1nian2sui4suo3xian”.

Original	Adopted expression (not used in translation)
1. “Hu2 Fei1”	Hu Fei
2. “E4dou4”	grim struggle
3. “yu4shang”	met
4. “Xiu1xi2”	learnt and practised
5. “zhao1shi4”	feats
6. “zhuan2xia”	left by
7. “yi2shu1”	posthumous letter
8. “zhao1shu4”	moves
9. “jing1miao4”	ingenious
10. “shi2zhan4jing1yan4”	combat experience
11. “gong1li4huo3hou2”	(level of attainment)
12. “nin2sui4suo3xian4”	immature [at his age]
13. “jing1li4”	vigorous
14. “nan2jie3nan2fen1”	neither could get the upper hand
15. “die2”	(without stop, repeatedly)
16. “yu4”	hit
17. “jie2wei1ji2xi”	critical moment
18. “zhai1kai1”	kept off

Table 5.9: Subject Two’s Searched Words in the Original, and the Results in Translation

In 24 minutes, Subject Three completed the translation task, with seven searches of the original words from the Chinese-English dictionary. (Table 5.10) Similar to Subject

Two, she failed to convey the meaning of “Ta2wu3gong1...er2cheng2” with “His fighting feats were all inherited from letters left by his dead father”. The word “exquisite” for “jing1miao4” does not make a good collocation with “his feats”. “With his abundant...some feats” only renders half of the sense of the original, as the result was “nan2jie3nan2fen”, neither side could gain an upper hand. “Most imminent peril” is different in meaning from “ji2wei1ji2xia”.

Original	Adopted expression
1. “e4dou4”	a fierce fight
2. “wu3gong1”	fighting feats
3. “yi2shu1”	letters left by
4. “jing1miao4”	exquisite
5. “huo3hou2...shang4cheng2”	refined...attained the...level
6. “jing1li4”	energy
7. “ming2bu4xu1zhuan2”	lives up to reputation

Table 5.10: Subject Three’s Searched Words in the Original, and the Results in Translation

In about 60 minutes, Subject Four made 11 searches of the Chinese words from the original in the Chinese-English dictionaries. (Table 5.11) However, she was unable to produce a word for translation. From the perspective of using the dictionary for translation, she was inefficient, although her self-evaluation in interview was otherwise.

Original	Potentially adopted expression
1. “e4dou4”	fierce fight
2. “yi2shu1”	letter, left behind by...immediately before death
3. “xiu1xi2”	study and practice
4. “zhao1shu4”	movement in martial arts
5. “jing1miao4”	skillful
6. “gong1li4”	effect
7. “huo3hou2”	level of attainment
8. “shang4cheng2”	upper level
9. “jing1li4”	energy
10. “nan2jie3nan2fen1”	locked together, neither could get an upper hand
11. “die2”	successively

Table 5.11: Subject Four’s Searched Words in the Original, and the Potentially Adopted Expression for Translation

5.3.3. Dictionary Use Efficiency of Individual Students in Translating in Terms of Dictionary Consultation Operations

Table 5.12 summarizes the numbers of segments in the think-aloud protocols of the subjects, the numbers and kinds of operations that they used with their dictionaries in the first 15 minutes for their translation task, and the average number of time of each operation used per segment.

Subject code	Number of think-aloud protocol segments	Executive operations	Cognitive operations	Meta-cognitive operations
1	58			
	Total number of times used	25	29	28
	Average number of times per segment	0.43	0.5	0.48
	Total number of the kinds of operations used	7	10	6
2	86			
	Total number of times used	50	22	50
	Average number of times per segment	0.58	0.26	0.57
	Total number of the kinds of operations used	9	10	8
3	38			
	Total number of times used	23	22	12
	Average number of times per segment	0.6	0.59	0.32
	Total number of the kinds of operations used	5	7	6
4	41			
	Total number of times used	26	13	33
	Average per segment	0.6	0.3	0.75
	Total number of the kinds of operations used	7	5	5

Table 5.12: A Summary of Figures Concerning the Think-aloud Segments of the Four Subjects

Subject Two produced the most think-aloud protocol segments, with 86. Subject One comes next, with 58, while Subjects Three and Four are close in number, with 38 and 41 respectively. Each segment of all subjects varies in the number of words. Subject One employed the operations quite evenly. Subjects Two and Four were the least involved in cognitive operations. This means that the latter pair did not focus enough on thinking about the word in the original text for translation, or about the headword in the dictionary text, or both. They relied too much on the dictionary to solve their problems; once again demonstrating their lack of confidence in their own language competence.

Subject Three had the lowest number of meta-cognitive operation per segment, while Subject Four the highest. The latter concentrated on thinking about her look-ups very much; the former was not very aware of them. That she produced the least think-aloud segments in the first 15 minutes of the exercise is further proof that her meta-cognitive awareness was not sensitive and developed enough for introspection (Mann, 1982, p. 89). This is also in agreement with her attitude to the use of the dictionary for translation, that “*the most important of it [the dictionary] is to remind you how a word is used; otherwise it is not of much use*” (Interview, Question 1). This contrasts with Subject Four, who regarded it “*indispensable*” (Interview, Question 1). Out of the 30 kinds of operations, Subject Two was engaged in 27 kinds, followed by Subject One with 23, Subject Three with 18, and Subject Four with 17, the least. Although Subject Two is considered the most reliant on the dictionary, he was at the same time the most sophisticated in dictionary skills in terms of the total kinds of operations employed. Subject Four could be judged the least skilled in dictionary use.

Subjects reported in the interviews whether they had received any training in Chinese-English dictionary use in their former education. Subject Two took a course “Lexicography and Translation”. Subject One was trained occasionally in some courses. Subjects Three and Four indicated that they had never any training, although their memory might have failed them. Even though English standard and year of study are two factors that might affect the efficient use of the dictionary, one other factor would be former training in dictionary use. In the case of Subjects One and Two, there is a possible link between sophisticated use of dictionary operations and former training. But Chi (2005) suggested that there needs to be further exploration into the effectiveness of training to dictionary use, and consequently, for specific purposes; and in this study, for production.

In terms of efficiency, it seems that both Subjects One and Three performed better than Subjects Two and Four. While the former pair made fewer searches, they could complete the task, and the original message is more or less transmitted into English. It is likely that due to their higher English standards, they needed to search for fewer words from the original, and could more quickly determine which English expressions they had searched from the dictionary were appropriate. Subject Two made the most searches. This is accountable by his frequent use of web-based dictionaries, which display search results instantly. But he was not able to complete the task, leaving one third undone. This could hardly be described as efficient in dictionary use, in regard to achieving the aim of completing the task. Subject Four was the most unsuccessful in using the dictionary for the aim. The performance of this pair could be partly attributed to their lower standards of English. At the same time, their over-reliance on the dictionary, which was partly due to their lower English standards, and partly to their inadequacy in dictionary skills, e.g., being unfamiliar with certain access methods, rendered their use of the dictionary inefficient. The results of the performance exercise are found to be in congruence with the findings in think-aloud protocols.

The above finding seems to lend support to the claim by Latkowska (2006, p. 213) that translation performance is primarily indicative of the underlying competencies, linguistic and meta-linguistic, and only secondarily of the strategies used. A “Strategy” can be defined as both conscious and unconscious procedures, to both overt tactics and mental processes (Séguinot, 1991, p. 82), including both translation strategy and dictionary look-up strategy. Li’s study (1998) reports positive relations between English proficiency, and dictionary use for reception. While this study cannot prove such relations for Chinese to English translation, results do suggest association between English proficiency and dictionary use efficiency.

Table 5.12 shows that although Subjects Two and Four performed more meta-cognitive operations per segment than the other two subjects, they had lower scores per segment in cognitive operations, which focus on thinking about the word in the reading text or about the headword in the dictionary text or both. This implies that their understanding of the word in the reading text or the headword in the dictionary text, as well as the judgment on choosing the right expression from the dictionary text, allow room for improvement. There may be a possible link with their former education, which fails to promote the deep and achieving learning approaches instrumental to independent thinking (Gow, Balla, Kember, and Hau, 1996, p. 119).

The above quantitative data help answer the research questions (sub-questions (J) to (L) in Section 3.1.2) about how students actually used the dictionary in translating, and the results of their use. The analysis from the data sheds light on the specific areas where dictionary use training is called for (e.g., sub-question (L)). The data also verify the interview results of informants. It has been shown that students with training in dictionary use seem to have been more sophisticated in dictionary use operations than those without. Another verifying instance is that, as Subject Four viewed efficiency in dictionary use as the pace in accessing the headword, but not finding the desired result of the word search, the analysis contradicts with her own claim that she was efficient in dictionary use.

In addition, the data demonstrate that the coding system for think-aloud protocols is very useful in analyzing the operations that the subject has undertaken in the dictionary use process for Chinese to English translation. It can also allow quantification of operations, so that the performance of specific aspects of dictionary skills of the subject can be evaluated, allowing diagnosis of strengths and weaknesses,

as well as comparison with other subjects. It is a system that can be applied to other studies employing verbalization of the dictionary use process, thus building up the external reliability of such research method. At the same time, it powerfully addresses Bernardini's (2001, p. 251) concern about the research paradigm of think-aloud protocol.

5.4. Summary

In using the dictionary in translating, the students would make plans for which words in the original to be looked up. They used their prior linguistic and topical knowledge to choose the right expressions from their dictionaries, or they would pick up words from their mental lexicon, and confirm their usage with the dictionary, bearing the context in mind. All of them referred to the dictionary for semantic information. Subjects Two and Four relied on the dictionary very much, and made more look-ups than the other two, showing a lack of confidence in their language competencies. Nevertheless, more look-ups do not guarantee more efficiency in dictionary use, if success of a search is measured by whether what is being searched is found. One of them could not complete the task, while the other failed to produce a word. Their searches could not effectively lead them to the right words in translation. Their poorer performance in the translation task, and less efficient dictionary skills, were partly attributed to their lower English standards, as compared to the other two subjects, who obtained higher grades in their English examination in matriculation. Subjects Two and Four took more steps in word search than the other pair, evidencing greater dependence on the dictionary. At the same time, their greater dependence may also be prompted by the easy access to, and instant responses from web-based dictionaries. The two subjects with better English standards did not use the web-based dictionary, while it functioned as importantly as the printed one to the other two. It did help the latter two who were not familiar with Putonghua

Pinyin in word search, and the look-up efficiency. However, the Chinese word processing system, and the failing of the computer would affect its use.

Students' approach to using the dictionary to translate intercultural items from Chinese to English is consistent with their general translation approach. They sought the semantic meaning of the original from the Chinese-English dictionary, isolating it from the context, although there was also mention of translation strategies.

The results are in agreement with one of the findings of research on dictionary use summarized by Cowie (1999, pp. 197–198). Similarly, translation students in Hong Kong are mostly concerned with the semantic meaning, and cultural items. Notwithstanding, as translation students are in general advanced language learners, the subjects' dictionary use skills could be judged to be average to sophisticated. This aspect is thus different from one of his summarized results. Yet their general lack of training still leaves room for improvement. Their working knowledge of, and attitude towards dictionaries, as well as the approach to using the dictionary, are areas that deserve attention, despite the disparity in English standards. Training of good management of time when using the dictionary is also called on (Bishop, 2000, p. 63).

The think-aloud protocol is an effective tool in eliciting revealing data from dictionary users on the dictionary use process, allowing quantification of data, diagnosis of user skills, and comparison of data with other users. It is useful not just for applied lexicography, but also pedagogical practice, to which the following chapter shall turn.

6. Pedagogical Implications

The survey results show that some students were not familiar with the dictionaries that they used. They did not spend time on reading the user guides, and familiarize themselves with the various functions of the dictionaries. Some of them had not mastered the access methods of the Chinese-English dictionary, e.g., *Pinyin*, the systems of the radical and number of strokes, and simplified Chinese characters. Very few students were ever taught how to use the Chinese-English dictionary. At the same time, a large number of students found it difficult to choose the right words from dictionary entry for translation, and to use the chosen words in context. Almost half of the respondents did not deem themselves efficient in dictionary use. What many considered efficient in dictionary use was accessing the headword, but not finding the right words for translation. It is high time that relevant training be introduced to the curriculum. In the survey, respondents wrote that, should such training be provided, they would want to know the varieties of Chinese-English dictionaries for different purposes, how to choose the right words from the Chinese-English dictionary for translation, and how to make the most from the dictionary. However, the training could not be expected to be carried out in secondary schools, as what some respondents suggested, since the use of Chinese-English dictionary is not very common, and it is hard to expect either Chinese or English language teachers in secondary schools to be familiar with this kind of dictionary, let alone training their students. It is more feasible to put it into the translation curriculum in university, where teachers are adept in its use, while students of this discipline have great need in it.

Even those translation programmes featured with this training did not seem to fully meet the needs of students, or students were not totally aware of its relevance to their studies. An implication is that there is room for improvement in both the quantity and

quality of teaching. Below is a detailed analysis of what is in lack, and what could be improved.

6.1. Students' Knowledge of their Working Dictionaries and Working Languages

Both the survey results and the translation exercise indicate the effect of English standards on participants' Chinese-English dictionary use efficiency, and their performance in translation. Students with higher English standards were more confident of their effective Chinese-English dictionary use, and performed better in its use for Chinese to English translation, and vice versa. Students with lower standards of English had to spend more time on checking the English expressions for the original, and on understanding the meanings and usage of the English expressions from the Chinese-English dictionary. As they relied on the dictionary more, the skills in using it become more important to them. From the perspective of translation pedagogy, students' translation standard is not only influenced by their language competence, and translation strategies, but also their efficiency in using the dictionary. This is another reason why the training of dictionary use should not be neglected in the translation curriculum.

Although the original language of the text, Chinese, is the first language of the subjects, and they had much less need in resorting to the monolingual Chinese dictionary, there are instances that they misunderstood the original, and thus resulted in adopting the wrong expressions. In Subjects Two and Four's cases, they encountered difficulties in accessing the Chinese headword by *Pinyin*, or radicals or number of strokes of characters, no matter in the traditional or simplified forms. It is a wonder if they could effectively use the monolingual Chinese dictionary, as it is also arranged as

the Chinese-English dictionary, unless they input the Chinese characters directly onto the electronic/web-based dictionary. It seems that the use of the monolingual Chinese dictionary was overlooked. Students' performance may be a reflection of the curricular focus. Besides uplifting the standard of their first language (Lang, 1994, p. 397, in a British context), the translation curriculum also needs to foster in them the habit of consulting the Chinese dictionary just as they do with the English-Chinese dictionary, to consolidate their skills in Chinese dictionary use, and to help them transfer and apply these skills to the use of bilingual and monolingual English dictionaries (Li, 1998, p. 63).

6.2. Attitude towards Using the Dictionary

Results from survey, interviews and think-aloud protocols indicate that the dictionary was important to translation students in general, irrespective of their English standard. There is one major problem in their attitude for rectification. Some relied too much on the Chinese-English dictionary for English "equivalents" to the original. Subject Two's interview answer and his performance in the translation exercise evidence this. They may have overlooked the context, forgotten to use their mental lexicon, and ignored the time factor in a translation task in real life, thus affecting translation efficiency. These are also related to their translation strategies. If they adopt the bottom-up approach in translating, they would focus on individual semantic elements, without paying due attention to the overall context and style. Their concept of "equivalence" is on the individual word level, but not on the text level. If the top-down approach is adopted, they would rely less on the dictionary, but use more of their mental lexicon to fit in the context, for they know translating the message of the original is not hinged on finding word-to-word equivalence. An inference is that translation strategies affect the effective use of the Chinese-English dictionary.

6.3. The Use of the Electronic/Web-based Dictionary in Translating

Results of the survey reveal that the hand-held electronic dictionary is very popular, with over half of respondents using the hand-held electronic dictionary from time to time or all the time. The think-aloud protocols demonstrate that the web-based dictionary is very easy to use, and could help solve students' problems, encouraging the use of reference tools. In using the hand-held electronic dictionary, students have needs of guidance from purchase to using the functions. If there are extended courses in primary and secondary schools for using the computer, various kinds of software, and the internet, there certainly is need in training for use of the hand-held electronic dictionary for translation, no matter how short it is.

It is commonly conceived that young people are more prone to accepting new technology than older people. Just like the advent of the computer age, people have gradually accepted the computer to be part of their life, whether they like it or not. Translation pedagogy should catch up with this change, especially when “being able to use new technology represents an added professional skill for translators, and it is a skill that is becoming increasingly appreciated in the marketplace” (Bowker, 2002, p. 130; as cited in Ulrych, 2005, p. 16).

It is obvious that translation teachers could not resist this trend. Teachers should be more familiar with this tool. Otherwise, they cannot enjoy the convenience this tool brings, nor will they know how to help students in choosing suitable electronic dictionaries, and to introduce to them useful web-based dictionaries, let alone not discourage them from using this useful tool.

But there may be a concern related to the attitude of students towards the use of

this kind of dictionary. If students are over-reliant on the dictionary in general, this over-reliance will extend to the web-based or hand-held electronic dictionary, as in the cases of Subjects Two and Four. As search results can be quickly reaped on-line, students would be more prone to using it for search on-end, without reflecting on whether the search is really necessary. They would spend too much time on the dictionary in the translation process, and thus could not complete the task. Again, this leads to the need for training in time management in using the dictionary.

6.4. The Use of the Dictionary to Handle Cultural Elements in Chinese to English Translation

Verbalization and the performance exercise show that students focussed on individual word level when translating Chinese cultural elements to English. This is consistent with their general strategies in translation. This bottom-up approach should not be adopted when translating a text. The purpose of translation should take precedence. The use of the dictionary to translate cultural elements is related to translation strategy. The dictionaries that the subjects used in this exercise did not provide the cultural information of the elements under search. They should find dictionaries with this function, like *A Chinese-English Dictionary with Cultural Background Information* (1998), or any encyclopaedic references for the same purpose. Introducing such references, and instructing students how to use the dictionaries for translating cultural elements, should be included in dictionary use training.

6.5. The Concept of “Dictionary Use Competence”

The pedagogical implications of students’ knowledge of their working dictionaries and working languages, their attitude towards dictionary use, including the electronic/web-based dictionary, time management, as well as their use of the dictionary

in translating cultural elements, all lead to the need for proper training in dictionary use, and consequently, the concept of “dictionary use competence”. Notwithstanding the definition by Chomsky, in which “competence” refers to “the speaker-hearer’s knowledge of his language” (Chomsky, 1965, p. 4), the term is applied here in its general sense, which means “the ability to do something successfully or effectively” (*New Oxford Dictionary of English*, 1998). “Dictionary use competence” is defined as the ability to use the dictionary efficiently for certain purposes. Since the concept is in its embryonic stage, and there are different purposes for dictionary use, this study will focus on the purpose of translation. The following figure illustrates the relationships between the different factors in dictionary use for translation. It has been shown in the findings that translation performance is affected by translation strategy, language competence, and dictionary use competence. At the same time, dictionary use competence is also affected by both language competence and translation strategy. (Figure 6.1)

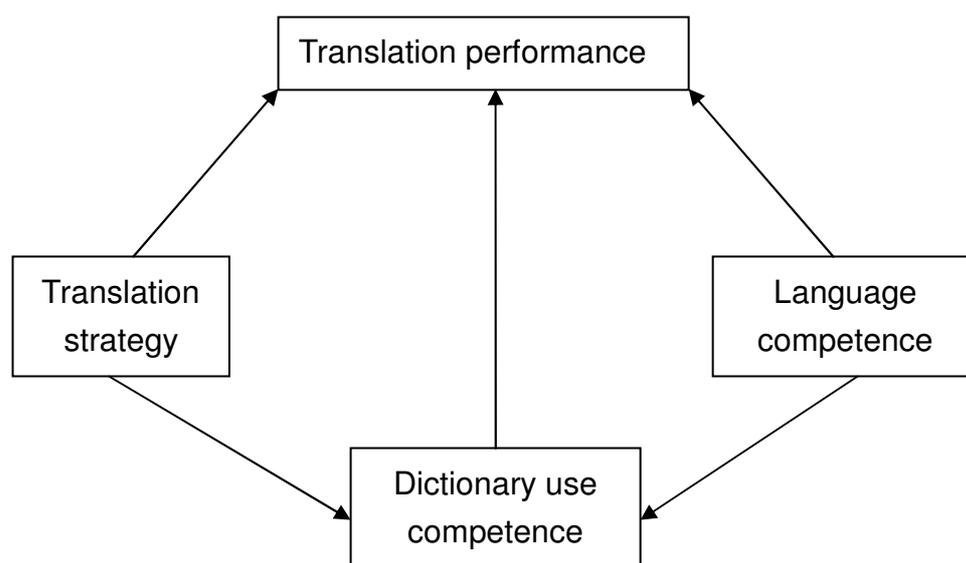


Figure 6.1: The Relationships between Different Factors in Dictionary Use for Translation

The framework of the concept is confined to “dictionary use” for translation; therefore, some areas of dictionary research, namely dictionary criticism, dictionary history, could be excluded, as they cannot directly serve the purpose of translation. The most relevant branches are dictionary typology, dictionary structure, and dictionary use (Hartmann, 2001, p. 30). Just as there is a certain threshold in language competence for students to reach before they could study translation, there should also be a threshold for their instrumental use of the dictionary for translation, after they have commenced their studies of translation. Without having reached that, as we can see from the examples of Subjects Two and Four, their dictionary use could not be efficient, and would thus affect their translation performance. The threshold can conveniently help teachers and students measure students’ mastery in these skills.

Dictionary use is related to students’ language levels, which cannot be enhanced in just a few months. But dictionary use competence is different. The basic knowledge of the dictionary for translation purpose can be acquired in a relatively short time, and the competence, i. e., the basic skills in applying the knowledge to the use of the dictionary, can be grasped within a short period, given proper training. This can be treated as the foundational skills of their translation studies. This study has shown the needs of students in dictionary use competence by triangulation, and that the present translation programmes in Hong Kong have not catered for their needs adequately. It is high time that this concept be incorporated into the curricular design. Due emphasis should be given to this area of training, because it is instrumental to translation performance in terms of speed and quality. That the teacher of University 4 denied her students access to Questions 13 to 15 of the original questionnaire is not helpful for improving the situation. What should be trained in the competence will be dealt with in the Recommendations chapter.

6.6. Validity and Reliability Issues

107 questionnaires from the translation students of five local universities were received for the survey. Three females and one male from the survey population volunteered for participation in the interviews and performance exercise. Three were in the third year of their study, and the other second year. They came from three universities. Although they were financially rewarded for the time that they spent on the task, their answers and performances were by no means biased towards the writer's expectation. The study results are validated by triangulation. The short answers from the survey are verified by in-depth answers in interviews. The indirect answers from these two instruments are further validated by think-aloud protocols, direct verbalizations of the process of dictionary use from four subjects, as well as by observations of the process by the researcher. The data validity is further complemented by subjects' translations in the performance exercise. Many views amassed in the survey are in agreement with those in the interviews, and the think-aloud protocols from the performance exercise further support them, especially those about the process of translating from Chinese to English.

Before the translation exercise, subjects were given brief guidelines on how to think aloud. They were trained once in how to verbalize their thoughts and actions when using the dictionary for translation. They were deemed to have basically grasped the skills before actual verbalization. The transcripts of both the interviews and think-aloud protocols were examined by the subjects for accuracy. The results show that subjects were able to verbalize their thoughts, although Subject Three did not think aloud as much as the others. Many thoughts went through her mind without being verbalized, and she had more silences during the process, e.g., Segments 18 – 22. It is believed that it was not automation of her thinking. She was merely not aware of verbalizing while concentrating on her task. Subject Two was very adept at the method. He could almost

speak out his thoughts non-stop. All in all, the think-aloud protocols give weight to the validity of this research method to investigate the dictionary consultation process.

A coding system adopted from Thumb (2004) for dictionary use for Chinese to English translation proved effective in analyzing the oral segments produced by the subjects during the performance exercise. The segments can be grouped according to the types of operations that the subjects were engaged in, which are relevant to dictionary use, and meaningful for understanding their patterns. An external addressee is rarely found or implied in the protocols. The few exceptions are produced by Subject Four:

Seg. 5: I am thinking whether to use “had never been experienced”, or “had never been encountered.”

Seg. 17: I read the story before, so I know the background.

Seg. 42: We have now come to the next.

While Segments 5 and 17 faintly suggest a listener, Segment 42 clearly indicates the inclusion of the researcher as listener. The absence of an external addressee in all the other protocols reveals the internal processes of subjects (Tirkkonen-Condit, 1997, p. 73), thus lending weight to their validity. This adoption of an established theoretical framework, with recognized categorizations for think-aloud protocols, also addresses Bernardini’s (2001, p. 251) concern. These protocols of dictionary use for translating a Chinese text to English can be compared with those with similar codes. All these enhance external validity.

The performance exercise was pitched at a level of difficulty suitable for the subjects in terms of length and language. For the undergraduate level, one hour was deemed more than enough to translate a piece of work in 150 words from Chinese to

English even in examination. Two subjects finished it within about half an hour, while the other two failed even within one hour. These results are due more to subjects' dictionary skills and English competence than the difficulty level of the exercise. The text is taken from a published fiction, a genuine text. There are expressions, including cultural elements, which prompted the subjects to search in the dictionary, and tested how students of better English language standards coped with the same task differently from the weaker ones. The exercise results lend support to their verbalized thoughts in dictionary use in the translation process, as they could be measured for the efficiency of the subjects' dictionary use. The study is reliable in the sense that the methods could be duplicated with another group of subjects, and similar results should be reaped.

6.7. Summary

The survey found that: (1) very few students were ever trained in dictionary use; (2) English standard is associated with efficient use of the Chinese to English dictionary; (3) the “bottom-up” approach to translation affects effective use of the Chinese to English dictionary; and (4) poor skills in Chinese to English dictionary use affect translation performance. Not only should proper skills be trained, but also proper attitude towards dictionary use imparted. The training should be carried out in the translation curriculum in university. A dictionary use competence threshold should be set up, and be reached by translation students. Mastery of monolingual Chinese dictionary use skills should be ensured in secondary school, and training at university level should help students transfer the skills to the use of the bilingual dictionary and the monolingual English dictionary. With students' increasing use of the hand-held electronic dictionary, teachers should be more prepared to teach them how to use it effectively. In addition, students should be taught how to use the Chinese-English dictionary for translating intercultural Items. It is expected that with proper training, students' knowledge of, skills in, and

attitude towards dictionary use could be greatly enhanced, leading to better translation quality and more effective learning.

Triangulation is instrumental in garnering valid research results. The findings from questionnaire survey, interviews, think-aloud protocols, and the performance exercise are in congruence with one another. The think-aloud protocols prove effective in exploring the thinking process of subjects in using the dictionary for translation. The coding system adopted from Thumb (2004) for Chinese-English dictionary use is useful for segmentation and analysis of the verbalized data from subjects. The methods can be duplicated to reap similar results. Many former studies (Atkins and Varantola, 1997; Chi, 2003; Cowie, 1999; Fan, 2000; Hausmann, Reichmann, Wiegand, et al, 1989; Li, 1998; Li, 2001; Li, 2003; Nesi, 2003) agree with the present study results.

The next chapter will discuss what could be done to improve dictionary use training for Chinese to English translation, and to further research in this area.

7. Recommendations

Although formal training is not mandatory to being a translator, it can perform two important functions: (1) to help individuals who wish to become professional translators enhance their performance to the full realization of their potential; (2) to help such individuals develop their translation skills more rapidly than through field experience and self-instruction (Gile, 1995, p. 3; Ulrych, 2005, p. 3). The task of translator education is to provide graduate translators with the empowering and transferable skills to deal confidently with any text, on any subject, within any situation at any time (Ulrych, 2005, p. 23). Among the various empowering and transferable skills of training, reference skills must be included (Li, 2001, p. 94; Ulrych, 2005, p. 12). Findings from Chi's study (2003, p. 105) prove that explicit teaching of selected dictionary use items was effective, and students highly appreciated the knowledge and skills imparted.

The previous chapters have shown how some Hong Kong translation students used the dictionary for Chinese to English translation, and how they viewed the training of Chinese-English dictionary use. Most of them had not received any training, and their views and performance in dictionary use indicated their needs of it, which were not met in the present translation curriculum. There could be room for improvement in their use, and in the curriculum. The following recommendations attempt to address their needs, with a hope to contribute to better teaching and learning in translation concerning the use of Chinese-English dictionary specifically, and the use of dictionaries in general.

7.1. Dictionary Use Training

7.1.1. The syllabus

The aims of the syllabus are to help translation students, which are regarded as advanced language learners, find answers to the questions that they are asked in their

translation courses, and to help the students find answers to their own questions. As a result, they could lessen their dependence on the teacher, without merely transferring their dependence from the teacher to the dictionary (Beattie, 1973, p. 162). The teaching about translation-relevant processes, in this case the dictionary use process, can boost students' self-confidence and self-awareness, which are both necessary conditions for professionalism, and should be incorporated into the curriculum and course design (Colin 2003, p. 36). It can also help students foster independent thinking required of tertiary education (Gow, Balla, Kember, and Hau, 1996, p. 119; also, Kussmaul, 1995, p. 32), and empower them to achieve autonomy for lifelong learning (Kiraly, 2000, p. 1).

The education of these dictionary users should be practical rather than theoretical, as it is for translation purposes. Activities should be language-oriented, not dictionary-oriented, as the use of the dictionary is not for its' own sake, but for translation. Although it is proposed that a special course on dictionary use be incorporated in the translation curriculum, the education of the users should be spread over the whole period of language teaching as much as possible (Hausmann, Wiegand, and Zgusta, 1989, p. 211). In different specialized translation courses, and language courses, the use of the dictionary pertaining to that particular subject matter of the course, no matter for reception or production, should form part of the course syllabus. As such, students could be very familiar with the various dictionary resources for different purposes and subjects. Most content is related to translation in either Language One to Language Two, or vice versa.

The syllabus should contain the following elements.

A. There should be a pre-test of dictionary skills before training courses, so that both students and teachers realize what students' strengths and weaknesses are in

dictionary use. Teachers can know more about how to meet students' needs, while the latter, being aware of their needs, can become more receptive to training. For example, should Subject Four realize that her weak grasp of the access systems of the dictionary had impaired her efficiency, she might have been more motivated in improving it. After training, with exercises and tests, both parties can know what difference the training has made on their dictionary use efficiency (c.f. Chi, 2003).

- B. Some students hold the misconceptions that the dictionary can help them find “equivalents” in all aspects to the original text in translation, and that knowing the access methods of the dictionary, and being able to find an entry already means efficient use of the dictionary. They should be disabused of all such popular misconceptions (Gates, 2003, p. 141). Only when they have realized their needs in training would they find such training meeting their needs.
- C. In order to be able to extract the maximum information from definitions and examples in dictionaries, students should have some basic knowledge of lexicography, which include structural semantics with concepts such as synonymy, hyponymy, polysemy, homonymy, collocation, connotation and distinctive features (Bishop, 2000, p. 63; Kussmaul, 1995, p. 124).
- C. With respect to basic concepts of the macro- and micro-structure of a dictionary, students should learn to look through all the portions of the entry; be familiar with the conventions in a dictionary; make good use of examples (Tono, 2001, p. 163); learn how to read definitions in entries, and distinguish the good from the bad.
- D. There should be a general survey of what types of dictionaries there are (Kussmaul, 1995, p. 124), including monolingual, bilingual, and bilingualized general language dictionaries in English and/or Chinese, specialized dictionaries, and encyclopaedic references, which are the most commonly used by translation students.
- E. The use of the hand-held electronic dictionary and web-based references, which are

different in medium from the printed ones, should be introduced. Although they may contain the electronic version of the printed dictionaries, which are designed with the same macro- and micro-structure, the functions and varieties of references that it provides deserve introduction. Web-based references useful in translation of different subjects are abundant resources.

- F. There should be revision of the most common access methods to Chinese, and Chinese-English dictionaries, including number of strokes, radicals, Putonghua *Pinyin*, and Chinese word processing.
- G. Students should develop the ability to select suitable dictionaries for different purposes, including the criteria for selection. It would certainly be advisable to compare the different language dictionaries on the market, so as to assess their individual strengths and weaknesses. This type of information helps users avoid many frustrating look-ups (Varantola, 2003, p. 348).
- H. Dictionary criticism and evaluation is perhaps the most complex skill in dictionary skills training, because it presupposes the more basic skills of choosing, interpreting and comparing dictionary information. At this level, students might discuss myths about the authority of the dictionary, and the impossibility of defining and translating meaning perfectly. There is some suggestion that tasks demanding critical and evaluative skills are more popular with students than mere mechanical exercises (Nesi, 2003, pp. 386, 389).
- I. Some students did not know how to choose the right definitions from an entry for translation. The syllabus should thus include the techniques of analyzing meaning in context for reception (Kussmaul, 1995, p. 106), how to choose the information from an entry for translating in context, and how to choose words of the right style for a particular type of text (Li, 2001, p. 87).
- J. Subjects Two and Four's examples demonstrate inadequate dictionary skills, and in

particular, how poor time management caused them to fail the task. How to use the dictionary efficiently for an assignment within certain timeline should be instructed (Bishop, 2000, pp. 64–65). Students should learn to use the dictionary as a tool, but not let it become a hindrance to achieving their task.

- K. It is discovered from the results that students’ “bottom-up” approach to translation makes them isolate individual words from the context, and rely on the Chinese-English dictionary for “equivalents” to the original, thus affecting translation quality. It is fitting to emphasize in this syllabus how this translation approach results in ineffective dictionary use, apart from the courses on translation strategies.
- L. It can also be demonstrated in the syllabus how learners’ language standard affects effective dictionary use, so as to make students more aware of the importance of language proficiency in the dictionary use process, and become more motivated in uplifting their language competence (Tono, 2001, p. 163).
- M. Kiraly (1995, p. 113) suggested that talk-aloud activities could be used in translation practice classes to enhance students’ awareness of their own mental processes while translating. This study has evidenced that these activities could also help students become more aware of their dictionary use process, discover what areas of skill are in lack, and thus pay more attention to improving those areas. It is recommendable for every student to practise.

A more detailed description of the references skills for higher education is provided by Nesi (2003), which is divided according to the development of the consultation process, namely, stage one: before study, stage two: before dictionary consultation, stage three: locating entry information, stage four: interpreting entry information, stage five: recording entry information, and stage six: understanding lexicographical issues,

with altogether 40 items. While many of the prescribed skills by her are similar to those expounded above, there are some which focus on the use for reception purpose, instead of that for translation purpose.

This syllabus should be placed in the foundation year of a translation programme, when students start to use the dictionary intensively and extensively, and when they should master the skills for their specialized studies at upper levels. To allow room for this in the curriculum, first of all, the teachers should recognize students' needs in their field of study, and find formal training in the curriculum important; otherwise, they would simply accord a lower priority to this, which is already indicated in the curricula analysis of Hong Kong translation programmes in the Literature Review chapter. Curriculum design is, after all, a matter of prioritization, where teachers place the most important in it, with others left out for alternative learning modes. Having seen how dictionary skills are connected with translation quality, and students' needs in training, teachers can no longer leave this to the secondary school. The secondary school curriculum has some other objectives, or leaves dictionary skills for students' self-study through trial and error. Many of Subjects Two and Four's frustrations and failures could have been avoided had they mastered dictionary skills. This would mean the reallocation of the time for different subjects in the curriculum. At the same time, the most significant resource implication is teaching expertise.

7.1.2. The Teacher

Teachers are the second stakeholder in the "lexicographical triangle" (Chi, 2003, p. 106). Without teaching expertise, providing training of dictionary use to students can never succeed. Research has consistently shown that this kind of training is rarely found in university education, which implies that teachers today were also not given proper

training in their student days. What they have mastered in dictionary skills are more likely acquired in their self-study through experience. Newly hired teachers generally just perpetuate the traditional process, passing on the knowledge that was handed down to them, teaching as they were taught (Kiraly, 2000, p. 17). As such, they must change their concept, and recognize the importance of dictionary skills training.

Study results indicate that students in general trusted their teachers for advice in the purchase of dictionaries. To teach well, they need a systematic syllabus, and to keep abreast of the latest developments in applied lexicography, especially in the hand-held electronic dictionary, which is a recent product of technology. Having the knowledge does not mean effectiveness in dictionary use pedagogy. They should know the needs and dictionary use habits of their students before they can design a suitable syllabus for them, and develop an appropriate pedagogy for delivery and implementation (Hatim, 2001, p. 163). Besides, pedagogy assessment and research are pointers to continuous improvement. Actually, the upgrading of training standard does not confine to this area. There is call for comprehensive degree programmes for the training of translator trainers, so as to improve the value and efficacy of translation training programmes, as well as the status of the graduate translator (Kiraly, 2000, p. 6).

7.1.3. Dictionary Use Competence

It is suggested that a Dictionary Use Competence be introduced to the translation curriculum, after having seen its importance to translation students in their studies. The above-recommended syllabus can be used for training students to acquire that competence. A test can be set at the end of the dictionary use training course to ensure that students have obtained the basic dictionary use skills for translation purposes. It can be designated as a pre-requisite for graduation, just as a certain English proficiency

level for university graduation in all disciplines. This requirement can be laid down especially for translation students. The survey results demonstrate that students were mostly serious about dictionary use, and relied on their dictionaries. Their inefficient use was mainly due to wrong attitudes towards the dictionary, inappropriate translation strategies, and the lack of proper skills, which can all be improved through systematic training.

If such graduation requirement is prescribed, students would pay more attention to attaining this competence, which at the end would be beneficial to their overall learning and future work. Ultimately, it is hoped that dictionary use would be given more due emphasis as a learning strategy, not just in translation studies and on the university level, but throughout a student's life, like time management, organization skills, language, mathematics, computer literacy and so on, which should be the goals of any formal learning. Dictionary use competence should be treated as all other competences, particularly for translation students. Thus, there should be more integration of the training of dictionary use since primary school, not only the monolingual dictionaries of the official languages in Hong Kong, namely Chinese (Cantonese and Putonghua) and English, but also bilingual (Chinese/English) dictionaries, as well as some other references; not just the printed ones, but also electronic and web-based ones. This is an undertaking that cannot be achieved by merely putting it as one or two items in the curriculum, as is the case in the English curriculum (Curriculum Development Council, Education Department, 1999a: 17; Curriculum Development Council, Education Department, 1999b: 12).

7.2. Dictionaries

Not only should there be more training in dictionary use, the very dictionary itself

should also change for more effective use for translation. There is an urgent need for productive Language One / Language Two dictionaries for each language pair that would include a higher proportion of culture-specific vocabulary. What is needed in this kind of dictionary are not only paraphrastic definitions, but also suggestions of textual equivalents. Most importantly, there should be exhaustive information about the syntactic properties of the equivalents offered, so that the users know what to do with the words available (Tomaszczyk, 1983, p. 47). As the Language Two-producer has native speaker knowledge of the source language, a production dictionary does not need to include any information relating to pronunciation, frequency, specific grammatical information, or culture and usage notes on the headword. Instead, it should provide a considerable amount of information about the translational equivalents of a headword (Hannay, 2003, p. 147). It must list all the semantic, syntactic, collocational, grammatical and stylistic information that the translator needs in order to use the vocabulary component with a native speaker's skill (Abu-Ssaydeh, 1991, p. 73). In the case of partial equivalence, the dictionary should provide information about any difference of meaning between the words, collocations, etc. in the source language and their equivalents in the target language, in order to enable the translator to find the right or best equivalents (Tarp, 2002, p. 74). To accommodate such voluminous data, it seems more feasible with electronic means than the printed form (Steiner, 1995, p. 280).

For Chinese to English translation, Tseng (2004, p. 117) puts forward a theory of Chinese-English learner's dictionaries. The requirements of such dictionary should be grammar, pragmatics, and culture. Chan (2005, p. 15) has another suggestion vis-à-vis the combination of languages: there should be a biliterate and trilingual dictionary to meet the language needs of Hong Kong people. The creation of such a dictionary is in line with the government policy to promote the use of English and Chinese in writing,

and English, Putonghua, and Cantonese in speech.

Specifically, more dictionaries for translating Chinese cultural elements to English should be compiled, which include art, religion, folklore, literature, music, etc. One such example is *Chinese-English Dictionary of Idioms and Proverbs*, edited by Heng Xiao-jun and Zhang Xue-zhi, 1988. One of the distinct characteristics of this dictionary is the triple classification of translation types into “literal translation”, “free translation” and “English equivalent”. In most cases, users can choose whichever translation they prefer. About 80% of the Chinese idioms and 50% of the Chinese proverbs have matching English expressions in the dictionary (Heng, 2003, p. 310).

7.3. Further Research

7.3.1. Pedagogy for Applied Lexicography

Three major areas are recommended for further research in the pedagogy for applied lexicography.

Dictionary use is seldom taught to translation students. If it is to be developed as a competence, and be taught as a learning strategy, research on the resources, the syllabus, and teaching effectiveness should be taken seriously by lexicographers and lexicographical educators. The “lexicographical triangle” should be supported by sound research. How training can be and is conducted, the difficulties in teaching and learning, the suggestions thereof, and the effectiveness of training all become a well of topics for further study, including the use for reception and production purposes, especially for translation, no matter from Language One to Language Two, or vice versa. In curriculum design, the effect of the inclusion of this training on, and its relationship with, other subjects, could also be explored.

This study canvasses how students use the dictionary for Chinese to English translation from the student's perspective by obtaining their views from questionnaire survey, interviews, and by their verbalizing their thoughts in the dictionary use process while translating. For promoting better use of the Chinese-English dictionary, the views from the other two key stakeholders, i. e., dictionary compilers and teachers, should also be solicited. Not much is known about how teachers view the importance of dictionary use training in the translation curriculum, how much they understand students' patterns of and difficulties in dictionary use, and how their needs should be met. Similarly, it is worth exploring how much dictionary compilers know about users' needs and skills, how they meet the needs of users, and what they expect of teachers to help improve the dictionary use of language learners.

It is recommended that, regarding dictionary use as a learning strategy, there should be integration of the syllabuses of dictionary use in monolingual Chinese, English, and bilingual English/Chinese dictionaries, as well as the use of electronic and web-based dictionaries throughout a student's life from primary school to university. How these syllabuses can be integrated and implemented should be carefully studied. How the skills of using these different kinds of dictionary for different purposes should be pitched at different academic levels is also an important issue. For example, what skills and levels of skills should be introduced in the foundation year in undergraduate studies? What levels of skills are expected of students to reach upon graduation? Are there different dictionary use strategies for translating from Chinese to English and vice versa? If there are, what are they?

7.3.2. Research Methodology

Think-aloud protocols prove to be useful in probing into the dictionary use process of

translating from Chinese to English. There can be more studies with the use of this research method.

It can be used for the process of translating from English to Chinese, which demands more on the translator's reception of the English text first, before producing the Chinese rendition. It is a process that involves more of the English-Chinese dictionary. The reception of a Language-One text, and production from Language Two to Language One distinguishes it from Thumb's (2004) study, which examined the dictionary look-up strategies of Hong Kong students for reception alone. A coding system for analyzing the dictionary use process for translating from English to Chinese can be developed to compare how the protocols can be different when involved in different language directions.

When process research advances, its aim will be to formulate theories which explain and predict, and not only describe (Tirkkonen-Condit, 1997, p. 70). For the dictionary use process, when dictionary look-up strategies for different purposes by different user groups in different languages are formulated, patterns of these uses can be formed, and user performance can thus be easier and more accurately explained and predicted. This can be the objective for further study.

Kiraly (1995, p. 113) suggests that think-aloud activities could be used in translation practice classes to enhance students' awareness of their own mental processes while translating. Students could translate a passage individually or in small groups, and record their thoughts on audio-tape. The quality of the translation product could be assessed by the instructor (or the other students), and the group as a whole could then analyze the results, including the relative effectiveness of various strategies

used. Such activities would encourage students to think of translation in terms of process as well as result. This method is also recommended for use in the process of dictionary use for improving students' skills. The effectiveness of this method in enhancing students' skills in dictionary use and in translation should be further investigated for pedagogical reasons.

7.4. Summary

This chapter follows the main threads of the study, namely, dictionary, dictionary use training, and the method to investigate the dictionary use process. Given the needs of students in dictionary use training, a syllabus is proposed for implementation, which covers the knowledge about and attitude towards dictionaries, and the skills of using them for various purposes. The resource implications include the re-structuring of the translation curriculum for incorporating this course, and teaching expertise. Teachers have to keep abreast of the knowledge of this subject, the needs of their students in this area, and at the same time, develop pedagogy for it. An exit test of dictionary use competence is proposed as graduation requirement for translation students. It is further proposed that dictionary use skills be treated as a learning strategy throughout a student's life, which requires the integration of the reference skills of monolingual Chinese, English, and bilingual English/Chinese dictionaries, other references, as well as the electronic and web-based dictionaries from the primary up to the tertiary levels for students of various disciplines. How this could be achieved awaits further exploration. A specialized bilingual Chinese/English dictionary for translation purposes with cultural information is anticipated. The research method of thinking-aloud protocols is deemed suitable for pedagogical purposes for translation and dictionary use. For further studies, the dictionary use process for translating from English to Chinese can be explored with think-aloud protocols. The look-up strategies of dictionaries of

more language combinations by different user groups for a greater variety of purposes should be formulated, so that the study of dictionary use can be more systematic and comprehensive, making more contributions to applied lexicography, and teaching. The effectiveness of employing verbalization in translation and dictionary use training should be measured, and how it is measured should be postulated.

8. Conclusion

This study starts with the research background of dictionary use from the general to the specific—the English/Chinese dictionary, with mention of the use of the hand-held electronic dictionary. It is found that research on the dictionary use of this language combination, particularly the Chinese-English dictionary for translation, is under-explored. At the same time, an investigation of the undergraduate translation programmes in Hong Kong indicates that the training of dictionary use occupies little, if any, place in the curriculum. In order to discover the general patterns of dictionary use of students for Chinese to English translation, and their actual dictionary use process for that purpose, so as to shed light on translation pedagogy, this study was conducted with four research methods to collect data: questionnaire survey, interview, think-aloud protocols, and translation exercise. 107 respondents participated in the survey, and four of them joined the other three research methods as well. A profile of how translation students use the dictionary for Chinese to English translation is formed.

Most translation students often used the Chinese-English dictionary, and some regarded the electronic ones, including web-based dictionaries, as important as the printed ones. But they were not familiar with their tools, and found some difficulties in choosing the right words from the dictionary, and in putting the words in the translation context. While just slightly more than half of them judged themselves efficient users of this kind of dictionary, they did not perceive their teachers' understanding of their difficulties. They were predominantly never trained in using the Chinese-English dictionary, and considered dictionary use instruction important to the translation curriculum. With the use of think-aloud protocols in the Chinese to English translation exercise, the actual processes of how four students used the dictionary were depicted. Familiarization with the access methods of the Chinese-English dictionary, the

operations employed in the dictionary use process, English standard, translation approach, and attitude to the dictionary are all connected to efficient dictionary use. It seems that there is a gap between student needs in dictionary use, and the curriculum, which could be bridged by training.

Corresponding areas to be included in the training are spotted. The concept of Dictionary Use Competence is introduced, and it is recommended that a threshold for graduation be set for translation students. It is further proposed that dictionary use skills be treated as a learning strategy, which should receive proper attention across the language curriculum from primary school to university. Teachers should equip themselves with the pedagogy for such training. Dictionary compilers should provide Chinese-English dictionaries that contain more information of English for production purposes, including that of culture and pragmatics.

As limitations and delimitations of the research, given translating as the purpose of dictionary use, the subjects must be advanced language learners. Two thirds of the subjects had Grade C or above in the Advanced-Level English Examination, which could be regarded as higher-level English users, while about one third had Grade D, as lower-level English users. The scope of the thesis does not allow the inclusion of more subjects for wider representation. The sampling of the subjects by the departments of universities, and that they only came from five out of the six local universities which offer undergraduate translation programmes, disallow the generalization of the findings to all undergraduate translation students in Hong Kong. The lengths of the questionnaire, the interview, as well as the performance exercise, are limited. The study only confines itself to undergraduate translation students, excluding the many that are studying translation on the sub-degree and post-graduate levels. These three groups supposedly have differences in dictionary skills, given their years of training, and the academic

background, yet they may also share some common features in their training.

For further research, the dictionary use process for English to Chinese translation could be uncovered for comparison with that for the other language direction, for dictionary use training. Proper pedagogy for applied lexicography should be developed, and the effectiveness of the training evidenced. How to achieve dictionary use competence as a learning strategy in the language curriculum for various academic levels deserves careful examination. At the same time, the views of teachers and dictionary compilers on the training of Chinese/English dictionary use should be solicited to widen the perspective on the issue. A coding system for the think-aloud protocols for the dictionary use process for English to Chinese translation could be set up, so as to further establish the validity and reliability of the research method.

This research enables teachers, students, and lexicographers to understand more of the general dictionary use patterns of Hong Kong translation students, and their actual dictionary use process in Chinese to English translation. A coding system based on Thumb's (2004) is developed for analyzing the think-aloud protocols for such purpose. It is hoped that these could contribute to research on applied lexicography, and the learning and teaching of dictionary use.

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10. Appendices

10.1. The Curricula of the Undergraduate Translation Programmes of Six Universities in Hong Kong

10.1.1. Chinese University of Hong Kong: B.A. In translation

(http://traserver.tra.cuhk.edu.hk/eng_programmes.html) [10 September 2008]

Aim: Not stated on web page.

Curriculum: Principles of Translation, Basic Skills of Translation, Textual Analysis and Readings, Culture and Translation, History of Translation, Voice Training for translators, Introduction to interpreting, Basic Skills for Interpreting, Lexicography and Translation, Fundamentals of French-Chinese Translation, Fundamentals of German-Chinese Translation, Fundamentals of Japanese-Chinese Translation, Fundamentals of Italian-Chinese Translation, Fundamentals of Spanish-Chinese Translation, Writing Skills and Translation, Language Studies for Translation, Consecutive Interpreting: Putonghua-English, Consecutive Interpreting: Chinese-English, Consecutive Interpreting: English-Chinese, Introduction to Translation Studies, Literary Translation Strategies: Chinese-English, Literary Genres in Translation (Chinese-English), Literary Translation Strategies: English-Chinese, Genres in Literary Translation: English-Chinese, Computers and Translation, Machine Translation, Arts Translation, Government and Public Affairs Translation, Introduction to Commercial Translation, Mass Media Translation, Introduction to Legal Translation, Chinese Writing and Legal Translation, Court Interpreting, Specialized Legal Translation, Advanced Legal Translation, Science and Technology Translation, Film and Television Subtitles Translation, Public Relations Translation, Techniques of French-Chinese Translation, Techniques of German-Chinese Translation, Techniques of Italian-Chinese Translation, Techniques of Japanese-Chinese Translation, Techniques of Spanish-Chinese Translation, Simultaneous Interpreting: Putonghua-English, Simultaneous Interpreting: Chinese-English, Simultaneous Interpreting: English-Chinese, Translation Criticism, Translation Project: English-Chinese, Translation Project: Chinese-English, Translation Workshop: English-Chinese, Translation Workshop: Chinese-English, Special Topic in Translation, Translation Seminar, Advanced Commercial Translation, Financial Translation.

10.1.2. City University of Hong Kong: B.A. in Translation and Interpretation

(<http://www.cityu.edu.hk/cityu/prgm/index.htm>) [10 September 2008]

Aim: “The programme aims to provide students with a sound education in translation studies, preparing them for career development as well as for further academic study. It offers a variety of courses designed to enhance their linguistic ability, sharpen their language awareness, and equip them with skills and knowledge in cross-cultural communication.

After acquiring a firm grounding in theory and methodology, students may choose freely from a wide range of specialized courses.”

Curriculum: Chinese Civilization I, II, III, University Language, Introduction to Linguistics, Putonghua for Academic Purposes I, II, Introduction to Interpretation, Building Interpretation Skills, Fundamentals of Style, Style in Selected Written Genres, Introduction to Literature, Comparative Cultural Studies, Theory of Translation General Translation, Chinese Rhetoric, Chinese Expository Writing, Developing Interpreting Skills, Introduction to Simultaneous Interpretation, Practical Translation: Chinese-to-English, Translation Practice: English-to-Chinese, Academic Writing Workshop, Critical Study in Translation Theory, Application of Translation Theories, Legal Interpreting (English-Cantonese), Medical Interpreting (English-Cantonese), Reading Bilingual Literature, Terminology, Bilingual Editing Skills, Commercial Translation, Translation for Government and Public Administration, Legal Translation, Translation for the Media, Literary Translation, Scientific and Technical Translation, Computer-Aided Translation, Problems of Translation and Interpretation in Putonghua and English, Specialized Translation in Commerce and Finance, Specialized Translation in Law, Specialized Translation for Government and Public Administration, Specialized Translation for the Media, Advanced Literary Translation, Specialized Translation in Science and Technology, Project, Consecutive Interpretation (English-Cantonese), Consecutive Interpretation (English-Putonghua), Simultaneous Interpretation (English-Cantonese), Advanced Consecutive Interpretation (English-Cantonese), Advanced Consecutive Interpretation (English-Putonghua), Simultaneous Interpretation (Putonghua-English), Advanced Simultaneous Interpretation (English-Cantonese), Advanced Simultaneous Interpretation (Putonghua-English).

10.1.3. Hong Kong Baptist University: B.A. in Translation

(http://arts.hkbu.edu.hk/ugrad_trans.asp) [10 September 2008]

Aim: “The programme is specifically designed to train bi-lingual and bi-cultural

communicators to operate in local and national markets in the 21st century.”

Curriculum: Principles and Methods of Translation, Research Methods, Practical Translation, Contrastive Language Studies, Translation Seminar I, Interpreting I & II, Translation Workshop, English for Translators, Professional Studies, Linguistics for Translators, Style, Communication and Interpretation, Cultural Issues for Translators, Placement, Translation Seminar II, Interpreting III & IV, Translation Assignments, Translation Appreciation, Criticism and Evaluation, Translation Theories and Philosophies, Legal and Government Document Translation, Media and Technological Translation, Honours Project.

10.1.4. Lingnan University: B.A. in Translation

(<http://www.ln.edu.hk/tran/>) [10 September 2008]

Aim: “Our programme has three major aims:

to develop students' oral and written as well as social skills to a stage where they will be able to serve as effective and responsible intermediaries between texts and speakers in English and Chinese;

to develop students' capacity to make independent and objective judgements, so that they will be prepared for employment as language specialists or leaders in government, business, industry and other professions; and

to help students develop a better understanding of themselves as a person and of their place in Hong Kong's community, so that they will be able to create a fulfilling personal life for themselves and make contributions to the well-being of the community.”

Curriculum: General interpreting (C-E), Literary translation A (C-E), Business Translation (C-E), Advanced Interpreting (C-E), Literary Translation B (C-E), Translation Project (E-C and C-E), Translation Project (C-E), Selected Translation Project (C-E), Introduction to Interpreting (C-E), Introduction to Interpreting (E-C), Introduction to Translation (C-E), Introduction to Translation (E-C), Language Studies for Translation: Phonology and Morphology, Language Studies for Translation: Syntax, Literature, Culture and Translation: the Individual and Society, Translation Theory I, Translation Criticism I (E-C and C-E), General Interpreting (C-E), General Interpreting (E-C), Literary Translation A (C-E), Literary Translation A (C-E), Translation for the Media (E-C & C-E), Translation of Texts in Popular Culture (E-C & C-E), Translation of Texts in Social Sciences (E-C & C-E), Translation of Texts in the Arts (E-C & C-E), Business Translation (E-C), Business Translation (C-E), Literary Translation (C-E), Literary Translation (E-C), Legal Translation (E-C & C-E), Translation for Science and Technology (E-C & C-E),

Language Studies for Translation: Advanced Contrastive Analysis, Publication Workshop, Bilingual Oral Workshop (E-C & C-E), Bilingual Studies in Twentieth-Century Fiction and Prose, Bilingual Studies in Twentieth-Century Poetry and Drama, Translating Cultures, Translation in the Hong Kong Context, Literature, Culture and Translation: Language and Ideology, Bilingual Studies in Humour, Topics in Bilingual Studies: Love in Chinese and Western Literatures, Advanced Interpreting (C-E), Advanced Interpreting (E-C), Translation Theory II, Translation Criticism II (E-C & C-E), Gender, Language and Translation, History of Translation, Studies in Comparative Literature A, Studies in Comparative Literature B, Selected Research Topics, Selected Research Topics—Hong Kong Literature, Selected Research Topics—Chinese Bible Translation, Selected Translation Project (E-C), Selected Translation Project (C-E).

10.1.5. Open University of Hong Kong: B.A. in Language and Translation

(http://www.ouhk.edu.hk/WCM/?FUELAP_TEMPLATENAME=tcSingPage&ITEMID=CCASSCONTENT_516003) [10 September 2008]

Aim: Not stated on web page. But the objectives are included.

Objectives: (a) demonstrate linguistic and communicative skills in English and Chinese; (b) demonstrate a basic knowledge and understanding of the structure of the Chinese language; (c) demonstrate a basic knowledge and understanding of the structure of the English language; (d) demonstrate practical ability in translation from Chinese to English and from English to Chinese; (e) understand the principles of translation from Chinese to English and from English to Chinese.

Curriculum: English for University Study, University English Writing Skills, Practice in Contemporary Language, Introduction to Chinese Language, Business Communication, A Foundation Course in Putonghua, Presentation Skills, Chinese Business Communication, Analysing English Grammar, The Structure of Modern English, Putonghua II, Introduction to Translation, Language Studies for Translation, Study of Translation Texts, Fundamentals of Interpreting, Modern Chinese Grammar, Language and Communication in Society, Introduction to Semantics and Pragmatics, Language and Society in Hong Kong, Stylistics and Discourse Analysis, Culture and Translation, Applied Translation 1 (Law and Business), Applied Translation 2 (Public Administration and Media), Advanced Interpreting, Translation Project.

10.1.6. University of Hong Kong: B.A. Major in Translation

(<http://hku.hk/chinese/undergraduate/c1h1.html>) [10 September 2008]

Aim: Not stated on web page.

Curriculum: Introduction to Translation, Language Studies for Translation I, Language Studies II, Translation Criticism I (English-Chinese), Translation Criticism II (Chinese-English), III, IV, Translation in Practice I (English-Chinese), Translation in Practice II (Chinese-English), Translation Criticism III (English-Chinese), Translation Criticism IV (Chinese-English), Translation Theory, Language Studies III: Comparative Stylistics, Long Translation, Choice of Words in Translation, Translation in Hong Kong Society, Culture and Translation, Introduction to Interpretation, Interpretation Workshop I, Journalistic Translation, Translation of Promotional Material, Translation for Administration and Business, Film Translation Workshop, Translating Writings on Art, Interpretation Workshop II, Legal Interpreting, Translating Short Stories.

10.2. Questionnaire on Translation Students' Use of Dictionaries: A Hong Kong Case Study for Chinese to English Translation

Thank you for your help in participating in this survey. This research aims at finding out how translation students in Hong Kong use the Chinese to English dictionary for translation. The results could shed light on the Chinese to English dictionary consultation process in translating, benefiting students, teachers, dictionary compilers, and dictionary use researchers. There are 7 pages, and will only take about 10 minutes to complete.

Participation is entirely voluntary. The results remain anonymous, and will only be used for this research.

Mr Law Wai-on

Doctor of Education candidate, University of Durham

Please tick the box for the answer that suits you best.

Part I. Chinese to English Dictionary Use in Translating

1. How important do you think is dictionary to translating?
 - A. Not important.
 - B. Somewhat important.
 - C. Important.
 - D. Very important.

2. If you buy an electronic dictionary for translation, what is your priority of consideration? (Write 1 in the box for the most important, 2 and the following numbers for decreasing importance.)
 - A. Price.
 - B. Functions.
 - C. Brand name.

- D. Weight.
- E. Recommendation by others: (please specify) _____
- F. Others: (please specify) _____
- G. I don't buy any electronic dictionary.
3. How often do you use the electronic dictionary for translating in the recent year?
- A. Never.
- B. Once in a while.
- C. 1 – 2 times/week.
- D. 3 – 4 times/week.
- E. All the time.
4. If you buy a printed Chinese to English dictionary for translation, what are your considerations? (You can choose more than one option.)
- A. Price.
- B. The number of entries.
- C. Whether it provides the information that I want.
- D. Brand name of the publisher.
- E. Recommendations by others: (please specify whom) _____
- F. Others: (please specify) _____
- G. I rarely use the printed Chinese to English dictionary.
5. What is the Chinese to English dictionary that you use most often? (You can choose more than option.)
- A. *English-Chinese/Chinese-English Dictionary* (Commercial Press)
(《英漢-漢英詞典》，商務印書館).
- B. *The New Chinese-English Dictionary* (Shanghai Jiaotong University Press) (《新漢英辭典》，上海交通大學).
- C. *New Age Chinese-English Dictionary* (Commercial Press)

(《新時代漢英大詞典》商務印書館).

D. *A Chinese-English Dictionary (Revised Edition)* (《漢英詞典》，修訂版，商務印書館).

E. *Far East Chinese-English Dictionary (The Far East Book)* (《遠東漢英大辭典》，遠東圖書公司).

F. Electronic dictionary: (Brand name) _____

G. Others: (please specify) _____

H. Not sure.

6. What is your most used access system to your Chinese-English dictionary?

A. *Hanyu Pinyin*.

B. The radical system.

C. The number of strokes of a character.

D. Cantonese Romanization.

E. Direct typing/writing into the electronic/web dictionary.

F. Others: (please specify) _____

7. How familiar are you with your most used Chinese to English dictionary, including electronic dictionary? (You can choose more than one option.)

A. I read the preface/introduction/user's guide.

B. I know what appendices it contains, if any.

C. I know what access methods are available.

D. I know most of the symbols in an entry.

E. I know the basic structure of an entry.

8. How do you usually choose the "right" word from the Chinese to English dictionary for translation? (You can choose more than one option.)

A. By guessing.

B. By choosing from the first English "equivalent".

- C. By choosing any likely word(s) from the example(s).
 - D. By considering the context of the original.
 - E. Others: (please specify) _____
 - F. Not sure.
9. What do you look for in a Chinese to English dictionary for translating? (You can choose more than one option)
- A. Equivalent word(s) to the Chinese original.
 - B. Grammar of the Chinese original.
 - C. Usage of the English “equivalent” word(s).
 - D. Example(s).
 - E. Cultural information of the Chinese original and the English “equivalent”.
 - F. Others: (please specify) _____
10. What do you usually do if what you look for in a Chinese to English dictionary is not found? (You can choose more than one option.)
- A. Turn to another printed or electronic, or web-based Chinese to English dictionary.
 - B. Turn to a monolingual English or Chinese dictionary.
 - C. Turn to an English to Chinese dictionary.
 - D. Find an expression from one’s own vocabulary.
 - E. Others: (please specify) _____
11. In decreasing order of frequency, from 1 to 6, which kind of dictionary do you use most often in Chinese to English translation?
- A. Printed Chinese to English dictionary.
 - B. Printed English to Chinese dictionary.
 - C. Printed monolingual English dictionary.
 - D. Printed monolingual Chinese dictionary.

E. Electronic dictionary.

F. Web-based dictionary.

12. What are your difficulties in using Chinese to English dictionaries for translation?

(You can choose more than one option.)

A. Can't find the "equivalent" word(s) for translation.

B. Don't know where to locate the Chinese headword.

C. Don't know how to use the English "equivalent" in context.

D. Don't understand the meaning of the English "equivalent".

E. The examples are not helpful.

F. The information that I need is not given.

E. Others: (please specify) _____

G. No difficulty. (Go to Question 14.)

Part II: Chinese to English Dictionary Use Training

13. Do you think that your teachers are aware of your difficulties in using Chinese to English dictionaries?

A. Yes

B. No

C. Unsure

14. Have you ever been taught how to use Chinese to English dictionaries in your secondary or university education?

A. Yes

Where: _____

How long: _____

B. No (Go to Question 16)

C. Unsure (Go to Question 16)

15. If you have received any instruction in Chinese to English dictionary use, do you find it useful to your translating?
- A. Not useful
 - B. Somewhat useful
 - C. Useful
 - D. Very useful
 - E. Unsure
16. Do you think that you need any instruction for Chinese to English dictionary use?
- A. Yes. Reason: _____
 - B. No. Reason: _____
 - C. Unsure. Reason: _____
17. How important is dictionary use instruction in the translation curriculum?
- A. Not important
 - B. Somewhat important
 - C. Important
 - D. Very important
 - E. Unsure
18. If Chinese to English dictionary use skills are to be taught in your programme, what topics should be included? (You can choose more than one option.)
- A. Introduction to the variety of Chinese to English dictionaries, and how to choose a suitable one for oneself.
 - B. How to make the most from a dictionary.
 - C. How to look for the “right” word(s) for translating.
 - D. The history of the Chinese to English dictionary.
 - E. How to compile one’s own Chinese to English glossary.
 - F. Others: (please specify) _____

19. Do you consider yourself an efficient user of the Chinese to English dictionary?

A. Yes. Reason: _____

B. No. Reason: _____

20. Do you have any points to add about your experience in Chinese to English dictionary use?

Part III: Personal Background

21. Year of study in university: A. Year 1 B. Year 2 C. Year 3

22. Gender: A. Male B. Female

23. First language: A. Cantonese B. Putonghua C. Others: _____

24. Use of English result in the Hong Kong Advanced-Level Examination: _____

If you don't have such result, please specify the matriculation examination, and your result in the English language: _____

End of Questionnaire. Thank you.

10.3. The Chinese Version of the Questionnaire on Translation Students' Use of Dictionaries: A Hong Kong Case Study for Chinese to English Translation

調查問卷：香港翻譯學生翻譯時如何使用漢英詞典？

感謝你參與此問卷調查。本研究旨在發掘香港翻譯學生翻譯時怎樣應用漢英詞典。調查結果可以顯示學生翻譯時應用漢英詞典的過程，對學生、老師、編撰漢英詞典的專家，與研究詞典應用的專家都有裨益。問卷共 6 頁，只需約 10 分鐘即可完成。

參與此調查完全出於自願。調查結果絕對保密，只供本研究用途。

羅偉安

University of Durham 教育博士候選人

請在方格內剔出適合答案。

甲部：翻譯時查考漢英詞典

1. 你認為詞典對翻譯多重要？
 - A. 不重要
 - B. 頗重要
 - C. 重要
 - D. 很重要
2. 如果你要買電子詞典，會考慮什麼？(請按考慮的優先次序填上號碼，1 代表最重要考慮，2 次之，餘此類推。)
 - A. 價錢
 - B. 功能
 - C. 品牌
 - D. 重量
 - E. 他人推薦：(請指明何人) _____

- F. 其他：(請指明) _____
- G. 我從不買電子詞典。
3. 最近一年，你翻譯時多久應用電子詞典一次？
- A. 從來不用
 - B. 偶爾
 - C. 每週一、兩次
 - D. 每週三、四次
 - E. 每次都用
4. 如果你要買一本印刷的漢英詞典，會考慮什麼？(可選擇多個答案。)
- A. 價錢
 - B. 詞項多少
 - C. 它有否我所要的資料
 - D. 出版商
 - E. 他人推薦：(請指明何人) _____
 - F. 其他 (請指明) _____
 - G. 我極少用印刷的漢英詞典。
5. 你最常用哪本漢英詞典？(可選擇多個答案。)
- A. 《英漢-漢英詞典》，商務印書館
 - B. 《新漢英辭典》，上海交通大學
 - C. 《新時代漢英大詞典》，商務印書館
 - D. 《漢英詞典》，修訂版，商務印書館
 - E. 《遠東漢英大辭典》，遠東圖書公司
 - F. 電子詞典：(請指明品牌) _____
 - G. 其他：(請指明) _____
 - H. 不清楚
6. 你查考漢英詞典時，最常用哪種檢索系統？

- A. 漢語拼音
 - B. 部首
 - C. 筆劃
 - D. 粵語拼音
 - E. 將詞項直接輸入電子詞典或網上詞典
 - F. 其他：(請指明) _____
7. 你有多熟悉自己最常用的漢英詞典，包括電子詞典？(可選擇多個答案。)
- A. 我讀過詞典序言/簡介/使用指引等。
 - B. 我知道詞典有哪些附錄。
 - C. 我知道詞典有哪些查考方法，如漢語拼音、筆劃等。
 - D. 我知道詞項內的縮寫或符號代表什麼。
 - E. 我知道詞項資料的編排方法。
8. 你通常怎樣從漢英詞典選取「適合」的翻譯用詞？(可選擇多個答案。)
- A. 猜測
 - B. 選擇第一個英語詞語。
 - C. 從例子選取看來適合的英語用詞。
 - D. 考慮原文語境
 - E. 其他：(請指明) _____
 - F. 不確定
9. 你翻譯時查考漢英詞典，想找些什麼資料？(可選擇多個答案。)
- A. 漢語原文的英語「對應」詞
 - B. 漢語原文的語法
 - C. 英語「對應」詞的用法
 - D. 例句
 - E. 漢語原文與英語「對應」詞的文化資料
 - F. 其他：(請指明) _____

10. 如果你在漢英詞典找不到想要的資料，通常跟著會怎樣做？(可選擇多個答案。)
- A. 從其他印刷漢英詞典、電子漢英詞典或網上漢英詞典搜尋。
 - B. 從英語詞典搜尋。
 - C. 從英漢詞典搜尋。
 - D. 從記憶中找用詞。
 - E. 其他：(請指明) _____
11. 漢英翻譯時，你較常使用哪種詞典？(請按使用頻率填上號碼，1 代表最常用，2 次之，餘此類推。)
- A. 印刷的漢英詞典
 - B. 印刷的英漢詞典
 - C. 印刷的英語詞典
 - D. 印刷的漢語詞典
 - E. 電子詞典
 - F. 網上詞典
12. 你使用漢英詞典時有沒有困難？(可選擇多個答案。)
- A. 找不到翻譯對應詞。
 - B. 不知道怎樣找出要查的字/詞語。
 - C. 不知道查到的英語「對應」詞怎樣用。
 - D. 不理解英語「對應」詞的意思。
 - E. 例句沒有用。
 - F. 沒有我要的資料。
 - E. 其他：(請指明) _____
 - G. 沒有困難。(跳到問題 14)

乙部：漢英詞典應用訓練

13. 你認為現在的老師覺察你使用漢英詞典的困難嗎？
- A. 認為

- B. 不認為
- C. 不確定
14. 你在中學或大學時老師有沒有教過怎樣使用漢英詞典？
- A. 有
- 中學還是大學時教的： _____
- 教了幾堂課： _____
- B. 沒有 (跳到問題 16)
- C. 不確定 (跳到問題 16)
15. 要是你接受過漢英詞典應用訓練，你覺得對翻譯有幫助嗎？
- A. 沒有
- B. 有點幫助
- C. 有幫助
- D. 很有幫助
- E. 不確定
16. 你認為自己需要接受漢英詞典應用訓練嗎？
- A. 需要。原因： _____
- B. 不需要。原因： _____
- C. 不確定。原因： _____
17. 你認為翻譯課程中，詞典應用訓練重要嗎？
- A. 不重要
- B. 有點重要
- C. 重要
- D. 很重要
- E. 不確定
18. 要是你的課程加入「漢英詞典應用技巧」，你認為應該包括什麼題目？(可選擇多個答案。)

A. 介紹不同類型漢英詞典，與怎樣選取適合詞典。

B. 怎樣善用詞典。

C. 翻譯時怎樣找出「適合」用語。

D. 漢英詞典史。

E. 怎樣編撰自己的漢英詞庫。

F.其他：(請指明) _____

19. 你認為自己查漢英詞典有效率嗎？

A. 有。原因： _____

B. 沒有。原因： _____

20. 你還有沒有其他查考漢英詞典的經驗想分享？

丙部：個人資料

21. 修讀年級： A. 一年級 B. 二年級 C. 三年級

22. 性別： A. 男 B. 女

23. 第一語言： A. 粵語 B. 普通話 C. 其他： _____

24. 高級程度會考中 Use of English 的成績： _____ 。

如無此成績，請指明入學考試名稱，與英語成績： _____

問卷完。謝謝。

10.4. Interview on Translation Students' Use of Dictionaries: A Hong Kong Case Study for Chinese to English Translation

Thank you for your help in participating in this interview. This research aims at finding out how translation students in Hong Kong use the Chinese to English dictionary for translation. The results could shed light on the Chinese to English dictionary consultation process in translating, benefiting students, teachers, dictionary compilers, and dictionary use researchers. It will only take about 15 minutes.

Participation is entirely voluntary. The results remain anonymous, and will only be used for this research.

Mr Law Wai-on

Doctor of Education candidate, University of Durham

Consent Form

This is to certify that I agree to participate in the interview. The objectives, procedures, my involvement in the interview, and the use of the data have been explained clearly to me, and I have had the opportunity to ask questions. I understand that the data is for research purposes, and it will be kept in strict confidence. I also give consent for the interview to be audio-taped, so that the data could be transcribed verbatim for analysis.

Name:

Date:

2006.

Signature:

Interview Questions:

1. How important do you think is dictionary to translating?

2. How do you usually choose the “right” word from the dictionary for translation?

3. Which kind of dictionary do you use more often in Chinese to English translation?

Why?

4. Do you have difficulties in using Chinese to English dictionaries for translation? If

yes, what are they?

5. Have you ever been taught how to use Chinese to English dictionaries in your

secondary or university education?

6. If you have received any instruction in Chinese to English dictionary use, do you find

it useful to your translating?

7. Do you think that you need to receive any Chinese to English dictionary use

instruction?

8. How important should dictionary use training be in the translation curriculum?

9. Do you consider yourself an efficient user of the Chinese to English dictionary?

10. Do you have any points to add about your experience with Chinese to English

dictionary use?

11. Year of study in university: A. Year 1 B. Year 2 B. Year 3

12. Gender: A. Male B. Female

13. First language: A. Cantonese B. Putonghua C. Other: _____

14. Use of English result in the Hong Kong Advanced-Level Examination: _____

If you don't have such result, please specify the matriculation examination, and your result in the English language: _____

End of Interview

10.5. The Chinese Version of the Interview on Translation Students' Use of Dictionaries: A Hong Kong Case Study for Chinese to English Translation

訪問表格：香港翻譯學生翻譯時如何使用漢英詞典？

感謝你參與此訪問。本研究旨在發掘香港翻譯學生翻譯時怎樣應用漢英詞典。訪問結果可以顯示學生翻譯時應用漢英詞典的過程，對學生、老師、編撰漢英詞典的專家，與研究詞典應用的專家都有裨益。訪問只需約 15 分鐘即可完成。

參與此訪問完全出於自願。訪問結果絕對保密，只供本研究用途。

羅偉安

University of Durham 教育博士候選人

同意書

本人同意參與這訪問，清楚訪問的目的、程序和資料用途，也有機會發問。我明白資料只用作研究，保持祕密。

本人也同意訪問時錄音，以供逐字記錄，方便分析。

姓名：_____

簽名：_____

日期：_____

訪問問題：

1. 你認為詞典對翻譯多重要？
-

2. 你通常怎樣從漢英詞典選取「適合」的翻譯用詞？

3. 漢英翻譯時，你較常使用哪種詞典？為什麼？

4. 你使用漢英詞典時有沒有困難？是什麼困難？

5. 你在中學或大學時老師有沒有教過怎樣使用漢英詞典？

6. 要是你接受過漢英詞典應用訓練，你覺得對翻譯有幫助嗎？

7. 你認為自己需要接受漢英詞典應用訓練嗎？

8. 你認為翻譯課程中，詞典應用訓練重要嗎？

9. 你認為自己查漢英詞典有效率嗎？

10. 你還有沒有其他查考漢英詞典的經驗想分享？

11. 修讀年級： A. 一年級 B. 二年級 B. 三年級

12. 性別： A. 男 B. 女

13. 第一語言： A. 粵語 B. 普通話 C. 其他： _____

14. 高級程度會考中 Use of English 的成績：_____。如無此成績，請指明入學考

試名稱，與英語成績：_____ (訪問完)

10.6. The Consent Form for the Performance Exercise on Translation Students' Use of Dictionaries: A Hong Kong Case Study for Chinese to English Translation

Thank you for your help in participating in this exercise. This research aims at finding out how translation students in Hong Kong use the Chinese to English dictionary for translation. The results could shed light on the Chinese to English dictionary consultation process in translating, benefiting students, teachers, dictionary compilers, and dictionary use researchers. It will take about 1 hour.

Participation is entirely voluntary. The results remain anonymous, and will only be used for this research.

Mr Law Wai-on

Doctor of Education candidate, University of Durham

Consent Form

This is to certify that I agree to participate in the performance exercise. The objectives, procedures, my involvement in the exercise, and the use of the data have been explained clearly to me. I have read the guidelines for the “think-aloud” exercise, and had the chances to ask questions. I understand that the data is for research purposes, and it will be kept in strict confidence.

I also give consent for thinking out loud in the dictionary use process, and allow the process to be audio-taped, so that the data could be transcribed verbatim for analysis.

Name:

Signature:

Date:

2006.

10.7. The Chinese Version of the Consent Form for the Performance Exercise on Translation Students' Use of Dictionaries: A Hong Kong Case Study for Chinese to English Translation

翻譯練習：香港翻譯學生翻譯時如何使用漢英詞典？

感謝你參與此練習。本研究旨在發掘香港翻譯學生翻譯時怎樣應用漢英詞典。練習結果可以顯示學生翻譯時應用漢英詞典的過程，對學生、老師、編撰漢英詞典的專家，與研究詞典應用的專家都有裨益。練習需約一小時完成。

參與此練習完全出於自願。練習結果絕對保密，只供本研究用途。

羅偉安

University of Durham 教育博士候選人

同意書

本人同意參與這練習，清楚練習的目的、程序和資料用途，看過「放聲思考」的指引，也有機會發問。我明白資料只用作研究，保持祕密。

本人也同意查考詞典過程中「放聲思考」，並供錄音與逐字記錄，方便分析。

姓名：_____

簽名：_____

日期：_____

10.8. The English Version of the Guidelines for the Participants of the Translation Performance Exercise and Think-aloud Exercise

1. You can bring along all the dictionaries that you usually use while doing the Chinese to English translation exercise.
2. You can bring your notebook computer to do your translation, and use the web dictionary.
3. The translation performance exercise will not be marked. What is important is that you approach the exercise as you usually do, except that you have to “think aloud”.
4. Keep speaking while you are doing the translation exercise, no matter in reading, writing, thinking, or checking up with the dictionaries.
5. Please speak out what dictionary you are consulting in the process, and spell out the access system that you are using with that dictionary.
6. All the paper for drafts and the final translation will be collected at the end of the exercise for analysis.

10.9. The Chinese Version of the Guidelines for the Participants of the Translation Performance Exercise and Think-aloud Exercise

「放聲思考」與翻譯練習指引

1. 你可攜帶慣常做漢英翻譯的工具書。
2. 你可攜帶筆記型電腦做翻譯，並用以查考網上詞典。
3. 翻譯練習不會評分；同學只須按平時習慣做翻譯練習，並「放聲思考」。
4. 做翻譯練習時盡量放聲描述過程，無論是閱讀、書寫、思考或查考詞典。
5. 查考詞典時請說出正在用哪本詞典，並說明正在用什麼檢索方法。
6. 所有草稿與翻譯用紙均會於練習後收集，以供分析。

10.10. The Chinese Pre-text for “Warm-up” for the Think-aloud Exercise, and the English Translation

1. The Chinese Original

只見包裹是幾件嬰兒衣衫，一雙嬰兒鞋子，還有一塊黃布包袱，月光下看得明白，包上綉著「打遍天下無敵手」七個黑字，正是她父親當年給胡斐裹在身上的。

(Louis Cha, 1992, *Flying Fox of the Snowy Mountains*, Ming Ho Publications Corporation Limited, p. 286. Reprint by permission.)

2. The English Translation

Inside she found only a few infant clothes, a pair of baby's slippers and a bundle wrapped in yellow cloth. The moonlit sky saw clearly embroidered in black on the pack the inscriptions "The Invincible Under the Sky". This was the very covering which her father had wrapped around Fox all those years ago.

(Jin, Y., 1993. *Fox volant of the snowy mountain*, p. 379. O. Mok, Trans. Hong Kong: Chinese University Press. Original work published 1959. Print by permission.)

10.11. The Chinese Original Text, and the English Translated Text for the Performance Exercise

1. The Chinese Original Text

這一番惡鬥，胡斐一生從未遇過。他武功全是憑著父親傳下遺書修習而成，招數雖然精妙，實戰經驗畢竟欠缺，功力火候因年歲所限，亦未臻上乘，好在年輕力壯，精力遠勝過對方，是以數十招中打得難解難分。兩人迭遇險招，但均在極危急下以巧妙招數拆開。胡斐奮力拆鬥，心中佩服：「金面佛苗大俠果然名不虛傳，若他年輕二十歲，我早已敗了。[略]」

(Cha, L., 1992, *Flying fox of the snowy mountains*, Ming Ho Publications Corporation Limited, p. 282. Reprint by permission.)

2. The English Translated Text

This was the fiercest battle Fox had ever fought in his life. He paraded martial feats in which he had trained himself by learning the Canon bequeathed by his father. The moves were intended to be immaculate in their own right, but Fox was lacking combat experience. His youth imposed also a limit, causing his martial dexterity to fall short, as yet, of perfection. Fortunately, he was young and strong, mustering more strength than his enemy, thereby making it possible for the battle to unfold with several dozen tricks without either side gaining much advantage. Precariously dangerous situations stared both fighters constantly in the face, but they both managed to dissolve impending moves by practising even more clever ones. Fox immersed his whole self in battling his enemy and dissolving his moves. He admired Phoenix in silence: “The Gilt-faced Buddha, Phoenix the Knight-errant, indeed lives up to his far-famed sobriquet. I would have been defeated a long time ago had he been twenty years younger. [omitted].”

(Jin, Y., 1993. *Fox volant of the snowy mountain*, p. 374. O. Mok, Trans. Hong Kong: Chinese University Press. Original work published 1959. Print by permission.)

10.12. Letter to the Department Head of the University under Study for
the Permission to Conduct Research with Students

Dear Sir/Madam,

Re: Permission for Data Collection for Research

I am writing to request your consent on data collection for my doctoral thesis for the Doctor of Education programme of the University of Durham. My research topic is “How Translation Students in Hong Kong Use the Chinese to English Dictionary for Translation, and How they are Trained to Use it: a Case Study”. The data are collected through questionnaire with about 50 undergraduate students, preferably final year students, interviews with 3 of them, and think-aloud protocol with 2 students while they are doing a Chinese to English translation performance exercise, which are scheduled to be conducted between December 2006 and February 2007. The results could shed light on the Chinese to English dictionary consultation process in translating, benefiting students, teachers, dictionary compilers, and dictionary use researchers. A copy of the completed thesis shall be delivered to your department for your reference as token of gratitude.

I would like to assure you that the data collected will only be used for research purposes, and the objectives of the course will be adhered to. The identities of respondents and the University remain anonymous. Please kindly reply by 15 December 2006. My telephone number is XXXXXXXX; e-mail address: xxxxxxxx. Thank you for your kind attention.

Yours faithfully,

(Mr Wai-on Law, D.Ed. candidate,
University of Durham)

10.13. A Coding System Adopted from Thumb's (2004) for Dictionary Use for Chinese to English Translation

Coding 1: Executive Operations before/during Dictionary Look-up

(BLT) Beginning Look-up Task: signalling the beginning of look-up task.

(SS) Starting Search: signalling the beginning of the search for the target word.

(SH) Searching Headword: searching for target headword in dictionary text.

(RH) Referring to Headword: referring to target headword or referring to a headword similar to target headword in dictionary text.

(RAEN) Referring to Absence of Entry: referring to the absence of an entry of target headword in dictionary text.

(RP) Referring to Pronunciation: referring to pronunciation of target word in the original text, or referring to pronunciation/phonetic symbols of target headword in dictionary text.

(RD) Referring to Definitions: referring to L2 (English) translation equivalent and/or definition of target headword.

(RT) Referring to Text: referring to target word in the original text, or referring to contextual clue(s) in particular, or referring to the original text as a whole.

(RX) Referring to Example: referring to examples (in L1 and/or L2) which are in the form of a sentence, clause or phrase, and which are related to target headword in dictionary text.

Coding 2: Cognitive Operations before/during Dictionary Look-up

On Dictionary Text:

(SSR) Searching by Strokes: searching for target headword according to strokes and/or radical in written Chinese.

(L) Locating: realizing the presence or exact location of target headword or its component(s) in dictionary text.

(FEN) Focussing Entry: concentrating on the entry of target headword, or its related headword.

(FG) Focussing Grammar: concentrating on grammatical information of target headword for translating.

(RGD) Realizing Definition: realizing how many L2 translation equivalent and/or L2 definition that a target headword has.

(A) Accepting: accepting L2 translation equivalent and/or L2 definition in dictionary text without consulting any contextual clues in original text.

(RED) Rejecting Definition: rejecting L2 translation equivalent and/or L2 definition in dictionary text which is/are considered not fitting the original text.

(FX) Focussing Example: using illustrative examples (in L2 and/or L1) of the target headword for translating.

(FU) Focussing Usage: concentrating on the usage of target headword for translating.

On Both the Original and Dictionary Texts:

(RSM) Realizing Shared Meaning: realizing some target words share the same or similar meaning after looking them up.

(CD) Choosing Definition: choosing L2 translation equivalent and/or L2 definition which is/are considered to fit the original text best.

On the Original Text:

(T) Translating.

Code 3: Meta-cognitive Operations before/during Dictionary Look-up

(PLT) Planning for Translation.

(PL) Planning: Making plans at the beginning of look-up task on how to tackle the task,

or setting look-up task goals or task demands.

(UPR) Using Prior Knowledge: drawing on prior linguistic or semantic knowledge of target word to decide whether to start, continue or discontinue looking it up.

(ISS) Initiating Search Strategy by Spelling: starting the spelling-driven word search by spelling out the whole or part of the target word in Putonghua *Pinyin*.

(ISP) Initiating Search Strategy by Pronouncing: starting the spelling-driven word search by pronouncing the whole or part of target word in Putonghua *Pinyin*.

(MO) Monitoring: monitoring the progress or process of the look-up task.

(SLD) Switching Language Dictionary: switching/using the English-English or English-Chinese language dictionary for the search for the Language Two equivalent or definition of the target word.

(SED) Switching Electronic Dictionary: switching/using electronic or web-based dictionary for the search for the target word.

(ET) Evaluating Task: making general comment(s) on look-up task, think-aloud method, and dictionary by summarizing, drawing on personal experience and/or linking concepts.

10.14. Codes from Thumb's (2004) Dictionary Look-up Coding System
Not Used in the Present Study

Coding 1: executive operations before/during dictionary look-up	
REN	Referring to Entry: referring to the entry of target headword or its related headword.
	Reason: Not found in this study
RS	Referring to Spelling: referring to the spelling of target word/headword in reading/dictionary text or referring to different American/British spellings of target headword in dictionary text.
	Reason: Not applicable to the use of the Chinese to English dictionary.
RG	Referring to Grammar: concentrating on grammatical information (such as adjectives, countable and uncountable nouns, phrasal verbs, inflections, derivatives, compound nouns) derived from clues in reading text or found in dictionary text.
	Reason: Not found in this study.
RU	Referring to Usage: referring to usage labels/information related to target headword in dictionary text, e.g., colloquial, sayings or proverbs, and catchphrases in L1 and/or L2.
	Reason: Not found in this study.
RI	Referring to Idioms: referring to idioms related to target headword and/or their meanings in L1 and/or L2.
	Reason: Not found in this study.
RF	Referring to Features: referring to features such as pictorial illustrations related to target headword in dictionary text or mechanical features such as italics, bold face related to target word/headword in reading/dictionary text.
	Reason: Not found in this study.
RDI	Referring to Dictionary: referring to the dictionary or dictionary text in general.
	Reason: Not found in this study
WD	Writing Definition: writing down L1 translation equivalent and/or L2 definition of dictionary text for target word in reading text.
	Reason: In translating, this operation is combined with another operation: (A) Accepting: accepting L2 translation equivalent and/or L2 definition in dictionary text without consulting any contextual clues in original text.

ELT	Ending Look-up Task: signalling the end of look-up task.
	Reason: Not found in this study.
Coding 2: cognitive operations before/during dictionary look-up	
UG	Using Grammar: using grammatical information derived from clues in reading text to help formulate meaning of target word.
	Reason: Not applicable to Chinese to English translation.
CC	Constructing from Context: constructing meaning of target word from contextual clues in reading text before and/or after looking it up.
	Reason: Not applicable to Chinese to English translation.
SA	Searching Alphabetically: searching for target headword according to alphabetical order.
	Reason: Not found in this study.
FS	Focussing Spelling: concentrating on different spelling used in American or British English of target headword.
	Reason: Not applicable to the Chinese to English dictionary.
CGF	Comparing Grammatical Form: comparing grammatical forms of some target headwords to formulate meaning.
	Reason: Not applicable to the Chinese to English dictionary.
FC	Focussing Chinese: concentrating on Chinese (L1) translation equivalent of target headword, ignoring the English (L2) definition to formulate meaning.
	Reason: In the Chinese to English dictionary, users usually focus more on the English definitions or equivalents to the Chinese.
FE	Focussing English: concentrating on English (L2) definition of target headword, ignoring the Chinese (L1) translation equivalent to formulate meaning.
	Reason: Not found in this study.
MD	Matching Definition: matching L1 translation equivalent of target headword with its L2 definition or vice versa to formulate meaning.
	Reason: Not applicable to the Chinese to English dictionary.
FI	Focussing Idiom: concentrating on idiom of target headword to formulate meaning.
	Reason: Not found in this study.
CF	Cross-referencing: indicating relevant information of target headword can be found at another entry.
	Reason: Not found in this study.

FM	Formulating Meaning: formulating own meaning/definition by using own words as far as possible after reading dictionary definition and/or after reading contextual clues.
	Reason: Not applicable to Chinese to English translation, as the original text is in subjects' first language.
FP	Focussing Pronunciation: concentrating on pronunciation of target word or concentrating on different pronunciations/phonetic symbols of target headword.
	Reason: No such feature in the entries of the Chinese to English dictionary.
M	Matching: realizing spelling of target word in reading text partly/wholly matches with that of target headword in dictionary text or realizing spelling of target word partly matches with that of target headword.
	Reason: Not applicable to the Chinese to English dictionary.
FF	Focussing Features: focussing on features such as pictorial illustrations related to target headword in dictionary text or mechanical features such as italics, bold face related to target word/headword in reading/dictionary text.
	Reason: Not found in this study.
RM	Refining Meaning: fine-tuning meaning after formulating word meaning from contextual clues or fine-tuning meaning after formulating own meaning/definition from dictionary definition(s).
	Reason: Not applicable to Chinese to English translation.
IM	Inferring Meaning: inferring meaning of target headword with the help of contextual clues.
	Reason: Not applicable to Chinese to English translation.
Coding 3: meta-cognitive operations before/during dictionary look-up	
PMS	Postponing Meaning Search: postponing search for meaning of target headword after dictionary user expresses doubts or have queries about the given dictionary definitions.
	Reason: Not found in this study.
TMS	Terminating Meaning Search: ending search for meaning of target headword after dictionary decides that s/he knows the meaning.
	Reason: Not found in this study.
TLT	Terminating Look-up Task: ending look-up task after dictionary user decides that s/he has looked up all the words s/he intends to look up.
	Reason: Not found in this study.

10.15. Interview Transcripts

The dialogues were originally in Cantonese, which is a spoken form of one of the varieties of the Chinese language. Some words in Cantonese are without a written form. For recording's sake, the Cantonese is translated into Modern Written Chinese. Words in [] are from the interviewer. Q stands for question; A for answer.

10.15.1. Subject One

10.15.1.1. English Transcript of Interview

1. Q: How important do you think is dictionary to translating?

A: It's quite important. There are many areas in translation. If the specialized area that you are involved in includes many technical terms, and you don't understand or aren't certain about their meanings in context, you can check them up with the dictionary, and see the examples. [Isn't it then very important?] But to me, the most important is the writing process. If a person has a wide range of vocabulary, she doesn't need to use it often. [If she knows a large vocabulary, there is no need to check up with it often?] Maybe she picked up her English by living abroad for an extended period of time. She knows the usage of some English. This is quite important to her, too. I wouldn't say the use of it is the most important.

2. Q: How do you usually choose the "right" word from the dictionary for translation?

A: First, the backdrop of the work; if it is a novel, the background of the character. It is a different issue to fit her identity. For example, a certain English expression may have several meanings in Chinese. Only one of them could fit the grass roots. This is the major concern. For technical terms, I just directly take the words provided by the dictionary.

3. Q: Which kind of dictionary do you use more often in Chinese to English translation? Why?

A: I usually use the Chinese to English dictionary. Sometimes, say, when you don't know if there is more than one English expression for one Chinese word, and you can't figure it out, it is convenient to find out the options available from the dictionary. But usually, I will check the English expressions again; or if I want to find something more, then I will use the monolingual English dictionary. [Why?] When you use the monolingual English dictionary, there are more precise definitions, and you can grasp the meanings, to find out if it is the way that the native speakers use the expression.

4. Q: Do you have difficulties in using Chinese to English dictionaries for translation? If yes, what are they?

A: There is no difficulty in the search method. The difficulty may be that after glancing through the definitions, there is none suitable. Then I may read English books in that area, instead of further consulting the dictionary. If the text is about

dance, then I will read dance books in Chinese and English.

5. Q: Have you ever been taught how to use Chinese to English dictionaries in your secondary or university education?

A: Seems like in primary school. [Primary school? How to use Chinese to English dictionaries?] Seems to be in primary school. There is no other recollection after that. In university, it was mentioned that you had to use dictionaries in translation, and some methods were suggested. But it seems to be in the primary school that I was first taught how to use them. It was blank in secondary school. A few courses in university touched on this. For example, in literary translation, which C-E dictionaries were better for the works of certain periods. [That means recommending the tools in consideration of the types of translation?] Yes. The reference lists usually contain dictionaries. [In a course, how much time is spent on this, including recommending dictionaries?] Very little, maybe less than 10%.

6. Q: Suppose you had been instructed on how to use the C-E dictionary by your teacher, would you find it useful to your translating?

A: I would know more types of C-E dictionaries which I might not have known. After recommendation, I may use them.

7. Q: Do you think that you need to receive any Chinese to English dictionary use instruction?

A: If it is about the search methods, it is unnecessary. If it is about how to improve its use, it may be helpful. [Does it imply that you may have room for improvement in using C-E dictionaries?] I suppose so. It would be best if there is instruction.

8. Q: How important should dictionary use training be in the translation curriculum?

A: So-so. [Why?] Because there are some other things more important, yet it is not unimportant. [What, for instance, is more important than learning to use the C-E dictionary?] Perhaps the approach to handling certain genre; or the writing skills, no matter in E-C translation, or when writing in English, to avoid the mistakes made by non-native speakers.

9. Q: Do you consider yourself an efficient user of the Chinese to English dictionary?

A: Yes, I am not slow. [How do you evaluate yourself in addition to the speed?] I can find out the word for my check-up very quickly, and can make the decision about which meaning to use among all those offered. Or if none is chosen, I can think up an associated Chinese word for further check-up for the English. [Does it mean you have sound judgement?] Kind of.

10. Q: Do you have any points to add about your experience in Chinese to English dictionary use?

A: If some classmates aren't familiar with the Putonghua *pinyin* system, they don't want to use those dictionaries by that searching route. Also, many people choose

to use the on-line dictionary. They won't find it handy when they have to turn to printed ones.

11. Year of study in university: Year 3

12. Gender: Female

13. First language: Cantonese

14. Use of English result in the Hong Kong Advanced-Level Examination: A

10.15.1.2. Chinese Transcript of Interview

1. 問：你認為詞典對翻譯多重要？

答：中上程度重要，因為翻譯有很多範疇，如果你接觸的專業範疇，例如科學有很多專有名詞，又或者藝術也有很多專有名詞，自己不了解，又或者有時不肯定，那個詞在那個語境中是什麼意思，就可以從詞典中查查，看看例句。[那不是很重要嗎？] 可是我覺得，最重要是寫的過程，有些人可能懂很多字，可能就不需要常用。[懂得很多詞，就毋須常查？] 可能她學英文的背景是靠在外國生活一段時間，可能在她腦中已經有一些英語的用法，對她來講也有相當的重要性。我就不會說是最重要。

1. 問：請簡述你平常做漢英翻譯時，怎樣從漢英詞典找「適合」的詞語來用。

答：首先看作品的時代背景，或者是那個人物；如果是小說，那個人物的背景，因為配合她的身分來說的意義可能就不一樣。因為例如英文某個詞可能在中文裏有幾個解釋，可能某個解釋才適合草根階層的講法。最主要是這方面。專有名詞方面通常是照著它的意思。

2. 問：你做漢英翻譯時，通常會用哪種詞典？即語言組合方面。

答：通常用漢英，有時例如說，一個中文字自己不知道是不是有多於一個英文表達方法，可能自己想不到，你一查就看到幾個解釋，方便些。不過通常之後再覆，或者有些東西想不到，會再用英英來查。[為什麼？] 因為當你用英英的時候，可能裏面有些解釋得準確些，你的意思會抓得緊些；英文這樣寫對於外國人來說是不是就是那個意思。

3. 問：你使用漢英詞典時有沒有困難？

答：困難可能是看完解釋後發覺沒有一個是最貼切的；查考方法就沒有特別困難。可能就不是再查詞典，而是看那方面用英文寫的書。那方面即那個範疇的書，例如跳舞的，就看關於跳舞的中文和英文的書。

4. 問：你在中學或大學時老師有沒有教過怎樣使用漢英詞典？

答：小學好像有。[小學？漢英詞典啊？] 小學好像有，之後就沒有特別印象有學過。大學好像有提過，即提過翻譯時要運用詞典，提過一些方法。可是一開始提怎樣用，好像是在小學。中學應該沒有接觸過這方面。大學有一些課程會講，例如文學翻譯的時候，某個時代的作品應該用哪一本漢英詞典比較好。[即根據不同類型的翻譯，推介工具？] 對，通常在 reference list 都有一些詞典。[那時間多長？即一個課程裏，花多少時間提這方面？包括剛才所說推介詞典。] 很少，我想不到 10%。

5. 問：假設有老師教你怎樣用漢英詞典，你覺得對你做翻譯有沒有幫助？
答：知道多些不同的漢英詞典，可能之前不知道的。推介過後，可能會用。
6. 問：你認為自己需要接受漢英詞典應用訓練嗎？
答：如果是用什麼索引查，即查考的方法，就不需要了。可能是用法上，可以怎樣改善，如果有些意見，也會有用。例如怎樣運用得好一點。[是不是暗示自己用漢英詞典方面可能還可以改善？] 應該是，如果有人教的話就最好了。
7. 問：你認為翻譯課程中，詞典應用訓練重要嗎？
答：一般。[為什麼？] 因為我覺得有其他東西更重要，同時又不是說它不重要。[例如有什麼其他內容比學用漢英詞典更重要呢？] 可能是說處理某種文體時要用什麼方式；或者說寫作的技巧，即英翻中，或寫成英文時，不是以英文為母語的人會出現的錯誤。
8. 問：你認為自己查漢英詞典有效率嗎？
答：不錯，不太慢。[你怎樣評估自己不錯，除了快慢之外？] 即我很快找到要查的字之後，那裏已經寫了所有解釋，那就立即想要用哪個解釋；或者不用的話，想想有沒有差不多的字再查，即跟那個字意思差不多的中文字，再查英文。[那算是知道怎樣選擇嗎？] 算是。
9. 問：你還有沒有其他查考漢英詞典的經驗想分享？
答：如果有些同學拼音沒那麼好，就不想用那些要拼音的。還有現在很多人轉用電腦查，可能重用手翻的字典會變得不熟習。
10. 修讀年級：三年級
11. 性別：女
12. 第一語言：粵語
13. 高級程度會考中 Use of English 的成績：A

10.15.2. Subject Two

10.15.2.1. English Transcript of Interview

1. Q: How important do you think is dictionary to translating?
A: Are there any options? Chinese to English, or English to Chinese? [You can answer the way you like.] It is very important in Chinese to English translation, for our vocabulary isn't rich. Very often we don't know how to express ourselves. In the first semester, in the long translation project, I had to check up almost every single sentence with the dictionary in C-E translation. I guess without the dictionary, I couldn't translate anything, I would be helpless. [You mean the dictionary is very important to translating?] Yes [And to you?] Especially in C-E translation.
2. Q: How do you usually choose the "right" word from the dictionary for translation?
A: It's difficult to explain without any example. [How about the process? You can think up an example.] For instance, for me, if in the Chinese original for English

translation, there are two words that I don't know, I will input the two words to an on-line dictionary, or search them in this *New Age Chinese-English Dictionary* [henceforth *NACED*]. If I find the word, the part of speech is right, e.g. verb for verb, I will then go into detail in the definition in the dictionary. [What is "the dictionary"?] Cambridge on-line dictionary. It is an E-E dictionary. What I just checked up...e.g. it usually...Yahoo on-line dictionary has a large vocabulary. When I check up any word, e.g. "da4", or whatever, for every word that I find from it, I will read the definitions and examples from Cambridge on-line dictionary, to see if the word is suitable. [There is no need for demonstration now. I want to make sure, that what you said about checking up a word from the Chinese original on-line for an English word with the right part of speech...] It normally provides you with a number of results, in different parts of speech. It's best to find a noun for a noun, a verb for a verb. [I want to explore this a little more. For example, if you are checking up a verb, do you expect to find a verb from the dictionary?] Sometimes I fail. [What do you do then?] If I fail, then I will see...it's hard to say without an actual example. [Okay, is what I just described typical?] It's more often than not that I can find a word with the same part of speech. [And then to an E-E dictionary for its definition?] Yes.

3. Q: Which kind of dictionary do you use more often in Chinese to English translation? Why?

A: When I was in Year One and Year Two, I usually used Yahoo on-line dictionary, and Cambridge on-line English dictionary. But in the long translation project last year, as the level of difficulty got higher, I couldn't find the words I wanted. When I couldn't...as it was quicker to consult the on-line dictionary...when I couldn't find the words, I used this one. [That is the *NACED*?] Yes. [You just said you used the on-line dictionary for its speed of response?] Yes, and actually Yahoo on-line dictionary has a large vocabulary, maybe greater than this *NACED*. [If Yahoo fails you, only then will you check up with this *NACED*?] Right.

4. Q: Do you have difficulties in using Chinese to English dictionaries for translation? If yes, what are they?

A: In C-E dictionaries, very often abstract words are rendered literally, not idiomatic enough, especially adjectives and some specialized terms. Well, specialized terms are better. If they are literary, the suggested words usually don't fit the context. Very often you have to think of a more elegant word from the one suggested, or one better fitting the context. [Then what is the difficulty?] The words suggested by the dictionary may not be suitable. You have to consider if there are any associated words...that is to think how to modify the word. [Is it a difficulty?] That means you have to change the word suggested. The dictionary cannot give you what you want. Say there are two words in the original for

check-up. I of course hope that after inputting the two words, the suggested English can be readily used. But if they are not, I don't feel good. Also, there can be many possible combinations with two Chinese characters. The entries in the dictionary are the commonly used. When you input a word, you may not... Say in a literary work, if you input two characters, which may be newly coined by the author, usually the on-line dictionary doesn't contain that entry. That's why it is difficult. [In short, the difficulty is twofold. One is that it takes quite some time before you can make use of the words from the dictionary in translation. Another is that the new words from the original can't be found in the on-line dictionary. Then you have to find some other help. These are the two major difficulties, right?] Right.

5. & 6. Q: Have you ever been taught how to use Chinese to English dictionaries in your secondary or university education? Suppose you had been instructed on how to use the C-E dictionary by your teacher, would you find it useful to your translating?

A: I took one course called Lexicography and Translation when I was in Year One. But the professor didn't mainly teach me how to use the dictionary; rather how a dictionary was arranged, e.g. by alphabet. It was more like teaching you how to make a dictionary than how to use it in practice. I didn't find it useful. [Not useful in terms of...] I would suggest that in every course, say Science and Technology Translation course, it is required to teach how to use certain science and technology dictionary. This would be better than a specialized course on lexicography. [Does it mean that the training should focus on the dictionaries for different subjects?] Yes. [And how to use them?] Yes.

7. Q: Do you think that you need to receive any Chinese to English dictionary use instruction?

A: I feel a little need. Consulting the dictionary requires some skills. After these few years of experience, I feel it needs some skills, but I can't put them into words... I guess I need an example for describing what those skills are. But there should be such training, especially for those... fresh translation students. They don't know which dictionaries are good. This is the first point. Second, they don't know which dictionaries can serve certain purpose. E.g., some dictionaries provide you with some words, say, C-E dictionaries, but only the English words, without the usage. Then you have to learn to find out which dictionaries can give you satisfying definitions. I think... I didn't realize that I had to consult several dictionaries when I first studied translation. [You think that consulting the dictionary requires some skills, and you lack them, so you feel the need for training?] It can be put this way.

8. Q: How important should dictionary use training be in the translation curriculum?

A: I think that in the translation curriculum, dictionary use training is quite important. The dictionary is very often used in translating. Training enables students to use it more effectively, so as to raise the efficiency and quality of translation.

9. Q: Do you consider yourself an efficient user of the Chinese to English dictionary?

A: How to measure whether it is efficient? [You define it yourself.] Am I efficient in the use of the Chinese to English dictionary?...It's hard to say. Not really, for sometimes the words found aren't suitable. This is especially the case in the first semester, in the long translation project. The words I found from the dictionaries were supposed to be equivalent to the Chinese. For example, when I checked up a Chinese word, the English from the dictionary I used should be equivalent and suitable for use. [I want to ensure I understand you right...] Say I wanted the English of a Chinese word, [Then you supposed the English that your dictionary provided should be equivalent to the Chinese?] Yes. [Equivalent in what sense?] For example, meaning, usage all fit...If there were two Chinese words that I didn't know how to say in English, I would check up with the dictionary, hoping to find the English to fit into the sentence. [That means you expect equivalence in various areas?] No matter what, it should fit my use. When they were used, they were pointed out as wrong by my supervisor. So very often, I spend quite some time on the check-up, but the results aren't satisfactory. [That's not efficient, right?] Right.

10. Q: Do you have any points to add about your experience with Chinese to English dictionary use?

A: My experience is that, sometimes after you have checked up a word with the C-E dictionary, it only gives you an idea about which words can be used. For example, you input two Chinese characters to the computer, and then many English words appear. Very often those words can make you think of many others that lead to a suitable one. Very often in the words provided, there is not a suitable one for you.

11. Year of study in university: Year 3

12. Gender: male

13. First language: Cantonese

14. Use of English result in the Hong Kong Advanced-Level Examination: C

10.15.2.2. Chinese Transcript of Interview

1. 問：你認為詞典對翻譯多重要？

答：有沒有選擇？中譯英，英譯中時？[你隨便怎麼回答都可以。] 中譯英時就很重要，因為我們本身詞彙不是很豐富，很多時候都不知道怎樣表達。總之中譯英，我上個 semester 我做了個長篇翻譯，中譯英時我差不多每一句都要查詞典。我想沒了詞典就譯不到，如果你不給我詞典，我一定譯不

到。[你的意思是詞典對翻譯很重要?] 是。[而對你來說] 中譯英時特別重要。

2. 問：請簡述你平常做漢英翻譯時，怎樣從漢英詞典找「適合」的詞語來用。

答：沒有例子，很難說。[過程呢？你可以想一個例子。] 例如，通常我，例如一篇中譯英的原文，某兩個字我不懂，我就會輸入那兩字在網上字典，或者在這一本《新時代漢英大詞典》裏面找，跟著如果找到那個字，那個詞性是對的，即動詞對動詞，我就再在這裏詳細看解釋 [「這個」是什麼?] 劍橋網上字典。這本是英英字典。就將剛才查到.....例如它通常.....雅虎網上字典有很多個字，即查出來，例如輸入一個「大」或什麼字，每個我查到的字，都會在劍橋網上字典看看它的解釋和例子，看看它合不合用。[現在暫時不用示範。我想確定，剛才你說在原文中文看到某個詞，你就在網上查，跟著找個詞性比較適合的英文.....] 因為通常它會給你很多結果，有什麼什麼詞性的，最好是例如名詞對名詞、動詞對動詞。[我想再多問一些關於這一點。例如你查的是動詞，你希望查出來的詞也是動詞?] 有時就查不到。[那你會怎樣做?] 查不到，那我就會看它.....那很難說，沒有實際例子。[Okay, 剛才我描述的是你一般的狀況?] 通常六七成、七八成都找到對的詞性 [跟著再找一本英英詞典查它的意思?] 嗯。

3. 問：你做漢英翻譯時，通常會用哪種詞典？即語言組合方面。

答：我 Year One 和 Year Two 的時候通常都用 Yahoo 的網上字典，和劍橋的英英字典，但去年長篇翻譯，因為難度增加，有時要查的字沒有。當找不到.....因為網上字典快.....當找不到適合的字，就會看這一本 [就是《新時代漢英大詞典》?] 對。[你剛說用網上詞典是因為快?] 對，還有 Yahoo 網上字典收錄的其實也很豐富。有時很可能比這一本《新時代漢英大詞典》更多。[如果沒有的話，才再查這一本《新時代漢英大詞典》?] 是。

4. 問：你使用漢英詞典時有沒有困難？

答：因為漢英字典很多時候比較 abstract 的字比較直譯，通常達不到翻譯通暢的要求，特別是形容詞、一些比較專業的詞語，專業的詞語比較好。如果是文學的詞語，它給的字通常都不合 context，很多時要從查出來的英文字再想可以怎樣寫得優美一些，或更適合原文的風格。[那困難是什麼呢?] 查出來的字未必一定合用，要再想想那個字有沒有其他.....即是想想怎樣去 modify 那個字。[這算是困難嗎?] 因為查出來的字再變，即字典不能給你想要的東西。即原文中有兩個字，我當然希望輸入那兩個字後，那英文就立即可以用。但如果找出來的不合用，就會覺得不是很好。還有，很多時候因為中文兩個單字可以有很多無窮的組合，有很多可能。你輸進去，但收錄的都是常用的，你不一定找.....例如文學作品，將那兩個字，例如作者自創新詞，輸入網上字典通常都沒有結果，所以是難的。[即是綜合來說，有兩方面的困難，一個困難是查了網上詞典後，要多花工夫才想到適合應用在譯文裏面；第二個困難是可能原文有一些新詞，網上詞典查不到，你就要再想辦法。主要是這兩個困難?] 是。

- 5, 6. 問：你在中學或大學時老師有沒有教過怎樣使用漢英詞典？你覺得對你做

翻譯有沒有幫助？

答。修讀過一個詞典學，叫 **Lexicography and Translation** 的課程，在大學一年級的時候，但是那個教授好像沒有集中教你怎樣查詞典，反而會教字典的編排，例如跟字母編排，好像教你怎樣造一本字典多於教你真正怎樣用。我就覺得用處不太大。[『用處不大』是對於你.....] 我反而覺得可以，例如每個課程，例如科技翻譯，例如特定一個範圍是教你怎樣用某本科技詞典，這樣比特地開設一個詞典學的課程要好。[即是說你希望訓練是就著不同範疇教你怎樣用不同的詞典？] 是。[還有怎樣查那些詞典？] 是。

7. 問：你認為自己需要接受漢英詞典應用訓練嗎？

答：我覺得有一點需要。因為查字典很多時需要一些技巧；我查了幾年，覺得需要一點技巧，卻講不出.....我想要查過才講得出，空口我講不出。不過需要有這樣的訓練，尤其是剛入.....初讀翻譯的學生，很多時不知道哪本字典好，這是第一；第二是，不知哪一本字典可以幫到你，例如有些字典會給你一些字，例如漢英字典，它就只給你一個英文字，不給你那個英文字的用法，那你就學查哪本字典才可以查到最適合的解釋。我想.....初初讀翻譯的時候沒想過要查幾本字典才行。[你覺得查詞典需要某些技巧，而你欠缺這些技巧，所以覺得自己需要接受訓練？] 可以這麼說。

8. 問：你認為翻譯課程中，詞典應用訓練重要嗎？

答：我認為翻譯課程中，詞典應用訓練頗為重要。翻譯常常要用到詞典，訓練能讓同學更有效使用詞典，從而提高翻譯的速度和質素。

9. 問：你認為自己查漢英詞典有效率嗎？

答：怎樣才算有效率？[你自己定義。] 查漢英詞典有沒有效率？.....頗難說，不是很有效率，因為有時查出來的字不合用。特別是上學期，長篇翻譯時查出來的字，我假定中文跟英文是對應的。例如我查一個中文字，我那本字典給我的英文應該是對應的、合用的。[我想確定你的意思.....] 例如一個中文字，想要它的英文 [你就假定你所查的詞典所提供的英文應該是跟中文對應的？] 是。[對應是哪方面的意思？] 例如意思、用法都適合..... 例如中文有兩個字，我不懂，於是就去查，希望可以找到英文插入那句句子裏面。[即是幾方面的對應？] 總之是適合我。查出來的時候，都是被我的教授說那個字不對。所以很多的時候查字典，雖然花了很多時間查，可是結果未必是滿意的。[這就算不夠效率了？] 是。

10. 問：你還有沒有其他查考漢英詞典的經驗想分享？

答：我想，有時候你查完漢英字典，查完某個字，很多時只是給你一個 idea，可以用哪些字。例如中文，有兩個中文字，你輸入電腦，然後出了很多英文字，很多時那些英文字可以让你想起其他更多英文字，從而令你找到適合的字。很多時那些字裏未必有你想要適合的字。

11. 修讀年級：三年級

12. 性別：男

13. 第一語言：粵語

14. 高級程度會考中 Use of English 的成績：C

10.15.3. Subject Three

10.15.3.1. English Transcript of Interview

1. Q: How important do you think is dictionary to translating?

A: I think the most important of it is to remind you how a word is used; otherwise it is not of much use. [You mean...] That is, if you forgot how a word is used or spelt, you check it up with the dictionary. Or if you...those thesauruses can help you find the suitable words. [You just said that “to remind you how a word is used”. You mean...you consult the dictionary for the words you have already learnt?] No. Perhaps you forgot a word...because we have built up a vocabulary almost large enough for use, it should be enough. When you see a word that you don't know, you check it up for its meaning. If you check up a word that you have learnt before, that's perhaps you forgot what it means. You check its meaning, or its spelling. Special dictionaries like the thesaurus can help you find the suitable words. [Then are they important to translating?] Yes.

2. Q: How do you usually choose the “right” word from the dictionary for translation?

A: By experience. I trust my English reading skill, so I know which English word is right. I won't...and the C-E dictionary won't teach you how to choose the word, but just list out all the English words. [That means you judge from the list of English words from the check-up? How does your experience guide you in choosing?] When you read English a lot, you will know how it flows. You will know when to use which word. [You mean by intuition?] Not really. If you aren't familiar with that word, you will check it up with the E-E dictionary, or E-C dictionary. You then see its definitions, how it is used, and its usage from examples. [In other words, when you choose a word, you consider the meaning more?] Yes, of course. The C-E dictionary is for you to choose the English expressions for the Chinese, so meaning comes first.

3. Q: Which kind of dictionary do you use more often in Chinese to English translation? Why?

A: I don't quite know how this dictionary is called. I only use this one. You'd better tell me. [That means you use the C-E dictionary?] Yes, it is a C-E dictionary. If there are words that I don't know, I will go to the E-E dictionary. if...the teacher says...if I still don't know the collocation of that word, I will input it to the search engine on-line, that is directly input the phrase to it. See if there is any result. [That is for the usage?] Yes.

4. Q: Do you have difficulties in using Chinese to English dictionaries for translation? If yes, what are they?

A: Not really. [No any difficulty?] Except for not finding the entry of the word. Well, perhaps...I once searched for the word for the tool to help rice to bowl. I didn't know how to say it. The English word after search wasn't right, not idiomatic. The

dictionary just gave an English word, which was wrong. Then I had to ask my teacher. [You seldom meet difficulty in dictionary consultation. But sometimes you aren't sure if the words found are right.] But then it was a proper noun, not a verb; I know most verbs.

5. Q: Have you ever been taught how to use Chinese to English dictionaries in your secondary or university education?

A: No.

6. Q: Suppose you had been instructed on how to use the C-E dictionary by your teacher, would you find it useful to your translating?

A: I think if a particular dictionary provides special functions, then there may be a need for guidance for use; otherwise, there is no need for teacher instruction. [Instructing how to use it?] Yes. [Why?] Why? The one that I use now is very user-friendly. I haven't seen others. Mine is just to search for the Putonghua *Pinyin* of the word in question. I know how to use it.

7. Q: Do you think that you need to receive any Chinese to English dictionary use instruction?

A: Not really. [What, do you think, will be taught in Chinese to English dictionary use instruction?] Maybe it would be...not sure. Don't know what will be taught.

8. Q: How important should dictionary use training be in the translation curriculum?

A: Not very important. But it should introduce to me different kinds of dictionary. There is just one kind of C-E dictionary, no others; but in contrast...no matter the size, C-E dictionaries are of the same kind. The training should tell me which ones are good, with a large vocabulary. That's enough. If it is on E-C dictionary, it must tell me the different kinds of dictionaries, e.g. phrasal verbs, idioms, and that kind called...euphemism. In my secondary school...it's only until university that I knew so many classifications in English.

9. Q: Do you consider yourself an efficient user of the Chinese to English dictionary?

A: Yes, the one that I use is helpful. [Do you mean that the dictionary contains words that are useful to you?] Yes. And I usually get what I want, except individual cases, like the proper noun I just quoted. In those cases, it is not idiomatic. I have to consult westerners.

10. Q: Do you have any points to add about your experience with Chinese to English dictionary use?

A: No.... Many secondary school students don't know the existence of the C-E dictionary. Perhaps...it is by Putonghua *Pinyin*. They may not know how to use it even if introduced.

11. Year of study in university: Year 3

12. Gender: Female

13. First language: Cantonese

14. Use of English result in the Hong Kong Advanced-Level Examination: B

10.15.3.2. Chinese Transcript of Interview

1. 問：你認為詞典對翻譯多重要？

答：我覺得最重要是提醒自己的詞彙，那個字是怎樣用，除此以外已經沒什麼用。[你意思即.....] 即是你忘記了一個字怎樣用或怎樣拼，於是就 check 一下字典。或者如果你.....那些 thesaurus 或同義詞詞典可以幫助你找到合適的字。[你剛才說「提醒你的詞彙」，你的意思是.....查詞典是查你已經會的詞彙?] 不是，可能是你忘記了某個字.....因為我們的 vocab. 已經是差不多的了，我覺得應該是差不多的了。見到的字，例如你見到不會的字，那就去查，去查它的解釋。如果你去查你已經會的字，那可能是忘記那個字怎樣解，去 check 它的 meaning, check 它的拼法。如果是特別一點的字典，例如同義、詞林這類，就可以幫你去查合適的字。[那重要嗎?] 重要。

2. 問：請簡述你平常做漢英翻譯時，怎樣從漢英詞典找「適合」的詞語來用。

答：其實是憑經驗。我信賴自己看英文的習慣，於是就知道用哪一個英文字是對，我不會.....而且漢英詞典也不會教你選哪一個字，只會 list 所有英文字出來。[即是憑你當時查詞典看到的英文詞來判斷？你的經驗會告訴你怎樣選呢?] 因你多看英文就知道它行文是怎樣。你會知道什麼時候用什麼字。[你的意思是不是憑直覺?] 也不是憑覺的。如果你不熟那個字，就再查英英詞典，或英中的 dictionary, 再看看裏面的解釋，再看看怎樣用，從 examples 看看怎樣用。[換句話說，當你選詞彙時，會著重意義較多?] 對啊，那當然啦。漢英一定是用中文字去選英文字，所以一定是 meaning。

3. 問：你做漢英翻譯時，通常會用哪種詞典？即語言組合方面。

答：我不太知道這種叫什麼字典，我只會用這一本，不如你告訴我。[即你會用漢英詞典?] 是，用漢英詞典。如果裏面有字我不會，就用英英。如果.....老師教.....如果還是不知道那個英文字是不是這樣組合，就打進網上的 search engine 去，即直接打那句上去，看它會不會直接顯示出來。[即慣用法?] 是慣用法。

4. 問：你使用漢英詞典時有沒有困難？

答：好像沒有。[沒什麼困難?] 除非找不到那個字。呀，或者.....試過有一次找盛飯的工具，不知道怎樣說，找出來的英文卻不對，不 idiomatic。詞典隨便顯示一個英文出來，那個英文是錯的。後來問老師。[你查詞典時很少遇到困難，只不過有時不知道查出來的英文對不對?] 不過那個是專有名詞，不是 verb; verb 大多數都會。

5. 問：你在中學或大學時老師有沒有教過怎樣使用漢英詞典？

答：沒有。

6. 問：假設有老師教你怎樣用漢英詞典，你覺得對你做翻譯有沒有幫助？

答：我覺得除非那本詞典有特別的 function, 要解釋，不然老師不需要特別解釋。[解釋怎樣用?] 是，解釋怎樣用。[為什麼?] 為什麼？我覺得我現在

用的那本用法很簡單，我沒有看過其他的。就是找出要查那字的普通話，然後去查。我會用。

7. 問：你認為自己需要接受漢英詞典應用訓練嗎？

答：不是太需要。[你認為學怎樣用漢英詞典，是學什麼的呢？] 可能是變成.....不是太清楚，不知道會教什麼。

8. 問：你認為翻譯課程中，詞典應用訓練重要嗎？

答：不是太重要，不過它要告訴我有什麼類型的字典。漢英方面只有詞典，沒有其他方面；但是反而.....漢英詞典大大小小都相同，大同小異；反而它要告訴我們哪一本詞典好，收詞量多。這樣就夠。假如是英英的話，就有必要告訴我們英文有哪幾類，例如 **phrasal verbs, idioms**，那些叫做.....委婉語， **euphemism**。因為我中學時.....我到大學才知道原來英文分那麼多東西。

9. 問：你認為自己查漢英詞典有效率嗎？

答：有。我用的那本詞典幫到我。[你用的那本詞典幫到你的意思是選的詞適合你？] 是，還有通常都找到我想要的，除非有個別，好像我剛才說的專有名詞，就沒有那麼 **idiomatic**，要問過外國人才知道。

10. 問：你還有沒有其他查考漢英詞典的經驗想分享？

答：沒有.....香港很多中學生都不知道有漢英詞典。或者.....裏面有普通話，介紹了也不會知道怎樣用。

11. 修讀年級：三年級

12. 性別：女

13. 第一語言：粵語

14. 高級程度會考中 Use of English 的成績：B

10.15.4. Subject Four

10.15.4.1. English Transcript of Interview

1. Q: How important do you think is dictionary to translating?

A: It's indispensable. In translation, no matter how good your English and Chinese are, the context and the subject matter are very important. There may also be many technical terms. I think references can make translation more accurate.

2. Q: How do you usually choose the "right" word from the dictionary for translation?

A: The first step is that I have to find out what is in the Chinese that I don't know how to translate. Usually.... For example, there are many words close in meaning from the C-E dictionary. Usually, I will check them up with the E-E dictionary. There may be nuances in the English words that I have to find out from the E-E dictionary. Based on my experience in using English, and my own writing style, I will decide which word to choose. [That means you first check up with the C-E dictionary. If there is more than one definition...] There mostly is [Then you will consult the E-E dictionary?] Right. I must go to the E-E

dictionary.

3. Q: Which kind of dictionary do you use more often in Chinese to English translation? Why?

A: For Chinese to English translation, I don't use a large dictionary all the time. I may simply use on-line dictionary. For E-E dictionaries, I usually use Oxford. [E-E dictionaries.... That means you use on-line dictionaries more often. After using on-line dictionaries] turn to some other on-line dictionaries. [Do you mean after using the on-line C-E dictionary, you will turn to the on-line E-E dictionary?] Right. Why do I choose the on-line C-E dictionary for C-E translation? Not because I trust on-line dictionaries very much, but because they are updated more quickly, with neologisms. Even if I can't find them from on-line dictionaries, very often I can find them from Wikipedia. [That means this factor is very important to your using on-line dictionaries?] Yes.

4. Q: Do you have difficulties in using Chinese to English dictionaries for translation? If yes, what are they?

A: If it is with the printed version, especially the simplified Chinese version, by Putonghua *Pinyin*, it takes more time. Actually, I am not used to reading simplified Chinese. If it is web-based, I don't quite trust the translation from the dictionary, although I will judge myself. Over all, no matter it is the printed, web-based or the so-called digital version, you never get the word you want. You still need to ponder and revise the words. [Let me summarize. The difficulty with the printed version is that you aren't familiar with simplified Chinese.] That's right. [You also aren't familiar with Putonghua *Pinyin*.] This can be solved if I don't use the simplified Chinese version. I think printed dictionaries are more reliable. The editorial work is more serious. Yet I still need to make my own judgement over the choice of word. [The major difficulty with printed C-E dictionaries lies in simplified Chinese.] Right. [And the difficulty with web-based dictionaries is that their definitions aren't reliable.] Correct.

5. Q: Have you ever been taught how to use Chinese to English dictionaries in your secondary or university education?

A: Yes, but who to teach and what to teach also matter. The curriculum included this. Maybe my teachers in primary and secondary schools held conservative views. They were all against using the electronic dictionary. Even if I consulted the official web site of Oxford, they still considered it unreliable. Only printed dictionaries were reliable. But it's just the progress of technology. Also, they thought that when you checked up with the dictionary, you had to pay attention to usage, homonyms and antonyms. But I don't think you can learn all this from the dictionary. [Are you talking about the E-C dictionary, but not the C-E dictionary?] Secondary school students mostly use E-C dictionaries. [What if I focus on the teaching of the use of C-E dictionaries?] Neither primary nor

secondary school would touch on C-E dictionaries. Schools only emphasize English. [Then did you learn how to use the C-E dictionary?] No. [That means you haven't been formally taught how to use the C-E dictionary since primary school till now?] No. [And you talked about E-C dictionaries at the beginning?] Right.

6. Q: Suppose you had been instructed on how to use the C-E dictionary by your teacher, would you find it useful to your translating?

A: I wouldn't find it useful, as it would only teach you how to search more efficiently. The basic problem wouldn't be resolved. The problem isn't that we don't know how to use the dictionary. Is it really that difficult? Maybe you will say that I don't pay proper regard to it. But what would the difference be after the instruction? [That means not helpful?] Not at all.

7. Q: Do you think that you need to receive any Chinese to English dictionary use instruction?

A: It won't teach me anything. I think it is rather convenient to use the dictionary nowadays. It's very user-friendly. Teaching people how to use the dictionary is like the library conducting classes to teach people how to use its databases, thinking that people don't know how to use the computer. [That means to you it's basically unnecessary?] Right.

8. Q: How important should dictionary use training be in the translation curriculum?

A: Unimportant. Actually, we know how to use it. [That means your classmates in general do?] Yes. How to put it? Dictionaries vary in their editing styles. Certain kinds of dictionary are for checking up word examples, e.g. word origin. Dictionaries vary in their functions. That's all about it. But we don't need to use so many functions. It's just for our information. [So it's basically not important?] Right.

9. Q: Do you consider yourself an efficient user of the Chinese to English dictionary?

A: Efficient....The on-line dictionary is very efficient. Right after your input, results are shown in an instant. Rather, is translating itself very efficient? [Let us focus on the process of using such reference.] In fact, checking up with the dictionary is very fast. A click leads you to many word choices. But to pick up the right one is another matter. [Checking up with the dictionary is to see if this reference can help you solve your translation problems....] A good dictionary can achieve this. Why is translation done by human but not machine? The key is that it takes human to do the analysis. So many words are available, how do you make the choice? To choose one but not the other, that's the difference between human and machine. A good and reliable dictionary can provide every possible sense of a word. It can't tell you which sense to choose, but it's fulfilled its function. [Let me confirm with you: when you use the C-E dictionary, no matter the on-line or

printed version, do you find yourself efficient?]) Yes.

10. Q: Do you have any points to add about your experience with Chinese to English dictionary use?

A: I think there should be several dictionaries for consultation. Translating stuff of different subjects requires different specialized dictionaries. A general dictionary is not of much use. Many proper nouns can only be found in specialized dictionaries. The definitions of general dictionaries are too awkward. At the end, you still have to resort to classmates specialized in that area. [That means you can't rely on one dictionary?] No. If you don't quite understand the original passage, you shouldn't trust one single dictionary. The key function of the dictionary is to provide definitions of a word. It's indispensable to translators. But for some specialist areas, literal English translation just doesn't work. The technical terms are different. So I think, for consulting C-E dictionary.... For example, if you are translating legal documents, you should consult dictionary of that area.

11. Year of study in university: Year 2

12. Gender: Female

13. First language: Cantonese

14. Use of English result in the Hong Kong Advanced-Level Examination: D

10.15.4.2. Chinese Transcript of Interview

1. 問：你認為詞典對翻譯多重要？

答：重要程度是不可或缺的。在翻譯上面，就算你的中英文程度有多好，始終翻譯要注重上文下理，還有翻譯範圍究竟是在哪方面，還有可能有很多專用名詞。我認為需要一些工具書才能令翻譯準確。

2. 問：請簡述你平常做漢英翻譯時，怎樣從漢英詞典找「適合」的詞語來用。

答：步驟是首先我要了解漢語裏面有什麼字是我不知道怎樣譯的，通常.....例如在字典裏找到很多近似的解釋，通常會再查英英字典。英文有很多字箇中可能有微小分別，我會再查英英字典，找出裏面有什麼不同。然後根據自己以前用英文的經驗，還有自己的 writing style，再決定選用哪一個字。[即是說你查漢英詞典後，看到有超過一個解釋.....] 多數都超過一個的 [那你就會再查英英詞典?] 沒錯，是一定會再查英英字典。

3. 問：你做漢英翻譯時，通常會用哪種詞典？即語言組合方面。

答：漢英的話不是每次都用那麼大部的字典。可能對著電腦用網上的 dictionary 就算了。反而英英字典方面，自己慣用 Oxford。[英英詞典.....即你較多用網上詞典，用完網上詞典後] 還是用網上字典。[即用完網上漢英詞典後，再用網上英英詞典?] 對啊，為什麼我平常會選網上漢英字典做中譯英呢？不是因為我很信賴網上字典，而是網上字典 update 得快，還有多新詞。就算那些網上字典找不到，很多時在 Wikipedia 也一定找得到。[即這

一方面對選用網上詞典是重要的？] 是。

4. 問：你使用漢英詞典時有沒有困難？

答：如果用印刷版本，尤其是簡體版，其實我很不慣用簡體，不大喜歡簡體；還有要用拼音查，時間比較多。如果是網上的，真的是不太信賴譯出來的東西；不過自己會判斷。反而整體來說無論是印刷版或是網上版，或是所謂的數碼版，你永遠都得不到你想要的字。還是需要自己再斟酌、再調整。[讓我簡單總結一下。如果是用印刷版的困難，是你不熟悉簡體字。] 不錯。[另外要用漢語拼音也是不熟悉。] 基本上如果我不用簡體版，這個問題就已經解決了。我認為印刷版的字典比較可靠，因為始終修訂比較嚴格，不過始終對用字自己還是要調整。[即用印刷版的漢英詞典主要困難只是不熟悉簡體字。]沒錯。[而用網上詞典的困難是覺得它提供的解釋不可靠。] 是。

5. 問：你在中學或大學時老師有沒有教過怎樣使用漢英詞典？

答：也有，不過誰教和教什麼也是有關係的。課程裏有包含這方面。可能我讀小學、中學時老師的思想比較保守，她們一概反對用 **electronic dictionary**，就算是我在 **Oxford** 的官方網站查，她們也覺得不可靠，一定是一本書印了出來，才是可以信賴的字典。我認為這只是科技進步。其次她們認為查字典要注意 **usage**、同義字、反義字，但是這些我認為不是全部在字典裏學的。[你剛才一直在講的是英漢詞典，不是漢英詞典？] 中學多數是用英漢字典。[如果我特別問到漢英詞典應用的教導呢？] 中小學都不會教漢英字典，因為學校只著重英文。[那有沒有在哪裏學過怎樣用漢英詞典？] 沒有。[即從小學至大學都沒有人正式教過你怎樣用漢英詞典？] 沒有。[而你剛才一開始說的是英漢詞典？] 沒錯。

6. 問：要是你有機會接受漢英詞典應用訓練，你覺得對你做翻譯有沒有幫助？

答：我覺得幫助不大，只是純粹教你尋找的方法怎樣變得更有效率。我認為根本的問題解決不了。不是我們不會用，那有多困難呢？或者可能你覺得我不重視它。學完後有什麼大分別呢？[即沒有什麼幫助？] 沒錯。

7. 問：你認為自己需要接受漢英詞典應用訓練嗎？

答：它教不到我什麼。我覺得現在查字典是很方便的事，很 **user-friendly**。我覺得教怎樣查字典，跟圖書館特別設立一些 **class** 去教人怎樣用它的 **database** 一樣，擔心你不會用電腦。[即對你來說基本上是不需要的？] 是的。

8. 問：你認為翻譯課程中，詞典應用訓練重要嗎？

答：不重要。其實我們自己會。[即一般同學都會？] 會。怎麼說呢？字典嚴謹有別，什麼字典 **for** 查什麼字例如詞源，不同字典有不同功用，我想教的也是這些。可是我們不需要用這麼多，我們知道就算了。[所以基本上是不重要的？] 沒錯。

9. 問：你認為自己查漢英詞典有效率嗎？

答：效率.....網上詞典真的有效率，你一輸入，幾秒鐘已經給你答案。反而是翻譯本身是不是很有效率呢？[我們集中在用這類工具書的過程。] 其實查字典是比較快的。你一按一個鍵就有很多字讓你選，可是自己怎樣取捨就是另一回事。[查詞典的最終目的是看這些工具書是不是能夠幫助你解決翻

譯問題.....] 一本好的字典就可以達到這個效果。爲什麼翻譯始終是人手做不是電腦做，分別就在於人腦要做分析。它給你那麼多字，你怎麼選呢？爲什麼選這個字而不選那個，這就是人做而不是電腦做的分別。但是工具書如果是一些可靠的字典，能夠提供一些解釋，已經可以完全涵蓋它的意思，即每一個意思都有；你要哪一個意思它不知道，它是死的，那個作用就已經達到。[那如果我再確切問一次，你查漢英詞典，無論是網上版或者是印刷版，你覺得自己有沒有效率？] 有。

10. 問：你還有沒有其他查考漢英詞典的經驗想分享？

答：我覺得字典要多查幾本，譯不同的東西要用不同的專科字典。一本很籠統的詞典幫助不大。很多名詞一定要找專科詞典。一般的漢英詞典提供的解釋很生硬，最後還是要找念那方面專科的同學來問。[即是不可以倚靠一本詞典？] 是。即例如自己對原文本身認識不夠，就不要單信字典。字典最要緊是解釋一個字有什麼意思，是翻譯工作者不可少的。可是一些專門的知識，你看著字面的意思，明明英文這樣譯是通的，可是專有名詞本身不是用這個。所以我認爲查漢英字典.....例如你譯法律的，就要查法律方面的。

11. 修讀年級：二年級

12. 性別：女

13. 第一語言：粵語

14. 高級程度會考中 Use of English 的成績：D

10.16. Transcripts of the First 15 Minutes of the Think-aloud Exercise

The words in { } are the Putonghua enunciated by the subject. Chinese words under search and originally in Cantonese are also Romanized in the *Pinyin* system in quotation marks in the English transcripts.

10.16.1. Subject One

10.16.1.1. English Transcript of Think-aloud Exercise with Coding

Think-aloud protocol segment	Executive operations	Cognitive operations	Meta-cognitive operations
1. I will read the text once first.			PL
2. “E4dou4” has to be checked up for any English expression.			PL
3. “Hu Fei” is a person’s name. I will use <i>Pinyin</i> .			PL
4. “Yi1sheng1cong2wei4yu4guo4”, I will render it as “he had never encountered this in his life”.	RT	T	
5. “Wu3gong1” has to be checked up.			PL
6. “Yi2shu1”, “yi2shu1”, I guess using “will” should be alright.		T	
7. But I think the “zhao1shu4” after it has to be checked up.			PL
8. “Bi4jing4qian4que1”...”gong1li4huo3hou2” is an abstract concept. I have to change it to a common English expression.	RT		PLT
9. “Nian2qing1li4zhuang4, jing1li4yuan3sheng4guo4dui4fang1, shi4yi3shu4shi2zhao1zhong1da3de0nan2 jie3nan2fen1”, I guess four-character idioms like “nan2jie3nan2fen1” may be found from the dictionary.	RT		PL
10. “Liang3ge4ren2die2yu4xian3zhao1, dan4jun1zai4ji2jin3ji2xia4yi3qiao3miao4 zhao1shu4chai1kai1”. I think “die2yu4xian3zhao1” can be translated as sort of “wei1xian3qing2kuang4”.	RT	T	
11. “Fen4li4chai1dou4, xin1zhong1pui4fu2: ‘Jin1mian4fo2...’”, “Jin1mian4fo2” involves	RT		PLT

cultural issues. It has to be handled by a combination of literal translation and paraphrasing.			
12. In “Miao2da4xia2”, “da4xia2” has to be checked up as well.	RT		PL
13. “Guo3ran2ming2bu4xu1chuan2”, the four-character idiom has to be checked up.	RT		PL
14. “Ruo4ta1nian2qing1er4shi2sui4, wo3zao3yi3bai4le0”, this part is manageable.	RT		PL
15. Now I start to check up the highlighted words.	BLT		
16. First, I will check up “e4dou4”. I am using <i>New Age Chinese-English Dictionary</i> [hereafter the <i>NACED</i>].	BLT		
17. “E4dou4” is {e4}.	RP		
18. I find the entry {e4}, and see the word “e4dou4”.		L	
19. There are two definitions: “fierce fight”, or “ferocious fight”, ”ferocious feat fight”.	RD		
20. I think ”feat fight” is like two people boxing, not quite suitable here. I guess it is okay to use “fierce fight”.		CD	
21. Then I will translate the first clause, as it is shorter.			PLT
22. “And this fierce fight are [<i>sic</i>]”...I will first transliterate “Hu2Fei1” as “Hu”. ”Hu has”...well...there shouldn’t be, no, shouldn’t be one clause in English. ”This fierce fight was something that Hu has never [<i>sic</i>] encountered in his life”.		T	PLT
23. Then it is “wu3gong1”. I am still using the <i>NACED</i> by <i>Pinyin</i> .	BLT		PL
24. “Wu3gong1” starts with {wu3}, {wu3}, {w-u}. {W-u}, “wu”, “wu”, “wu”, “wu3shi4dao4”; “gong1” starts with [g].			ISP, ISS
25. Got “wu3gong1”.	RH		
26. Well, one definition is out of consideration: “wen2zi4wu3gong1”. Out. It should be the second definition: “martial arts”.		CD	
27. Three expressions are listed: ”martial arts, wushu”, that is a transliteration by <i>Pinyin</i> ; and		RGD	

“kungfu”.			
28. I think this describes his competence in martial arts.	RD		
29. I will use “his”.		T	
30. “Kungfu” suggests strongly to foreigners that it is like that of Bruce Lee’s, like “ <i>Wing Chun</i> fists”. It doesn’t suit the context here. I won’t use “kungfu”....		RED	
31. [babbling] “All his ability in martial arts was acquired from his father’s will.”		T	
32. I will first end this clause, and check up “zhao1shu4”. I am still using the <i>NACED</i> by <i>Pinyin</i> .	BLT		PLT, PL
33. “Zhao1”, [z]...got it {zhao1}, “zhao1shu4”, {zhao1shu4}, {shu4}. Got it.		L	ISP, ISS
34. There are two definitions, no, three: ”move in chess or movement in wushu or martial arts”; or “trick” or “device”.		RGD	
35. I guess “move in chess” is irrelevant. But about “movement in wushu”, it reads bizarre if “movement in wushu” or “movement in martial arts” is directly used.		CD	
36. Maybe I can find a substitute for “trick”. Maybe I can check up “zhao1shi4” for a close equivalent, for “zhao1shi4” seems to be related to “wushu”...it...but the definition it gives is more or less the same: “movement and posture”.		RSM	
37. I will check up with another dictionary: <i>Chinese-English Dictionary</i> .	SS		
38. It uses the stroke system: two three four five six, eight strokes. Eight strokes, with the radical “shou3”, on page 171, 171, 171.		SSR, L	
39. There are only “zhao1dai4” and “zhao1mu4”. No further reading needed.	RH		MO
40. I decide to find a suitable expression from those definitions I have just checked.			ET
41. “Zhao1shu4” can be rendered as “movement”, I think. “Movement and posture” is better. ”The movement and posture he learnt were of high		CD, T	

standard.”			
42. “Jing1miao4” will be replaced by “high standard”. ”But he lacks in [<i>sic</i>] practical experience.”		T	PLT
43. I plan to cut the following part into two clauses, for the Chinese is too long. “Gong1li4huo3hou2”, I will use the <i>NACED</i> for check-up by <i>Pinyin</i> .	BLT		PLT
44. “Gong1li4”, “gong1”, “gong1”, “gong1”...I see “efficacy”, effectiveness, efficiency”, or “skill”, “ability”.		RGD	ISP
45. There is one example sentence: “gong1li4hen3shen1de0ge1chang4jia1”. The English is “a singer of high standard”.	RX		
46. I guess this expression may be suitable. “Gong1li4huo3hou2yin1nian2sui4suo3xian4, yi4wei4zhen1shang4cheng2”.	RT	A	
47. But the “hao3zai4” after it indicates a turn. Maybe “though” can be used, and a clause for concession can be constructed.			PLT
48. ”Although his”...[babbling] Well...I think I will use the word “efficacy”.		T	PLT
49. ”Although his efficacy is bounded by age, and was not of high calibre”.		T	
50. Then it comes to “hao3zai4nian2qing1li4zhuang4”.	RT		
51. ”He is still young and strong, as he...he was much more energetic than his opponent.”		T	
52. I will then check up for a fitting explanation of “nan2jie3nan2fen1”, starting with [n], with the <i>NACED</i> .	BLT		ISS
53. “Nan2”, “nan2”, “nan2”, “nan2jie3nan2fen1“, I got it very easily.		L	ISP
54. “Zhe4chang3qi2sha1de0nan2jie3nan2fen1”.	RT		
55. There is one explanation, whose usage is similar to my case here.		FU	
56. It says, “reached the”.... “The chess game reached the stage where the players were locked in a stalemate.”	RX		

57. I will see if this can be used here.		FX	
58. “This is why they were locked in a stalemate.”		T	

10.16.1.2. Chinese Transcript of Think-aloud Exercise

我先看一次這篇文章。「惡鬥」要查一查，看看英文裏有什麼表達方式。「胡斐」是人名，會用拼音。「一生從未遇過」我想會譯作“he had never encountered this in his life”。跟著「武功」也要查一查。「遺書」，「遺書」，我想用“will”應該沒有太大問題，但是後面的「招數」我想也要查。「畢竟欠缺」……「功力火候」是很抽象的概念，我想要將它轉為一個較常用的英文字。「年輕力壯，精力遠勝過對方，是以數十招中打得難解難分」，我想「難解難分」這個四字成語可以看看詞典裏面有沒有。「兩個人迭遇險招，但均在極緊急下以巧妙招數拆開」。我想「迭遇險招」可以譯作「危險情況」之類。「奮力拆鬥，心中佩服：『金面佛……』」，「金面佛」就牽涉到文化的問題，那就看看用半直譯半意譯方法去處理還是怎樣。「苗大俠」，我想「大俠」這個字也要查一查。「果然名不虛傳」，我想四字成語也要查一查。「若他年輕二十歲，我早已敗了」，這個部分就沒有什麼問題。

那我開始查剛才決定查的字了。首先查「惡鬥」，我用《新時代漢英大詞典》。「惡鬥」是 [e4]。查到「惡」字了。看到「惡鬥」這個字。有兩個解釋：“fierce fight”，或者“ferocious fight”，“ferocious feat fight”。我想“feat fight”真的像兩個人互相打拳那樣，好像不是很適合。我想用“fierce fight”也沒有什麼問題。那我會先開始譯前面這一句，因為這一句比較短。“And this fierce fight are [sic]”……「胡斐」我會先譯為“Hu”。“Hu has”……嗯……應該不是，在中文，不是，在英文應該不是一個 clause。“This fierce fight was something that Hu has never [sic] encountered in his life”。跟著就查「武功」。還是《新時代漢英大詞典》，用拼音查的。「武功」是 [wu3]，[w-u]。[w-u]，「武」，「武」，「武」，「武士道」；「功」是 [g]。查到「武功」了。嗯，有一個解釋應該不合用了，它說「文字武功」，不合用。應該是後面第二個解釋“martial arts”。它列出了三個字：“martial arts, wushu”，即用中文拼音直接翻譯，和“kungfu”。我想這裏是說他武學方面的能力，我想我會用“his”。我想“kungfu”會讓外國人很強烈以為是李小龍式的那一種，詠春拳的功夫，好像跟這裏的不是很吻合，所以我不會寫“kungfu”這個字。……[babbling] “All his ability in martial arts was acquired from his father’s will.” 跟著我會先斷句，然後查「招數」這個字。還是用《新時代漢英大詞典》，用拼音查。「招」，[z]……查到了 [zhao1]，「招數」，[zhao1shu4]，[shu4]，查到了，它有兩個解釋提供，啊，不是，有三個：“move in chess or movement in wushu or martial arts”，或者是“trick”和“device”。我想“move in chess”不是很有關係；但是那個“movement in wushu”，如果直接用“movement in wushu”或者用“movement in martial arts”，又會有些奇怪。我想可以用一個近似“trick”的字來代替。或者可以查「招式」這個字可以比較貼近貼切點，因為「招式」好像跟武術那方面……它……但它給的解釋還是“movement and

posture”。我想我會查另外一本字典，會查《漢英小字典》。要用筆劃查：二三四五六，八劃。八劃，八劃的「手」字部，171 頁，171，171，看到只得「招待」和「招募」，即不需要看了。我決定在剛才查到的解釋裏面看看有沒有合用的字。「招數」，我想其實可以用“movement”，”movement and posture” 會比較好。”The movement and posture he learnt were of high standard.” 「精妙」我會用“high standard” 來避過它。”But he lacks in [sic] practical experience.” 跟著後面部分我打算分為另外一句，因為這句中文句子太長了。「功力火候」我想用《新時代漢英大詞典》查一查，也是用拼音查。「功力」，「功」，「功力」，「功力」，見到有“efficacy”, effectiveness, efficiency”，或者是“skill” 和 “ability”，還有例句裏有一句說「功力很深的歌唱家」，它用“a singer of high standard”，我想這個字也可能適合。「功力火候因年歲所限，亦未臻上乘」，但它後面「好在」有個轉折，這樣可能用“though”，然後造一個有轉折的句子。”Although his”.....[babbling] 嗯.....我想我會用“efficacy” 那句。”Although his efficacy is bounded by age, and was not of high calibre”，跟著就是譯「好在年輕力壯」。”He is still young and strong”, as he...he was much more energetic than his opponent.” 跟著查一查「難解難分」有沒有適合的解釋；也是用《新時代漢英大詞典》，查 [n]。[nan2]，「難」，「難」，「難解難分」，很快見到。「這場棋殺得難解難分」，見到有一個解釋，應該跟這裏的用法情況差不多，它寫“reached the” “The chess game reached the stage where the players were locked in a stalemate.” 看看這裏可不可以用這個。”This is why they were locked in a stalemate.”

10.16.2. Subject Two

10.16.2.1. English Transcript of Think-aloud Exercise with Coding

Think-aloud protocol segment	Executive operations	Cognitive operations	Meta-cognitive operations
1. I will read the text once first. I will see and highlight the words that I don't know, and check them up with the dictionary.			PLT, PL
2. “Zhe4yi1fan1e4dou4”, I figure that there must be better words to express this “e4”.	RT		PLT
3. And I don't know the Putonghua <i>Pinyin</i> and pronunciation of “Fei1” in “Hu2 Fei1”.	RP		
4. I will use the dictionary to check it out.			PL
5. “Wu3gong1”...”Hu2 Fei1 yi1sheng1cong2wei4yu4guo4”. “Ta1wu3gong1quan2shi4ping2zhe0fu4qin0 zhuan2xia4yi2shu1xiu1xi2er2cheng2”,	RT		

6. I don't know the English of "yi2shu1". I will check it with the dictionary.			PL
7. "Xiu1xi2" has also to be checked up with the dictionary.			PL
8. Next is "zhao1shu4sui1ran2jing1miao4".	RT		
9. Will I find "zhao1shu4" from the dictionary? I will try.			ET
10. "shi2zhan4jing1yan4bi4jing4qian4que1", presently, what I can think up is...not many suitable words that I can think of.	RT		PLT
11. I will consult the dictionary later.			PL
12. "Gong1li3huo3hou2yin1nian2sui4suo3xian4", basically I don't think "huo3hou2" is translatable.	RT		PLT
13. Anyway, I will try to check it up with the dictionary.			PL
14. "Yi4wei4zhen1shang4cheng2", I will check up "shang4cheng2".	RT		PL
15. "Hao3zai1nian2qing1li4zhuang4", I guess I can manage it without the dictionary.	RT		PLT
16. "Jing1li4yuan3sheng4guo4dui4fang1", I think "jing1li4" may be translated by "stamina".	RT		PLT, UPR
17. I will see if it fits. I will check it up with the E-E dictionary.			PL
18. "Shi4yi3shu4shi2zhao1zhong1da3de0nan2jie3nan2fen1", I will try "nan2jie3nan2fen1" on the dictionary, but without much expectation.	RT		PL, ET
19. "Liang3ren2die2yu4xian3zhao1", I don't quite understand the Chinese meaning of "die2". I will try on Yahoo dictionary. There is Chinese definition, and I can figure the meaning out.	RT		PL
20. "Dan4jun1zai4ji2wei1ji2xia4yi3qiao3miao4zhao1shu4zhai1kai1", "zhai1kai1" may be translated by "solve".	RT		PLT, UPR
21. The E-E dictionary can provide some synonyms for my reference.			ET
22. "Hu2 Fei1 fen4li4zhai1dou4, xin1zhong1pui4fu2: 'Jin1mian4fo2Miao2da4xia2guo3ran2ming2bu4xu1zhuang2, ruo3ta1nian2jing1er4shi2sui4, wo3zao3yi3bai4le0.'"	RT		

23. Sometimes idioms like “ming2bu4xu1zhuan2” can be found in the dictionary. I will see if there are any useful words.			ET, PL
24. Then I start with “e4dou4”. I am searching on Yahoo on-line dictionary. I inputted the two characters “e4dou4”.	BLT, SS		SED
25. It gives me “grim”. It seems to be irrelevant, or just a little relevant. It shouldn’t be...	RD	CD	
26. Wait, I see one translation example in Yahoo dictionary. The Chinese is: “Wo3men0jing1li4le0chang3e4dou4, cai2ying2de0sheng4li4”. The English is “We have a grim struggle”.	RX		
27. What is in the dictionary should be right.			ET
28. But then it comes to “yi1fan1” in Chinese. The Chinese quantifier “fan1” is absent in English. I guess I will use “a grim struggle” from Yahoo dictionary. I am thinking to put “zhe4yi1fan1e4dou4” at the end, while starting the English clause with “Hu2 Fei1”.			PLT, UPR
29. Now I input “Hu2 Fei1” into Yahoo on-line dictionary.	BLT		SED
30. It usually provides Putonghua <i>Pinyin</i> : [F-e-i].	RP		ET
31. Now I start translating. “Hu Fei...”		T	PLT
32. Should I use the past or the present tense? It’s difficult to decide which tense to use without a context. English uses the present tense to show immediacy, and vividness. Or I should use the past tense, as things happened in the past. Without a context, with just a short passage, I’d better use the past tense. Then I write, “Hu Fei had never”.		T	PLT
33. I am thinking whether to use “meet” or “encounter” for “ou3yu4”. But I feel both words aren’t suitable.			PLT, UPR
34. I will try on Yahoo on-line dictionary.	BLT		SED
35. It gives me “to meet, to treat or receive”, or “a chance”.	RGD		
36. All three words aren’t right, not suitable for my text.		RED	

37. Then I translated it as “met” for the time being. ”Hu Fei had never met such a grim struggle in his life”.		T	PLT
38. I know “wu3gong1” is usually rendered as “martial art”. But in the original, “wu3gong1” is something he acquired by learning. “Martial art” doesn’t seem right.			PLT, UPR
39. I will try on Yahoo on-line dictionary to see if there will be any good result.	BLT		SED
40. Yahoo on-line dictionary writes: “Sorry, no results were found in this item.”	RAEN		
41. I am thinking hard on how “wu3gong1” can....			PLT
42. I will use the <i>NACED</i> . I am now inputting “wu3” of “wu3gong1” into Yahoo on-line dictionary, for it will give me the Putonghua <i>Pinyin</i> . I am not sure which tone the character is of. It says the third tone.	SS, RP		
43. Now I start to search in the <i>NACED</i> . I am now searching [w], the third tone.	SS, SH		ISS
44. I saw “wu3lin2”. It isn’t suitable. I got “wu3gong1”.		L, FEN	
45. In the entry there is a definition: “military feats”.	RD		
46. I feel that “feats” should be fine, for westerners call the skills and techniques “feats”. But I am not sure.		CD	
47. I have to check up with the E-E dictionary, with Cambridge on-line E-E dictionary.	SS		SLD, SED
48. It says “something difficult, needing a lot of skill or bravery”.	RD		
49. Now the examples. One of them is “The Eiffel Tower is a remarkable feat of engineering.” Another is “She has performed a remarkable feat of organization for the office.”	RX		
50. I am thinking if “feat” is a right word. If it is, I will use it.		FX	
51. I will say “He learn”, ”He learnt all the feats”.		T	
52. I am now searching how to translate “yi2shu1”, with Yahoo on-line dictionary.	BLT		SED
53. I suddenly realize that I have not finished reading			MO

all the entries of “wu3gong1” in the <i>NACED</i> . I now take a longer look.			
54. I see...well, “wu3shu4” is also rendered “martial arts” here. “Gong1fu0” becomes “kungfu” in English.	RD	RSM	
55. Maybe “martial arts” can also be considered, for I saw it...I am thinking if “martial arts” can be used in this way....		CD	
56. I will see if there is any example from the E-E dictionary, and how it is used. I am on Cambridge E-E on-line dictionary.	SS		MO, SLD, SED
57. It means “a sport that is a traditional Japanese or Chinese form of fighting or defending yourself”.	RD		
58. An example is “Kungfu and karate are martial arts.”	RX		
59. In this light, ”martial arts” refer to “wushu”, some fighting activity or sport. But “wu3gong1” in the original should mean the moves.		CD	
60. I think...I will...I try to read it out: ”He learnt all the martial arts from his father”...		T	
61. It doesn’t seem right....			PLT
62. [Babbling] Then I go on with the search for “yi2shu1”.	BLT		
63. Yahoo on-line dictionary gives me this: ”posthumous papers, a letter of note, or a note left by one immediately before death”.	RD		SED
64. This is too long, not suitable. “Ancient books scattered or lost” isn’t right either, for “yi2shu1” was left by the father.		CD	
65. I don’t know the meaning of “posthumous” in ”posthumous papers”. I have to check it up from the dictionary.			UPR
66. I am searching on Cambridge on-line E-E dictionary.	SS		SLD, SED
67. One of the definitions says that it is an adjective, meaning ”happened after a person’s death”.	RD	FG	
68. It seems right.		A	
69. Then I translated it as “all the deeds from a posthumous letter from his father”. It should be		T	

“of his father”, or “left by his father”.			
70. Now it comes to “zhuan2xia4”. For the time being, I use “left by”. But the meaning of “zhuan2xia4” is a little different from “left”.			PLT, UPR
71. I am searching on Yahoo on-line dictionary for better choices.	BLT		SED
72. Apart from “left”, others like “hand down, pass, summon” aren’t suitable.		CD	
73. I will see what other Chinese characters combine with “zhuan2” to form words, and then check them up with Yahoo on-line dictionary. No idea yet.			UPR, SED
74. “Left by his father” then.		T	
75. I see in the original “xiu1xi2er2cheng2”.	RT		
76. I think words like “xiu1xi2”, “xiu1lian4” can be found on Yahoo on-line dictionary.	BLT		UPR, SED
77. Now I input “xiu1xi2” in the dictionary.	SH		
78. As I expected, there is no such entry.	RAEN		
79. Then I try “xiu1lian4”. I am inputting “xiu1lian4”.	SS, SH		
80. Maybe I input the wrong data.			ET
81. There is no such entry either.	RAEN		
82. I try “xiu1” again. See if there is anything usable with words starting with “xiu1”.	RH		
83. None either.	RAEN		
84. I will check...I will input the character “xiu1” to check its tone. It’s the first.	RP		
85. I will check...by <i>Pinyin</i> , in the first tone, with the <i>NACED</i> .			ISP
86. I am searching for the first tone of [x-i-u].			ISS
87. I turn to page 1742, and find “xiu1”. See if there are any words related to “xiu1xi2”, “xiu1lian4”.		L	

10.16.2.2. Chinese Transcript of Think-aloud Exercise

我首先將原文看一次。我會看一下有什麼字是不懂的，我會劃出來，然後查字典。「這一番惡鬥」，我會覺得這個「惡鬥」可能在字典查到比較好的用詞來形容這「惡」字。而「胡斐」的「斐」字我也不太清楚它的普通話讀音、拼音，等一下我會用字典查一查。「武功」這個字.....「胡斐一生從未遇過」。他武功全是憑著父親傳下遺書修習而成，我不懂「遺書」的英文，等一下我會查字典。「修習」這個字，

我想等一下也會查字典。跟著的一句是「招數雖然精妙」，我想「招數」這個字字典會不會有？我會試一下。「實戰經驗」，我暫時想到……「實戰經驗畢竟欠缺」，我暫時想到的是……也想不到很多適合的字可以選擇，等一下我也會查字典。「功力火候因年歲所限」，基本上我想「火候」這兩個字是不可譯的，不過我還是會查字典看看。「亦未臻上乘」，我會查「上乘」這兩個字。「好在年輕力壯」，我想這一句應該不用查字典。「精力遠勝過對方」，我想「精力」這幾個字，可以、大概有個英文字叫“stamina”，看看合不合用。我會查英英字典看看合不合用。「是以數十招中打得難解難分」，我想「難解難分」可以試試查字典，不過沒有什麼大期望。「兩人迭遇險招」，這個「迭」字的中文解釋基本上我不是很清楚，我想會查 Yahoo 字典，因為 Yahoo 字典會有中文解釋，就會看看，就會猜到那個字是什麼意思。「但均在極危急下以巧妙招數拆開」，「拆開」可能會用“solve”，可以查查英英字典，會提供其他 synonyms、同義詞讓我參考一下。「胡斐奮力拆鬥，心中佩服：『金面佛苗大俠果然名不虛傳，若他年輕二十歲，我早已敗了。』」「名不虛傳」這類四字成語有時候可能在字典找得到，我會看看有沒有可以用的字。

那就先查「惡鬥」試著開始了。我在 Yahoo 網上字典。我輸入了「惡鬥」兩個字上去，它就給我一個“grim”，跟我輸入的無關係，有一點關係，又不太相關的字出來。我覺得應該不是……啊，我看到有一句譯文，即 Yahoo 字典有句英文句，中文是：「我們經歷了場惡鬥，才贏得勝利。」而 Yahoo 網上字典有句：“We have a grim struggle”，在字典裏出現就應該是對的了；但是現在要想中文的「一番」，「番」字這些中文量詞在英文裏是沒有的。我想我會用好像 Yahoo 網上字典那樣用“a grim struggle”。我現在在想將「這一番惡鬥」在譯文中調往後面，由「胡斐」開始。現在我輸入「胡斐」到 Yahoo 網上字典，它通常會有普通話拼音：[F-e-i]。那就開始譯了。“Hu Fei...”我在想應該用過去時態還是現在時態，但因為我沒有前文下理，很難想，不知道應該用過去時態還是現在時態。但現在時態呢，英文有時用現在時態來譯，就可以表達到，即可以更即時、更精采。但是用過去時態呢，因為事情是過去發生，我想沒有上文下理，前文後理，其中一段，我會用過去時態。那我就寫“Hu Fei had never”，「遇過」這個字我在想用“meet”還是“encounter”。但是我覺得這兩個字都不是很適合。我會試查 Yahoo 網上字典。Yahoo 網上字典給我“to meet, to treat or receive”或者“a chance”，我覺得三個字都不對，或者對我的譯文都不適合。那我暫時先譯為“met”。“Hu Fei had never met such a grim struggle in his life”。「武功」這個字我知道通常譯做“martial art”，但是中文原文“martial art”這個字，即「武功」這個字，是講他學成回來的武功，如果譯作“martial art”，我覺得不大適合。我就試查 Yahoo 的網上字典，看看有沒有什麼好結果。查 Yahoo 網上字典，它說：「很抱歉，找不到要查詢的資料。」我在苦思「武功」究竟怎麼……我會查《新時代漢英大詞典》。我現在在 Yahoo 網上字典輸入「武功」的「武」字，它會給我普通話拼音；我不知道它第幾聲，它告訴我「武功」的「武」字是第三聲。那我就開始查《新時代漢英大詞典》。現在在找 [w]，找第三聲。我看到「武林」，「武林」應該不是很適合。看到「武功」，「武力」裏有一個解釋，《新時代漢英大詞典》有個解釋叫做：“military feats”。我看到“feats”這個字覺得頗

適合，因為西方人談到學到什麼技能、特技都說 “feats”，但是我不肯定。我要再查英英字典，查劍橋網上的英英字典，看 “feats” 這個字。它說 “something difficult, needing a lot of skill or bravery”。那我就看看它的例句，其中一個例句是 “The Eiffel Tower is a remarkable feat of engineering.” 還有 “She has performed a remarkable feat of organization for the office.” 我在想 “feat” 這個字合不合用，如果適合的話，就會用。我會說 “He learn”，”He learnt all the feats”。我現在查「遺書」這兩個字怎樣譯。我查 Yahoo 網上字典。我想起剛才查《新時代漢英大詞典》，對於「武功」的英文字，我還沒有看完全部的 entries。我現在再看清楚一些。我看到.....啊，它將「武術」也譯做 “martial arts”，還有個「功夫」，即英文的 “kungfu”。可能 “martial arts” 這個字也可以用，因為我見到它.....我在想 “martial arts” 這個字是不是可以用在這一方面。.....我試查英英字典，看看有沒有例句，看看怎樣用。在查劍橋網上英英字典。它的意思是 “a sport that is a traditional Japanese or Chinese form of fighting or defending yourself”，有個例句就是 “kungfu and karate are martial arts.” 我這樣看的話，”martial arts” 通常就是一些武術，形容一些打鬥的活動、運動。但是原文裏面的「武功」應該是指招式。我想.....我會.....我現在試讀一下：“He learnt all the martial arts from his father”.....我覺得不是很適合.....[babbling]，那我就繼續查「遺書」這個字。Yahoo 網上字典給了我幾個字：“posthumous papers, a letter of note, or a note left by one immediately before death”。我覺得太長，應該不合。“Ancient books scattered or lost” 就不適合，因為「遺書」是爸爸留給我的。“Posthumous papers” 這個 “posthumous” 我不知道怎樣解，我就查字典。我在查劍橋網上英英字典，它其中一個解釋是將這個字形容為一個形容詞，“happened after a person’s death”，我覺得這個字也合用，那我就譯作 “All the deeds from a posthumous letter from his father”，應該寫 “of his father”，或者是 “left by his father”。現在看到「傳下」這兩個字，我暫時用 “left by”，但「傳下」的意思就和 “left” 有點不同。我在查 Yahoo 網上字典，看看有沒有比較好的字。除了 “left”，例如 “hand down, pass, summon” 這些字都不適合。我會再看看中文有什麼和「傳」這個字拼合成詞語，再查 Yahoo 字典。暫時還想不到，那暫時就用 “left by his father”。我看到原文有「修習而成」，我覺得「修習」、「修練」這些字查 Yahoo 網上字典或許會有一些好字，可以找出來，那就輸入「修習」到 Yahoo 網上字典。「修習」一如我所料，是沒有的。那我就查「修練」。我現在輸入「修練」。可能我輸入錯了。我輸入「修練」，Yahoo 網上字典沒有解釋。我再輸入「修」字，看它拼法相似詞彙有沒有「修什麼」、「修什麼」是合用的，發覺也是沒有的。我會查.....我會再輸入「修」字，看它第幾聲。是第一聲。我再查.....用拼音第一聲，再查《新時代漢英大詞典》。我正在查 [x-i-u] 的第一聲。我翻到 1742 頁，看到「修」字，看它有沒有詞語跟「修習」、「修練」有關。

10.16.3. Subject Three

10.16.3.1. English Transcript of Think-aloud Exercise with Coding

Think-aloud protocol segment	Executive operations	Cognitive operations	Meta-cognitive operations
1. I learnt about this piece before.	RT		
2. I am checking up “feat” with the E-C dictionary.	BLT		SLD, UPR
3. “Feat”...”feat” can mean Kungfu, “move”.	RD		
4. I think it can mean “zhao1shu4”.		A	
5. And then I check up “yi2shu1”: “letter”...I am not sure if “yi2shu1” can mean “a letter”.	RD		
6. I am using the C-E dictionary. {Yi2shu1}, searching by Putonghua <i>Pinyin</i>	SS		ISP
7. I found it. It says “surviving works”, “posthumous work”, “collected writing”.		RGD	
8. [Babbling] This C-E dictionary doesn’t give me a noun, but a definition...		FEN	
9. I think... [Babbling] “left by his father”.		T	
10. “Zhuan2xia4yi2shu1xiu1xi2er2cheng2, zhao1shu4...”. [Babbling] I will start to translate.	RT		PLT
11. “E4dou4”, I have to check it up....	BLT		
12. {E4}, {e4dou4}, I don’t think I can find it.	RP		ET
13. Oh, here it is: “a fierce fight”....	RD		
14. “Zhe4yi1fan1e4dou4, Hu2Fei1 cong2wei4yu4guo4”. “Hu Fei”, capital letters H, F. It should be in the past tense. ”had never experienced such fierce””furious”, either “fierce” or ”furious” is okay.... “fierce fight before”.	RT	T	
15. “Wu3gong1”...”wu3gong1”...”wu3gong1”, I will check it up. {Wu3gong1}....	BLT		ISP
16. Here it shows “military accomplishment”. I find another meaning: ”stage fighting”.		RGD	
17. ”His fighting feat”, I guess I will write “his fighting feat”. ”His fighting feats were... inherited”, ”his fighting feats were inherited”. For “yi2shu1”, as it was about father and son, so I will use “inherited”...”from a book”, “from a book”, ”from...from letters by his dead father”. “Jing1miao4”, “zhao1shu4sui1ran2jing1miao4”, ”his fighting		T	

feats were all inherited from letters left by his dead father"... "his feats were..."			
18. "Jing1miao4", the word I have in mind is "miraculous"....			UPG
19. {Jing1miao4}... "exquisite". The dictionary gives me the word "exquisite".	RD		ISP
20. I check it up again....	SS		
21. "Jing1miao4", "refined", "delicate".... [Babbling] "Refined", "delicate", not found here.	RD	RSM	
22. [Babbling] I think, "His feats were... miraculous".		T	
23. "Jing1miao4"...I want to check it up again....			MO
24. Then I use "exquisite". "His feats were exquisite but he lacked real fighting experience".		A, T	
25. "Gong1li4huo3hou2yin1nian2sui4suo3xian4, yi4wei4zhen1shang4cheng2". I have to check up "huo3hou2".	RT, BLT		
26. "His feats"... I think of... "His feats were not refined".		T	
27. {Huo3hou2}, I will check up {huo3hou2}....	BLT		
28. [Babbling] "The level of attainment", "the level of attainment" is "huo3hou2".... "Crucial moment"... "the level of attainment"... "his level of attainment",		CD	
29. "His feats". I think "his feats" should be alright.... "Are not refined"...to translate "wei4zhen1shang4cheng2", "were not refined and not attaining the highest level". "His feats were not...attaining the highest level since he was still young"....		T	
30. "Hao3zai4nian2qing1li4zhuang4, jing1li4yuan3sheng4dui4fang1". "Hao3zai4nian2qing1li4zhuang4": "his vantage ground...was that he was young and strong".	RT	T	
31. "Shi4yi3shu4shi2zhao1zhong1da3de0nan2jie3nan2fen1". "Jing1li4yuan3sheng4dui4fang1, shi4yi3shu4shi2zhao1zhong1, da3de0nan2jie3nan2fen1". "With his...";	RT	T	
32. "jing1li4", I have to check it up.	BLT		
33. {Jing1li4}... "energy, vigour, rein".		RGD	ISP

34. I haven't seen "rein" before. I'd better use "energy":		CD	
35. "with his abundant energy compared to his opponent"... "he has...he could not ...he could not yield".		T	
36. I have thought up a word, "yield". I am checking with the E-C dictionary....	BLT		UPR, SLD
37. [Babbling]...."tou2xiang2", I think it isn't suitable.	RD	RED	
38. "He could not make his enemy yield to him after..." "Shu4shi2zhao1": "after ten and something feats".	RT	T	

10.16.3.2. Chinese Transcript of Think-aloud Exercise

這篇東西我以前學過。我是在查英漢詞典，查 feat 這個字。"Feat"... "feat"，可以解「功夫」、「動作」。我想可以解釋「招數」。然後查「遺書」："letter".....我不知道「遺書」是不是可以解為 "a letter"。我正在用漢英詞典。"yi2shu1"，用普通話來查.....這裏有，它說 "surviving works", "posthumous work", "collected writing" [babbling]。這本漢英詞典不是給一個 noun，而是給我一個解釋.....我想.....[babbling] "left by his father"。「傳下遺書修習而成，招數.....」[babbling] 我想我開始譯了。「惡鬥」，我又要查一下..... "e4", "e4dou4"，我想就沒有了。啊，有："a fierce fight".....「這一番惡鬥，胡斐從未遇過」。"Hu Fei"，大寫 H, F，這個用過去時態，"had never experienced such fierce" ... "furious", "fierce" 或者 "furious" 都可以....."fierce fight before"。「武功」.....「武功」.....「武功」，我又去查。"wu3gong1".....這裏顯示 "military accomplishment"。我就找到另外一個「武功」，"stage fighting"。"His fighting feat"，我想我會用 "his fighting feat"。"His fighting feats were... inherited", "his fighting feats were inherited"。我想「遺書」，因為那是父親和兒子，所以我會用 "inherited" 這個字..... "from a book", "from a book", "from...from letters by his dead father"。「精妙」，「招數雖然精妙」，"his fighting feats were all inherited from letters left by his dead father"... "his feats were..."。「精妙」，我心裏面想到的字是 "miraculous"..... "jing1miao4" "exquisite"，這裏它給的字是 "exquisite"。我再查.....「精巧」，"refined", "delicate"... [babbling] "refined", "delicate"，這裏沒有 [babbling]。我想，"His feats were... miraculous"，「精妙」.....我想再查.....那我再用 "exquisite" 這個字。"His feats were exquisite but he lacked real fighting experience"。「功力火候因年歲所限，亦未臻上乘」。「火候」，我又要查。"His feats".....我想到的是..... "His feats were not refined"。"Huo3hou2" [火候]，我會查 "huo3hou2" 這個字。.....[babbling] "The level of attainment", "the level of attainment" 就是火

候。..... “crucial moment”...”the level of attainment”... “His level of attainment” ,”His feats”, 我想就用 “his feats” 就可以了.....”are not refined”..... 譯「未臻上乘」, “were not refined and not attaining the highest level”。“His feats were not...attaining the highest level since he was still young”。..... 「好在年輕力壯, 精力遠勝對方」。「好在年輕力壯」: “his vantage ground...was that he was young and strong”。「是以數十招中, 打得難解難分」。「精力遠勝對方, 是以數十招中, 打得難解難分」。“With his...”; 「精力」, 我又查一下。”Jing1li4” ...”energy, vigour, rein”。“rein” 我就沒見過, 那我就用 “energy”: “with his abundant energy compared to his opponent”... “he has...he could not ...he could not yield”。我又想起一個字, “yield”字。我在查英漢詞典..... [babbling]..... 「投降」, 我想不是很適合。”He could not make his enemy yield to him after...” 「數十招」: ”after ten and something feats”。

10.16.4. Subject Four

10.16.4.1. English Transcript of Think-aloud Exercise with Coding

Think-aloud protocol segment	Executive operations	Cognitive operations	Meta-cognitive operations
1. I am going to translate <i>Xue3shan1 fei1huo2</i> by Jin Yong. I will read the original once first.			PLT
2. “Zhe4yi1fan1e4dou4, Hu2 Fei1 yi1sheng1cong2wei4yu4guo4. Ta1wu3gong1quan2shi4ping2zhe0fu2qin0 zhuan2xia4yi2shu1xiu2xi2er2cheng2, zhao1shu4sui1ran2jing1miao4, shi2zhan4jing1yan4bi4jing4qian4que1, gong1li4huo3hou2yin1nian2sui4suo3xian4, yi4wei4zhen1shang4cheng2, hao3zai4nian2qing1li4zhuan4, jing1li4yuan3sheng4guo4dui4fang1, shi4yi3shu4shi2zhao1zhong1da3de0nan2jie3nan2 fen1. Liang3ren2die2yu4 xian3zhao1, dan4jun1zai4ji2wei1ji2xia4yi3qiao3miao4 zhao1shu4zhai1kai1. Hu2 Fei1 fen4li4zhai1dou4, xin1zhong1pui4fu2: ‘Jin1mian4fo2Miao2da4xia2 guo3ran2ming2bu4xu1zhuan2,ruo4ta1nian2 qing1er2shi2sui4, wo3zai3yi3bai4le0.’”	RT		
3. I now first think about the original for one more			PLT

time. I will ignore the new vocabulary for now, but consider how to handle the sentence patterns.			
4. When I first read the original, I also underlined those words that I have to check up. I underlined “e4dou4”. The meaning in Chinese is not difficult. I just wonder how to describe fighting fiercely in English, about the wording.			PL, PLT
5. “Yu4guo4”, I am thinking whether to use “had never been experienced”, or “had never been encountered”. I will check up “experienced” and “encountered”. If it is “yu4”, the dictionary probably will give me “encountered”. “He had never encountered.” I think both words are okay with the original. But I will still check which one is more suitable.			PLT, PL, UPR
6. Next is “zhuan2xia4yi2shu1”. I will check up “yi2shu1”. I don’t know how to translate it. “Zhuan2xia4yi2shu1”. It should be left behind by his father.			PLT, PL
7. I will check up “xiu1xi2” as well. Should it be “practice” or “learn”? I will see how many definitions are given for “xiu1xi2”.			PLT, PL, UPR
8. Then “zhao1shu4jing1miao4”. It reads easy, but difficult to translate. “Zhao1shu4”, how to translate “zhao1shu4” in martial arts? I will check up “jing1miao4”. Maybe the two-character word has to be translated character by character.			PLT, PL
9. “Shi2zhan4jing1yan4bi4jing4qian4que1”. I will check up “huo3hou2” in “gong1li4huo3hou2”. But I am afraid the definition provided may be the “huo3hou2” for making soup.	RT		PL
10. “Wei4zhen1shang4cheng2”. Jin Yong is very refined in writing. My inferior translation skill certainly cannot match his in every way. I guess I will paraphrase “wei4zhen1shang4cheng2”. I don’t know the English words to match his literary style.	RT		PLT
11. “Nian2qing1li4zhuang4, jing1li4yuan3sheng4guo4dui4fang1”. I will see if	RT		PL, PLT

there are choices.			
12. “Shi4yi3shu4shi2zhao1zhong1da3de0nan2jie3nan2fen1”. I will check up “nan2jie3nan2fen”.	RT		PL
13. I think “nan2jie3nan2fen1” means the winner wasn’t decided yet. I will paraphrase it.			PLT
14. In “die2yu4xian3zhao1”, I will check up the meaning of “die2”. I am not clear about its meaning. “Xian3zhao1”, “xian3zhao1”.... I don’t know what it means, so I have to check it up.			PL
15. “Dan3jun1zai4ji2wei1ji2xia4yi3qiao3miao4zhao1shu4zhai1kai”. “Qiao3miao4” should also be looked up. What’s the difference between “qiao3miao4” and “jing1miao4”? For “zhai1kai1”, I guess the dictionary may give me a definition of unpacking or breaking off something. I will think twice before checking up.	RT		PL
16. “Hu2 Fei1 fen4li4zhai1dou4, xin1zhong1pui4fu2: ‘Jin1mian4fo2 Miao2da4xia2’”. “Jin1mian4fo2”, “Jin1mian4fo2”, “da4xia2”, I will check them up. Wonder how the West understands “da4xia2”. The inner meaning of “Jin1mian4fo2” may not be found in the dictionary.	RT		PL
17. In the fiction, “Jin1mian4fo2” refers to the golden complexion, yet chevalier and kind deeds of “Miao2 Ren2feng4”. That’s why people nicknamed him “Jin1mian4fo2”. I read the story before, so I know the background. I think I will translate it literally, or add an explanation in brackets or a footnote.			UPR, PLT
18. “Ruo4ta1nian2qing1er4shi2sui4, wo3zai3yi3bai4le0”. For now, the list includes “e4dou4”, “yi2shu1”, “xiu1xi2”, “zhao1shu4”, “jing1miao4”, “gong1li4huo3hou2”, “jing1li4”, “da3de0nan2jie3nan2fen1”, “die2” in “die2yu4xian3zhao1”, “qiao3miao4”, “da4xia2” for look-up.	RT		PL
19. I am using <i>A Chinese-English Dictionary of Foreign Language Teaching and Research Press</i> [hereafter <i>CED</i>] for look-up.	BLT		

20. I use the index to search for “e4dou4”, for I don’t know the simplified version of the character “e4”. I am now searching the radical table. I turn to page 142 for a likely radical, but I am not sure if I can find the word.		SSR	
21. Searching the index is slower.			ET
22. There is no such character on page 142. It’s strange. The simplified form should be like this, but it is not found.	RAEN		
23. Then I check up the radical “xin1”.		SSR	
24. This may be faster.			ET
25. Still can’t find it. It should be so written, no mistake.	RAEN		ET
26. As I can’t find the simplified form of “e4”, I go to Yahoo for it.	SS		MO, SED
27. Hope it doesn’t give me the meaning of “qiong2xiong1ji2e4”. I should first check up “e4”, “dou4” next.	RAEN		MO
28. There is only “xie2e4” under the headword “e4”. I think the meaning of “e4dou4” here doesn’t refer to the person, but the tough fight.		RSM	
29. It’s better to check up “jian1xian3”.	RH		SED
30. The definitions include: “hardships and danger, perilousness”.	RD		
31. Let me use <i>OAL</i> to check up these words. First, “hardship”.	SS, SH		SED
32. It means: “a situation that is difficult and unpleasant because you don’t have enough money, food and clothes.” “E4dou4” is not like that.	RD	RED	
33. Next word. ”Dangerous” should be the right meaning. Let’s first keep it.	SH	A	
34. “Perilous”. It means “very dangerous, hazardous”, about experience. But it should refer to natural disasters.... “Hazardous” should describe disasters.	SH, RD		SED
35. I think “perilous” should be a suitable choice, because it says, because “hazardous” says something “involving risk or danger”. This is quite suitable.	RD	CD	

36. “Xian3” is related to your safety, involving “wei1xian3”. But it’s not over. Besides “perilous”, we also have “difficult” and “dangerous”.	RD	RSM	
37. Let’s first check up “difficult”. ”Difficult”: “not easy, needing effort or skill to do or to understand”.	SS, RD		SED
38. A few homonyms follow: “challenging, demanding”.		RSM	
39. ”Challenging”, but here it was not about challenge. So “difficult” is more general in meaning.		CD, RSM	
40. I have been thinking a word: “wicked”. “Wicked” means “morally bad”. I think there is no association with “moral”.			UPR
41. So I just keep “perilous” and “difficult” for now.		CD	
42. We have now come to the next. Next is “yi2shu1”. I am using the printed version of <i>CED</i> , searching for the character of “yi2” by index.	BLT	SSR	
43. I am not very good at using a dictionary in simplified Chinese characters.			ET
44. I am searching the simplified form of the radical of “yi2shu1” by index.		SSR	

10.16.4.2. Chinese Transcript of Think-aloud Exercise

我現在要譯的原文出自金庸的《雪山飛狐》。我先讀一讀原文：這一番惡鬥，胡斐一生從未遇過。他武功全是憑著父親傳下遺書修習而成，招數雖然精妙，實戰經驗畢竟欠缺，功力火候因年歲所限，亦未臻上乘，好在年輕力壯，精力遠勝過對方，是以數十招中打得難解難分。兩人迭遇險招，但均在極危急下以巧妙招數拆開。胡斐奮力拆鬥，心中佩服：「金面佛苗大俠果然名不虛傳，若他年輕二十歲，我早已敗了。」我現在先在腦裏看一次原文，心中先不理那些生詞，我會先想一想那些句式會怎麼譯。我一直看原文的時候，也一直劃下一些我需要查的字。我劃下「惡鬥」。「惡鬥」中文不難明白，我只是想知道英文裏怎樣描述打架打得很激烈，怎樣用字。「遇過」我想“had never been experienced”，還是“had never been encountered”，我會查“experienced”和“encountered”這兩個字，因為我想大概如果「遇」的話，它會給我“encountered”，他從來未經歷過。我想兩個字放在原文都沒有問題。不過我會查查看哪個字的用法比較適合。跟著「傳下遺書」，我想會查「遺書」，因為我不知道「遺書」怎麼譯。「傳下遺書」應該是他爸爸 left behind。「修習」也會查，那究竟是 practice 還是 learn？我會查「修習」究竟有哪幾個解釋。

跟著「招數精妙」，這句看似容易，其實很難。「招數」，怎樣譯武功裏面的「招數」？「精妙」，我會查，可能甚至要分開，分開譯作兩個生詞。「實戰經驗畢竟欠缺」，「功力火候」，這個「火候」我會查字典，不過我怕查出來的會變成煮湯的火候。「未臻上乘」，金庸的文筆是很好的，我的九流翻譯，當然不能每一方面都做得到。「未臻上乘」，我想會意譯，不懂那麼深的字。「年輕力壯，精力遠勝過對方」，我會看看「精力」有沒有一些字給我選。「是以數十招中打得難解難分」。「打得難解難分」，我會查「難解難分」，不過這「難解難分」，我會以為是互無勝敗，這個我會意譯。「迭遇險招」，這個「迭」我會查，因為我不是很清楚「迭遇險招」的「迭」。「險招」，「險招」……我會就不用查了。「但均在極危急下以巧妙招數拆開」。這個「巧妙」也要查，究竟這個「巧妙」和「精妙」有什麼分別呢？這個「拆開」，我想它真的會給我拆開、用手拆開一些東西的解釋給我。所以這個我會想一想才決定查不查。「胡斐奮力拆鬥，心中佩服：『金面佛苗大俠』」，「金面佛」，「金面佛」，「大俠」我會查，不知西方怎樣理解「大俠」這個概念。「金面佛」，本身的意思在字典不一定查得到。不過「金面佛」在小說是指「苗人鳳」面是金色，卻又是慈祥的大俠，行事都是行善的多，所以人稱呼他「金面佛」，因為我看過書，所以知道這樣。我想譯的時候會直譯，或者加個括弧英文解釋，或者下一個 footnote。「若他年輕二十歲，我早已敗了」。暫時來說，我就有「惡鬥」、「遺書」、「修習」、「招數」、「精妙」、「功力火候」、「精力」、「打得難解難分」、「迭遇險招」的「迭」、「巧妙」、「大俠」，這些字需要查字典。

我現在拿起外研社的《漢英詞典》來查。「惡鬥」，用檢字法，因為我不會「惡鬥」的「惡」字的簡體。我現在一直跟著部首來找。我翻到 142 頁好像有個近似的部首，但是我不肯定會不會在那裏找到，那就不用查檢字表那裏慢慢搜索。暫時去到 142 頁沒有那個字。我有點奇怪，它的簡體字應該那樣寫，怎麼會沒有那個字。既然是這樣，我就查「心」字部，這樣可能快一點。暫時字典還未找到那個字。應該是這樣寫的，沒錯啊？既然在這本漢英詞典我還未找到簡體字「惡」字，那我就查 Yahoo，查「惡」字，它不會給我「窮兇極惡」的意思的。我還是先查「惡」字，不去想那「鬥」字。它的「惡」字，只給了我「邪惡」的意思。我想這裏的意思，「惡鬥」不是說人很惡，而是說這場戰鬥很艱險。我不如索性查「艱險」。查到的解釋有“hardships and danger, perilousness”。我現在就用 OAL 查這些字。首先查“hardship”。“Hardship”的意思是“a situation that is difficult and unpleasant because you don't have enough money, food and clothes”。「惡鬥」應該不是這個意思，那已經可以到下一個字。“Dangerous”應該是這個意思，我們先保留。“Dangerous”大家都明白解「燃眉之急」。先查“perilous”。“Perilous”的意思是“very dangerous, hazardous”，就是一些經驗。但它應該是指一些天災……“hazardous”應該指災害。我想“perilous”應該頗適合，因為它在說，因為“hazardous”在說一些“involving risk or danger”，對你的安全有威脅，我想這個字頗合用。這個「險」是跟你的安全有關係，而有「危險」的意味在內。但是未完的。我們除了“perilous”這個解釋之外，還有“difficult”和“dangerous”。我們先查“difficult”。“Difficult”：“not easy, needing effort or skill to do or to understand”

這裏下面給了一些近義詞解釋，有“challenging, demanding”。“Challenging”，但是這裏不是說挑戰，所以“difficult”會比較籠統。我剛才在想一個字：“wicked”，“wicked”是“morally bad”，我想跟“moral”沒有關係，所以我暫時只保留“perilous”和“difficult”的意思。我們再到下一個了，下一個字是「遺書」。我又用印刷版的外研社的《漢英詞典》，繼續用檢字表來找那「遺」字。始終用一本簡體字字典不是我的強項。我現在一直在檢字表裏找「遺書」的簡體字部首。暫時還沒找到。

10.17. English Renditions, and Dictionaries Used by Subjects in the Performance Exercise

10.17.1. Subject One

10.17.1.1. English Rendition

This fierce fight was far from anything Hu has ever encountered in his life. All his ability in martial arts was acquired from his father's will. The movement and postures he learned were of high standard, but he lacks in [sic] practical [sic] experience. Although his efficacy is bounded by age and was not of high calibre, he is still young and strong. He was much more energetic than his opponent. This is why they were locked in a stalemate after several rounds of fight. Both of them were at risk at times, but every time they could manage themselves out of it with great finesse.

As Hu resisted by spirited attacks, he started admiring, "His reputation as the Golden Buddha Miao is well deserved. If he is 20 years younger, I would have lost by now!"

10.17.1.2. Dictionaries Used

Chinese-English Dictionary, (《漢英小字典》) eds. Chik Hon Man, Ng Lam Sin

Yuk, Chinese University Press, Hong Kong, 1989.

New Age Chinese-English Dictionary (《新時代漢英大詞典》), eds. Wu

Jingrong, Cheng Chenqiu, Beijing, Commercial Press, 2004.

10.17.2. Subject Two

10.17.2.1. English Rendition

Hu Fei had never met such a grim struggle in his life. He learnt and practised all the feats from a posthumous letter left by his father. Though his moves were ingenious, he lacked combat experience and was still immature at his age. But he was young, strong and much more vigorous than his rival, so neither of them could get the upper hand. They almost hit the other with lethal moves, but in critical moment they could keep each other off skilfully.

10.17.2.2. Dictionaries Used

Cambridge Advanced Learner's Dictionary (on-line) <http://dictionary.cambridge.org/>

Lin Yutang's Chinese-English Dictionary of Modern Usage (《林語堂當代漢英詞典》)

(<http://humanum.arts.cuhk.edu.hk/Lexis/Lindict/>)

Merriam-Webster Online Search (thesaurus)

<http://www3.merriam-webster.com/opedictionary/>

New Age Chinese-English Dictionary (《新時代漢英大詞典》), eds. Wu

Jingrong, Cheng Chenqiu, Beijing, Commercial Press, 2004.

Yahoo on-line dictionary (<http://hk.dictionary.yahoo.com/>)

10.17.3. Subject Three

10.17.3.1. English Rendition

Hu Fei had never experienced such a fierce fight before. His fighting feats were all inherited from letters left by his dead father. His feats were exquisite but he lacked real fighting experience. They were not refined, and had not attained the highest level since he was still young. His vantage ground was that he was young and strong. With his abundant energy compared to his opponent, he could not make his enemy yield to him after ten and some feats. Both fighters encountered dangerous circumstances, but both could solve the others' feat in the most imminent peril. Hu Fei brought out all his feats to fight his opponent. He secretly admired the Golden-face Buddha Fighter Miao, "He really lives up to his reputation. If he is 20 years younger, I could have been defeated already."

10.17.3.2. Dictionaries Used

Chinese-English Dictionary, revised edn., ed. Beijing Waiguoyudaxue yingyuxi, Beijing,

Waiyujiiaoxueyuyanjiu Chubanshe, 1995 (《漢英詞典》，修訂版，北京外國語大學英語系編，北京，外語教學與研究出版社).

Shidai English-English/English-Chinese Dictionary, ed. Yan Yuanshu, Wanren

Chubanshe, 1996 (《時代英英/英漢雙解大辭典》，顏元叔編，萬人出版社).

10.17.4. Subject Four

10.17.4.1. English Rendition

Not done.

10.17.4.2. Dictionaries Used

Chinese-English Dictionary, revised edn., ed. Beijing Waiguoyudaxue yingyuxi, Beijing,

Waiyujiaoxueyuyanjiu Chubanshe, 1995 (《漢英詞典》，修訂版，北京外國語大學英語系編，北京，外語教學與研究出版社).

Guoyucidian, ed. Jiaoyubuguooyutuixingweiyuanhui, Taiwan Jiaoyubu, 1998

(《國語辭典》，教育部國語推行委員會編，台灣教育部) (<http://140.111.34.46/dict/>).

Lin Yutang's Chinese-English Dictionary of Modern Usage (《林語堂當代漢英詞典》)

(<http://humanum.arts.cuhk.edu.hk/Lexis/Lindict/>)

Oxford Advanced Learner's Dictionary

(<http://www.oup.com/elt/catalogue/teachersites/oald7/lookup?cc=global>)

Yahoo on-line dictionary (<http://hk.dictionary.yahoo.com/>)