Measure Words in Learning and Teaching Chinese as a Second Language

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I hereby confirm that this study is conducted on my own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

Chinese measure words (CMW) are obligatorily used between numerals/demonstratives and nouns/verbs to count the items and actions. Comparing with Chinese, strictly speaking, there are no measure words in English. This cross lingual difference causes difficulties in the English native speakers' application of CMW when learning Chinese as a second language according to Lado's (1957) Contrastive Analysis Hypothesis (CAH), i.e. the language elements that are different from learners' native language will be difficult for them. This study adopted an empirical study to find out how L2 learners' application of CMW is and what the problems are. Before the empirical study, a new categorisation was generated based on the existing studies on CMW categories, and a comparative study was carried out to underpin the study. A questionnaire and a proficiency test were adopted to gather information about the participants of the empirical study. A CMW test was designed to collect data on the English native speakers' application of different CMW categories and usages.

The results of the empirical study suggested that CMW are difficult for the English native speakers who are learning Chinese as a second language. The results also indicated that even though English native speakers have difficulties in the application of most of the CMW categories, some are easier than others. The English native speakers are better at weights and measures, collective nominal measure words and container measure words than standard verbal measure words, borrowed verbal measure words, individual nominal measure words and temporary nominal measure words. Although the cross lingual difference between Chinese and English count for the difficulties, the complexity of some CMW is also the reason. After revealing the difficulties in the English native speakers' difficulties, some suggestions on teaching CMW in second language learning and application were tentatively proposed.

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List of Abbreviations

ANOVA: One-Way Analysis of Variance

CA: Contrastive Analysis

CAH: Contrastive Analysis Hypothesis

CMW: Chinese Measure Words

CPL: Chinese Proficiency Levels

EA: Error Analysis

EMU: English Measuring Units

HSK: Chinese Proficiency Test

L1: First Language

L2: Second Language

SLA: Second Language Acquisition

SPSS: Statistical Package for the Social Sciences

UCAS: Universities and Colleges Admissions Service

Chapter 1 Introduction

1.0 Research Context

Chinese Measure Words (CMW) is one of the most important language elements in Chinese language. They appeared in Chinese language when the language came into existence approximately three thousand years ago (Long and Li 2009, Li and Zhang 2009, Wu 2009), even though there were only a few of them. CMW develops both in number and variety along with the progress of human society and language (Long and Li 2009, Liu 1965). This close relationship between CMW and Chinese language suggests that measure words are important language elements in learning Chinese either as the first language or as a second language.

Although CMW are important in Chinese language, the definition of this type of word has not been unified. In the existing studies on CMW, different scholars have given different definitions to these words. Chao (1968) defines Chinese measure words as a bound morpheme which forms D-M compounds (compound of determinatives and measures with one of the determinatives), such as 杯 (bēi) in '这杯水 [(zhèbēishuǐ) this glass of water]' and 头 (tóu) in '那头牛 [(nàtóuniú) that cow]'. Cheng and Sybesma (1998), Zhang (2007), Guo (2008) and Liang (2009) have named nominal measure words as classifiers; Liu (2003) defines measure words as 'elements which obligatorily occur between a numeral and a noun in a quantifying construction', while according to Lin (1991) measure words are 'words used to calculate actions and referents of nouns'.

Among the above definitions, Liu did not take into account the verbal measure words. Chao's definition is reasonable to some extent as some CMW are not words but morphemes which cannot function on their own (e.g. individual nominal measure words). However, many CMW are words that can function independently (e.g. borrowed measure words). Therefore, by considering the features of different measure words categories, the current research agrees with Lin and defines CMW as 'words' used obligatorily to quantify actions (verbal measure words) and referents of nouns (nominal measure words).

As 'obligatory in quantifying construction' is the most salient feature of CMW. The majority of CMW cannot work alone in a sentence and in communication as they have to be used with numerals or demonstratives to form a 'numeral + measure (NM)' or 'demonstrative + measure (DM)' unit to function grammatically. Comparing with Chinese language, strictly speaking, measure words do not exist in English as this language adopts a different system to measure items and actions. Therefore, although some quantifiers or 'numeral/article + noun + of + noun' units can be seen as equivalents to some CMW (refer to Chapter 2), measure words do not exist in English. The following two tables present some of the differences between CMW and English measuring units (EMU). For the CMW phrases in Table 1.1, there are no equivalent expressions in English. For the CMW phrases in Table 1.2, there are English expressions that can be seen as their equivalents.

Table 1.1 CMW that cannot be Translated into English

Chinese	一只羊	一辆汽车	一棵树	一份文件
	*a CMW sheep	*a CMW car	*a CMW tree	*a CMW document
English	a sheep	a car	a tree	a document

Table 1.2 CMW that have ‘Equivalents’ in English				
Chinese	一瓶啤酒	一卡车沙	一包糖	一盆花
	a CMW beer	a CMW sand	a CMW sweet	a CMW flower
English	a bottle of beer	a truckload of sand	a bag of sweet	a pot of flower

Although the Chinese phrases in Table 1.2 can be translated into English ‘directly’, these translations are ‘article + nouns + preposition + noun’ structures. These structures and their Chinese origins are semantically equivalent but grammatically different. In the English translations, the words ‘bottle’, ‘truckload’, ‘bag’ and ‘pot’ are the direct translations for measure words ‘瓶 (píng)’, ‘卡车 (kǎchē)’, ‘包 (bāo)’, ‘盆 (pén)’. These English words are nouns that need to be used together with numerals and the preposition ‘of’ to act as measuring units, but the Chinese measure words denote quantity themselves. As for the differences between CMW and EMU, further discussions will be carried out in Chapter 2 to present a clearer picture of the differences between them systematically.

1.1 Hypotheses and Objectives

According the Lado (1957, p.2) ‘*those elements which are similar to [the learner's] native language will be simple for him, and those elements that are different will be difficult*’ (Contrastive Analysis Hypothesis (CAH)). There are measure words in Chinese, but no measure word in English, which uses different structures as measuring methods. Because of the cross lingual difference between Chinese and English, English native speakers who study

Chinese as a second language have difficulties in the application of CMW according to CAH.

Therefore, the current study employs an empirical study to examine the application of different CMW of English native speaker learners who are learning Chinese as a second language. This empirical study mainly aims at investigating how difficult CMW are for the English native speakers, where the difficulties lie and what the difficulties are. After revealing the difficulties, this study also explores pedagogical strategies to promote the learning and acquisition of CMW among the English native speakers. The focus of the current study is measure words themselves, thus the social and individual differences among the L2 learners are not considered.

1.2 Research Question

Generally speaking, there are only a handful of studies on CMW in learning and teaching Chinese as a second language. By reviewing previous studies, the current study detects a gap in this field, i.e. most of the studies mainly focus on the nominal measure words and none of them have covered all the usages of CMW in modern Chinese.

Therefore, the current research aims at providing an overall picture of British native speakers' learning and acquisition of CMW to provide Chinese language learners and instructors some information systematically. The present research is divided into two parts: the first part is CMW in second language acquisition (SLA) among British students and the second part is CMW in teaching Chinese as a second language.

First Part: CMW in SLA among British students

1. Are measure words difficult for Chinese language learners of English native speakers and where the difficulties lie?
2. What are the difficulties in English native speakers' application of CMW?

The above two questions are important to the current research as they are the questions the present study is setting out to find the answers to. In order to answer these prime questions, the current study needs to investigate English native speakers' application of different CMW categories and also the application of different usages of CMW. The empirical study for this research is designed to answer these research questions.

Second part: CMW in teaching Chinese as a second language

3. How to improve English native speakers' application of CMW?

The main objective of the current research is to discover the problems with English native speakers' application of CMW. Once the difficulties are identified, the current study then generates some implications on improving the learning and acquisition of CMW from a Chinese language instructor's aspect.

1.3 Methodology

The current study combines both the quantitative research method and the qualitative research method to find the answers to the research questions. The qualitative research method is adopted to collect statistic information

about the leaners' application of Chinese measure words. The qualitative method is applied to explore the results that are generated by the quantitative research method.

For the quantitative research method, a survey is the main technique used. This survey starts with a short introduction about the research and the ethical considerations. In this introduction the participants are informed that all the information collected will be treated as confidential and will be mainly for the purpose of the this study. After the introduction, the survey includes a questionnaire, a Chinese language proficiency test and a test on CMW. The questionnaire collects information about the participants and this is mainly for reference. The Chinese language test is used to divide the participants into lower, intermediate and advanced group. The CMW test is designed to collect data on the participants' application of different CMW categories and usages. This test combines multiple choice tasks, gap-filling tasks, cloze test, matching tasks and translation tasks. The multiple choice tasks examine the participants' knowledge on CMW repetition and CMW with similarities. The gap-filling tasks mainly gather information about the participants' mastery of nominal measure words. The cloze test intends to investigate the participants' understanding of CMW regards different quantity relationships. The matching tasks intend to collect information on the participants' use of CMW in context, verbal measure words and some subcategories of nominal measure words.

After the survey, the data collected will be recorded into Statistical Package for the Social Sciences (SPSS) software to assist the statistical analysis of the results from different levels. The results of the three second language (L2) groups and the native speaker group will be compared by using this software. The comparison assumes that there is no significant difference between different groups and the results of the comparison will confirm or reject this assumption. This comparison is carried out by comparing the different group participants' average percentage of the correct answers of

different CMW categories and usages. If there is a significant difference between the average percentage of the correct answers of the overall results of the L2 groups and the native speakers, the study suggests that CMW is difficult for the L2 learners. Similarly, if there is a significant difference between the average percentage of the correct answers of the different CMW categories and usages of the L2 groups and the native speakers, the study suggests that these CMW categories and usages are difficult for the L2 learners.

By generating the quantitative results using SPSS, the qualitative research method is applied to explore, analyse and explained the results. The errors from the CMW test will be summarised. These errors will be described and explained in accordance with the second language acquisition (SLA) theories and hypothesis to find out what the difficulties are.

In a word, this study integrates the quantitative research method and the qualitative research method to find the answers to the research questions. The quantitative data generated will answer the research question ‘Are measure words difficult for Chinese language learners of English native speakers and where the difficulties lie?’ The qualitative research method twill describe the results and provide an in-depth understanding of research question ‘What are the difficulties in English native speakers’ application of CMW?’ By answering these two research questions, this study is able to tentatively provide suggestions on ‘How to improve English native speakers’ application of CMW?’

1.4 Significance of the Research

As the definition of CMW implies, there is a close relationship between CMW and Chinese nouns and verbs, which suggests that the learning and

acquisition of CMW is integrated with the learning and acquisition of nouns and verbs. Thus, CMW acquisition is combined with the lexicon development that is the essence in language learning. This also suggests that the learning of CMW is involved in the whole L2 Chinese language learning process. Therefore, a comprehensive study on the application of different CMW in the context of learning Chinese as a second language is vital. Moreover, CMW is used in various contexts (see Chapter 2) in reading and speaking in Chinese, thus the understanding of all the usages of CMW is necessary in order to be able to communicate in Chinese more efficiently, which is the ultimate goal of the L2 acquisition and learning.

However, most of the existing studies on CMW mainly focus on the nominal measure words from both linguistic and applied linguistic aspects. Although nominal measure words are the major CMW, they are not the only measure words category (refer to Chapter 2 for the categorisation of CMW). Thus, the present study will replenish the studies in this area by studying not only nominal measure words but also verbal measure words. Moreover, most of the existing studies on nominal measure words mainly focus on the individual nominal measure words, thus the current study also complements the studies on the nominal measure words by also investing other subcategories under this type of measure word, including weights and measures, collective nominal measure words, temporary nominal measure words, container measure words and quasi-measures.

Because of the shortage of study on CMW from a more diverse context, especially from an applied linguistic aspect, the current research is a comprehensive study on all the different categories of Chinese measure words, the CMW repetitions and CMW in literary context. Furthermore, the current study also provides a supplement to the area of CMW research from a linguistic aspect by exploring the categorisations and the usages of CMW.

By revealing the difficulties and problems in English native speakers' application of CMW, the present study also proposes some pedagogical suggestions in the hope that these suggestions will enlighten Chinese language instructors in teaching Chinese as a second language.

1.5 The Structure of the Thesis

This thesis consists of seven chapters to present the study on Chinese measure words in learning and teaching Chinese as a second language. The following paragraphs are going to provide an overview from Chapter 2 to Chapter 7.

Chapter 2 considers Chinese measure words from both linguistic and applied linguistic aspects. To provide a linguistic framework for the current study, this chapter explores and discusses the categories of CMW. From an applied linguistic aspect, this chapter examines the cross lingual difference between Chinese measure words and the English measuring units to provide a framework for the present study.

Chapter 3 discusses SLA hypothesis and theories that could help in understanding the difficulties that appear in English native speakers' CMW application. This chapter also reviews previous studies on CMW to situate the current study in the related field.

Chapter 4 develops an appropriate research instrument to find the answers to research questions of the present study.

Chapter 5 presents the overall results of CMW application to find out how difficult CMW are for English native speakers of Chinese language learners, and where the difficulties lie.

Chapter 6 analyses the results of CMW application according to CMW categories generated in Chapter 2 to find out more detailed information on the English native speakers' CMW application. This chapter focuses on explaining what the difficulties are.

Chapter 7 summarises the current study and generates some implications from the results of the empirical study. This chapter also discusses the limitations of the current study to make some suggestion on further studies on Chinese measure words.

Chapter 2 Chinese Measure Words: A Linguistic and Applied Linguistic Account

2.0 Introduction

Preceding the empirical study on English native speakers' application of CMW, exploring this type of word is crucial. This chapter is organized as the following: Section 2.1 discusses the categorisation of CMW and their different usages in detail to provide adequate information for the research into CMW; Section 2.2 compares CMW with EMU.

2.1 Categorisation of Modern CMW

Although the categorisation of modern CMW is not the focus of this study, it is crucial for the research of measure words in the context of learning and teaching Chinese as a second language. Firstly, an elaborate classification provides the foundation for the comparison of CMW and EMU. Secondly, it also provides information on further discussion of a more effective way of learning and teaching CMW, as each type of CMW will be discussed separately in the context of learning and teaching in the current study. Therefore, it is significant to find an appropriate categorisation to provide a linguistic framework for the present research.

2.1.1 CMW Categorisation of Previous Scholars

Many scholars have categorized CMW from different aspects, especially for nominal measure words. Cheng and Sybesma (1998) propose that count-mass distinction exists in Chinese nouns. They divide nominal measure words into classifiers and massifiers. According to them, classifiers are words like 枝 [(zhī) for rod-shaped things], 个 [(gè) for nouns without particular measure word] and 头 [(tóu) for some animals and plants with a bulb], which measure countable discrete unit like pen, people and pig. Massifiers are word like 瓶 [(píng) bottle], 盘 [(pán) plate] and 杯 [(bēi) glass], which create measure units for items that are uncountable such as water, sand and juice. Zhang (2007) has also adopted the categorisation of nouns in English and put Chinese numeral classifiers into two categories according to the nouns: count-noun classifiers and mass-noun classifiers. Zhang has summarised that there are some other names for the count-noun classifiers and mass-noun classifiers, such as ‘count-classifier’, ‘count-noun classifiers’, ‘qualifying classifiers’, and ‘massifiers’, ‘quantifiers’, ‘mass-classifiers’.

Although Cheng and Sybesma and Zhang’s categorisation is reasonable to some extent, it does not match the characteristics of Chinese language. Chinese nouns cannot be simply divided into count noun and mass noun as in English, and sometimes there is no clear boundary for count and mass classifiers as Zhang has argued. Thus, this research would not adopt their method, but argue the categorisation from a different perspective, which will be discussed in this section.

Zong (2007) has commented that the categorisation of CMW has the cultural and psychological attributes as other categorisations which depend on the recognition of different people. He (2000) has summarised the naming process of ‘measure words’ in her research on modern CMW, in which she

has discussed the classification and sub-classification of CMW simultaneously. According to He (2000), the categorisation and sub-categorisation of CMW is not unified as both nominal and verbal measure words are difficult to construe both in semantic and syntactic ways, which also explains the different versions of CMW categorisation from different perspectives. He (2000) has also argued that the most logical way of categorizing measure words is taking both semantic and syntactical features of measure words into consideration and examines them in the context of communication.

Some of the measure words categorisations are listed to present the differences in CMW classifications.

Chao (1968) has classified ‘measures’ into nine classes:

i. Classifiers or individual measures (Mc)
ii. Classifiers specially associated with V-O constructions (Mc’)
iii. Group measures (Mg)
iv. Partitive measures (Mp)
v. Container measures (Mo)
vi. Temporary measurers (Mt)
vii. Standard measures (Mm)
viii. Quasi-measures (Mq)
ix. Measure words for verbs (Mv)

In the categorisation above, all the members are parallel with each other. Chao explained each group respectively and listed a group of words for each category in *A Grammar of Spoken Chinese*: individual measures are words like 匹 (pǐ) in 一匹马 [(yīpǐmǎ) a horse]; classifiers specially associated with

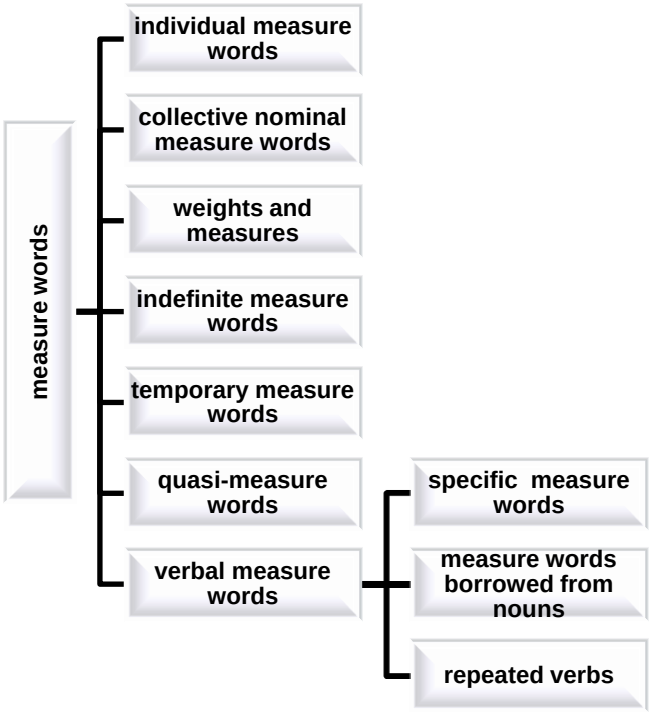
V-O constructions are words like 句 [(jù) sentence] in 说句话 [(shuōjùhuà) say a word] and 顿 [(dùn) spell, session] in 挨顿骂 [(āidùnmà) get a scolding]; group measures are words like 对 [(duì) pair] in 一对夫妻 [(yīduìfūqī) husband and wife] and 帮 [(bāng) group] in 一帮工人 [(yībānggōngrén) a group of workers]; partitive measures are words like 份 [(fèn) portion] in 一份礼 [(yīfènlǐ) a gift] and 段 [(duàn) section] in 一段文章 [(yīduànwénzhāng) a paragraph of a written text], which represent a portion of items; container measures are words like 箱 [(xiāng) case] in 一箱书 [(yīxiāngshū) a case of books] and 杯 [(bēi) glass] in 一杯水 [(yībēishuǐ) a glass of water]; temporary measures are words like 桌子 [(zhuōzi) table] in 一桌酒菜 [(yīzhuōjiǔcài) a table of dishes], which can only use 一 [(yī) one] in numeral-measure compound; standard measures are measures agreed among people and stimulated by the government like 公里 [(gōnglǐ) kilometre] and 英尺 [(yīngchǐ) inch]; quasi-measures are words like 村 [(cūn) village] and 站 [(zhàn) station] in 多少村 [(duōshǎocūn) how many villages] and 几站 [(jǐzhàn) how many stops] and measure words for verbs are words like 步 [(bù) step] in 迈三步 [(màisānbù) take three steps] and 响 [(xiǎng) sound] in 响三响 [(xiǎngsānxiǎng) sounds three times].

By analysing the above examples, the current study suggests that classifiers or individual measures, classifiers specially associated with V-O constructions, group measures, partitive measures, container measures, temporary measures, standard measures and quasi-measures are members of nominal measure words. Moreover, classifiers specially associated with V-O constructions and partitive measures should be included in individual measure words as the former are individual measure words used in V-O phases as an attributive while the latter are individual measure words used to describe different shapes or status of the referents of nouns.

According to Chao (1968) quasi-measures are measures which follow numerals and other determinatives directly but they are autonomous and do not belong to a noun or certain nouns. Zhu (1982) has defined quasi-measure word as a word which can be both a noun and measure word: the word is a noun when it follows a measure word while it is a measure word when it precedes a numeral, such as 国 [(guó) country], 年 [(nián) year], 县 [(xiàn) county] and 季 [(jì) season]. The present study agrees with Chao and Zhu and regards quasi-measures as a sub category of nominal measure words.

Zhu (1982) has categorized CMW into seven categories:

Table 2.1.1.1 Zhu's CMW Categorisation

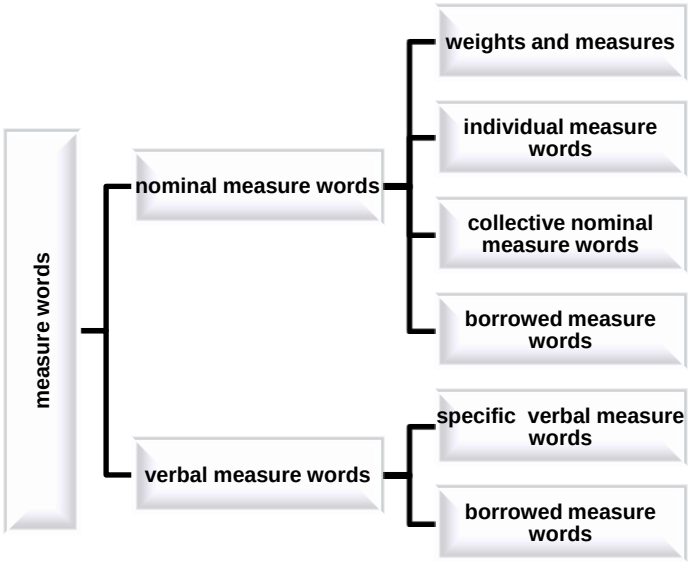


Zhu's categorisation of verbal measure words is more specific with sub-categories, in which he views second 看 (kàn) in 看一看 [(kànyīkàn) have a look] and 想 (xiǎng) in 想一想 [(xiǎngyīxiǎng) have a think about] as

measure words. Guo (1987) names these words as equal verb measure words and describes the characteristic of these measure words: they cannot collocate with numerals other than 一 [(yī) one] to express the short duration of the actions referred by the verb. Wang (1990) proposes that 一 [(yī) one] is usually used between repeated verbs (normally monosyllabic verb) to count one action or express the short duration of the action such as 想一想 [(xiǎngyīxiǎng) have a think about] and 算一算 [(suànyīsuàn) have a count]. Although some scholars regard these words as verb repetitions, the current research agrees with Zhu, Guo and Wang, and takes the verbal measure words borrowed from verbs as one of the verbal measure words categories.

Wu and Cheng (1981) put CMW into two groups: nominal measure words and verbal measure words.

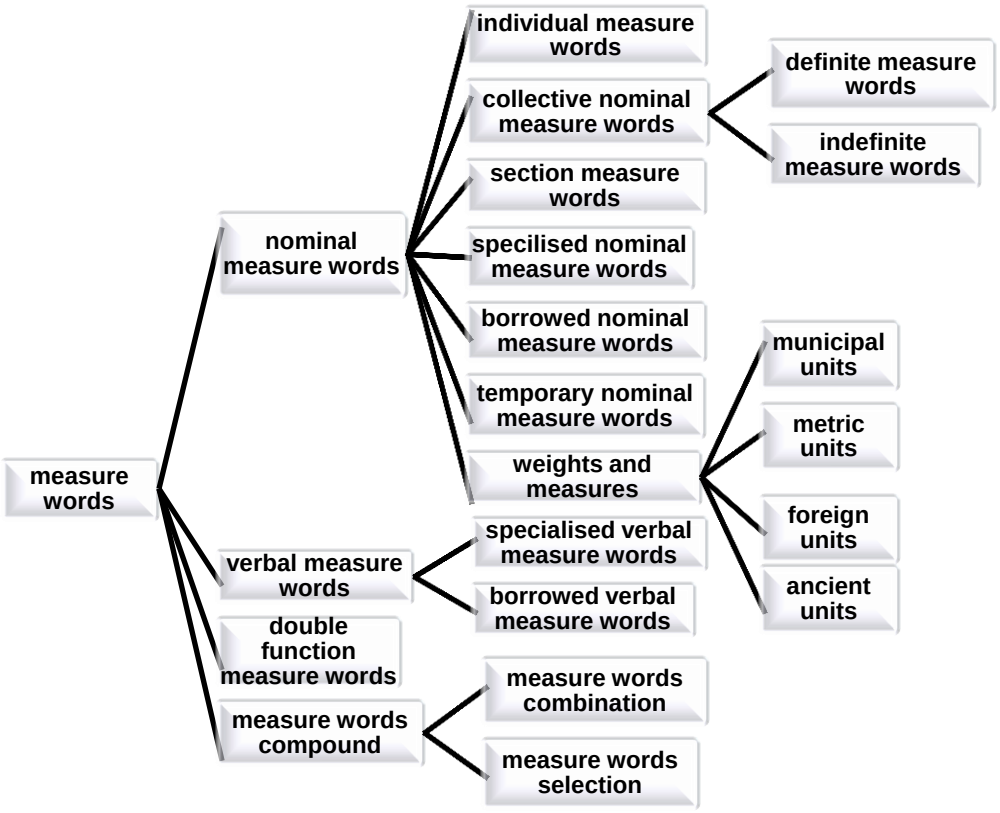
Table 2.1.1.2 Wu and Cheng's CMW Categorisation



Although Wu and Cheng have presented some of the major categories of measure words, their categorisation is far from clear. He (2000) has analysed other scholars' measure words categorisations in *Research into*

Modern Chinese Measure Words and drew a categorisation, in which sub classes of nominal measure words are more abundant.

Table 2.1.1.3 He (2000)'s CMW Categorisation



He (2000)'s categorisation of CMW is more sophisticated, demonstrating a much clearer hierarchy in the classification than previous scholars. However, her categorisation is not ideal:

Firstly, He (2000) regards measure words compound, such as 一架次 [(yījiàcì) a flight] and 千米每小时 [(qiānmǐměixiǎoshí) kilometre per hour] as a separate category, which can be classed into nominal measure words as they only modify nouns.

Secondly, He (2000) classifies words like 回 [(huí) for the times of an action or measuring thing or a chapter of novels] in 去一回 [(qùyīhuí) been once] or 一回事 [(yīhuíshì) a thing], 次 [(cì) the number of repetitions in a given period of time or the number of times an action is taken] in 一次地震 [(yīcìdìzhèn) an earthquake] or 抱一次 [(bàoyīcì) hug once] as double-function measure words. By analysing the examples above, the present study considers verbal measure words that can be used as nominal measure words as members of verbal measure words. Therefore, the categories at the first level should be only nominal measure words and verbal measure words.

Finally, on the second level of He (2000)'s classification, section nominal measure words and specialised nominal measure words are actually members of the individual measure words. The former are partitive measures (Mp) in Chao (1968)'s categorisation, which are words like 段 (duàn) in 一段文章 [(yīduànwénzhāng) a paragraph of an article] and 瓣 (bàn) in 一瓣蒜 [(yībànsuàn) a clove of garlic] that are individual measure words used to modify part of an object; the latter are words like 届 (jiè) in 一届会议 [(yījièhuìyì) a conference] and 出 (chū) in 一出戏 [(yīchūxì) a play] which are individual measure words only measure a specific referent of a noun. Thus both section nominal measure words and specialised nominal measure words are sub-classes of individual nominal measure words.

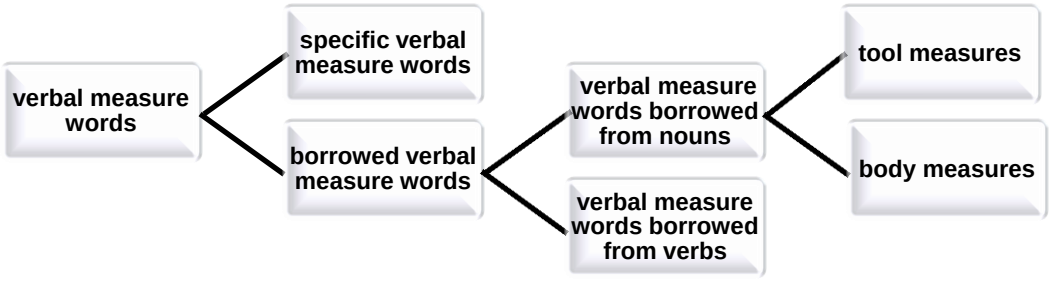
He (2000) has distinguished between temporary nominal measure words and borrowed nominal measure words in her study, which she claims that temporary nominal measure words are mainly borrowed from referents of nouns for the human body that can only collocate with 一 [(yī) one], and 的 (de) can be used between the measure words and the noun measured, such as, 汗 (hàn) in 一身汗 [(yīshēnhàn) in a sweat] and 脸 (liǎn) in 一脸汗水 [(yīliǎnhànshuǐ) sweaty face]; whereas borrowed nominal measure words are mainly borrowed from containers or vehicles which can collocate with any numerals, and can be repeated to emphasise the individuals of the

referents of nouns, such as, 杯 (bēi) in 三杯水 [(sānbēishuǐ) three glasses of water] and 车 (chē) in 四车羊 [(sìchēyáng) four trucks of sheep]. The present study agrees with the above claim and puts these two types of measure words into different categories: temporary nominal measure words and container measure words (= borrowed nominal measure words).

Many scholars have pointed out that more in-depth studies of nominal measure words (Chao, 1968; Zhu, 1982 and He, 2000) have been carried out comparing the studies on verbal measure words. Although the study of verb measure words is not at the same level of nominal measure words, there are still some influential categorisations.

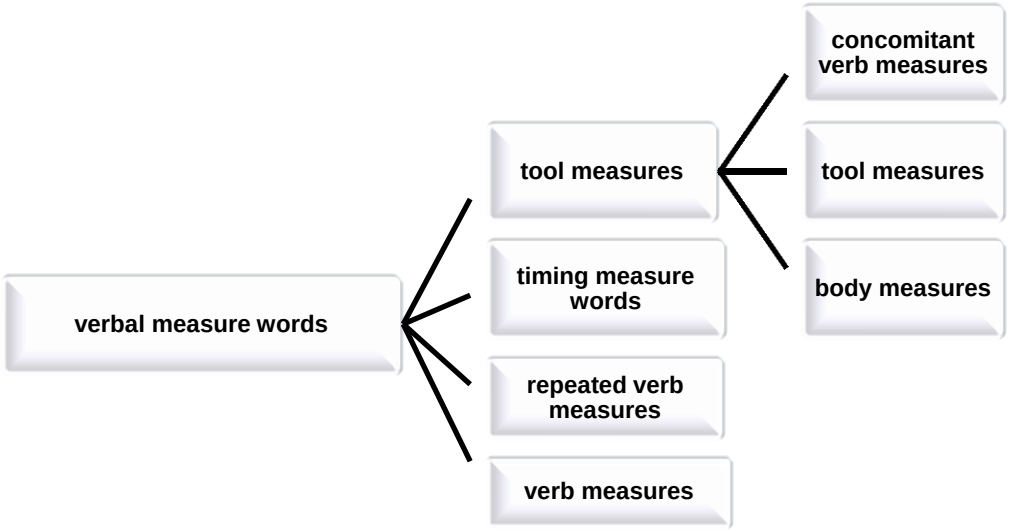
Huang and Liao (2003) all divide verbal measure words into specific verbal measure words, such as 下 (xià) in 跳三下 [(tiàosānxià) jump three time] and 遍 (biàn) in 读四遍 [(dúsìbiàn) read four times], and borrowed verbal measure words which includes verbal measure words borrowed from nouns (including tool [刀 (dāo) in 切一刀 [(qiēyīdāo) cut it] and 棒 (bàng) in 打一棒 [(dǎyībàng) hit with a club] and body [拳 (quán) in 打一拳 [(dǎyīquán) give a punch], 口 (kǒu) in 咬一口 [(yǎoyīkǒu) a bite] and 掌(zhǎng) in 打一掌 [(dǎyīzhǎng) hit with a palm]) and verbal measure words borrowed from verbs (such as 看 (kàn) in 看一看 [(kànyīkàn) have a look] and 闻 (wén) in 闻一闻 [(wényīwén) have a smell]). This categorisation takes into consideration of the semantic relationships between verbal measure words and the verb measured. Although the hierarchy between categories is rather clear, which is presented as the following, their categorisation is not elaborate.

Table 2.1.1.4 Huang and Liao's Verbal Measure Words Categorisation



Jiang (2006) has discussed the classification of verbal measure words from the cognitive and semantic points of view and classed verbal measure words into timing measure words (年 [(nián) year], 月 [(yuè) month] and 日 [(rì) day]), verb measures (下 (xià) in 跳三下 [(tiàosānxià) jump three times] and 遍 (biàn) in 读四遍 [(dúsìbiàn) read four times]), tool measures (including body measures [拳 (quán) in 打一拳 [(dǎyīquán) give a punch], 口 (kǒu) in 咬一口 [(yǎoyīkǒu) a bite] and 掌 (zhǎng) in 打一掌 [(dǎyīzhǎng) hit with a palm]], tool measures [刀 (dāo) in 切一刀 [(qiēyīdāo) cut it] and 棒 (bàng) in 打一棒 [(dǎyībàng) hit with a club]] and concomitant verb measures [声 (shēng) in 喊一声 [(hǎnyīshēng) a shout] and 觉 (jiào) in 睡一觉 [(shuìyījiào) a sleep]]), and repeated verb measures (看 (kàn) in 看一看 [(kànyīkàn) have a look] and 闻 (wén) in 闻一闻 [(wényīwén) have a smell]), which is presented in the following table:

Table 2.1.1.5 Jiang's Verbal Measure Words Categorisation

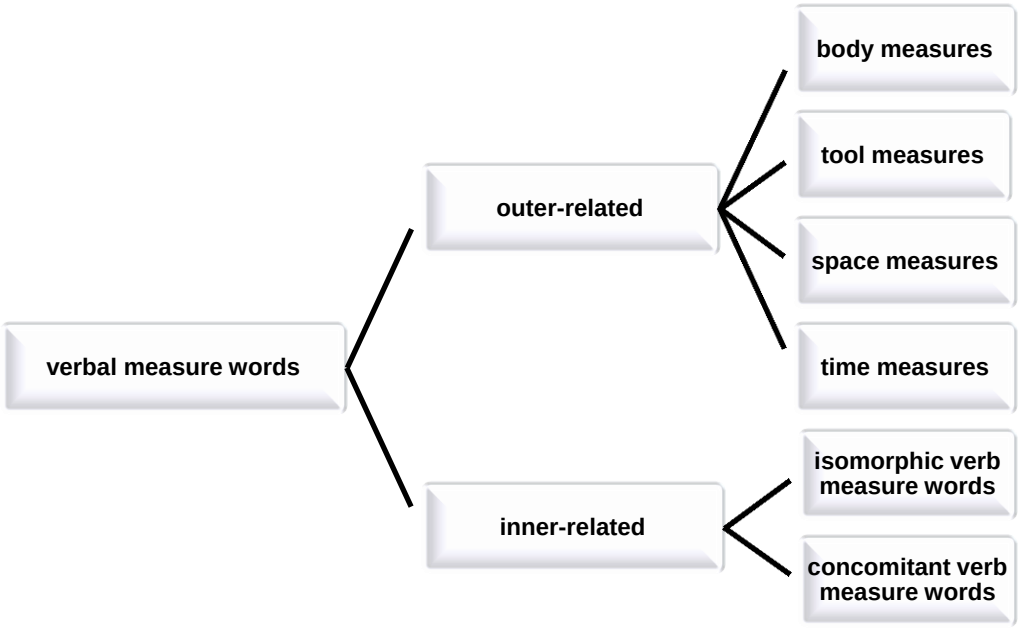


Although Jiang (2006) has categorised verbal measure words in accordance with the verbs measured, she has not taken the characteristics of verbal measure words themselves into consideration. The above categorisation does not differ the measure words exclusively for verbs from the temporarily borrowed verb measure words.

Fang (2008) has studied the semantic features of verbal measure words and suggested the 'inner-relations' and 'outer-relations' between verbal measure words and the verbs measured. The former suggests that the verbal measure words and the verbs measured are related from their internal semantic values; the latter proposes that the verbal measure words and verbs measured are related externally, such as 'borrow' tools used to measure the actions. Therefore, body measures (拳 (quán) in 打一拳 [(dǎyīquán) give a punch], 口 (kǒu) in 咬一口 [(yǎoyīkǒu) a bite] and 掌 (zhǎng) in 打一掌 [(dǎyīzhǎng) hit with a palm]), tool measures (刀 (dāo) in 切一刀 [(qiēyīdāo) cut it] and 棒 (bàng) in 打一棒 [(dǎyībàng) hit with a club]), time measures (年 [(nián) year], 月 [(yuè) month] and 日 [(rì) day]) and space

measures (圈 (quān) in 跑一圈 [(pǎoyīquān) run a lap] belong to outer-related category. Isomorphic verb measure words (看 (kàn) in 看一看 [(kànyīkàn) have a look] and 闻 (wén) in 闻一闻 [(wényīwén) have a smell]) and concomitant verb measure words (声 (shēng) in 喊一声 [(hǎnyīshēng) a shout] and 觉 (jiào) in 睡一觉 [(shuìyījiào) a sleep]) are under the inner-related category. This categorisation is explicit to some extent, but it does not present the features of the verb measure words like Jiang (2006). Fang's categorisation is presented as the following:

Table 2.1.1.6 Fang's Verbal Measure Words Categorisation



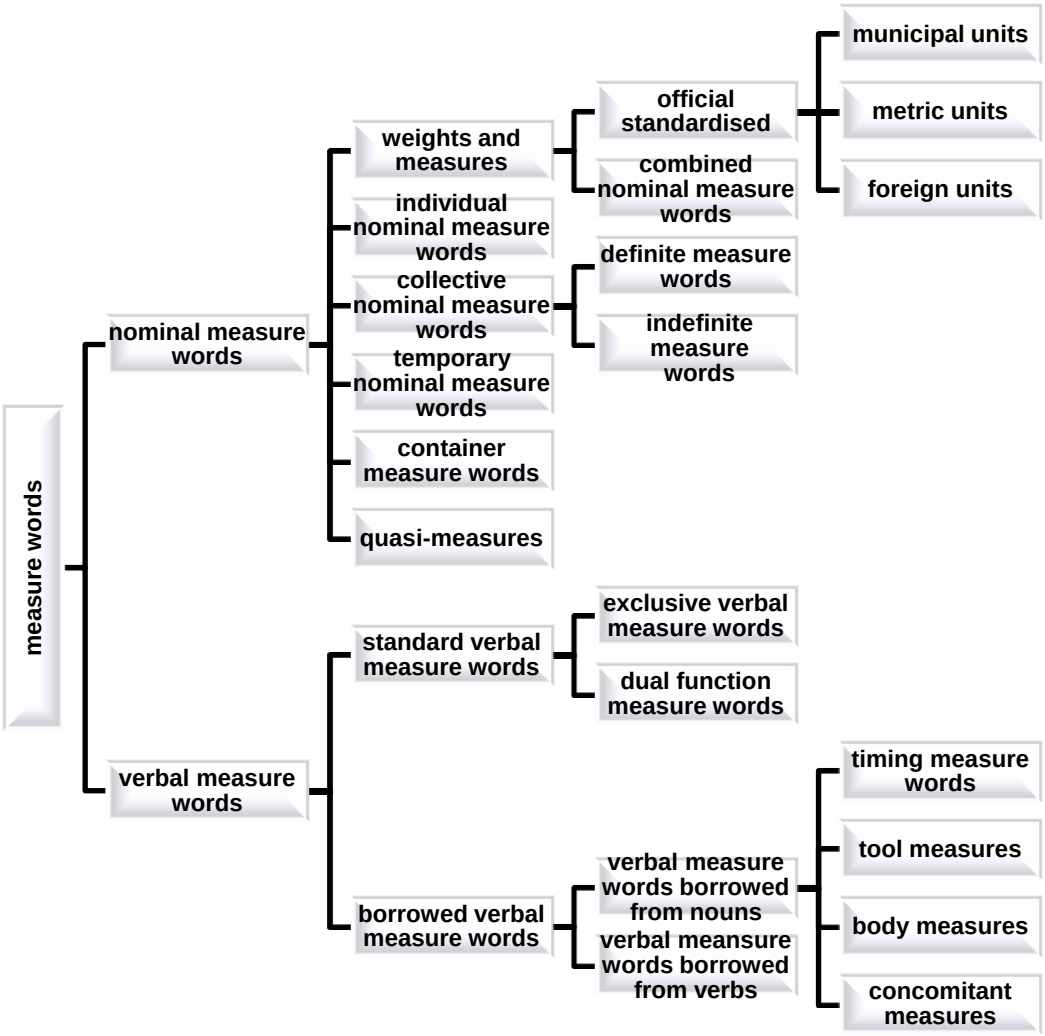
In short, studies on the verb measure words have provided important information for the present research. Based on the studies discussed, the current research classes verb measure words into two categories which are standard verbal measure words and borrowed verbal measure words. The standard verbal measure words category includes exclusive verbal measure words, such as 遍 [(biàn) for a course of an action] in 看一遍 [(kànyībiàn)

read once] and 程 [(chéng) for the distance of an action] in 走一程 [(zǒuyīchéng) walk a certain distance], and dual function measure words, such as 回 [(huí) for the times of an action or measuring thing or a chapter in a novel] in 去一回 [(qùyīhuí) been once] or 一回事 [(yīhuíshì) a thing], which can be used as nonspecific nominal measure word as well as verbal measure word. Under the borrowed verbal measure words category, there are verbal measure words borrowed from nouns and verbal measure words borrowed from verbs (=repeated verbs). The former includes timing measure words (年 [(nián) year], 月 [(yuè) month] and 日 [(rì) day]), tool measures (刀 (dāo) in 切一刀 [(qiēyīdāo) cut it], 棒 (bàng) in 打一棒 [(dǎyībàng) hit with a club]), body measures (拳 (quán) in 打一拳 [(dǎyīquán) give a punch], 口 (kǒu) in 咬一口 [(yǎoyīkǒu) a bite] and 掌 (zhǎng) in 打一掌 [(dǎyīzhǎng) hit with a palm]) and concomitant measures (声 (shēng) in 喊一声 [(hǎnyīshēng) a shout] and 觉 (jiào) in 睡一觉 [(shuìyījiào) a sleep]). The latter includes words like 看 (kàn) in 看一看 [(kànyīkàn) have a look] and 闻 (wén) in 闻一闻 [(wényīwén) have a smell]. All these categories will be discussed in the following section in detail.

2.1.2 A New CMW Categorisation

From the exploration of different CMW classifications, the current research integrates previous scholars' ideas and presents a modern CMW categorisation with a clear hierarchy system. This categorisation not only provides a framework for the present study of CMW in learning and teaching Chinese as a second language but is also valuable for the study of CMW in other areas.

Table 2.1.2.1 The CMW Categorisation of the Current Study



2.1.2.1 Nominal Measure Words

Nominal measure words are applied in the quantifying constructions when referents of nouns are counted. Within the construction, they normally appear after numerals/demonstratives/interrogative pronouns before nouns. Under nominal measure words category, there are weights and measures, individual nominal measure words, collective nominal measure words, temporary nominal measure words, container measure words and quasi-measures.

Weights and measures are classified into official standardised measure words and combined nominal measure words.

- **Official standardised measure words** are regulated by the government to unify the measures for goods and products, including the following categories:

  - **'Market' units**, such as, 市寸 [(shìcùn) =3.3333 centimetre], 市尺 [(shìchǐ) =0.3333 metre], 市丈 [(shìzhàng) =3.3333 metre] and 市里 [(shìlǐ) =0.5 kilometre], 市斤 [(shìjīn) =0.5 kilogramme] and 市两 [(shìliǎng) =50 gramme].

  - **Metric units** are unified globally, such as, 米 [(mǐ) metre], 千米 [(qiānmǐ) kilometre], 升 [(shēng) litre], 克 [(kè) gram], 公斤 [(gōngjīn) kilogram], 公顷 [(gōngqǐng) hectare] and 吨 [(dùn) tonne];

  - **Foreign units** which are translated from other language directly, such as, 英寸 [(yīngcùn) inch], 英尺 [(yīngchǐ) foot], 码 [(mǎ) yard], 英里

[(yīnglǐ) mile], 加仑 [(jiālún) gallon], 盎司 [(àngsī) ounce], 磅 [(bàng) pound] and 英亩 [(yīngmǔ) acre].

- **Combined nominal measure words**, such as, 架次 [(jiàcì) a flight], 千米每小时 [(qiānmǐměixiǎoshí) kilometre per hour] and 平方公里 [(píngfānggōnglǐ) square kilometre].

Individual nominal measure words are the most diverse measure words category. This type of measure words put objects into certain classes or groups according to their shape, animacy, function and other salient characteristics of the objects counted. The following listed measure words are examples of this category:

- 条 [(tiáo) for long things] in 一条蛇 [(yītiáoshé) a snake] and 一条绳子 [(yītiáoshéngzi) a rope]
- 片 [(piàn) for thin and flat things] in 一片叶子 [(yīpiànyèzi) a leaf] and 一片雪花 [(yīpiànxuěhuā) a flake of snow]
- 部 [(bù) for films, books or a set of words and etc.)] in 一部电影 [(yībùdiànyǐng) a film] and 一部小说 [(yībùxiǎoshuō) a novel]
- 本 [(běn) for books, magazines, things bound like a book etc.)] in 一本书 [(běn) a book] and 一本笔记本电脑 [(yīběnbǐjìběndiànnǎo) a notebook computer]
- 匹 [(pǐ) for silks, satins, cloth, or horses, mules, camels, etc.] in 一匹布 [(yīpǐbù) a piece of cloth] and 一匹马 [(yīpǐmǎ) a horse]
- 头 [(tóu) measure words for certain animals] in 一头牛 [(yītóuniú) a cow] and 一头猪 [(yītóuzhū) a pig].

Collective nominal measure words are obligatorily preceded by numerals to collocate with nouns to form a unit as ‘collective nouns’. Under this category, there are:

- **Definite measure words** quantify the nouns measured, like the following words:
  - 对 [(duì) for a pair] in 一对鸳鸯 [(yīduìyuānyāng) a couple of mandarin ducks]
  - 副 [(fù) for a set of things or two things of the same kind] in 一副筷子 [(yīfùkuàizi) a pair of chopsticks]
  - 双 [(shuāng) for a pair of things that are usually used together] in 一双眼睛 [(yīshuāngyǎnjīng) a pair of eyes]
  - 打 [(dǎ) = twelve] in 一打啤酒 [(yīdápíjiǔ) twelve bottles of beer].

- **Indefinite measure words** collocate with nouns to represent the indefinite quantity, such as the following words:
  - 帮 [(bāng) for a group of people] in 一帮学生 [(yībāngxuéshēng) a group of students]
  - 簇 [(cù) for cluster of flowers, plants and people] in 一簇野菊花 [(yīcùyějúhuā) a cluster of daisies]
  - 沓 [(dá) for sheets and other stacked items] in 一沓钞票 [(yīdáchāopiào) a stack of money]
  - 点 [(diǎn) for a small amount of uncountable matters] in 一点沙子 [(yīdiǎnshāzi) some sand (uncountable)]
  - 队 [(duì) for people in orderly rank] in 一队士兵 [(yīduìshìbīng) a team of soldiers]
  - 堆 [(duī) a heap of things] in 一堆文件 [(yīduīwénjiàn) a pile of files]
  - 户 [(hù) for household] in 一户人家 [(yīhùrénjiā) a household]
  - 些 [(xiē) for indefinite quantity of countable items] in 一些苹果 [(yīxiēpíngguǒ) some apples (countable)].

Temporary nominal measure words are mainly borrowed from the referents of nouns for human body to use as measure words. In the

temporary nominal measure words construction, ‘的 (de)’ can be used between measure words and the nouns measured, and only the numeral ‘一 [(yī) one]’ is allowed in the measuring constructions. The following are the examples of this category:

- 脸 (liǎn) in 一脸汗水 [(yīliǎnhànshuǐ) sweaty face]
- 嘴 (zuǐ) in 一嘴瞎话 [(yīzuǐxiāhuà) full of nonsense]
- 身 (shēn) in 一身汗 [(yīshēnhàn) in sweat]
- 肚子 (dùzi) in 一肚子坏水 [(yīdùzihuàishuǐ) full of maliciousness]
- 头 (tóu) in 一头白发 [(yītóubáifà) grey headed]
- 口 (kǒu) in 一口水 [(yīkǒushuǐ) mouthful of water]

Container measure words are mainly borrowed from ‘containers’ and ‘vehicles’ to measure the item/items in the ‘container’, such as:

- 杯 (bēi) in 一杯水 [(yībēishuǐ) a glass of water] or 两杯水 [(liǎngbēishuǐ) two glasses of water]
- 壶 (hú) in 一壶酒 [(yīhújiǔ) a flask of wine] or 三壶酒 [(sānhújiǔ) three flasks of wine]
- 碗 (wǎn) in 一碗饭 [(yīwǎnfàn) a bowl of rice] or 四碗饭 [(sìwǎnfàn) four bowls of rice]
- 盆 (pén) in 一盆汤 [(yīpéntāng) one tureen of soup] or 五盆汤 [(wǔpéntāng) five tureens of soup]
- 桶 (tǒng) in 一桶油 [(yītǒngyóu) one barrel of oil] or 六桶油 [(liùtǒngyóu) six barrels of oil]
- 车 (chē) in 一车羊 [(yīchēyáng) a truck full of sheep] or 七车羊 [(qīchēyáng) seven truck full of sheep]
- 船 (chuán) in 一船游客 [(yīchuányóukè) a shipload of tourists] or 八船游客 [(bāchuányóukè) eight shiploads of tourists].

Quasi-measures are words like 年 (nián) in 两年时间 [(liǎngniánshíjiān) two years time], 县 (xiàn) in 三县人 [(sānxiànrén) people from three counties],

季 (jì) in 两季庄稼 [(liǎngjìzhuāngjià) two seasons' crop], 天 (tiān) in 四天路程 [(sìtiānlùchéng) four days journey] and 国 (guó) in 十国人 [(shíguórén) people of ten nationalities]. This type of measure word expresses 'measures themselves' and they are different from temporary and container measure words. The reasons are: firstly, '的 (de)' can be added between quasi-measures and nouns; secondly, this kind of measure words can be used with any numerals.

2.1.2.2 Verbal Measure Words

Verbal measure words collocate with verbs to count the number or duration of an action. There are two types of verbal measure words: standard verbal measure words and borrowed verbal measure words.

Standard verbal measure words are words mainly used to measure verbs, and there are two sub categories of this type of measure word.

- **Exclusive verbal measure words** can only be used to measure verbs, such as:
    - 遍 [(biàn) for a course of an action] in 看一遍 [(kànyībiàn) read once]
    - 程 [(chéng) for the distance of an action] in 走一程 [(zǒuyīchéng) walk a certain distance]
    - 通 [(tōng) to indicate certain actions lasting for a period of time] in 打一通 [(dǎyītōng) beat once] or 说一通 [(shuōyītōng) talk a while]
    - 下 [(xià) or the frequency or continued time of an action] in 跳了几下 [(tiàolejǐxià) jump a few times].

- **Dual function measure words** not only can be used to measure verbs, but also can be used to measure referents of nouns, for instance:
    - 回 [(huí) for the times of an action or measuring thing or a chapter of novels] in 去一回 [(qùyīhuí) been once] or 一回事 [(yīhuíshì) a thing]
    - 次 [(cì) the number of repetitions in a given period of time or the number of times an action is taken] in 一次地震 [(yīcìdìzhèn) an earthquake] or 抱一次 [(bàoyīcì) hug once]
    - 把 [(bǎ) for things with a handle or something like a handle or for a handful of something or for an action done with the hand to indicate its quickness] in 一把椅子 [(yībǎyǐzi) a chair] or 一把花生 [(yībǎhuāshēng) a handful of peanuts] or 帮一把 [(bāngyībǎ) give a hand]
    - 场 [(chǎng) for the course of an event or a nature phenomenon or certain actions] in 一场争论 [(yīchǎngzhēnglùn) an argument] or 一场雨 [(yīchǎngyǔ) rained once] or 哭了一场 [(kūleyīchǎng) have a cry]
    - 顿 [(dùn) for regular meal or reprisal] in 一顿饭 [(yīdùnfàn) a meal] or 打一顿 [(dǎyīdùn) beat once]
    - 番 [(fān) for the process of certain actions or for kindness, favour, etc.] in 研究一番 [(yánjiūyīfān) have a study] or 一番好意 [(yīfānhǎoyì) a favour]

Borrowed verbal measure words are borrowed from nouns and verbs to measure verbs.

- **Verbal measure words borrowed from nouns** are divided into time verbal measure words, body verbal measure words, tool verbal measure words and concomitant measures.

- **Time verbal measure words** measures the duration of an action, such as 年 (nián) in 等一年 [(děngyīnián) wait a year] and 日 (rì) in 等四日 [(děngsìrì) wait four days].

- **Tool measures** are borrowed from the tool used in an action to calculate the number of the action, for example, 刀 (dāo) in 切一刀 [(qiēyīdāo) cut it], 棒 (bàng) in 打一棒 [(dǎyībàng) hit with a club], 车 (chē) in 载一车 [(zǎiyīchē) a truck load] and 笔 (bǐ) in 写一笔 [(xiěyībǐ) write a stroke].

- **Body measures** are borrowed from the part of the body that does the action to quantify the action, for instance, 脚 (jiǎo) in 踢三脚 [(tīsānjiǎo) kick three times], 拳 (quán) in 打一拳 [(dǎyīquán) a punch], 口 (kǒu) in 咬一口 [(yǎoyīkǒu) a bite] and 掌 (zhǎng) in 打一掌 [(dǎyīzhǎng) hit with a palm].

- **Concomitant measures** are borrowed from the nouns for the result of an action to calculate the action, such as 觉 (jiào) in 睡一觉 [(shuìyījiào) a sleep], 耳光 (ěrguāng) in 扇一耳光 [(shānyīěrguāng) a slap] and 声 (shēng) in 喊一声 [(hǎnyīshēng) a shout].

- **Verbal measure words borrowed from verbs** are used to express the short duration of an action, for instance:
  - 看 (kàn) in 看一看 [(kànyīkàn) have a look]
  - 跳 (tiào) in 跳一跳 [(tiàoyītiào) have a jump]
  - 试 (shì) in 试一试 [(shìyīshì) have a try]
  - 摸 (mō) in 摸一摸 [(mōyīmō) have a touch]

- 洗 (xǐ) in 洗一洗 [(xǐyīxǐ) have a wash]
- 转 (zhuàn) in 转一转 [(zhuànyīzhuàn) have a turn]
- 踢 (tī) in 踢一踢 [(tīyītī) have a kick

2.1.3 CMW Usages

As the main objective of language learning is communication, CMW acquisition is not only a case of lexicon acquisition but also the acquisition of the usages and functions of different CMW. This section explores the main usages of CMW, including CMW repetitions and the literary usages of CMW to facilitate the analysis of application of CMW usages of L2 learners in Chapter 5 and Chapter 6.

2.1.3.1 CMW Repetition

Repetition is an important usage of CMW, which can express additional meanings of a single measure word. This section provides an overview of some studies on CMW repetition to support the discussion of the current research.

Xiong and Kang (2009) have summarised that the measure words repetitions are restricted by many conditions. First of all, only monosyllabic CMW can be repeated, except some temporary nominal measure words, such as 一脸汗水 [(yīliǎnhànshuǐ) sweaty face] that cannot be transferred into *一脸脸汗 (yīliǎnliǎnhàn) as 脸 (liǎn) is not monosyllabic. Secondly, CMW that are derogatory cannot be repeated, such as 一帮流氓 [(yībāngliúmáng) a group of gangs] and 一伙强盗 [(yīhuǒqiángdào) a gang of robbers]. In the same study, Xiong and Kang have also summarised that CMW repetitions mean ‘every’ and ‘each one’ (他讲的话句句真理。[(Tā jiǎng de huà jùjù zhēnlǐ.) Everything he says is the truth]), or ‘large quantity’ (桌上

摆着一本本书。[(Zhuōshàng bǎizhe yīběnběnshū.) There are lots of books on the desk.]). Furthermore, CMW repetition can only be used with numeral 'one' (一把把椅子 [(yībǎbǎ yǐzi) lots of chairs]) and cannot be used as complements in a sentence (*鸡比鸭多五只只。(jī bǐ yā duō wǔzhīzhī)).

Liu (2009) has studied the unbalance of the CMW repetition on the basis of the CCL (Centre for Chinese Linguistics Corpus Database). According to her study, most of the CMW can be overlapped with some exceptions under each CMW category. Some CMW repetition appear more often than others, such as '个 (gè)、家 (jiā)、本 (běn)' have over 1000 sentences in CCL, whereas '尊 (zūn) and 位 (wèi)' have less than 50 sentences.

He (2000) has also included one chapter in her *Modern Chinese Measure Words Studies* to discuss the relationship between measure word repetition and its additional meanings. She has analysed CMW repetition syntactically according to the sentence elements the overlapped measure word serve i.e. subject, predicate, object, attributive and adverbial:

1. When a CMW repetition serves as a subject in a sentence and it describes the characteristics of the noun, this CMW repetition transforms the sentence into a literary style, such as 谁知盘中餐，粒粒皆辛苦。 [(Shuí zhī pánzhōngcān, lìlì jiē xīnkǔ). Do you know all the food on the plate came from peasants' hard work]. The measure words that express a small quantity or size overlap to indicate an emotion of cherishing, such as 针针有情 [(zhēnzhēn yǒuqíng) do every stitch with love].

2. When a CMW repetition acts as a predicate in a sentence, the sentence transforms into literary style, such as 秋风阵阵，湖水荡漾。

[(qiūfēng zhènzhèn, húshuǐ dàngyàng.) Autumn winds create gentle waves in the lake.]

3. When a CMW repetition functions as an object in a sentence, it changes the meaning of the sentence to emphasise the ‘large quantity’ of the noun measured, such as:
    - 建起楼房座座 [(jiànqǐ lóufáng zuòzuò) built lots of multi-storey buildings]
    - 家家户户挂起了红灯笼 [(jiājiāhùhù guà qǐle hóng dēnglóng) lots of families hang up red Chinese lanterns].

4. When a CMW repetition operates as an attributive in a sentence, it transforms the sentence into a literary style, providing the measure word is metaphorical or descriptive, for instance:
    - 蓝天飘过朵朵白云 [(lántiān piāoguò duǒduǒ báiyún) many clouds drift in the blue sky]
    - 阵阵微风吹过 [(zhènzhèn wēifēng chuīguò) the breeze blowing]

    If the measure word measures individual nouns and conveys some characteristics of the word measured, the CMW repetition changes the meaning of the sentence to emphasise ‘each of the noun measured’, such as 杯杯的酒装着人们的喜悦 [(bēibēi de jiǔ zhuāngzhe rénmen de xǐyuè) each glass of wine filled with the joy of the people.].

5. When a CMW repetition performs as an adverbial in a sentence, it transforms the sentence into a literary style, providing the measure word expresses the characteristics of the word measured, such as:

    这些树将一片荷塘重重围住 [(zhèxiēshù jiāng yīpiànhétáng chóngchóng wéizhù) around the pound, far and near, low and high, are trees]

Verbal measure words repetition changes the meaning of the sentence to emphasise ‘each time’, such as 他回回都撒谎 [(tā huíhui dōu sāhuǎng) he lies every time].

2.1.3.2 CMW in Literary Context

Many literary usages of CMW are in a metaphorical sentence or have metaphorical indication: CMW in a metaphorical sentence is not necessarily implying the metaphorical usage, while the metaphorical usages of CMW are not necessarily in a metaphoric sentence. The flowing sentences illustrate what the differences are:

我看见一轮明月。 [1]
Wǒ kànjiàn yīlún míngyuè.
*I see a CMW (wheel like) moon.
I see a full moon.

树色是阴阴的，乍看像一团烟雾。 [2]
Shùsè shì yīnyīn de, zhàkàn xiàng yītuán yānwù.
*Tree colour is fading, at first glance it looks like CMW (a cloud of) smoke.
The tree is fading, which looks like a cloud of smoke at first glance.

衬着蓝色的天幕，又飘来一抹晚霞。 [3]
Chènzhe lánsè de tiānmù, yòu piāolái yīmǒ wǎnxiá.
*In the blue sky, again flows a CMW (a wisp of) cloud that has dyed by the sunset.
A wisp of cloud that is dyed by the sunset flows towards here in the blue sky.

一盏宫灯似的太阳，挂在京西暮霭缠绕的峰峦上。 [4]
Yīzhǎn gōngdēng sìde tàiyáng, guàzài jīngxī mùǎichánrào de fēngluán shàng.

*A CMW (measure word for lantern or light) palace lantern like sun, hang at Beijing west evening mist surrounded mountaintop.
A sun that looks like a palace lantern, hanging over the mountain top which are surrounded by evening mist at west Beijing.

All the CMW in the above listed sentences are in the literary context. Among them, [1] is not a metaphorical sentence, but the measure word '轮 (lún)' is metaphorical. 轮 (lún) means wheel, but has been used to describe the shape of the moon which is 'looks like a wheel' in the sentence. Both the sentence and the measure word in [2] are metaphorical usages as the smoke is used to represent the tree, while the CMW '团 (tuán)' represents the shape of the smoke which 'looks round'. The CMW in [3] presents a clear picture of the shape of the cloud in the blue sky, which is '抹 [(mǒ) thin, narrow and faded]'. [4] is a metaphorical sentence, but the CMW in this sentence is not a metaphorical usage. Although the sun is the subject in [4], the CMW '盏 [(zhǎn) measure word for lanterns]' is related to the palace lantern which represents the sun.

2.2 The Comparative Study of CMW and EMU

The core structure of a sentence in Chinese and English is '(attributive) subject + (adverbial) predicate (complement) + (attributive) object (complement).' The majority of CMW cannot work alone in a sentence as they have to be used with numerals or demonstratives to form a 'numeral + measure (NM)' or 'demonstrative + measure (DM)' unit to function grammatically. Different CMW function as different elements in a sentence, such as subject, object, attributive, adverbial and complement.

The introduction chapter has briefly discussed the differences between CMW and EMU. This section discusses the differences further by exploring the cross lingual differences between Chinese measure words and English measuring units to provide a linguistic framework for the analysis of CMW application in Chapter 5 and Chapter 6. The bilingual comparison is based on the new CMW categorisations generated in Section 2.1.2.

2.2.1 Nominal Measure Words and their 'English Equivalents'

Nominal measure words are the most diverse CMW categories in Chinese language, and there are a large number of these words. By comparison, the number of EMU for nouns in English is small, and most of them are used for mass nouns. Therefore, although measure words do not exist in English, some EMU constructions can be seen as the 'equivalents' to some CMW.

Generally speaking, the majority of weights and measures in NM and DM unit are attributives in a sentence and they are often used to modify nouns, and these measure words have 'equivalents' in English.

Table 2.2.1.1 Weights and Measures and their English 'Equivalents'

Chinese	两米布 [NM]	十英寸冰 [NM]	这米布 [DM]
	liǎngmǐbù	shíyīngcùnbīng	zhèmǐbù
	*two CMW cloth	*ten CMW ice	*this CMW cloth
English	two metres of cloth	ten inches of ice	one metre of this cloth

As presented, weights and measures can be translated into English. However, weights and measures such as 米 (mǐ) and 英寸 (yīngcùn) are measure words in the phrases, whereas their equivalents metre (米) and

inch (英寸) are nouns that need to be used with the preposition ‘of’ to use before nouns to describe the quantity. Although weights and measures 米 (mǐ) and 英寸 (yīngcùn) and their English ‘equivalents’ (‘metre of’ and ‘inch of’) are different parts of speeches, they appear at the same position and have similar functions.

Individual nominal measure words are the most abundant measure words category in Chinese as these words are obligatory in counting referents of nouns and also put nouns into classes according to their semantic features such as animacy, shape, and function. There is no similar expression in English for individual measure words, which is also one of the most obvious cross lingual differences between Chinese and English.

Table 2.2.1.2 Individual Nominal Measure Words and their English Translations		
Animacy 只 zhī [animacy]		
一只苍蝇 [NM] yīzhīcāngyíng *a animacy fly a fly	一只母鸡 [NM] yīzhīmǔjī *a animacy hen a hen	一只兔子 [NM] yīzhītùzi *a animacy rabbit a rabbit
Shape 条 tiáo [for long items]		
一条围巾 [NM] yītiáowéijīn *a long scarf a scarf	一条信息 [NM] yītiáoxìnxī *a long message a message	一条绳子 [NM] yītiáoshéngzi *a long rope a rope
Function 辆 liàng [for vehicles]		
一辆汽车 [NM] yīliàngqìchē *a vehicle car a car	一辆自行车 [NM] yīliàngzìxíngchē *a vehicle bike a bike	一辆公共汽车 [NM] yīliànggōnggongqìchē *a vehicle bus a bus
我给你一支枪。 [attributive] Wǒ gěi nǐ yīzhīqiāng. *I give you a gun. I give you a gun.		路上有一根香蕉皮。 [attributive] Lùshàng yǒu yīgēn xiāngjiāopí. *Road has a CMW banana skin. There is a banana skin on the road.

As the English translations of the Chinese phrases and sentences in the above table indicate, no equivalents or similar expressions for the individual nominal measure words exist in English. This also suggests that English does not adopt the same system to describe nouns, as numerals can be

used before nouns directly to count the objects such as a hen, a scarf and a gun.

Most collective nominal words have similar expressions in English, and some can be directly translated into English quantifiers such as ‘些 (xiē) = some’.

Table 2.2.1.3 Collective Nominal Measure Words and their English ‘Equivalents’

一群学生 [NM]	一双袜子 [NM]	一些沙 [NM]	一堆文件 [NM]
yīqúnxuéshēng	yīshuāngwàzi	yīxiēshā	yīduīwénjiàn
a CMW students	a CMW socks	a CMW sand	a CMW documents
a group of students	a pair of socks	some sand	a pile of documents
外面有一群学生。 [attributive]			
Wàimiàn yǒu yīqúnxuéshēng.			
*Outside have CMW (a group of) students.			
There is a group of students outside.			

As Table 2.2.1.3 shows, there are similar expressions in English for the collective nominal measure words although the English ‘equivalents’ are mainly ‘noun + preposition (of)’ constructions such as 群 (qún) = group of. 群 (qún) is a measure word, whereas its English equivalent ‘group of’ is a phrase.

Temporary nominal measure words do not have similar expressions in English and they cannot be directly translated. The relationship between

some CMW and nouns is not transparent and some even arbitrary as most of the ‘numeral + temporary nominal measure words + noun’ constructions have totally different meanings from their word to word expressions.

Table 2.2.1.4 Temporary Nominal Measure Words and their English Translations		
一手冷汗 [NM]	一屁股债 [NM]	一鼻子灰 [NM]
yī shǒu lěnghàn	yī pìgǔ zhài	yī bízi huī
*a handful of sweat	*a bottom full of debt	*a nose full of dust
sweaty hand	lot of debt	encounter snub
冠名没想到自己会碰这么一鼻子灰。 [attributive] Guànmíng méi xiǎngdào zìjǐ huì pèng zhème yībízihuī. *Guanming did not think he will get a nose full of dust. Guanming did not think he will encounter snub.		
他惊吓得一抖腿，起了一身鸡皮疙瘩。 [attributive] Tā jīngxiàde yīdǒutuǐ, qǐle yīshēnjīpígēdá. *He was scared to jump, raised a body full of goose pimples. He was scared to jump that caused him to break out in goose pimples.		

As the above Table 2.2.1.4 presents, the temporary nominal measure words in phrases and sentences cannot be translated into English directly, and these measure words do not have the same or similar expressions in English.

Comparing with temporary nominal measure words, container measure words create ‘a unit of measure’, which have similar concepts to EMU, and these words have ‘equivalents’ in English.

Table 2.2.1.5 Container Measure Words and their English ‘Equivalents’

一瓶啤酒 [NM]	一卡车沙 [NM]	一包糖 [NM]	一盆花 [NM]
yī píng píjiǔ	yī kǎchē shā	yī bāo tang	yī pén huā
a CMW beer	a CMW sand	a CMW sweet	a CMW flower
a bottle of beer	a truckload of sand	a bag of sweets	a pot of flowers

Quasi-measures express ‘measurement’ themselves, and these measure words are seen as nouns first, for which reason there are English equivalents for quasi-measures.

Table 2.2.1.6 Quasi-Measures and their English Equivalents

他给我三天时间考虑他的提议。 [attributive] Tā gěi wǒ sāntiān shíjiān kǎolǜ tādetíyì. *He gave me three days time to consider his offer. He gave me three days to consider his offer.
两国人都反对这个政策。 [attributive] Liǎngguórén dōu fǎnduì zhègè zhèngcè. *Two countries’ people all against this policy. People of two countries all against this policy.

2.2.2 Verbal Measure Words and their English ‘Equivalents’

Verbal measure words mainly function as complements in sentences, and most of these words cannot be directly translated into English. Among them, standard verbal measure words are the mostly recognised verbal measure words, including exclusive verbal measure words and dual function measure words. The former mainly function as complements and the latter can function as complements and attributives in sentences. The most popular standard verbal measure words include: 次 (cì), 通 (tōng), 番 (fān), 阵(zhèn), 顿 (dùn), 回 (huí), 趟 (tàng), 遍 (biàn), 下 (xià) and 场 (chǎng). Among these words, some may have the same semantic meaning under certain circumstances, such as 次 (cì) and 遍 (biàn), 次 (cì) and 回 (huí) and 次 (cì) and 场 (chǎng).

Table 2.2.2.1 Standard Verbal Measure Words and their English 'Equivalents'
帮我把桌子抬一下。 [1] [complement] Bāng wǒ bǎ zhuōzi táiyīxià. *Help me table lift one CMW. Help me to lift the table. 这个故事他听过三(次/回/遍)了。 [2] **[**complement] Zhè gè gùshì tā tīngguò sān (cì/huí/biàn) le. *This story he heard three times. He has heard this story three times. 这是非常大的一(次/场)盛会。 [3] [attributive] Zhè shì fēichángdà de yī (cì/cháng) shènghuì. *This is very big one CMW event. This is a very big event.

For the above sentences, the measure word in [1] cannot be translated directly into English, while all three CMW in [2] can be translated into 'times' in English. The measure words in [3] cannot be translated into 'once', but should be translated into 'one', as they serve as an attributive to modify the noun '盛会 [(shènghuì) event]'. Therefore, only the measure words in [2] have 'equivalents' in English.

For the verbal measure word borrowed from nouns, some of them can be translated directly into English, but some do not have English 'equivalents'.

Table 2.2.2.2 Verbal Measure Words Borrowed from Nouns and their English Translations
等一年 [1] děngyīnián Wait a year 老张在纸上画了一笔。 [2] [complement] Lǎozhāng zài zhǐ shàng huàle yībǐ. *Mr Zhang on the paper draws a CMW. Mr Zhang has drawn a stroke on the paper. 小狗咬了小王一口。 [3] [complement] Xiǎogǒu yǎole xiǎowáng yīkǒu. *The little dog bites xiaowang a CMW. The little dog gives xiaowang a bite. 小红说睡一觉明天就没事了。 [4] [complement] Xiǎohóng shuō shuìyījiào míngtiān jiù méishì le. *Xiaohong said have a sleep tomorrow will be fine. Xiaohong said go and have a sleep and you will be fine tomorrow.

As presented in the table above, [1] has equivalent in English as the structure for the Chinese phrase and its English translation are the same, and the measure word '年 (nián)' locates at the same place as its equivalent 'year'. All the measure words in [2], [3] and [4] are complements that come after the verbs to describe the verb further, which do not have an equivalent in English as the measure word 笔 (bǐ), 口 (kǒu) and 觉 (jiào) are translated into 'stroke', 'bite' and 'sleep' which do not convey the same meaning as the CMW.

Verbal measure words borrowed from verbs are probably the most controversial category. Some scholars suggest they are verb repetition, but the current study takes them as borrowed verbal measure words to emphasise the action and the short duration of actions.

Table 2.2.2.3 Verbal Measure Words Borrowed from Verbs and their English Translations
让我摸一摸包的里面。 [complement] Ràngwǒ mōyīmō bāodelǐmiàn. *Let me feel a feel bag's inside. Let me have a feel inside the bag. 让我看一看你的脸。 [complement] Ràng wǒ kànyīkàn nǐdeliǎn. *Let me look a look your face. Let me have a look at your face.

The examples in Table 2.2.2.3 indicate that verbal measure words borrowed from verbs can be translated into English. For instance 摸一摸 [mōyīmō] and 看一看 [kànyīkàn] can be translated into ‘‘have a ‘verb in the sentence’” in English. However, the English translations cannot be seen as the equivalents for this type of measure word as they are not the direct translations.

2.3 Conclusion

This chapter has discussed CMW in detail to provide a linguistic and applied linguistic framework for the present study. The study on categorisation of

CMW and CMW usages has been conducted in Section 2.1. A comparative study on CMW and EMU has been carried out in Section 2.2 to examine the cross lingual difference between the two languages. Some CMW have 'equivalent' in English, whereas others cannot even be translated into English.

Table 2.3 The Comparison between CMW and EMU

CMW that have 'equivalent' in English	**CMW that have no 'equivalent' in English**
Weights and measures	Individual nominal measure words
Collective nominal measure words	Temporary nominal measure words
Container measure words	Standard verbal measure words (dual)
Quasi-measures	Verbal measure words borrowed from nouns (tool, body and concomitant)
Standard verbal measure words	Verbal measure words borrowed from verbs
Verbal measure words borrowed from nouns (time)	

Generally speaking, a cross lingual difference exists between Chinese and English in measuring objects and actions, and this difference could be the reason for the difficulties for English speakers when learning CMW. The next chapter will explore the theories and hypothesis in SLA from a cross lingual perspective, and the previous studies on CMW will also be reviewed in the next chapter to locate the current study in the relevant field.

Chapter 3 A Theoretical Account and Literature Review on CMW in L2 Learning and Acquisition

3.0 Introduction

Chapter 2 has built the foundation for the current study from both linguistic and applied linguistic aspects. As discussed, measure words are obligatory in the Chinese language, but do not exist in English. This difference between Chinese and English may cause difficulties in CMW acquisition for the English native speakers when learning Chinese, which is the main reason for the current study.

This chapter situates the study in the field of second language acquisition (SLA). The relevant SLA theories are going to be discussed to frame the discussion of the L2 learners' application of CMW. The previous studies on CMW will be overviewed to locate the present study in the context of the CMW studies. This chapter starts from Section 3.1 which reviews the SLA theories, including Contrastive Analysis (CA), Contrastive Analysis Hypothesis (CAH), The Hierarchy of Difficulty Model, Error Analysis (EA), Interlanguage, and proposes a theoretical framework for language learning. Section 3.2 overviews previous studies on CMW and locates the current study in the context of the CMW research. Section 3.3 proposes the research questions for the present study.

3.1 SLA Hypothesis/Theories and CMW

3.1.0 Introduction

As discussed in Chapter 2, a cross lingual difference exists between Chinese (L2 (second language)) and English (L1 (first language)), and this difference affects the English native speakers' learning and acquisition of Chinese language as many scholars have proposed (Fries 1945, Lado 1957). Therefore, the current research reviews the related hypothesis and theories regarding the L1 and L2 in the SLA field before the discussion of the L2 learners' internal process of CMW acquisition.

3.1.1 Contrastive Analysis, Error Analysis and Interlanguage

Contrastive analysis (CA) is one of the most important methods the currently study adopts which compares learners' first language (English) with the second language (Chinese) they are learning. The comparison is conducted in order to locate the difficulties and find solutions to improve the English speakers' learning and acquisition of CMW. According to CA, those elements that are similar to the learners' native language will be simple and those elements that are different will be difficult.

Lado (1957) further proposed CAH based on CA, which was the dominant theory in the school of Behaviourism in the early SLA field. CAH predicates difficulties in L2 learning and acquisition by comparing L1 and L2. According to CAH, the language elements that have equivalents in learners' first language are easy for them and the language elements that do not have equivalents are difficult. This theory further proposes that when first language habits are helpful for the language learners in acquiring second

language habits, this is a positive transfer. When the first language habit hinders the learners in learning the new one then it is a negative transfer.

Stockwell, Bowen, and Martin (1965) explored CA and CAH further in their study *Grammatical Structures of English and Spanish*. They have not only compared the English and Spanish by simply listing differences and similarities, but also put difficulties into different levels. They have proposed 'Hierarchy of Difficulty' with the most difficult language element at the top and the least difficult one at the bottom.

Table 3.1.1.1 Stockwell, Bowen, and Martin: Hierarchy of Difficulty

Type of Difficulty	L 1 English; L 2 Spanish	Example
1. Split	X X ＜ y	Por for＜ para
2. New	ø ----- ---> x	Marking grammatical gender
3. Absent	x -- --- ---> ø	Do as a tense carrier
4. Coalesced	X ＞Y Y	his/her is realized as a single form su
5. Correspondence	x -- --- ---> x	-ing = -ndoas a complement with verbs of perception

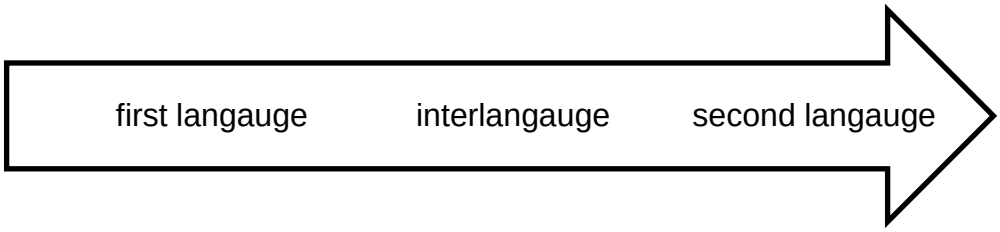
Five levels of difficulties are suggested in Table 3.1.1.1, from 1 the most difficult to 5 the least difficult for the L2 learners: 1, exist in learners' L1 and

L2 but different or extended in learners' L2, such as one item in L1, but become two items in L2; 2, exist in L2 but absent in L1; 3, exist in L1 but absent in L2; 4, two or more items in the first language integrate into one in L2; 5, no difference between L1 and L2.

Although many scholars (Hughes 1980, Whitman and Jackson 1972, Klein 1986, Noblitt 1972) have argued that CAH cannot predicate all the difficulties in language acquisition, for the current study, CA is integrated with Error Analysis (EA) to discuss and explore the difficulties in the English native speakers' application of Chinese measure words. More specifically, the comparison between learners' L1 and L2 is the main technique adopted to analyse the difficulties in CMW application by studying the errors from the empirical study. The integration of CA and EA is also supported by Hammerley (1982) who claims CA complements EA in the sense that CA provides explanation for errors while EA confirms or rejects the predications based on CA. Using error analysis, L2 learners' erroneous expressions are compared with the native speakers' utterances, and three steps are suggested in EA: locating the errors; finding the reasons for the errors, and explaining the errors (Corder, 1981). For the current study, EA is adopted to identify the errors in English speakers' CMW application, to describe the errors, and to explain them with the assistant of CA in the hope of suggesting some teaching strategies for the language teachers.

Although the current study studies the L2 learners' errors, the actual object of the current study is learners' language, which is interlanguage that has been introduced by Selinker (1972) to refer to a language system that is intermediate between the learner's mother tongue and the target language.

Table 3.1.1.2 The Interlanguage



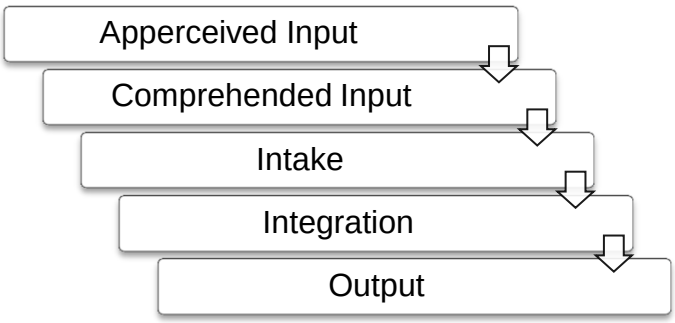
Interlanguage proposes that the language an L2 learner produces is different from a native speakers' although they convey the same meanings, and it is the language between the learners' first language and their second language. Interlanguage refers to the language the second language learners produce at any point before they attain the ultimate competence of the language they are learning, which varies as learners' knowledge develops. Although Corder (1981) proposes that no methodological difference exists between error analysis and the study of the learner's language, error analysis compares learners' language with the target language, whereas the study of interlanguage is the study of the learners knowledge as well as what has been taught. The current study not only compares the L2 learners' L1 with Chinese language but also studies the L2 learners' interlanguage by analysing the errors made by the learners. Therefore, the study of the Chinese measure words application can be seen as the study of Chinese learners' interlanguage as the difficulties in the using of them happen before the achievement of the ultimate competence of Chinese.

3.1.2 Model of the Process of CMW Acquisition

Section 3.1.1 has discussed the theoretical methodology the current study adopts in discussing and analysing the difficulties in the English native speakers' application of Chinese measure words. This section is going to propose a model of the L2 learners' internal process of CMW acquisition in the hope that this model will assist the identification, discussion and analysing of the difficulties in the application of CMW from the language learners' perspective. Before proposing the model of the process of CMW

acquisition, Gass (1988)'s study of a learner's conversion of ambient speech (input) to output will be discussed. This framework is the main guidance and inspiration for the model of the process of CMW acquisition.

Table 3.1.2.1 Ambient Speech



In the above framework, 'ambient speech' refers to an adequate second language data that the language learners are exposed to, which is mainly provided by the L2 native speakers in the second language speaking environment and the language teachers in the language classroom. Although exposed to 'ambient speech', not all the data will pass through the learner and be processed further. The current study is considered under the condition that the L2 learners are in the 'ambient speech' that adequate CMW data is available to them, and the L2 learners have contact with adequate CMW data from the early stage of their Chinese language learning as CMW have a close relationship with nouns and verbs which are the key elements in the language learning process. To further support the above proposal, the current study has examined the text book for the first year students at the University of Leeds and thirty-eight measure words are found, including both nominal measure words and verbal measure words.

The first stage 'apperceived input' refers to the passing through of initial data. In other words, '*apperceived input is the language which is noticed in some*

way by the learner because of some particular features' (Gass, 1988, p. 202). According to the above statement, learners play an active role at this stage and 'noticing' is the key point in 'apperceived input', thus the current study takes 'noticing as the first step in the model of the process of CMW acquisition.

According to Gass (1988), the second stage 'comprehended input' is potentially multi-staged as comprehension can refer to the range of meaning from semantic to structure. The current study tries to explore the learning and acquisition of CMW, and 'comprehension input' is separated into 'understanding (understanding the definition of measure words and basic features of CMW)' and 'comprehension (comprehend the usages of CMW)'. The present study takes 'input' as the passing through of language data and it happens between all the stages. Furthermore, 'input' varies according to the level of the stages and they are modified by the L2 learners depending upon the different requirements of different learners. In the model of the process of CMW acquisition, 'modified Input' refers to modifying the understood data of CMW and input into learners' interlanguage; and 'comprehended input' refers to the modifying of the comprehended data and input into the learners' interlanguage.

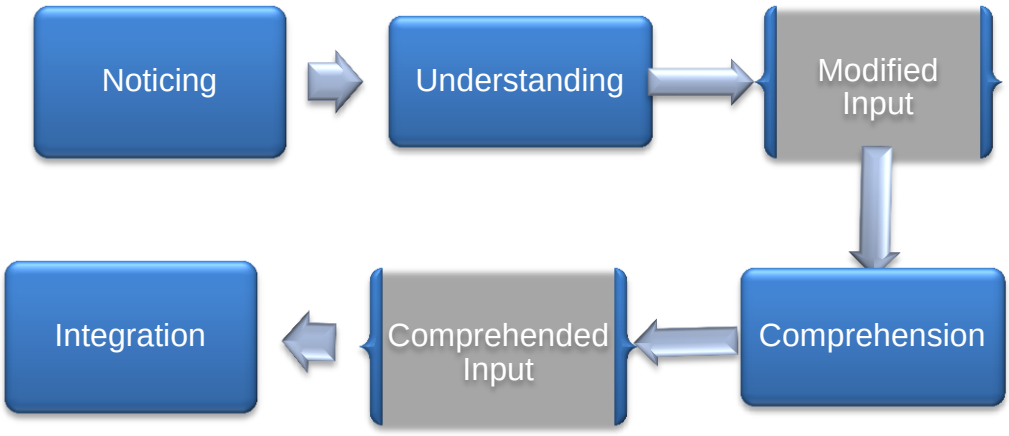
The third stage 'intake' refers to the process of attempted integration of linguistic information. The concept of 'intake' is first proposed by Corder (1967) who distinguishes between 'input' and 'intake'. According to Corder, 'intake' is controlled by the language learners, thus the 'input' data does not necessarily 'intake' by the language learners. The present study takes 'intake' as the interaction of the new language data and the existing knowledge, and it happens all the time in the language learning and acquisition process. Moreover, the current study combines 'intake' with 'integration' that refers to the development of the 'intake' in Gass's ambient speech framework. At the integration stage, the language learners integrate the language data into their second language grammar or interlanguage,

which is also the interaction between leaners' newly input language data and their existing knowledge.

The final stage 'output' in the 'Ambient Speech' framework refers to the language production of the second language learners. The present study regards 'output' as a process that is integrated with all the stages as the language learners try to use their existing knowledge to interact with native speakers or try to practice the newly learnt language.

Based on the discussions above, the current study proposes a model for the learning and acquisition of CMW. This model sets off from the learners' perspective and proposes an internal process of the leaners' CMW acquisition. The discussion of CMW application results will be integrated with the proposed model of the process of CMW acquisition, and the main purpose of proposing this model is identifying where the difficulties of CMW application lie.

Table 3.1.2.2 Model of the Process of CMW Acquisition



The above framework proposes that noticing is the most important stage in CMW acquisition. Schmidt (1990; 1993a; 1994; 1995b) has discussed in his

Noticing Hypothesis that learning cannot happen without noticing, and Schmidt (1990) has also suggested that noticing is necessary and sufficient for turning input into intake. This hypothesis has been adopted by many researchers in SLA (Ellis, 1993; 1994b; Fotos, 1993; 1994; Fotos and Ellis, 1991; Harley, 1993; Larsen-Freeman and Long, 1991; Long, 1991; Robinson, 1995; 1996; Zalewski, 1993). Generally speaking, 'Noticing' transfers CMW data into a stage that is ready for further process. The current study proposes that noticing is the first step in CMW acquisition process. In the model of the process of CMW acquisition, the 'Noticing' stage varies, for instance, noticing the existence of CMW, noticing the differences between different CMW, and noticing the usages of CMW.

Take the measure word 张 (zhāng) in the sentence '我有一张纸。' [(Wǒ yǒu yīzhāngzhǐ) I have a piece of paper.] as an example. A Chinese language learner needs to notice 张 (zhāng) to further the study of this word. After noticing this word, the language learner then inputs it into his/her knowledge base, and tries to understand the basic meanings and features of this word. After understanding 张 (zhāng), the learner then modifies the understood information according to their existing knowledge and continues to comprehend the grammatical and structural usages of this word. Once the grammatical usages of this word have been comprehended, the language learner intakes the comprehended input to integrate it with his/her interlanguage. The learner's interlanguage that associates with this word develops and it has finally been learnt. At the stage that most of the usages of this word have been learnt, the language learner then 'picks up' more usages of this word through reading, listening and communication.

The above paragraph has displayed how this model works. It is worth emphasising the difference between 'understanding' and comprehension' as the former refers to the basic and essential aspect of the language point, such as conceptual meaning and definition; the latter refers to the further

exploration of the language data, such as syntactical, grammatical and literary usages. Only if the language data goes through all the above steps can it be acquired. Although this framework is designed for the purpose of analysing CMW application, it might be useful in the studying of other language elements.

3.2 Review on CMW in Learning and Teaching Chinese as a Second Language

Section 3.1 has discussed the theoretical framework for the study of CMW in learning and teaching Chinese as a second language. This section is going to provide a general overview of what has been done on CMW in the SLA and teaching Chinese as a second language so as to locate the current study in the related field. The following sections are going to review the studies of Wang (2004), Dong and Zheng (2007), Guo and Han (2007), Guo (2008), Liang (2009) and Zhang and Peng (2010).

Wang (2004) has carried out a study of CMW categorisation and teaching Chinese as a foreign language. He suggests that the categorisation of CMW is important in CMW acquisition as a clear categorisation can help the contrastive studies between Chinese measure words and English measuring units. This further supports the present study of CMW categorisation in Chapter 2. According to Wang, the difficulties in teaching CMW do not lie in the ones which have similarities in English, but the ones which do not have equivalents in English, such as individual CMW. He has also made some suggestions for CMW in teaching Chinese as a foreign language at the beginners' level, such as not taking individual measure words as the major CMW teaching and learning task at the beginners' level, making use of the general measure word 个 (gè), and emphasising the nonspecific measure words in designing teaching material.

Wang does not adopt any SLA theories to support his claims, which is the major problem of his study. He has made some assumptions without any evidence, and his suggestions are not persuasive because of the lack of theoretical support and relative evidence. For instance, the suggestion of 'not taking individual measure words as the major CMW teaching and learning task at the beginners' level' is not feasible as the individual measure words is the major category of CMW, composing a high percentage of CMW, and the study of individual measure words starts at the elementary level of Chinese study (Guo, 2008). Therefore, it is difficult to avoid the teaching and learning of individual measure words at any stage of Chinese study.

From the methodological point of view, Wang has studied other scholars' categorisation of CMW and summarised their classification, and found the equivalence of each CMW category in English and simply discussed them before making his suggestions. Although he has analysed CMW in HSK and tried to use it to support his suggestions, Wang has not based his study on a systematic theoretical framework, which reduces the validity of this study.

Dong and Zheng (2007) have studied the use of CMW by American and European English native speakers in 'Corpus of Chinese Interlanguage'1, in which they have adopted error analysis to analyse every sentence of the 1636 CMW uses of 63 CMW in the corpus. According to their study, English native speakers can use 'weights and measures' and 'container measure words' correctly, and they can master individual measure words that have fewer usages. They have also found two types of errors among English native speakers. The first one is the inappropriate match of CMW and nouns, including the overgeneralisation of '个 (gè)', '位 (wèi)', '种 (zhǒng)' and '件 (jiàn)', the general mismatching of CMW and nouns and the errors caused

[1]《汉语中介语语料库》

by nouns. The other type of error is the syntax mistakes in CMW application, including the redundant CMW in a sentence, the mismatch of CMW with other parts of speeches other than nouns and verbs, using CMW as nouns and wrong word order.

In their study, Dong and Zheng have mainly analysed general individual measure words, and they have not examined the other types of measure words sufficiently. Among the mistakes summarised by Dong and Zheng, the overgeneralisation of '位 (wèi)' is controversial as the use of '位 (wèi)' varies according to the context and style. Take one of the sentences from Dong and Zheng's study as an example:

我拿坐列车的一位人来说吧。

Wǒ ná zuò lièchē de yīwèirén lái shuō ba.

Let me take one of the people who take the train as an example.

In the sentence above, '一位人 [(yīwèirén) a CMW person]' is seen as an inappropriate expression unless it is used as an ironic expression. Besides the use for expressing respect, '位 (wèi)' can be used for ironic, personification and rhetoric context. In the sentence above, it is difficult to examine whether it is incorrectly used without a general context.

Dong and Zheng have also made some suggestions for teaching CMW, including making use of the positive transfer of L1, avoiding the negative transfer of L1, and summarizing the combination of CMW and nouns. Although these suggestions are made on the basis of their findings, they have not been explained clearly, and inadequate evidence is provided to support these suggestions.

Theoretically, this study is based on the Corpus of Chinese interlanguage, but the corpus has not been introduced, and Interlanguage which is the framework of their study has not been discussed in this study. Moreover, they have not explained L1 transfer theory, the positive L1 transfer and the negative L1 transfer although these theories have been mentioned in their study.

Methodologically, Dong and Zheng have used corpus studies to conduct their study, but this corpus research method has not been discussed, and the reasons for taking this research method have not been explained. Although, the errors in the corpus have been analysed in detail, the validity of the study is reduced without the justification of the research method. Dong and Zheng have mentioned that error analysis has been adopted for their study to analyse the errors in CMW application, but they have not discussed error analysis to fit this theory into their study. Furthermore, Dong and Zheng have not indicated the language proficiency level of the native English speakers studied, which again reduces the validity of their findings.

Guo and Han (2007) have based their research on the outline for HSK, and investigated and analysed the use of CMW by foreign students. They have interviewed and surveyed 116 L2 learners of Chinese from elementary level (students who have been studying Chinese for half a year), intermediate level (students who have been studying Chinese for a year) and advanced level (students who have been studying Chinese for over two years) in Tianjin Normal University. After data collection, they have adopted error analysis to analyse these students' application of CMW. According to their study, the higher the students' Chinese language proficiency level, the better their CMW application is. Guo and Han have also adopted the theory of interlanguage (Selinker, 1969) and concluded that a CMW interlanguage system is developing along with the development of the Chinese language proficiency.

According to Guo and Han, the errors in using CMW are mainly caused by the overgeneralisation of '个 (gè)', the differences between synonymous, measure words that have the same pronunciation and similar characters (i.e. 副 and 幅), measure words for items that have similar features (i.e.根 and 条), nouns which can collocate with different measure words (i.e. 买了一行树 [bought a row of trees]) and general misunderstanding of CMW.

Guo and Han have investigated most of CMW categories but not all CMW types have been covered. They have presented the results of their investigation but have not analysed these results further. Moreover, in their study, they have excluded 'weights and measures' by simply proposing that these words exist in all languages and they can be translated directly. Methodologically, Guo and Han have used interview and questionnaire research instruments to collect data, but they have not discussed these instruments and explained the research design in detail.

Guo (2008) has analysed the causes of errors made by foreign students in learning CMW from the teaching and learning aspects. According to her study, the errors in the learning and acquisition of CMW are mainly caused by negative transfer from L1, over-generalisation and learners' communication strategies. She has concluded that the differences between English and Chinese are the main reason that causes difficulties in CMW learning and acquisition among English speaking students. The over-generalisation of the target language is most common in novice learners, for example, using the so called general classifier '个 (gè)' to match the nouns that they do not know the matched classifiers for. In the case of communication strategies, the L2 learners avoid using CMW when they are not confident in using it.

Although Guo has analysed some errors in learning and teaching CMW from both SLA and teaching Chinese as a second language aspects, she has not

explained the methodological instruments and her findings sufficiently by providing inadequate examples and simple assumptions without any evidence. Guo has mentioned L1 transfer in her study, but no further introduction of L1 transfer has been made and no support from related studies has been discussed. She has also mentioned the influence of communicative strategies, but no detailed explanations of how this is associated with CMW learning has been made.

Methodologically, Guo has claimed that documentary studies are the method used to examine and compare different textbooks, but she has not described this research method adequately. She has claimed that textbooks are the main material used and this is also the most important factor in CMW teaching, but inadequate evidence is provided to support this claim. Furthermore, she has not discussed other factors that might affect CMW teaching in detail.

Liang (2009) has carried out a research on the acquisition of Chinese nominal classifiers by L2 adult learners. In his study, 29 native speakers of Korean, 29 native speakers of English and 10 Taiwanese native speakers of Chinese have been employed to take part in three tests, including: a comprehension test, production test and prototype test to explore the L2 learners' acquisition of different nominal measure words. All the results from these three tests have suggested that the Chinese proficiency level is related to their application of CMW.

Liang has adopted the Hierarchy of Difficulty Model (Stockwell, Bowen and Martin, 1965), which proposes that some linguistic units are more difficult to learn than others. He has listed a scale of eight difficulties in connection with English and Spanish in his study, from the most difficult to the least difficult.

Table 3.2.1 Liang's Hierarchy of Difficulty Model		
	English	Spanish
1	No Choice	Obligatory
2	No Choice	Optional
3	Optional	Obligatory
4	Obligatory	Optional
5	Obligatory	No Choice
6	Optional	No Choice
7	Optional	Optional
8	Obligatory	Obligatory

By presenting the Hierarchy of Difficulty Model, Liang has located the CMW acquisition at the first two levels as measure words do not exist in English, but they are obligatory or optional in Chinese language.

Liang has adopted the Natural Order Hypothesis (Krashen, 1987), which proposes that there are orders in the acquisition of some grammatical units and the order is dependent upon the learners' age, L1 background and conditions of exposure. Therefore, the language teachers should be aware of the different backgrounds of different learners when teaching CMW. Liang has also fitted the Processing Instruction framework (VanPatten, 2004) into his study, and proposed that the acquisition of CMW should be connected with their semantic features.

By introducing the Hierarchy of Difficulty Model, Natural Order Hypothesis and Processing Instruction framework, Liang has concluded that Chinese measure words would be very difficult for English native speakers as English is not a classifier language. Liang has suggested that the easy classifiers and the difficult ones should be taught together, and Chinese numbers and demonstratives should be taught together with Chinese classifiers, such as

‘numeral + classifier + noun/numeral + classifier’ and ‘demonstrative + classifier + noun/demonstrative + classifier’. Liang has also indicated that the sequence in acquisition Chinese classifiers is decided by learners’ age, L1 background and other factors, and the language teachers should be aware of these factors in teaching CMW.

By concluding that the Chinese measure words are difficult for the English native speakers, Liang’s study supports the current research on CMW to some extent. Liang has also reassured the current study on the investigation of the role of L1 in acquiring CMW and the evidence for a positive or negative influence of L1 in the learning and acquisition of CMW by summarising the future studies needed. However, Liang has only studied individual nominal measure words, and the other types of measure words have not been explored in his study.

Zhang and Peng (2010) have analysed the errors made by American students in learning CMW and discussed some practical strategies for teaching Chinese as a foreign language. In their study, they have analysed American students’ homework and discovered that the errors in using Chinese nominal measure words are mainly caused by the differences between English and Chinese. They have summarised that the errors lie in the redundant use of CMW, the omission of CMW, the mismatch of CMW with nouns and wrong word order. According to their study, these errors mainly appear among the beginners. They have also proposed some solutions for teaching CMW, including summarising the rules in matching nominal measure words with nouns, comparing the similarities and differences between English and Chinese, and practicing the usages of CMW more.

Although Zhang and Peng (2010) have provided some information on CMW in learning and teaching Chinese as a second language, they have not

collected data systematically. They have mainly focused on Chinese nominal measure words, and have not discussed other types of CMW in Chinese language. Corder's error analysis and Krashen's SLA theories have been adopted in Zhang and Peng's study, but no introduction of these theories is made and no discussions of how these theories fit into their study have been carried out. They have also proposed some teaching strategies, but insufficient supportive evidence is provided to prove that these strategies are practical.

From the methodological point view, they have used documentary studies and error analysis to analyse the American students' homework. However, they have not justified their methods used and have not explained the reasons for adopting these methods.

Chapter 4 Research Methodology

4.0 Introduction

Chapter 3 has discussed the theoretical framework for the present study and analysed the previous studies on CMW. This chapter will present the methodological framework this research adopts to investigate the English native speakers' application of CMW, and this chapter is presented as follows: Section 4.1 discusses the reasons for choosing survey research method; Section 4.2 reviews the content of the questionnaire; Section 4.3 explains the language proficiency test; Section 4.4 analyses the tests this study adopts to elicit the L2 learners' performance on CMW; Section 4.5 explains the sampling method for data collection; Section 4.6 demonstrates the data analysis procedure and Section 4.7 summarises the ethical consideration for the current research.

4.1 Survey

Among many empirical education research methods, such as case studies, and experiments, the current study adopts the survey research method to collect information, which includes a short questionnaire and two comprehensive tests. Although a case study can study one aspect of a problem in some depth, the generalisation is a problem (Bell, 2005). The current study intends to generate some useful strategies for CMW in learning and teaching Chinese as a second language, thus case study is insufficient. Experimental research methods are not appropriate for the present study as well because experiment involves making a change in the value of one variable and observes the effect of the other variable as Cohen,

et al. (2007) suggested. For the present study, the variables that change and the problems in CMW application are not clear, so the way of finding out the 'cause and effect' (Bell, 2005) of the experiment research method is not effective for the current research in finding the problems and suggesting the possible solutions.

The current study needs to collect descriptive and explanatory information from participants with different language proficiency levels at the same period of time. Therefore, the survey method is helpful as 'surveys gather data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events' according to Cohen, et al. (2007). Furthermore, surveys gather standardized information in that all the material and methods used for the survey will be exactly the same throughout the data collection process, and can also capture data from multiple choice, cloze questions and other question types. These are the main reasons for taking survey research method to collect data for the current research as it is the most effective way to find out the L2 learners' acquisition of CMW.

Among many survey methods, paper surveys and web-based surveys are popular. Paper surveys are traditional methods in educational research. Although paper surveys have all the advantages of the survey research methods, there are some disadvantages of paper surveys: firstly, financial disadvantages such as cost for printing, administration fees as it is better to be present at the survey venue to get a higher respondent rate, travel costs and necessary payments for participants. Secondly, it can be time-consuming to travel to where the participants are. Thirdly, it is difficult to finish all the tests on a specific date as this is may not be convenient for all the respondents. In addition the availability of the respondents may not suit that of the researcher.

Compared with paper surveys, internet surveys are newer in research methodology, which have some particular features that paper surveys do not have. Firstly, it reduces the cost as there is no need for paper and printing, and it relies on the internet for distribution which saves the transportation cost. Secondly, it saves time as the survey is distributed via the internet which can reach a large number of participants in a short time and the data can be automatically collected and stored. Thirdly, it is more convenient than paper surveys as the respondents can complete the questionnaire anywhere to suit their convenience. However, the respondent rate might be low as it is difficult to get the entire target to respond.

Weighing up the advantages and disadvantages of the paper survey and web based survey, the current study combines these two methods to reach the best result of the data collection. A paper survey is mainly used for collecting data in the UK as it is important to guarantee a higher respondent rate from the limited target participants. A web based survey is mainly used for gathering information on Chinese native speakers' application of CMW as it is easier to reach a large number of people from this group via the internet to collect adequate data.

The paper survey starts from a short introduction, which explains the purpose of the survey and the ethical considerations. After the introduction, the survey is divided into three parts, the first part is a questionnaire, the second part is a language proficiency test and the final part is a test on CMW. The web-based survey aims at collecting data from Chinese native speakers. Therefore it just contains The CMW test, which is the same as the one in the paper survey for the L2 learners. The web based survey is designed with the assistance of LimeSurvey which is an open source survey application. The application is required to be installed on a remote web server to allow the survey to be accessed by anyone worldwide using the link I provided (http://www.limeizheng.com/surveys/limesurvey). The results would be stored automatically and be seen within the administration section

of LimeSurvey at the following link http://www.limeizheng.com/surveys/limesurvey/admin/admin.php.

Among the different studies, cross-sectional studies that collect data from different samples at the same period are applied to the current research. There are some advantages in making cross-sectional studies suitable for the present study: firstly, it reaches participants at the same time in the data collection period; secondly, it provides representative sampling, which has the potential to reach more participants that could gather data from different students from different Chinese proficiency levels (CPL); thirdly, it enables different groups to be compared. Moreover, Cook (1993) also pointed out that cross-sectional studies can provide information about acquisition by comparing the successive knowledge states as if they existed in the same person, which suggests that the cross-sectional studies of students at different levels of study will provide information similar to that of a longitudinal study. The task of the current study is finding the problems of CMW application, thus it is adequate to examine the differences of the CMW interlanguage (see the theoretical consideration section) of different CPL learners at the same period instead of a longitudinal study of one student as the students' progress within the limitation of duration of study.

4.2 Questionnaire

The questionnaire (see Appendix English Students' Learning of Chinese Measure Words p.240) aims at gathering personal information of the participants before the test. However, the current study does not focus on participants' individual differences, thus the personal information is mainly for reference.

Question one collects information about the gender of the participants. Question two checks the participants' native language as the targeted participants of the current study are English native speakers. Question three gathers information about whether the participants have experience in learning other languages. Question four asks the participants to comment on their Chinese proficiency level themselves. Question five checks the time that the participants spend on practicing Chinese outside the classroom. Question six examines whether the participant filling in the questionnaire has a Chinese native speaking partner or friend as these can help their Chinese language development. Question seven gathers general information about how often participants practice reading, listening, writing and speaking.

4.3 Chinese Language Performance Test

The current study adopts a proficiency test (see Appendix Chinese Language Test p.242) to examine participants' Chinese grammar and vocabulary to obtain the information on their language proficiency level, thus dividing them into three different groups: lower, intermediate and advanced group.

In this test, two types of questions are employed: multiple choices (see Appendix Chinese Language Test p.242, task 1 and task 2) and cloze test (see Appendix Chinese Language Test p.245, task 3). The majority of questions are multiple choices as '*multiple choice tasks can allow test takers to demonstrate their abilities to control very fine distinctions in vocabulary, grammatical structures, phonology, or comprehension of content*.' (Douglas, 2010, p.50). Among the multiple choice tasks, there are five questions in the first task, among which the first question tests the difference between adverbial '不 (bù)' and '没有 (méiyǒu)'; the second and third questions test word order in sentences; the fourth and fifth questions test vocabulary. The second multiple choice task is a reading comprehension test which

examines the participants' vocabulary and understanding of Chinese language.

A cloze test is designed to test the integrated use of Chinese, which asks the participants to fill in the gaps with Chinese characters. In this task, the participants are not only required to comprehend the context but also required to have the ability to write the characters needed correctly.

4.4 CMW Test

4.4.0 Introduction

As Corder (1981) stated that elicitation procedures are adopted to discover the learners' language. Therefore, the current study adopts a test that is an elicitation procedure to gather specific information about the L2 learners' application of CMW for the error analysis and discussions in the following chapters.

According to Carroll (1982), the most effective test instrument will contain a good balance of restricted-response items, closed-ended items and open-ended items, reducing the limitations of each task. Alderson, et al. (1995) also suggest that researchers should adopt more than one test method for testing any ability as it is difficult to use a particular single method to test a particular language ability. Therefore, this test combines different types of tasks to gather authentic information, including gap-filling, translation, multiple choice, binary choice, matching task and cloze test, and these tasks complement each other to elicit information about CMW application among Chinese language learners.

Before the illustration of different tasks, the current study needs to clarify that a corpus study on CMW is an important resource this research uses to support the further research into CMW in SLA and teaching Chinese as a second language. This relies on the free online corpus of CCL (Centre for Chinese Linguistics of Peking University), including resources from both colloquial language and written language. The use of different types of CMW in different contexts will be investigated in CCL so as to ascertain that all the CMW and CMW usages involved in the current research are used in communication.

4.4.1 Closed-ended Items

According to Carroll (1982), closed-ended items provide a given set of responses to choose from and this can vary from a 'Yes-No' dichotomy to multiple options. For this test, multiple choice tasks are this type of item, and three types of multiple choice tasks are adapted in the empirical study: multiple choice items with four choices, three choices and two choices.

The four choices multiple choice tasks (see Appendix CMW Test p. 248, task 6) are chosen to test participants' understanding of CMW repetition such as:

我(　　)都调查了。[A. 家　　B. 家家　C. 一家　D. 一家家][2]

Wǒ ( ) dōu diàochále. [A. jiā B. jiājiā C. yījiā D. yījiājiā]

I (CMW) all investigated. [A. household　B. every household C. one household　D. many households]

[2] Note: English translation is not providing in the original survey.

The expected answer is B (see p. 154) according to the meaning of the sentence. The reason for choosing multiple choice items is that it is difficult to test CMW repetition in other format as there are other options available to express the same meaning such as 家家=每家 [(jiājiā=měijiā) every household].

The two choices and three choices multiple choice tasks (see Appendix CMW Test p. 247, task 3) are adopted to test participants' skills on distinguishing CMW with similarities, for instance:

一( )眼镜 [A. 副 B. 幅]

Yī ( ) yǎnjìng [A. fù B. fú]

A (CMW) glasses [A. pair or set B. originally refers to the width of cloth and change into measure word measuring cloth, things made of cloth, pictures, maps, etc.]

一( ) 电线[A. 节 B. 截]

Yī ( ) diànxiàn [A. jié B. jié]

A (CMW) electricity cable [A. for things with joints or things joined together
B. for the cut part of an object]

For the first example, the two options have the same pinyin 'fù' and have similar characters. For the second example, both of the options have the same pinyin 'jié', but have different characters. Participants are expected to choose A for both of the gaps (see p. 112 and p.151 for more details).

The multiple choice items with three choices are used to test three different CMW with the same pinyin ‘zhī’:

一 (　　) 玫瑰 [A. 只　　B. 支　C. 枝]

Yī ( ) méiguī [A. zhī　B. zhī　C. zhī]

A (CMW) rose [A. for insects, animals and one of the things in a pair B. for songs and troops C. for flowers and grass]

Participants are expected to understand the difference between them to choose the right answer C.

4.4.2 Restricted-response Items (the Answers are Restricted)

As Carroll (1982, p.8) defined ‘*restricted-response items allow a response to be composed by the testee, but on very restricted grounds. Probably the answer will consist of one or two words or, at the most, of a short sentence*.’ For this test, the gap-filling tasks, the cloze test and matching tasks are the restricted-response items by Carroll’s definition.

The purpose of the gap-filling task (see Appendix CMW Test p. 246, task 2) in the present study is testing the participants’ mastery of nominal measure words. There are seven groups of nouns that require participants to filling appropriate CMW, including referents of nouns for animals, body parts, vehicles, weapons, furniture, cloth and abstract objects. The participants can choose from a range of measure words to fill these gaps, and multiple answers are available to most of the questions. For instance, for 一(　　)狗 [(yī ( ) gǒu) a (CMW) dog], the possible answers could be 一(条)狗 [(yī (tiáo) gǒu) a (long item) dog], 一(群)狗 [(yī (qún) gǒu) a group of dogs] and 一(窝)狗 [(yī (wō) gǒu) a litter of puppies].

The cloze test (see Appendix CMW Test p. 250, task 9) in the current study tests the participants' understanding and application of CMW in communication, especially the different CMW regards different quantity relationships. The participants are expected to restore the text using measure words, and they need to comprehend the text to be able to fill the gaps correctly. Take the following paragraphs as an example:

教师的学生学习很用功，参加工作后表现也突出，三十几岁就当上了局长。可是没有想到，突然就被抓了。老师去看他，带了(1)烟。本来老师看学生带东西怎么也说不过去，怎奈老师考虑学生在看守所里待着买烟不方便，带点也表示一下师生的情份。就这么件简单的事，却引出了一连串的问题。老师的学生就是在一些看起来是小事上犯了大事的。

学生看到烟，嘴唇哆嗦了好多下，说"拿这么多干什么？有(2)抽就行了。""还客气什么，无非就是些烟嘛。""老师，你说的怎么与有些企业界经理、老板说的话一样？那时候，他们知道我抽烟，隔三差五给我送，开始时是(3)，后来是(4)，再后来就是(5)。当时我也觉得无非就是烟嘛，便收下了。"

Jiàoshī de xuéshēng xuéxí hěn yònggōng, cānjiā gōngzuò hòu biǎoxiàn yě túchū, sānshí jǐ suì jiù dāngshàngle júzhǎng. Kěshì méiyǒu xiǎngdào, túrán jiù bèi zhuāle. Lǎoshī qù kàn tā, dàile (1) yān. Běnlái lǎoshī kàn xuéshēng dài dōngxi zěnme yě shuōbuguòqù, zěnnài lǎoshī kǎolǜ xuéshēng zài kānshǒusuǒ lǐ dàizhe mǎi yān bù fāngbiàn, dài diǎn yě biǎoshìyīxià shīshēng de qíngfèn. Jiù zhème jiàn jiǎndān de shì, què yǐnchūle yīliánchuàn de wèntí. Lǎoshī de xuéshēng jiùshì zài yīxiē kànqǐlái shì xiǎoshì shàng fànle dàshì de.

Xuéshēng kàndào yān, zuǐchún duōsuōle hǎoduō xià, shuō "ná zhème duō gànshénme? Yǒu (2) chōu jiùxíngle." "Hái kèqì shénme,

wúfēi jiùshì xiē yān ma.” “Lǎoshī, nǐ shuōde zěnme yù yǒuxiē qǐyèjiè jīnglǐ, lǎobǎn shuōdehuà yīyàng? Nàshíhou, tāmen zhīdào wǒ chōuyān, gésānchàwǔ gěi wǒ sòng, kāishǐ shí shì (3), hòulái shì (4), zài hòulái jiùshì (5). Dāngshí wǒ yě juédé wúfēi jiùshì yān ma, biàn shōuxiàle.”

Teacher’s student studied very hard, and his work performance was outstanding after graduating. He became the head of a department in the government when he was thirty years old. However, he was arrested unexpectedly. The teacher went to see him with a (1) cigarette. Normally it is not justified for a teacher to buy gifts for his/her student. However, it is inconvenient for the student to buy cigarettes in the detention centre and bring some also to show affection from the teacher to the student. Such a simple thing leads to a serial of problems. The student‘s big mistake has actually started from this kind of small issues.

The student saw the cigarettes, and his lips trembled. He said ‘Why do you need to bring so many? It is good enough to just have (2).’ ‘You don’t need to be polite. It is nothing more than some cigarettes.’ "Teacher. Why you said the same as some business managers and bosses? At that time, they knew I smoke, so they sent me cigarettes from time to time. At first they sent me (3), and then (4), and then (5). I thought they were nothing more than cigarettes and thus I accepted them.

In the paragraphs above, different measure words can be used to measure and describe the gap (1) 烟 [(yān) cigarette], including 包 [(bāo) a pack] and 条 [(tiáo) a package]. Whilst the answer to gap (2) is limited as it needs a CMW that represents a smaller quantity than (1). For (3), (4) and (5) the ‘measure’ should be (3) < (4) < (5), for example 一包 [(yībāo) a pack] < 一条 [(yītiáo) a package] < 一箱 [(yīxiāng) a case] or 一根 [(yīgēn) a cigarette] <一包 [(yībāo) a pack] <一条 [(yītiáo) a package].

Matching task is another major method adopted in the present study, which requires the participants to understand and recall the differences among measure words. In this test, three sets of questions are designed. The first set is used to test the literary usages of CMW (see Appendix CMW Test p. 247, task 4). The second set examines the application of verb measure words (see Appendix CMW Test p. 248, task 5). The third set examines temporary nominal measure words and some borrowed verbal measure words (see Appendix CMW Test p. 248, task 7). In this task, a list of words is available in each set for the participants to choose from. Take the following matching task as an example:

A 丝 B 线 C 轮 D 弯

A sī B xiàn C lún D wān

撩开幔子，我看见一(C)明月，高悬在远远的塔尖。

Liāokāi mànzi, wǒ kànjiàn yī (C) míngyuè, gāo xuán zài yuǎnyuǎn de tǎjiān.

*Uncovering the veil, I saw a ( ) full moon, hanging on the top of the spire in the distance.

Uncovering the veil, I saw a full moon. The moon looked like it is hanging on the top of the spire in the distance.

椰子树梢上挂着一(D)月牙。

Yēzi shùshāo shàng guàzhe yī (D) yuèyá.

*There is a ( ) crescent moon hanging on top of the coconut tree.

Above the coconut tree, there is a crescent moon looks like it is hanging on the top of the coconut tree.

偶然一(B)阳光从岩石缝里露过来。

Ǒurán yī (B) yángguāng cóng yánshífènglǐ lù guòlái.

*Occasionally one (B) of the sunlight reveal from the crevice between the rocks exposed.

Occasionally, sunshine shows from the crack of the rock.

雾气已经消失了，没有一(A)风，却干巴巴的冷。

Wùqì yǐjīng xiāoshīle, méiyǒu yī (A) fēng, què gānbāba de lěng.

*Fog has disappeared, not even a (A) of wind, cold but dry.

Fog has disappeared, no wind, dry and cold.

In the example above, the meanings for choice A and B are similar, while the choice C and D are both used to describe the moon. The participants need to understand the differences between them to be able to put them into the appropriate gaps. Among the choices, A 丝 [string] is derived from the market unit (1/1000 fen) to describe the minimal amount; B 线 [string] is used to measure abstract objects to express the small quantity; C 轮 [wheel] describes and measures the full moon that looks like a wheel and D 弯 [curve] is adapted to use as a measure word for the crescent moon that is curved. The participants not only need to understand the context but also the measure words to make the correct matches.

4.4.3 Open-ended Items

Phrase translation (see Appendix CMW Test p. 248, task 1) and sentence translation (see Appendix CMW Test p. 248, task 8) are open-ended questions in the test. The participants are expected to translate the phrases and sentences using appropriate measure words, and the measure words that can be used are constrained by the nouns or verbs in the phrases or sentences. For instance, for ‘a bottle of beer’, the answer should be 一瓶啤酒 (yīpíngpíjiǔ), whilst for ‘She had a jump and broke her leg.’, the expecting answer can be ‘她跳了一下/跳了一跳摔坏了腿。(Tā tiàoleyīxià/tiàoleyītiào shuāi huàile tuǐ)’. However, the participants are not provided with possible answers, thus they can answer the questions freely (Whether they choose to use CMW or not/whether they use the appropriate one or not).

4.4.4 Summary

To sum up, different types of tasks are designed to collect different information about CMW application of the English native speakers. From a grammatical point of view, this test examines CMW in phrases as well as sentences, including modifier-noun phrases such as 一(条)狗 [(yī (tiáo) gǒu)] and verb-complement phrases such as 等一年 [(děngyīnián) wait a year]; CMW as subject, object, attributive and complement in a sentence. Although each task is designed to answer particular research questions, it might reveal other problems which are not included in the research question.

Moreover, it is necessary to clarify that the purpose of this study is examining the L2 learners' understanding and comprehension of Chinese measure words, thus the participants are allowed to refer to dictionaries as there are some words they might not know, and this shall not affect the results of this study.

After the test, the contact information of the participant is asked, but it is not compulsory. Finally, the survey finishes with a short thank you.

4.5 Sampling

Cohen, et al. (2007) stated that the larger the sample size the better, as it is more reliable and can also collect more sophisticated statistics, but the large sample size is not necessarily representative. There are 24 universities which have Chinese courses across Britain (UCAS, 2010) and the exact number of students who are learning Chinese is not clear, thus it is difficult to reach all the target participants. Therefore, this research is going to take a

sample which can represent the whole Chinese L2 learners in the UK and generate some valid results.

As stated in the above paragraph, the current research is trying to choose a representative sample among students in the 24 British universities in academic year 2011-2012. Thus cluster sampling is adopted to choose from these 24 universities. The University of Leeds and the University of Sheffield are chosen to conduct the research as these two universities have established Chinese programmes with students from various backgrounds. Moreover, it is easier to travel to these universities to conduct the survey.

By deciding the units of the samples, the current research takes all the third year students in the University of Leeds and the fourth year students in the University of Sheffield as the participants to ensure a good sample size. The reasons are as follows:

Firstly, there is a chance of non-response, which is a commonplace for the surveys. In order to receive a reasonable response rate, it is a wise option to include a larger possible population. Secondly, some participants might fail to complete the survey, which may cause the questionnaire to be invalid. The larger the population of students taking the survey, the lower the invalidate data rate is. Thirdly, some participants might miss out questions, especially for the test which is the most important part of the survey. There are different difficulty levels in the test, including all types of the measure words. The harder the test is the more complicated the usage of the measure words tested is. Some participants might miss out all the hard questions that include important information for this research. Therefore, a larger sample size has more chance to receive more completed data to be analysed and also reduce the incomplete questionnaire percentage from the whole sample size. Finally, including all the targeting participants reduces

the danger of bias for the research as there is no subjective choice involved in the sampling process.

Among the students approached, there are fifty-five third year students from the University of Leeds and nineteen fourth year students from the University of Sheffield. Forty students have participated and completed the paper survey. As the majority of data collected for the study will be qualitative data, thus the sample of forty is adequate to represent the Chinese L2 learner population.

For the Chinese native speaking control group, the second year university students across China are approached via the online social media networks. This group has the same age range from the third year and the fourth year university students in the UK. They act as a norm in the current study to decide the native likeness of the L2 learners' application of CMW. Thirty-one native speakers have completed the online survey, which provides representative information on Chinese adults' application of CMW.'

4.6 Data Analysis

The present research uses Statistical Package for the Social Sciences (SPSS) data analysis software to record data and assist the analysing process. Additionally, Microsoft Excel is adopted to support the presentation of the results. There are three main steps involved:

First step: input the answer from the questionnaires into SPSS. Each of the correct answers from the test score 1. The percentage of the correct answers for both Chinese Language performance test and CMW test will be

loaded into the database. The percentage of the correct answers for each task and each CMW categories will also be recorded.

Second step: the participants will be divided into three groups: ‘lower’, ‘intermediate’ and ‘advanced’, according to their Chinese Language performance test results. The participants who achieve 50% or less will be coded into 1 (lower level), the participants who achieve 50%-70% will be coded into 2 (intermediate level) and the participants who achieve over 70% will be coded into 3 (advanced level). The control group is coded into 4.

Third step: compare the mean percentage of the total correct answers, the mean percentage of the correct answers of different tasks, and the mean percentage of the correct answers of the different CMW categories of different groups using one-way analysis of variance (ANOVA).

Third step: report the results.

4.7 Ethical Considerations

The current research is conducted in accordance with the University of Leeds ethics policy. An ethical approval form has been submitted to the university and the approval has been granted by the university before carrying out the empirical study. All the documentary materials used in this research are appropriately referenced. All the participants have volunteered to take part in the survey and they can withdraw from the survey at any time. The research is anonymous and the data collected is only used for research purposes, and all private information is regarded as being strictly confidential.

Chapter 5 Results and Discussion of the Overall Result of the Tests

5.0 Introduction

Chapter 4 has developed the methodological framework for the current study. This chapter presents and discusses the overall results drawn from the Chinese L2 learners who have participated in the survey. As discussed in the methodology chapter, participants are divided into three levels according to their language proficiency, and forty L2 learners have completed the survey. There are also thirty-one native speakers who have participated in the survey as the control group.

The main aim of this chapter is to find answers to the research question 1, which is 'Are measure words difficult for Chinese language learners of English native speakers and where the difficulties lie?' This chapter is organized as follows: Section 5.1 presents and discusses the overall results of the L2 learners' application of CMW. Section 5.2 presents and summarises the results of CMW application in different test tasks. Section 5.3 summarises where the CMW application difficulties lie.

5.1 The Overall Performance of L2 Learners' Application of CMW

SPSS is used for data entry and analysis, which was originally designed as a Statistical Package for the Social Sciences (SPSS) by IBM. This software is now widely used for market research, government surveys, education research and others. The answers from the empirical study are recorded in

SPSS, and the percentage of the correct answers is input into SPSS for analysis. The lower group is marked ‘1’, the intermediate group is marked ‘2’, the advanced group is marked ‘3’ and the native speaker group is marked ‘4’.

ANOVA is a statistical test in SPSS designed to examine the difference between groups when there are more than two groups by comparing the means. ‘Tukey Test’ in ANOVA compares all the means to identify the significant difference among groups (significant at 0.05). The significant value 0.05 is commonly used as the cut edge point to reject a hypothesis as the ANOVA test assumes that there is no significant difference between different groups. If the significant probability result is higher than 0.05, the hypothesis is accepted, i.e. there is no significant difference among different groups. If the significant probability result is equal to or lower than 0.05, the hypothesis is rejected, i.e. there is a significant difference among different groups. More specifically, if the significant probability result is 0.893, this means that there is an 89.3% chance that there is no significant difference among groups thus the hypothesis is accepted. If the significant probability result is 0.013, this means that there is a 1.3% chance that there is no significant difference among groups, and the hypothesis is rejected.

The main purpose of the ‘Tukey Test’ is examining the native likeness of the L2 groups in using CMW. The process of ‘Tukey Test’ will be presented in the following paragraphs.

Table 5.1.1 The Overall Result of CMW Application			
1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	4.95000	.893
	3	5.41667	.888
	4	-21.24138*	.013
2	1	-4.95000	.893
	3	.46667	1.000
	4	-26.19138*	.000
3	1	-5.41667	.888
	2	-.46667	1.000
	4	-26.65805*	.000
4	1	21.24138*	.013
	2	26.19138*	.000
	3	26.65805*	.000
* The mean difference is significant at the 0.05 level.			

As discussed in the methodology chapter (Chapter 4), the current study took some university students in the UK as a sample to investigate the application of Chinese measure words. The 'Mean Difference of the Percentage of the Correct Answers' in Table 5.1.1 above represents the average difference of the percentage of the correct answers between sample groups, and the 'Significant probability' refers to the statistical difference which is represented by the letter p. The mean difference is significant at 0.05, i.e. there is a significant difference between the groups if the significant probability number is smaller than 0.05 or equal to 0.05; there is no significant difference if the number is bigger than 0.05.

The above Table 5.1.1 takes each group and compares it with the other three groups to see whether the average percentage of the correct answers

on measure words application are significantly different among them. The lower group is firstly compared with the intermediate group and no significant difference is found (Sig. =0.893, i.e. p>0.05). The lower group is then compared with the advanced group and no statistically significant difference is found (Sig. =0.888, i.e. p>0.05). The lower group is compared with the native speaker group and a significant difference is found (Sig. =0.013, i.e. p<0.05).

The intermediate group is first compared with the lower group and no significant difference is found (Sig. =0.893, i.e. p>0.05). The intermediate group is then compared with the advanced group and no statistically significant difference is found (Sig. =1.000, i.e. p>0.05). The intermediate group is compared with the native speaker group and a significant difference is found (Sig. =0.000, i.e. p<0.05).

The advanced group is firstly compared with the lower group and no significant difference is found (Sig. =0.888, i.e. p>0.05). The advanced group is then compared with the intermediate group and no statistically significant difference is found (Sig. =1.000, i.e. p>0.05). The advanced group is compared with the native speaker group and a significant difference is found (Sig. =0.000, i.e. p<0.05).

The results presented above indicate that no significant difference among the L2 groups is found. However, all three L2 groups are significantly different from the native speaker group (significant values are less than 0.05). The L2 learners' application of Chinese measure words is not equivalent to the native speakers', and this indicates that L2 learners have difficulties in the learning and acquisition of Chinese measure words.

As indicated in Chapter 4, the different tasks in the empirical study aim at finding different information about learners' application of CMW. The next two sections are going to present and discuss the results of different tasks.

5.2 The Results of CMW Application in Different Tasks

The results of the closed-ended items (multiple choice)

Table 5.2.1 The Results of Multiple Choice Task

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	1.03750	1.000
	3	12.23636	.820
	4	-71.50345*	.000
2	1	-1.03750	1.000
	3	11.19886	.692
	4	-72.54095*	.000
3	1	-12.23636	.820
	2	-11.19886	.692
	4	-83.73981*	.000
4	1	71.50345*	.000
	2	72.54095*	.000
	3	83.73981*	.000

* The mean difference is significant at the 0.05 level.

The results of Restricted-response items (the answers are restricted)

Table 5.2.2 The Results of Cloze Test

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-1.16667	.999
	3	-3.00000	.991
	4	-41.00000*	.000
2	1	1.16667	.999
	3	-1.83333	.994
	4	-39.83333*	.000
3	1	3.00000	.991
	2	1.83333	.994
	4	-38.00000*	.000
4	1	41.00000*	.000
	2	39.83333*	.000
	3	38.00000*	.000

* The mean difference is significant at the 0.05 level.

Table 5.2.3 The Results of Matching Task

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	6.68182	.994
	3	15.37500	.947
	4	-116.91379*	.000
2	1	-6.68182	.994
	3	8.69318	.977
	4	-123.59561*	.000
3	1	-15.37500	.947
	2	-8.69318	.977
	4	-132.28879*	.000
4	1	116.91379*	.000
	2	123.59561*	.000
	3	132.28879*	.000

* The mean difference is significant at the 0.05 level.

Table 5.2.4 The Results of Gap-Filling Task

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-12.71429	.171
	3	-22.20000*	.025
	4	-23.24138*	.001
2	1	12.71429	.171
	3	-9.48571	.469
	4	-10.52709	.058
3	1	22.20000*	.025
	2	9.48571	.469
	4	-1.04138	.998
4	1	23.24138*	.001
	2	10.52709	.058
	3	1.04138	.998

* The mean difference is significant at the 0.05 level.

The results of open ended questions

Table 5.2.5 The Results of Phrase Translation Task

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-113.06140	.175
	3	-118.32051	.180
	4	-194.13218*	.002
2	1	113.06140	.175
	3	-5.25911	.999
	4	-81.07078	.097
3	1	118.32051	.180
	2	5.25911	.999
	4	-75.81167	.220
4	1	194.13218*	.002
	2	81.07078	.097
	3	75.81167	.220

* The mean difference is significant at the 0.05 level.

Table 5.2.6 The Results of Sentence Translation Task

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-4.50000	.978
	3	-21.87500	.274
	4	-44.69828*	.001
2	1	4.50000	.978
	3	-17.37500	.207
	4	-40.19828*	.000
3	1	21.87500	.274
	2	17.37500	.207
	4	-22.82328*	.037
4	1	44.69828*	.001
	2	40.19828*	.000
	3	22.82328*	.037

* The mean difference is significant at the 0.05 level.

According to Table 5.2.1-Table 5.2.6, there is a significant difference between the L2 groups and the native speaker group for the multiple choice task, cloze test, matching task and sentence translation task. A significant difference between the lower group and the native speaker group for the gap-filling and phrase translation tasks is also found even though the results from the intermediate and the advanced level groups are not significantly different from the native speakers. These results suggest that the L2 learners with a higher language proficiency level are better at the gap-filling and phrase translation tasks.

Summary

Section 5.2 has presented the results of CMW application for different tasks. Generally speaking, the L2 learners' application of CMW has not reached native likeness, and CMW are difficult for English native speakers who are learning Chinese as a second language. The following table presents the summary of the results of different tasks to aid the discussion of the results in the next section.

Table 5.2 Summary of Different Tasks

Tasks		CMW Application Significantly Different from the Native Speakers	CMW Application Close to the Native Speakers
Multiple Choice	Lower	V	
	Intermediate	V	
	Advanced	V	
Cloze Test	Lower	V	
	Intermediate	V	
	Advanced	V	
Matching	Lower	V	
	Intermediate	V	
	Advanced	V	
Gap-Filling	Lower	V	
	Intermediate		V
	Advanced		V
Phrase Translation	Lower	V	
	Intermediate		V
	Advanced		V
Sentence Translation	Lower	V	
	Intermediate	V	
	Advanced	V	

5.3 The Discussion of the Results of Different Tasks

As Carroll (1982), Alderson, et al. (1995) all suggest that different tasks are needed to test different abilities of the L2 learners. Therefore, the present study adopts six different tasks to examine the L2 learners' ability to use different Chinese measure words.

The multiple choice tasks in the current study examine the L2 learners' application of nonspecific nominal measure words, which is one of the most common measure words in the Chinese language. The choices in the multiple choice tasks are similar in some ways. The first multiple choice task requires the L2 learners to distinguish between CMW that have similar characters or pronunciations or meanings, in which the participants need to notice the difference among the choices, understand them to be able to make the correct choice. The other multiple choice tasks test CMW repetitions, which require the L2 learners to distinguish the differences between choices. The results of the multiple choice task (Table 5.2.1) suggest that the L2 learners have difficulties in the application of measure words with similarities and CMW repetitions, and this result will be discussed in detail in Chapter 6.

According to Chapter 4, cloze test is adapted to test students' understanding and application of CMW in communication, especially the nominal measure words regarding different quantity relationships in context. The participants need to comprehend the text to be able to fill in the gaps with the appropriate measure words. Firstly, the L2 learners are required to understand the meaning of the text and then analyse the missing gaps. They then need to decide what are missing for each gap. After deciding on what is needed for each gap, they then need to find the correct measure words or phrases. The results of cloze test (Table 5.2.2) indicate that the L2 learners have problems

in using Chinese measure words in context, which will be analysed in detail in the next chapter.

The matching tasks assess the L2 learners' application of literary usages of nominal measure words, temporary nominal measure words and verbal measure words. These tasks require the participants to understand the meaning of the sentence where a CMW is needed first, and then the participants need to understand the meaning of the choices. Moreover, participants need to comprehend the choices and analyse them in order to make the correct matches as there are CMW with similar semantic meaning and grammatical usages in the choices. The results of the matching task (Table 5.2.3) from the empirical study indicate that the L2 learners encounter difficulties in the literary usages of nominal measure words, temporary nominal measure words and verbal measure words, and these difficulties will be discussed in detail in Chapter 6.

Gap-filling and phrase translation tasks are mainly used to test the application of nominal measure words. The results from Table 5.2 reveal that the intermediate and the advanced L2 learners have a good understanding of nominal measure words as their results are similar to the native speaker group. However, the L2 learners with lower language proficiency have difficulty in matching nouns with their proper CMW. These results will be analysed in depth in the next chapter.

The sentence translation tasks in the empirical study aim at investigating the application of the verbal measure words borrowed from verbs and quasi-measures. The L2 learners can translate the sentences freely with measure words or without. According to the results (Table 5.2.6), the L2 learners' application of verbal measure words borrowed from verbs and quasi-measures has not reached the similar level as the native speakers, and these results will be explained in detail in Chapter 6.

This section has discussed the different tasks adopted in the empirical study in brief. By analysing different tasks, the following table is generated to display where the difficulties may lie.

Table 5.3 The Difficulties in CMW Application
CMW that have similar characters or pronunciations or meanings
CMW repetition
Nominal measure words and verbal measure words in context
Literary usages of nominal measure words
Temporary nominal measure words
Verbal measure words and Quasi-measures

Summary

This chapter has presented and discussed the overall results and the results of different tasks, and the difficulties of the CMW applications have been located. The next chapter is going to discuss the summarised results in detail in accordance with the different measure words categories, which intends to discover what the difficulties are in the learning and acquisition of different measure words.

Chapter 6 Results and Discussion of the Application of Different Measure Words

6.0 Introduction

According to Chapter 5, the difficulties in the application of CMW mainly lie in the CMW that have similar characters, pronunciations and meanings, CMW repetition, nominal measure words and verbal measure words in context, literary usages of nominal measure words, temporary nominal measure words, verbal measure words and quasi-measures. The current chapter is going to present and analyse the results in accordance with the different measure words categories that have been explored in Chapter 2 to define the problems. The discussion of the results in this chapter will be integrated with the error analysis and the model of the process of CMW acquisition which has been introduced in Chapter 3.

The intention of Chapter 6 is to answer the research question “What are the difficulties in English native speakers’ application of CMW?” In order to present a clear picture, this chapter is divided into ten sections.

6.1 Learners’ previous knowledge, the model of the process of CMW acquisition and the results of CMW application

6.2 The results of weights and measures.

6.3 The results of collective nominal measure words.

6.4 The results of container measure words.

6.5 The results of quasi-measures.

6.6 The results of standard verbal measure words.

6.7 The results of individual nominal measure words.

6.8 The results of temporary nominal measure words.

6.9 The results of borrowed verbal measure words.

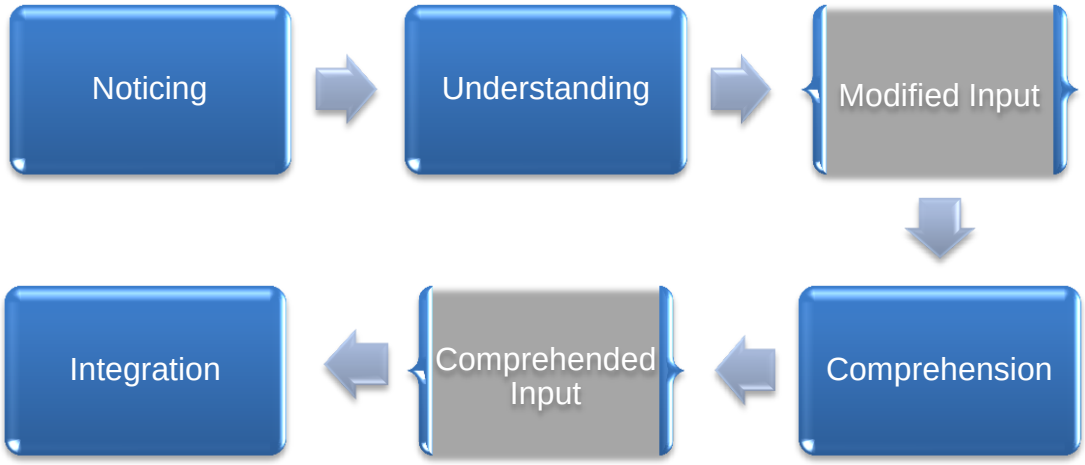
6.10 Summary of the results of application of different CMW and presentation of the hierarchy of the difficulties in the application of different CMW for L2 learners in accordance with the model of the process of CMW acquisition.

During the discussion in the present chapter, each section will present the measure words involved in the discussion first. The one-way analysis of variance (ANOVA) output will be presented and the significant probability will be summarised. Each section will present a table of the correct answers of the application of different CMW from different groups before the detailed discussion of the difficulties. The questions that have the most incorrect answers will be presented and discussed. Because of the large number of CMW, the present study has chosen some measure words from each category in the hope that the results of these chosen measure words will shed some lights on the problems that English native speakers who are learning Chinese as a second language encounter.

6.1 Learners' Previous Knowledge, the Model of the Process of CMW Acquisition and the Results of CMW Application

Chapter 3 has discussed the theoretical framework for the current study. Before the discussion of the results, the key elements of the supporting theories and framework will be summarised briefly.

Model of the Process of CMW Acquisition



Schmidt (1990) suggests that there are a number of factors that are likely to influence what learners notice. The current study proposes that L2 learners' L1 knowledge is one of the most important factors that affect learners' noticing of CMW information. Many scholars have claimed that learners' previous knowledge affects their L2 learning and acquisition in the field of SLA (for example, Lado 1957 and Corder 1983). In the *Handbook of Applied Linguistics*, William Littlewood (2004) has pointed out the two cases of previous knowledge: L1 knowledge (L1 transfer) and L2 knowledge gained until that point (generalisation). As discussed in Chapter 3, Lado (1957) proposes that first language habits can be helpful in acquiring a second language, but can also hinder the learner in learning the new language. For the learning and acquisition of CMW, the success in learning some measure words can be seen as the result of positive transfer from learners' L1, and the difficulties in learning some measure words are the result of negative transfer from learners' existing knowledge.

This section is going to discuss the results of students' performance on different CMW categories according to the comparative study that has been

conducted in Chapter 2. In that chapter, CMW and EMU are compared and the results are summarised below again.

Table 6.1 The Comparison between CMW and EMU

CMW that have 'equivalent' in English	**CMW that have no 'equivalent' in English**
Weights and measures	Individual nominal measure words
Collective nominal measure words	Temporary nominal measure words
Container measure words	Standard verbal measure word (dual)
Quasi-measures	Verbal measure words borrowed from nouns (tool, body and concomitant)
Standard verbal measure words	Verbal measure words borrowed from verbs
Verbal measure words borrowed from nouns (time)	

As the above Table 6.1 presents, some CMW have similar expressions in English and some CMW do not have similarities with English. L1 transfer theory suggests the CMW that have 'equivalent' in English should be easier than the CMW that do not have 'equivalent' in English. For this section, the discussion of the application of different CMW will start from CMW that have the 'equivalent' in English.

6.2 The Results of Weights and Measures

As discussed in Chapter 2, weights and measures exist in all languages. The present study has examined the use of some weights and measures in four phrases, including 米 [(mǐ) metre], 升 [(shēng) litre], 英寸 [(yīngcùn) inch], and 平方公里 [(píngfānggōnglǐ) square kilometre].

Table 6.2.1 The Significant Probability of the Results of Weights and Measures

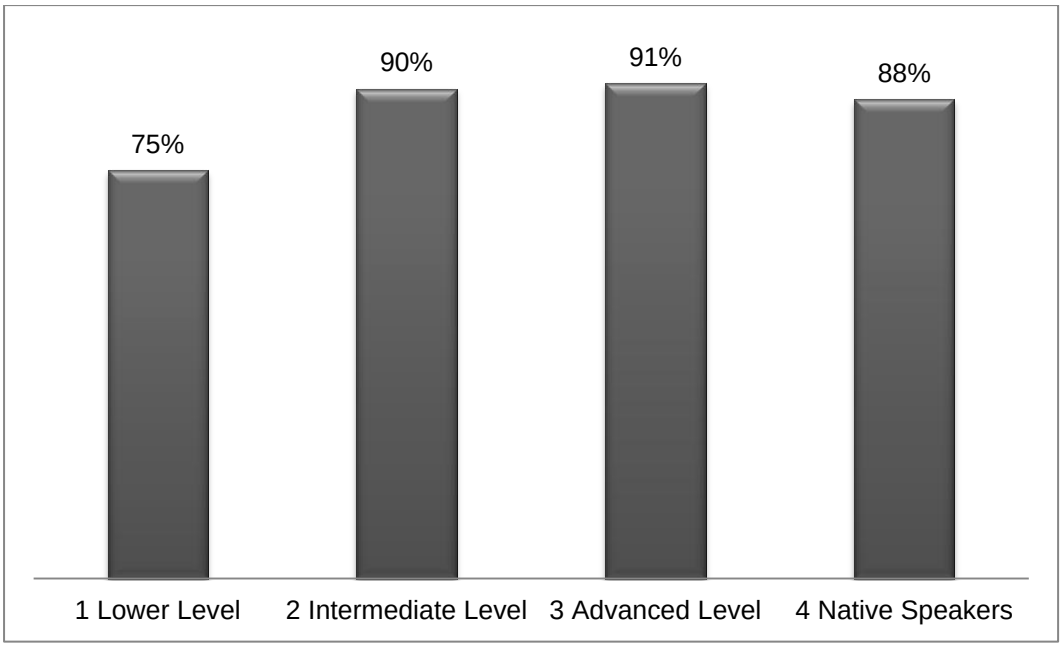
1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-15.00000	.222
	3	-15.90909	.215
	4	-13.79310	.230
2	1	15.00000	.222
	3	-.90909	.999
	4	1.20690	.995
3	1	15.90909	.215
	2	.90909	.999
	4	2.11599	.982
4	1	13.79310	.230
	2	-1.20690	.995
	3	-2.11599	.982

* The mean difference is significant at the 0.05 level.

As discussed in Chapter 5, ANOVA was adopted to calculate the difference of the average scores among different groups. The table above has summarised the output of the ANOVA results of the application of weights and measures. As the results above indicate, the scores of the correct answers are not significantly different among different groups ($p>0.05$). This

means that L2 learners have reached the similar level to the native speakers in the application of weights and measures. As summarised in Table 6.1, weights and measures have the ‘equivalent’ in English which is the learners’ native language. According to CAH, language elements that exist in both learners’ L1 and L2 are not difficult (Lado, 1957), thus it is predicted that English native speakers who are learning Chinese as a second language do not have difficulties in the application of weights and measures.

Figure 6.2.1 Percentages of the Correct Answers in the Application of Weights and Measures



According to the figure above, about 75% of the answers from the lower level learners, about 90% from the intermediate learners, around 91% from the advanced learners and also around 88% of the answers from the native speakers are correct. These results indicate that errors occur in both L2 learners and the native speakers as none of the groups have achieved 100% of the correct answers. Despite the fact that CAH has predicted that weights and measures are not difficult for English native speakers, the figure above indicates that difficulties still appear in the application of weights and

measures in all of the groups. Although the current study is not aiming to test the validity of CAH, it provides further evidence to support the argument that CAH cannot predict all the difficulties in L2 learning and acquisition. At least, some difficulties in the application of weights and measures cannot be predicted by CAH.

Four phrases that require weights and measures in the phrase translation tasks are tested, including 'two metres of cloth', 'four litres of water', 'ten inches of ice' and 'five square kilometres'. Among the phrases, L2 learners' errors are mainly caused by the missing answers in translating the phrase 'five square kilometres.

Table 6.2.2 The Missing Answers in Translating 'five square kilometres'

Errors	Lower	Intermediate	Advanced	Native Speakers
Missing Answers	17%	16%	17%	0%

According to the table above, about 17% of the lower level learners, around 16% of the intermediate learners and about 17% of the advanced learners have not translated the phrase involved. The present study proposes that this type of error is mainly caused by learners' lack of knowledge in translating this phrase.

Missing answers are not the main mistakes for the native speakers. For the native speakers, the errors are mainly caused by misunderstanding the English phrase 'four litres of water'. For example, 25% of the native speakers have translated the phrase into '四立方水 [(sìlìfāngshuǐ) four cubic of water]. Since English is the second language of the native speakers, this

type of mistake also supports the claim that L2 learners' lack of knowledge on learners' L2 (English for the native speakers) has caused the errors.

Conclusion

Generally speaking, the main problem in L2 learners' application of weights and measures is caused by lack of knowledge of some of this type of word. In the model of the process of CMW acquisition, lack of knowledge is mainly caused by lack of attention to (noticing) the usages of some weights and measures such as 平方公里 [(píngfānggōnglǐ) square kilometre].

6.3 The Results of Collective Nominal Measure Words

In the current study, most of the common usages of collective nominal measure words are tested, including simple CMW and noun matches (phrase translation), collective nominal measure words that have similarities with other CMW (multiple choice) and collective nominal measure words repetition (multiple choice).

6.3.1 The Results of Collective Nominal Measure Words in Phrase Translation

In the phrase translation, some collective nominal measure words are tested in seven phrases, including 'a pair of socks', 'a group of students', 'a bunch of grapes', 'a herd of elephants', 'a pile of files', 'some sand' and 'some apples'.

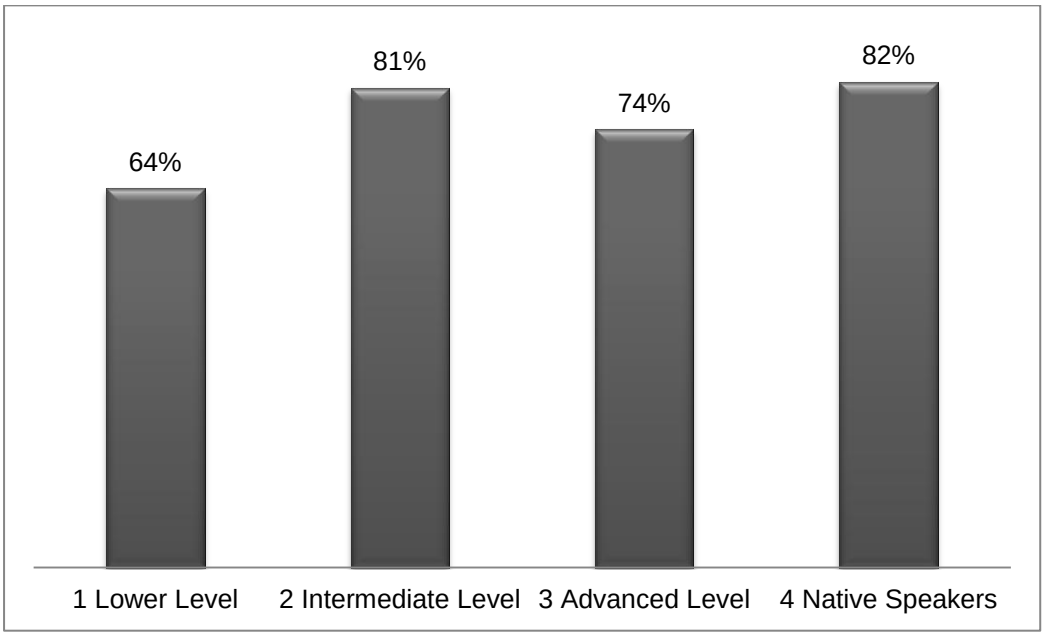
Table 6.3.1.1 The Significant Probability of the Results of Collective Nominal Measure Words in Phrase Translation

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-11.11667	.591
	3	-9.16667	.768
	4	-14.85632	.308
2	1	11.11667	.591
	3	1.95000	.992
	4	-3.73966	.905
3	1	9.16667	.768
	2	-1.95000	.992
	4	-5.68966	.818
4	1	14.85632	.308
	2	3.73966	.905
	3	5.68966	.818

* The mean difference is significant at the 0.05 level.

According to the results, there are no significant differences of the scores of the correct answers in the application of collective nominal measure words in the phrase translation between the L2 groups and the native speaker group ($p>0.05$). There is also no significant difference between all the L2 groups ($p>0.05$). These results correspond with the prediction by CAH that English native speakers do not have difficulties in the application of collective nominal measure words as these words have equivalents in English.

Figure 6.3.1.1 Percentages of the Correct Answers in the Application of Collective Nominal Measure Words in Phrase Translation Tasks



The figure above suggests that around 64% of the answers from the lower level group, about 81% of the answers from the intermediate group, about 74% of the answers from the advanced group and about 82% of the answers from the native speaker group are correct. These imply that difficulties still appear among English native speakers as there are less than 80% of the correct answers from the L2 groups on average. Among the seven phrases tested, the difficulties mainly appear in translating ‘a herd of elephants’ for both the native speakers and the L2 learners.

Table 6.3.1.2 The Errors in Translating ‘a herd of elephants’				
Error Type	The incorrect use of individual measure word for the phrase that requires a collective nominal measure word	The incorrect use of general measure word 个 (gè)) for the phrase that requires a collective nominal measure word	The incorrect use of nouns as collective nominal measure words	The absence of answers
Error Level	一头/只大象 [(yītóu/zhī dàxiàng) an elephant]	一个大象 [(yígè dàxiàng) overuse of general CMW 个]	一兽群/牧群大象 [(yīshòuqún/mùqún dàxiàng) herd]	Missing Answers
Lower	50%	0%	0%	33%
Intermediate	0%	0%	16%	29%
Advanced	0%	0%	8%	33%
Native speaker	35%	3%	0%	0%

As presented in the table above, the lower group and the native speaker group mainly make mistakes in translating the phrase with the CMW for an elephant. For the intermediate and the advanced learners, using nouns as measure words are the main mistakes. Furthermore, the problems of missing answers appear in all the L2 groups.

For the errors from the lower group, about 50% of the participants have translated the English measuring unit incorrectly. The current study suggests that the errors from the lower group are mainly caused by generalising learners’ learnt Chinese that is negative transfer from learners’ second language as discussed in Section 6.1. There are different CMW that can be used to measure elephant/elephants. For example, ‘头/只 (tóu/zhī)’ is used

for measuring an elephant, 群 (qún) is used for measuring a herd of elephants and 排 (pái) for a row of elephants. In the empirical study, the lower group learners have made mistakes in translating the phrase ‘a herd of elephants’ by choosing the CMW for an elephant ‘头/只 (tóu/zhī)’. This implies that the lower group learners have gained the knowledge of the measure word 头/只 (tóu/zhī) for an elephant, but they have not mastered other CMW that can be used with elephant/elephants. Due to the limitation on their CMW knowledge, the lower level learners have over generalised their existing knowledge of the individual measure word 头/只 (tóu/zhī) to match ‘a herd of elephants’ which requires a collective nominal measure word.

As summarised in Table 6.3.1.2, about 16% of the intermediate level learners and about 8% of the advanced level learners have translated the phrase into 一兽群象 (yīshòuqúnxiàng)/一牧群象 (yīmùqúnxiàng). 兽群 (shòuqún) and 牧群 (mùqún) both refer to a herd of animals, which are nouns that do not function as measure words. ‘Herd’ means 兽群 (shòuqún) and 牧群 (mùqún). All of the translations for ‘herd’ include the character 群 (qún) that was originally a noun which means ‘a herd of sheep’ and it is generated to use as a measure word to measure a group of animals, people and other things. Therefore, 群 (qún) is the appropriate measure word for a herd of elephants [一群大象 (yīqúndàxiàng)]. The use of 兽群 (shòuqún) and 牧群 (mùqún) suggests that L2 learners have not understood the difference between certain nouns and measure words, which is mainly caused by inadequate knowledge on CMW. From another aspect, the errors from the intermediate and advanced level learners also indicate that learners from these two groups have the knowledge that the individual nominal measure word 只 (zhī) is not correct although they have not mastered the appropriate measure word for a herd of elephants.

Moreover, around 33% of the lower level learners, 29% of the intermediate and 33% of the advanced learners did not translate the phrase. This suggests that L2 learners lack knowledge of Chinese they are learning, and thus have difficulties in translating ‘a herd of elephants’. This viewpoint is further supported by the errors from the native speakers as 35% of the native speakers have misunderstood the phrase and translated it by using measure words for an elephant, which is mainly caused by lack of knowledge on learners’ second language that is English in the case of the Chinese native speakers.

Generally speaking, difficulties still appear in learners’ application of collective nominal measure words in the phrase translation tasks even though these words are predicted to be not difficult for English speakers by CAH. This again provides evidence that CAH cannot foresee all the problems in L2 learning and acquisition. The errors caused by lack of knowledge on CMW from all the L2 groups suggest that L2 learners have difficulties at the noticing stage in the model of the process of CMW acquisition. The errors of using 兽群 (shòuqún) and 牧群 (mùqún) as measure words from the intermediate and advanced group suggest that L2 learners have difficulties at the understanding stage in the model of the process of CMW acquisition.

6.3.2 Results of Collective Nominal Measure Words that have Similarities with other CMW in Writing and Pronunciation in Multiple Choice Task

As discussed in Chapter 2, CMW with similarities are one of the difficult usages of CMW. In the empirical study, the collective nominal measure word 副 (fù) that have similarities in writing and pronunciation with the individual nominal measure word 幅 (fú) is examined in the multiple choice task 一 ( ) 牌 [(yī ( ) pái) a ( ) card].

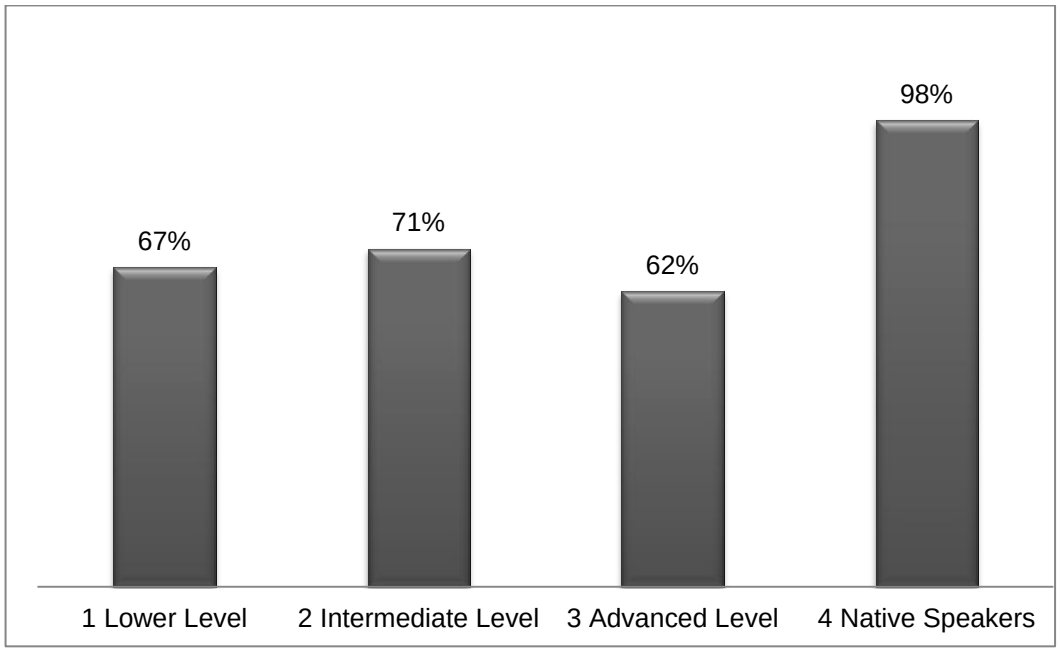
Table 6.3.2.1 The Significant Probability of the Results of Collective Nominal Measure Words with Similarities in Multiple Choice Task

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-4.38596	.971
	3	4.16667	.979
	4	-31.60920*	.008
2	1	4.38596	.971
	3	8.55263	.695
	4	-27.22323*	.000
3	1	-4.16667	.979
	2	-8.55263	.695
	4	-35.77586*	.000
4	1	31.60920*	.008
	2	27.22323*	.000
	3	35.77586*	.000

* The mean difference is significant at the 0.05 level.

As presented in the table above, the mean difference of the percentage of the correct answers among different L2 groups are not significantly different ($p>0.05$). However, there is a significant difference between all the L2 groups and the native speaker group ($p<0.05$). The results indicate that L2 learners have difficulties in the application of the collective nominal measure word 副 (fù) that have similarities with the individual nominal measure word 幅 (fú). This result contradicts the prediction that collective nominal measure words are not difficult by English native speakers by CAH as this type of measure word has equivalent in learners' native language.

Figure 6.3.2.1 Percentages of the Correct Answers in the Application of 副 (fù) and 幅 (fú)



As the above Figure 6.3.2.1 presents, on average, less than 70% of the answers from the L2 learner groups are correct, comparing with 98% of the correct answers from the native speakers. 幅 (fú) and 副 (fù) have the same pinyin 'fu'. The former is pronounced as fú and it is an individual measure word used to count and describe pictures, cloth and things that are wide and spread out. The latter is pronounced as fù and it is a collective nominal measure word used to describe a set of things. The two characters have the same component but have different radicals. In the multiple choice task, the noun 牌 [(pái) card] is flat, thin and made from paper, which does not have features that can be described by 幅 (fú). However, 牌 [(pái) card] can come in a set thus 副 (fù) can be used to measure cards i.e. 一副牌 [(yīfùpái) a set of cards].

The present study believes that the difficulties in distinguishing 幅 (fú) and 副 (fù) happen at the noticing stage and understanding stage in the process of

CMW acquisition. Some L2 learners fail to notice the difference between the two characters, thus have difficulties in distinguishing them. Some other L2 learners have noticed the difference, but have difficulties in understanding the different usages of them.

In addition, L2 learners' difficulties in the application of collective nominal measure words reveal that CAH has not covered all the aspects in second language learning and acquisition. Not all the language elements that have equivalents in learners' native language can be acquired without difficulties.

6.3.3 Results of Collective Nominal Measure Words Repetitions

Chapter 2 has discussed that only monosyllabic measure words can be repeated to form CMW repetitions. In the empirical study, the repetition of the collective nominal measure word 簇 (cù) is examined.

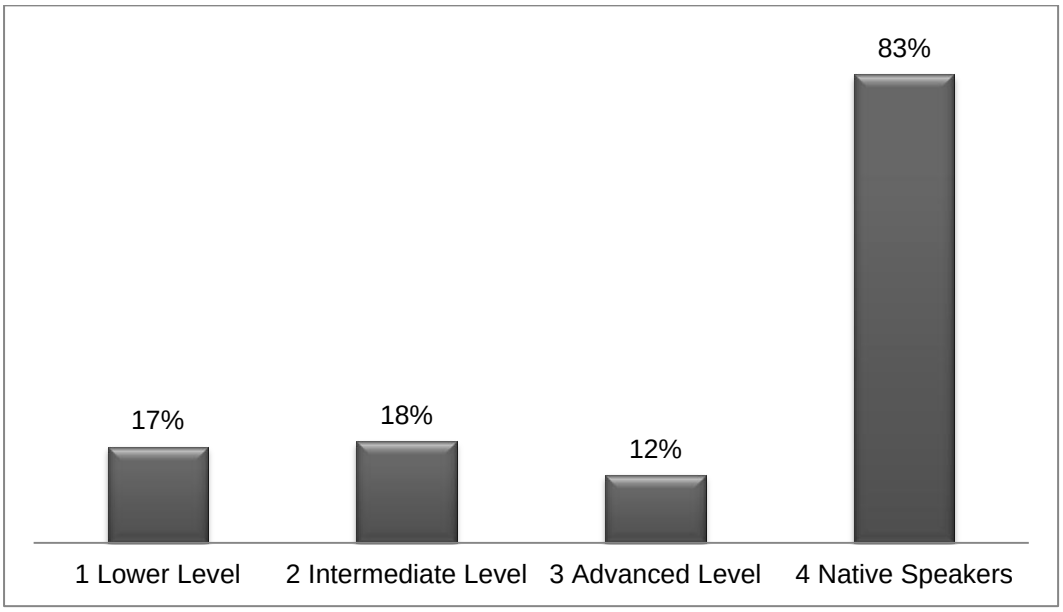
Table 6.3.3.1 The Significant Probability of the Results of Collective Nominal Measure Words Repetition

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	.87719	1.000
	3	.00000	1.000
	4	-66.09195*	.002
2	1	-.87719	1.000
	3	-.87719	1.000
	4	-66.96915*	.000
3	1	.00000	1.000
	2	.87719	1.000
	4	-66.09195*	.000
4	1	66.09195*	.002
	2	66.96915*	.000
	3	66.09195*	.000

* The mean difference is significant at the 0.05 level.

According to Table 6.3.3.1 above, no significant difference of the scores of the correct answers among the L2 learners is found ($p>0.05$). However, the mean scores of the correct answers from the L2 learners is significantly different from the native speaker group ($p<0.05$). This means that L2 learners' application of collective nominal measure words repetition is not close to the native speakers', which again does not match the prediction that English native speakers do not have difficulties in the application of collective nominal measure words by CAH.

Figure 6.3.3.1 Percentages of the Correct Answers in the Application of Collective Nominal Measure Words Repetitions



The figure above has presented that there are less than 20% of correct answers in all the L2 groups. In contrast, 83% of the answers from the native speakers are correct. As discussed in Chapter 2, CMW repetitions have different usages from their original form. The following sentence is taken from the empirical study to explain the collective nominal measure words repetitions.

在一个地方河面窄了。(一簇簇)的绿叶伸到水面上来。

[A.簇 B.簇簇　C.一簇　D.一簇簇]

Zài yīgè dìfāng hémiàn zhǎi le. Yīcùcù de lǜyè shēndào hémiàn shànglái.

The river is narrowed at one place, where clusters of green leaves have reached the surface of the river.

Among the choices, 簇 (cù) originally means things that gather together and it is used as a measure word to describe things that gather into a group,

such as 一簇绿叶 [(yīcùlǜyè) a cluster of leaves]. When 簇 (cù) is repeated into 簇簇 (cùcù), it emphasis each cluster. When 一 (yī) is added into 簇簇 (cùcù), the phrase 一簇簇 (yīcùcù) emphasise large quantities of clusters. For the sentence above, participants need to understand the meaning of the sentence first and then understand each choice so as to choose the correct answer 一簇簇 (yīcùcù).

The previous studies on CMW repetition have been explored in Chapter 2. These studies have provided evidence that the usages of CMW repetition are complicated. This is also the reason that 17% of the answers from the native speakers are incorrect. Both the previous studies and the results from the native speakers indicate that the difficulties in CMW repetition are mainly caused by the complexity of this type of usage. The current study proposes that these difficulties happen at the noticing stage and the understanding stage, and they are mainly caused by L2 learners' lack of knowledge on CMW repetition. Furthermore, the results of the collective nominal measure words repetition again advise that CAH has not covered all the aspects in L2 learning as the difficulties in the application of collective nominal measure words repetition are not anticipated.

Conclusion

Generally speaking, the simple match of the collective nominal measure words and the nouns is easier than the other usages of the collective nominal measure words for L2 learners. L2 learners have difficulties in distinguishing some collective nominal measure words that have similarities and also have difficulties in the application of the collective nominal measure words repetition.

In the model of the process of CMW acquisition, the difficulties of the application of collective nominal measure words matches, collective nominal measure words with similarities and the usages of collective nominal measure words repetitions mainly appear at the noticing stage and the understanding stage. Additionally the results from English native speakers' application of collective nominal measure words also advise that CAH has not predicted all the difficulties in CMW learning and acquisition.

6.4 The Results of Container Measure Words

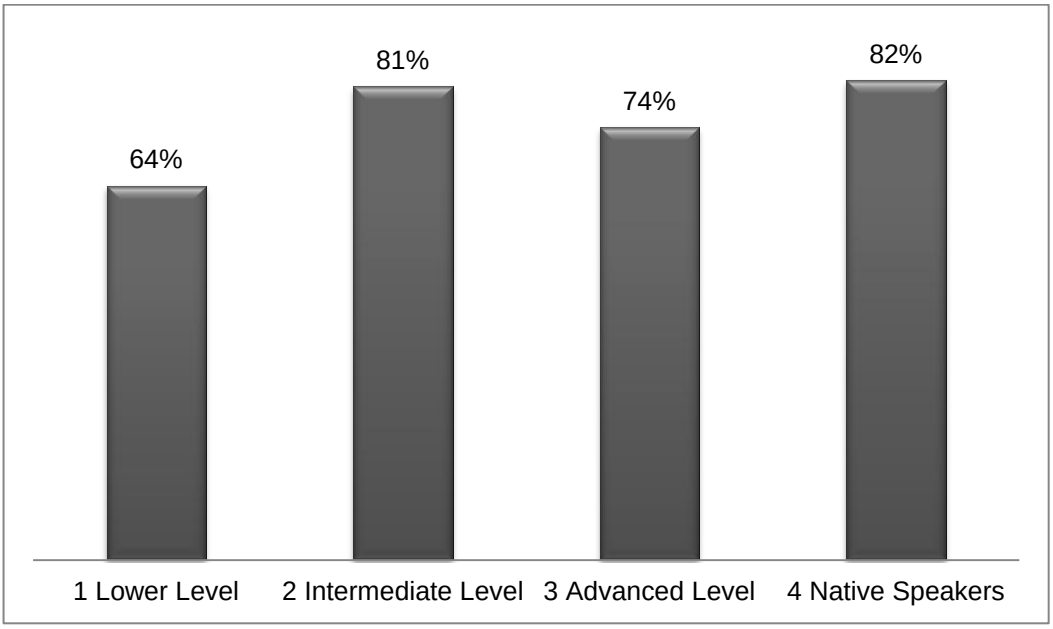
In the empirical study, six container measure words are examined in the phrase translation tasks, for example, 'a bottle of beer', 'a cup of coffee' and 'a truckload of sand'.

Table 6.4.1 The Significant Probability of the Results of Container Measure Words

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-3.81667	.977
	3	-4.25000	.975
	4	-3.85632	.974
2	1	3.81667	.977
	3	-.43333	1.000
	4	-.03966	1.000
3	1	4.25000	.975
	2	.43333	1.000
	4	.39368	1.000
4	1	3.85632	.974
	2	.03966	1.000
	3	-.39368	1.000
* The mean difference is significant at the 0.05 level.			

According to the results from the empirical study, there are no significant differences between the scores of the correct answers among different L2 groups ($p>0.05$). There is also no significant difference between the L2 groups and the native speaker group ($p>0.05$).

Figure 6.4.1 Percentages of the Correct Answers in the Application of Container Measure Words



As presented in the figure above, about 64% of the answers from the lower level learners, 81% of the answers from the intermediate level learners, 74% of the answers from the advanced learners and about 82% of the answers from the native speakers are correct. This result indicates that both of the L2 groups and the native speaker group have difficulties in the application of container measure words and the difficulties among the L2 learners contradict the prediction that the language elements that have equivalents in learners' first language are not difficult by CAH.

Among the phrases tested, the main problems occur in translating ‘a bottle of beer’ for the native speakers as 29% of them have translated this phrase into 一杯啤酒 [(yībēipíjiǔ) a glass of beer], which is caused by misunderstanding the English phrase that is the native speakers’ second language. However, this phrase is not the main difficulty for the L2 learners, for whom the main errors appear in translating ‘a truckload of sand’.

Table 6.4.2 Errors in Translating ‘a truckload of sand‘

Errors	Lower	Intermediate	Advanced	Native Speaker
把 (bǎ)	0%	5%	0%	3%
一辆卡车 (yīliàngkǎchē)	0%	0%	0%	6%
一块沙滩 (yīkuàishātān)	0%	0%	0%	3%
一堆沙(yīduīshā)	0%	0%	0%	6%
一辆超载沙的卡车 (yīliàng chāozài shā de kǎchē)	0%	0%	0%	3%
No Answer	17%	24%	8%	0%

As presented in the table above, the most common problems for the L2 learners are the missing answers. About 17% of the lower level learners, 24% of the intermediate level learners and 8% of the advanced level learners did not answer the question. This indicates that L2 learners lack knowledge of translating ‘a truckload of sand’, which is mainly caused by the difficulties in matching ‘truckload’ with a measure word. In the model of the process of CMW acquisition, this difficulty mainly appears at the noticing stage as the L2 learners’ lack of attention on the usage of the container measure word that matches ‘truckload’ is the main cause of this problem.

Moreover 5% of the intermediate level learners have translated ‘a truckload of sand’ into 一把沙 [(yībǎshā) a handful of sand] which is a random choice of the measure words that can be used to match sand. Some native speakers also have chosen other measure words that can be used for sand in translating the phrase, including 一把沙 [(yībǎshā) a handful of sand] and ‘ 一堆沙 [(yīduīshā) a pile of sand]. Some other native speakers have even translated ‘truckload’ into 卡车 [(kǎchē) truck] and take 卡车 [(kǎchē) truck] as the noun that needs a measure word, including 一辆卡车 [(yīliàngkǎchē) a truck] and 一辆超载沙的卡车 [(yīliàng chāozàishā de kǎchē) an over loaded truck]. These incorrect translations of the phrase from the L2 learners and the native speakers make it evident that L2 learners have difficulties in understanding ‘truckload’, and this is a difficulty that mainly appears at the understanding stage in the model of the process of CMW acquisition. To translate ‘truckload’ into a measure word is not straight forward as this word is a noun that represents ‘the amount a truck can carry’ which is 一卡车的量 (yīkǎchēdeliàng) in Chinese. Not only the L2 learners need to understand the meaning of truckload, they also need to understand that container measure words are transferred from the ‘container/tool’ that is used to express the quantity that the ‘container/tool’ can carry so as to translate the phrase ‘a truck load of sand’ correctly into ‘一卡车沙 (yīkǎchēshā)’.

To sum up, the difficulties of English native speakers’ application of container measure words mainly appear at the noticing stage and the understanding stage in the model of the process of CMW acquisition. Additionally, the results of the English native speakers’ application of container measure words further advise that the prediction that the language elements that have ‘equivalents’ in learners’ native language are not difficult by CAH is not always correct as this prediction could not be applied on some container measure words.

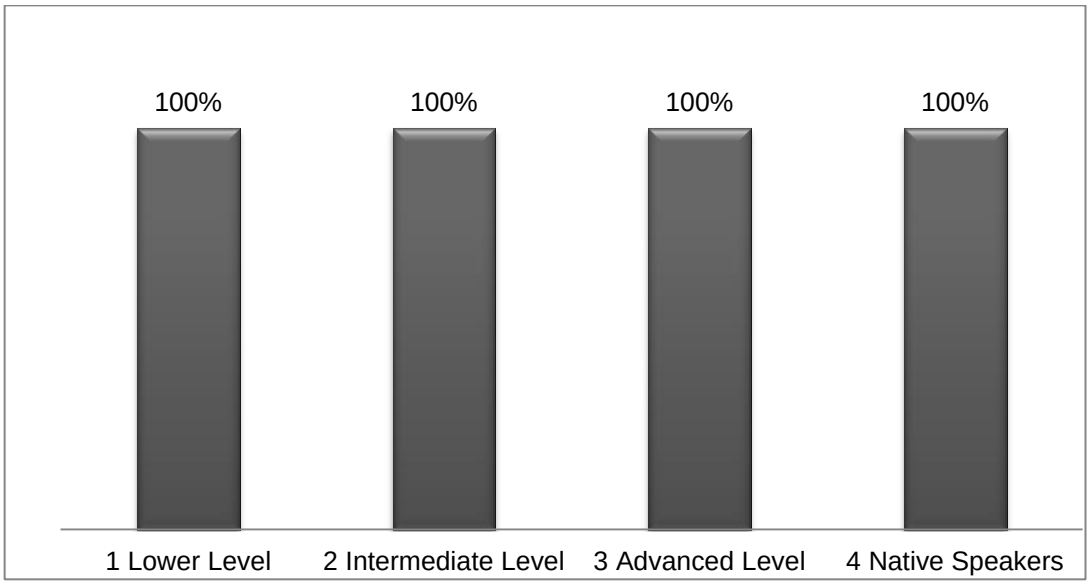
6.5 The Results of Quasi-Measures

In the empirical study, two quasi-measures are tested in the sentence translation tasks, including 三天时间 (sāntiānshíjiān) and 两国人 (liǎngguórén).

Table 6.5.1 Means of Quasi-Measures	
1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Percentage of the Correct Answers
1	100
2	100
3	100
4	100

As the table above presents, the means are all the same from all the groups and there is no difference between all the L2 groups in the application of quasi-measures. As discussed in Chapter 2, quasi-measures can be translated into learners' L1 directly, and this type of word is easy for English native speakers who are learning Chinese as a second language according to CAH.

Figure 6.5.1 Percentage of the Correct Answers in the Application of Quasi-Measures



According to the figure above, no error is found in the application of quasi-measures for both of the L2 groups and the native speaker group. The L2 learners' application of quasi-measures has reached the same level as the native speakers'. This result matches the proposal by CAH that L2 learners' first language facilitates the learning of the second language elements that have equivalents in learners' L1, and quasi-measures is one of those words that have equivalents in English which is the L2 learners' first language for the current study. In the model of the process of CMW acquisition, the application of quasi-measures has gone through all the stages, and this type of measure word has been mastered well by the English native speakers.

6.6 The Results of Standard Verbal Measure Words

As discussed in Chapter 2, there are two categories of standard verbal measure words: exclusive verbal measure words and dual function measure

words. In the empirical study these measure words are examined in the phrase translation tasks and the matching tasks.

6.6.1 The Results of Standard Verbal Measure Words (Dual Function Measure Words Measuring Nouns) in Phrase Translation Tasks

Among the different standard verbal measure words, dual function measure words that measure nouns are mainly examined in the phrase translation tasks, including ‘an earthquake’, ‘a war’, ‘an accident’, ‘a shower (rain)’ and ‘a round of applause’.

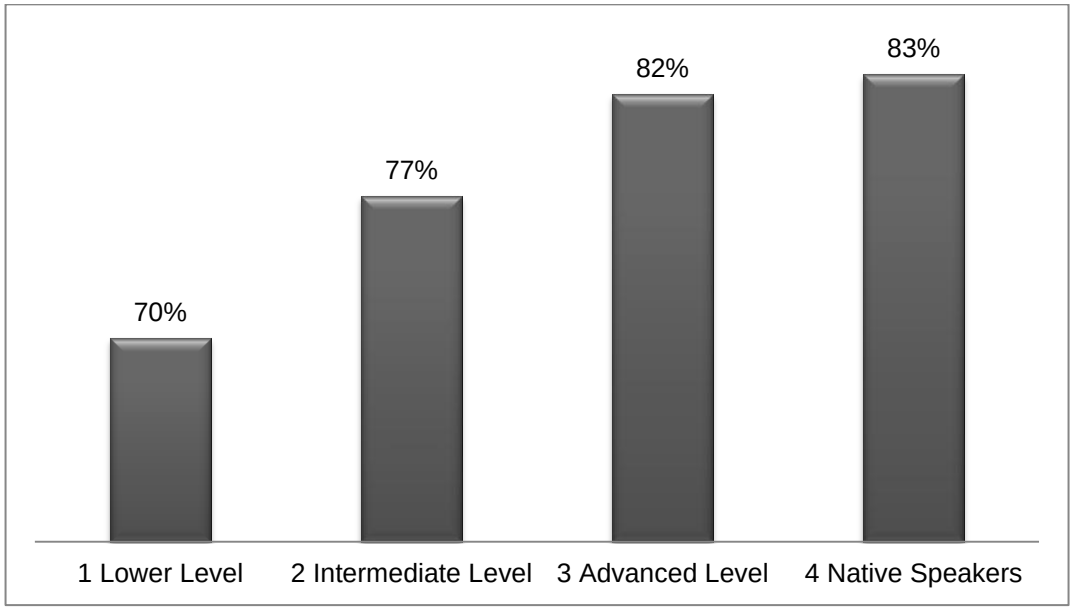
Table 6.6.1.1 The Significant Probability of the Results of Standard Verbal Measure Words (Dual Function Measure Words Measuring Nouns) in Phrase Translation Tasks

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-6.01754	.943
	3	-8.16667	.891
	4	-23.33333	.115
2	1	6.01754	.943
	3	-2.14912	.994
	4	-17.31579	.060
3	1	8.16667	.891
	2	2.14912	.994
	4	-15.16667	.225
4	1	23.33333	.115
	2	17.31579	.060
	3	15.16667	.225

* The mean difference is significant at the 0.05 level.

According to the results presented in Table 6.6.1.1, there is no significant difference of the scores of the correct answers between the L2 groups and the native speaker group ($p>0.05$) for the phrase translation tasks, and there is also no significant difference among all the L2 groups ($p>0.05$). This implies that L2 learners' application of dual function verbal measure words measuring nouns has reached a similar level as the native speakers.

Figure 6.6.1.1 Percentages of the Correct Answers in the Application of Standard Verbal Measure Words (Dual Function Measure Words Measuring Nouns) in Phrase Translation Tasks



As presented in the figure above, about 70% of the answers from the lower level learners, 77% of the answers from the intermediate level learners, 82% of the answers from the advanced level learners and 83% of the answers from the native speakers are correct in translating the phrases involving the dual function measure words measuring nouns. These suggest that the percentages of the correct answer from the L2 learners and the native speakers are not significantly different, which correspond with the results

presented in Figure 6.6.1.1. However, as more than 17% of the answers from each group are incorrect, these results also indicate that the L2 learners and the native speakers have difficulties in the application of dual function measure words measuring nouns in the phrase translation tasks, and the errors from the L2 groups match the prediction that the language elements that do not have equivalents in learners' first language are difficult by CAH (Section 6.1 has summarised that dual function measure words measuring nouns have no equivalents in English which is the L2 learners' first language in the current study).

In order to present a clearer picture of the results of the application of dual function measure words measuring nouns, the errors from the translation tasks are listed in the following tables.

Table 6.6.1.2 Errors in Translating 'an earthquake [一场/次地震 (yīcháng/cìdìzhèn)]'

Errors	Lower	Intermediate	Advanced	Native Speaker
一个地震 (yígèdìzhèn)	0%	5%	8%	0%
No measure word	0%	0%	0%	7%
Missing answers	17%	32%	33%	0%

Table 6.6.1.3 Errors in Translating 'a war [一场/次战争 (yīcháng/cìzhànzhēng)]'

Errors	Lower	Intermediate	Advanced	Native Speaker
一个战争 (yīgèzhànzhēng)	17%	11%	0%	0%
一部战争 (yībùzhànzhēng)	0%	0%	8%	0%
一阵战争 (yīzhènzhànzhēng)	0%	5%	0%	0%
一战 (yīzhàn)	0%	5%	8%	0%
No measure word	0%	0%	0%	7%
Missing answers	17%	11%	17%	0%

Table 6.6.1.4 Errors in Translating 'an accident [一场/次事故 (yīcháng/cìshìgù)]'

Errors	Lower	Intermediate	Advanced	Native Speaker
一件事故 (yījiànshìgù)	0%	0%	17%	0%
Misunderstanding	0%	16%	17%	0%
No measure word	0%	0%	0%	3%
Missing answers	50%	11%	8%	0%

Table 6.6.1.5 Errors in Translating 'a shower (rain) [一阵雨 (yīzhènyǔ)]'				
Errors	Lower	Intermediate	Advanced	Native Speaker
Misunderstanding	33%	16%	0%	34%
Wrong character 陈 (chén)	0%	5%	8%	0%
No measure word	0%	0%	0%	3%
Missing answers	17%	16%	17%	3%

Table 6.6.1.6 Errors in Translating 'a round of applause [一阵掌声 (yīzhènzhǎngshēng)]				
Errors	Lower	Intermediate	Advanced	Native Speaker
Wrong character 陈 (chén)	0%	11%	8%	0%
一回掌声 (yīhuízhǎngshēng)	0%	5%	0%	0%
一圈掌声 (yīquānzhǎngshēng)	0%	0%	0%	3%
Misunderstanding	0%	0%	0%	48%
Missing answers	17%	32%	42%	0%

To sum up, six types of errors appear in translating the phrases that require the dual function measure words measuring nouns, and these errors are going to be discussed in the following paragraphs.

1) over generalising the use of the general measure word 个 (gè)

The errors of over generalising the use of the general measure word 个 (gè) mainly appear in translating ‘an earthquake [一场/次地震 (yīcháng/cìdìzhèn)]’ and ‘a war [一场/次战争 (yīcháng/cìzhànzhēng)]’. As presented in Table 6.6.1.2 and Table 6.6.1.3, about 5% of the intermediate level learners and 8% of the advanced learners have translated ‘an earthquake [一场/次地震 (yīcháng/cìdìzhèn)]’ into ‘一个地震 (yígèdìzhèn)’. About 17% of the lower level learners and 11% of the intermediate level learners have translated the phrase ‘a war [一场/次战争 (yīcháng/cìzhànzhēng)]’ into ‘一个战争 (yígèzhànzhēng)’. These errors are mainly caused by negative transfer from learners existing knowledge of the measure word 个 (gè) which can be used for many nouns.

2) translating the phrases without measure words

The errors of translating the phrases without measure words mainly appear among the native speakers. This type of error is caused by generalising (negative transfer) the native speakers’ existing knowledge of English which is their second language as there is no measure word in English. However, this type of error does not appear among the L2 learners, which also suggests that the L2 learners’ first language (English) does not hinder the learning of dual function measure words measuring nouns although these words do not exist in English.

3) missing answers from the participants

On average, more than 20% of the L2 learners from all levels have avoided translating the phrases that require dual function measure words measuring

nouns. The current study proposes that L2 learners' lack of knowledge of Chinese is the main reason for this type of difficulty.

4) wrong characters for the measure words

Wrong characters are also the problems which appeared. Some L2 learners have difficulties in distinguishing between the measure word 阵 (zhèn) and the word 陈 (chén) that is not a measure word as they have the same radical and similar components. This is caused by the lack of attention to the writing of certain measure words, and this type of error also reflects the difficulties in learning Chinese characters.

5) misunderstanding the phrases

Misunderstanding is another reason for the difficulties in translating the phrases with dual function measure words measuring nouns. This type of error mainly appears in translating 'an accident [一场/次事故 (yīcháng/cìshìgù)]', 'a shower (rain) [一阵雨 (yīzhènyǔ)]' and 'a round of applause [一阵掌声 (yīzhènzhǎngshēng)]'.

For the errors in translating the phrase 'an accident [一场/次事故 (yīcháng/cìshìgù)]', about 16% of the intermediate level learners and 17% of the advanced learners have misunderstood this phrase, and most of the errors are translating an accident into '一件事 [(yījiànshì) a thing]', which is caused by misunderstanding the word 'accident'. This means that the L2 learners have problems in distinguishing between 事 [(shì) thing] and 事故 [(shìgù) accident, incident], which is mainly caused by L2 learners' lack of knowledge of Chinese.

For the phrase ‘a shower (rain) [一阵雨 (yīzhènyǔ)]’, about 33% of the lower level learners, 16% of the intermediate level learners and 34% of the native speakers have misunderstood the phrase. ‘A shower’ can refer to 淋浴 (línyù) which is the device used to wash the body and 阵雨 (zhènyǔ) that refers to the rain. The majority of the errors are translating ‘a shower’ into 淋浴 (línyù), which is mainly caused by learners’ lack of attention to the information provided in the bracket as (rain) makes the question clear that ‘a shower’ in the test refers to the rain.

6) wrong measure words

Choosing inappropriate measure words in translating the phrases is another difficulty that mainly appears in translating ‘a war [一场/次战争 (yīcháng/cìzhànzhēng)]’, ‘an accident [一场/次事故 (yīcháng/cìshìgù)]’ and ‘a round of applause [一阵掌声 (yīzhènzhǎngshēng)]’.

As presented in Table 6.6.1.3, Table 6.6.1.4 and Table 6.6.1.6, about 8% of the advanced learners have translated ‘a war [一场/次战争 (yīcháng/cìzhànzhēng)]’ into ‘一部战争 (yībùzhànzhēng)’, which is not appropriate as 部 (bù) is mainly used to measure and describe books. About 5% of the intermediate level learners have translated the phrase incorrectly into ‘一阵战争 (yīzhènzhànzhēng)’. The measure word 阵 (zhèn) describes a short period of time in which an event happens, such as ‘一阵风 [(yīzhènfēng) a gust of wind]’, which is not suitable for ‘a war’ because the duration of ‘a war’ is not as short as the measure word 阵 (zhèn) represents. The present study proposes that over generalising (negative transfer) learners’ existing knowledge of 部 (bù) and 阵 (zhèn) is the main reason for these errors.

For the phrase ‘an accident [一场/次事故 (yīcháng/cìshìgù)]’, about 17% of the advanced learners have chosen the measure word 件 (jiàn) to translate the phrase ‘an accident’ into ‘一件事故 (yījiànshìgù)’ incorrectly. This translation reflects that L2 learners have difficulties in distinguishing between 事 [(shì) thing] and 事故 [(shìgù) accident] as 件 (jiàn) is the measure word for 事 [(shì) thing] in 一件事 (yījiànshì), but it cannot be used for 事故 [(shìgù) accident]. This error is caused by generalising (negative transfer) L2 learners’ existing knowledge of Chinese.

For the phrase ‘a round of applause [一阵掌声 (yīzhènzhǎngshēng)]’, about 5% of the intermediate L2 learners have adopted 回 (huí) that is a dual function measure word used to measure things such as 一回事 [(yīhuíshì) to measure 掌声 as 一回掌声 (yīhuízhǎngshēng), which is caused by generalising L2 learners’’ existing knowledge of Chinese. About 3% of the native speakers have translated this phrase into 一圈掌声 (yīquānzhǎngshēng) which is the direct translation from the English phrase as ‘round’ can be directly translated into 圈 [(quān) round]. This error of the native speakers is also resulted from generalising L2 learners’ existing L2 knowledge (as Chinese is the L2 language for the English native speakers, and English is the L2 language for the Chinese native speakers).

Having discussed all the errors in translating the phrases that require dual function measure words measuring nouns, the present study indicates that the L2 learners (English native speakers who are learning Chinese as a second language) have difficulties in the application of standard verbal measure words (dual function measure words measuring nouns), and three reasons are counted for the difficulties: L2 learners’ lack of knowledge of Chinese, generalising learners’ existing L2 knowledge and L2 learners’ lack of attention on certain CMW. This result also resembles the prediction by CAH that the language elements that do not have equivalents in learners’

first language are difficult. In the model of the process of CMW acquisition, the problems in the application of dual function measure words measuring nouns mainly happen at the noticing stage and the understanding stage.

6.6.2 The Results of Standard Verbal Measure Words in Matching Tasks

Ten standard verbal measure words are examined in the matching tasks, including 次 (times), 通 (times), 番 (times), 阵 (times), 顿 (times), 回 (times), 趟 (times), 遍 (times), 下 (times) and 场 (times).

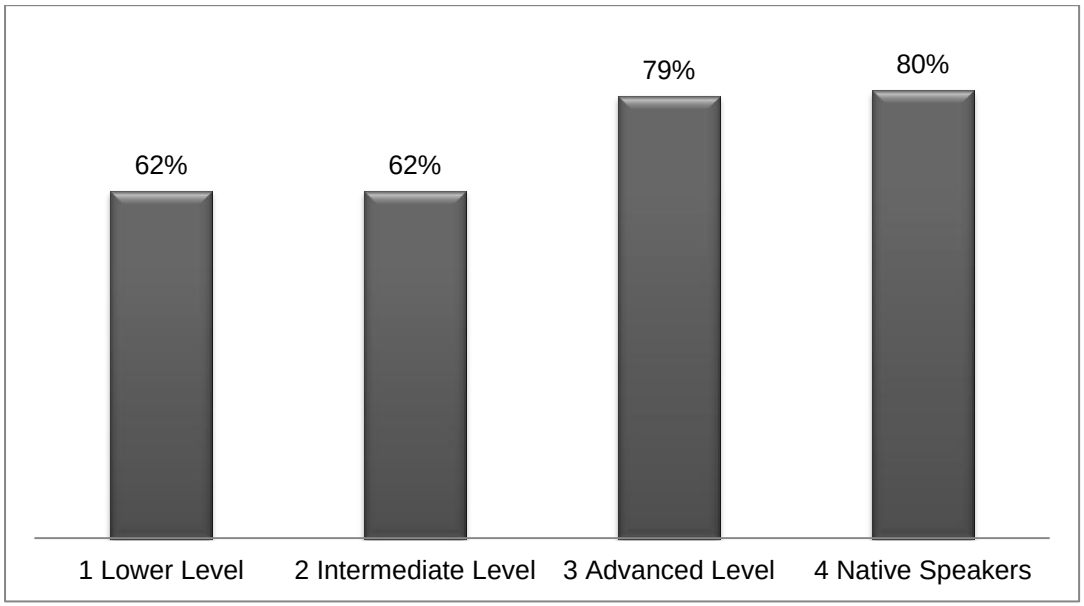
Table 6.6.2.1 The Significant Probability of the Results of Standard Verbal Measure Words in Matching Tasks

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	.00000	1.000
	3	-17.61905	.077
	4	-18.74713*	.010
2	1	.00000	1.000
	3	-17.61905*	.028
	4	-18.74713*	.001
3	1	17.61905	.077
	2	17.61905*	.028
	4	-1.12808	.997
4	1	18.74713*	.010
	2	18.74713*	.001
	3	1.12808	.997

* The mean difference is significant at the 0.05 level.

According to Table 6.6.2.1, there are no significant differences of the scores of the correct answers among the L2 groups ($p>0.05$), and there is also no significant difference between the advanced level group and the native speaker group ($p>0.05$). However, a significant difference of the scores of the correct answers is found between the lower level L2 group and the native speaker group ($p<0.05$) and between the intermediate level L2 group and the native speaker group ($p<0.05$). This result indicates that the lower level and the intermediate level L2 learners' application of standard verbal measure words in the matching tasks are behind the native speakers, but the advanced level learners' application of standard verbal measure words in the matching tasks has reached almost the same level as the native speakers.

Figure 6.6.2.1 Percentages of the Correct Answers in the Application of Standard Verbal Measure Words in Matching Tasks



As the figure above presents, about 62% of the answers from the lower level group and the intermediate level group, 79% of the answers from the advanced level group and 80% of the answers from the native speaker

group are correct. This means that more than 20% of the answers from each group are incorrect and there are difficulties in the application of standard verbal measure words in the matching tasks from both of the L2 groups and the native speaker group. The result from the L2 groups are inconsistent with the prediction by CAH that the language elements which have equivalents in learners' first language are easy as the application of standard verbal measure words are difficult although these words can be translated into English that could be regarded as 'equivalents' in learners' native language (see Chapter 2).

As discussed in Chapter 2, standard verbal measure words have 'equivalents' in English that is the L2 learners' first language, for example, 听两次 (tīngliǎngcì) is translated into 'listen twice', 看三回 (kànsānhuí) means 'watch three times', 下三阵 (雨) (xiàsānzhèn (yǔ)) equals to 'rain three times', 读四遍 (dúsìbiàn) is 'read four times' in English and 拍五下 (pāiwǔxià) matches the English phrase 'beat five times'. As the examples advise, most of the standard verbal measure words are translated into 'times' in English, which means that the same translation is applied to more than one standard verbal measure words.

According to the Hierarchy of Difficulty Model proposed by Stockwell, Bowen, and Martin (1965), the most difficult language items for the L2 learners are the ones that exist in their L1 but different or extended in learners' L2. (i.e. an item in L1 becomes two or more items in L2, which is the case for the standard verbal measure words and their equivalents in English). Therefore, the results of the standard verbal measure words in matching tasks match the Hierarchy of Difficulty Model, and the difficulties in the application of standard verbal measure words are caused by negative transfer from learners' L1 because of the similarities and differences between learners' L1 and L2.

However, negative transfer from learners' L1 (English) is not the only reason for the difficulties. The complexities of the usages of standard verbal measure words are also counted for the problems as some standard verbal measure words that have similar meanings and usages can be used to replace each other in certain contexts[3].

The present study believes that the similarities and differences between different standard verbal measure words cause confusion for some L2 learners and native speakers, which is the main reason for the difficulties in the application of these words. This means that the negative transfer from learners' existing knowledge of other standard verbal measure words (learners' L2) interrupts the learning and acquisition of these words.

To conclude, the results from the standard verbal measure words in the matching tasks indicate that this type of measure word is difficult for the English native speakers and these difficulties are caused by negative transfer from both of learners' L1 and L2. This suggests that the CAH prediction that the language elements which have equivalents in learners' first language are easy is not accurate. However, the results of the standard verbal measure words correspond with the Hierarchy of Difficulty Model although the cause of the difficulties of standard verbal measure words in

[3]This will be presented by analysing the similarities and differences between 次 (cì), 回 (huí) and 遍 (biàn). The standard verbal measure word 次 (cì) is used to count repeated actions and can be replaced by 回 (huí) and 遍 (biàn) in the following sentence to express the same meaning: 这个故事他听过三次/遍/回了。[(Zhègè gùshì tā tingguò sāncì/biàn/huí le.) He has heard this story three times.]. However, 遍 (biàn) refers to a completed action from the beginning to the end, whereas 次 (cì) and 回 (huí) do not emphasis the process. Therefore, 遍 (biàn) cannot be used for actions like 去 (qù) and 来 (lái), but 次 (cì) and 回 (huí) can: 他去了次/回上海。[(Tā qùle cì/huí Shànghǎi.) He has been to Shanghai once.]. 次 (cì) is also used as a nominal measure word to count the items that appear repeatedly, in which case it cannot be replaced by 回 (huí) and 遍 (biàn) as 遍 (biàn) cannot be used to measure nouns while 回 (huí) equals to the nominal measure word 件 (jiàn) as in 这回/件事 [(zhè huí/jiàn shì) this thing] and it is also used to count a chapter of a long novel:这是非常大的一次盛会 [Zhè shì fēicháng dà de yīcì shènghuì. This is a very big event.].

the matching tasks is not only negative transfer from learners' first language but also the second language they are learning.

In the model of the process of CMW acquisition, the difficulties in applying standard verbal measure words in the matching tasks mainly appear at the integration stages as the similarities and differences among different standard verbal measure words complicate the learning and acquisition of this type of measure word for the L2 learners.

Conclusion

This section has analysed the errors from the empirical study in the application of standard verbal measure words. Generally speaking, standard verbal measure words are difficult for the English native speakers who are learning Chinese as a second language. The results of the standard verbal measure words (dual function measure words measuring nouns) from the phrase translation tasks are consistent with the CAH prediction that the language elements that do not have equivalents in learners' L1 are difficult, while the results of the standard verbal measure words from the matching tasks are inconsistent with the CAH prediction that the language elements that have equivalents in learners' L1 are easy. This again suggests that CAH prediction has not covered all the aspects in language learning.

By analysing the errors and difficulties, the present study advises that negative transfer from learners' L1 is not the main reason for the difficulties despite the fact that the results from the matching tasks agree with the Hierarchy of Difficulty Model which is based on the differences and similarities between learners' L1 and L2. The cause of the difficulties is mainly negative transfer from learners' existing knowledge of CMW. According to the model of the process of CMW acquisition, the difficulties in

the application of standard verbal measure words mainly appear at the noticing stage, understanding stage and integration stage.

6.7 Individual Nominal Measure Words

Individual nominal measure words are the most common measure words in Chinese language. In the empirical study, these words are tested in different tasks, including phrase translation tasks (simple match of CMW and nouns), gap-filling tasks, multiple choice tasks (individual nominal measure words that have similarities and individual nominal measure words repetition), matching tasks (literary usages of individual nominal measure words and individual nominal measure words in different register) and cloze test (individual nominal measure words regarding quantity relationships).

6.7.1 The Results of Individual Nominal Measure Words in Phrase Translation Tasks

Nine phrases that require individual nominal measure words are tested in the phrase translation tasks, including ‘a piece of paper’, ‘a piece of string’, ‘a piece of advice’, ‘a piece of wood’, ‘a piece of cake’, ‘a bar of soap’, ‘a snowflake’, ‘a watch’ and ‘a watermelon’.

Table 6.7.1.1 The Significant Probability of the Results of Individual Nominal Measure Words in Phrase Translation Tasks

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-10.11667	.544
	3	-.16667	1.000
	4	-23.87356*	.009
2	1	10.11667	.544
	3	9.95000	.345
	4	-13.75690*	.025
3	1	.16667	1.000
	2	-9.95000	.345
	4	-23.70690*	.000
4	1	23.87356*	.009
	2	13.75690*	.025
	3	23.70690*	.000

* The mean difference is significant at the 0.05 level.

The results from Table 6.7.1.1 above present that there is a significant difference of the means of the correct answers between all the L2 groups and the native speaker group ($p<0.05$) in the phrase translation tasks. This means that the L2 learners from all levels have difficulties in the application of individual nominal measure words in the phrase translation tasks. These difficulties from the L2 learners match the prediction that the language elements that do not have equivalents in learners' L1 are difficult by CAH as this type of word cannot be translated into English. Among the phrases involved, the participants particularly have difficulties in translating 'a piece of string' and 'a snow flake'.

Table 6.7.1.2 Errors in Translating ‘a piece of string’ for the L2 Learners			
Errors	Lower	Intermediate	Advanced
一根/条绳 (yīgēn/tiáoshéng)	100%	84%	91%
Misunderstanding	0%	0%	9%
一串线 (yīchuànxiàn)	0%	5%	0%

As the above Table 6.7.1.2 presents, the majority of the L2 learners[4] have translated the phrase incorrectly using the measure words 条/根 (tiáo/gēn). These two words are used for ‘a string’ that is different from ‘a piece of string’ as the former refers ‘a complete string’ and the latter means ‘a part of a string that comes from a complete string’ which requires 截 (jié) or 段 (duàn) as the measure words. This error is mainly caused by overgeneralising the L2 learners’ existing knowledge of 条/根 (tiáo/gēn). In the model of the process of CMW acquisition, this type of difficulty mainly appears at the integration stage.

‘A snowflake’ is also difficult for the L2 learners in the translation tasks, which will be discussed in the following paragraphs.

[4] 100% of the lower level learners, 84% of the intermediate level learners and 91% of the advanced level learners.

Table 6.7.1.3 Errors in Translating ‘a snowflake’ for the L2 Learners			
Errors	Lower	Intermediate	Advanced
一团雪花 (yītuánxuěhuā)	0%	0%	8%
一颗雪花 (yīkēxuěhuā)	0%	0%	8%
一滴雪 (yīdīxuě)	0%	0%	8%
一张雪花 (yīzhāngxuěhuā)	0%	10%	8%
一块雪片 (yíkuàixuěpiàn)	0%	0%	8%
一场雪花 (yīchǎngxuěhuā)	0%	0%	8%
一个雪花 (yígèxuěhuā)	0%	10%	0%
一只雪花 (yīzhīxuěhuā)	0%	5%	0%
Missing answers	50%	35%	17%

As presented in the table above, missing answers indicate the difficulties for the L2 learners from all levels. About 50% of the lower group learners, 35% of the intermediate group learners and 17% of the advanced learners did not translate this phrase. The present study suggests that some L2 learners’ (especially the lower level learners’) lack of knowledge of translating the phrase is the main reason for this type of difficulty. In the model of the process of CMW acquisition, these difficulties mainly appear at the noticing stage.

The errors from the intermediate and the advanced level learners are mainly caused by translating the phrase with inappropriate CMW, including 张 (zhāng), 个 (gè), 颗 (kē), 滴 (dī), 只 (zhī), 团 (tuán), 块 (kuài) and 场 (chǎng).

The current study believes that the main reason for choosing inappropriate CMW in translating this phrase is the complexity of CMW themselves. CMW describe the features of the noun they measure. For ‘a snowflake [雪/雪花

(xuě/xuěhuā)]', its main feature is flat and thin thus Chinese people normally use 片 (piàn) to describe it. The Chinese noun 雪花 (xuěhuā) also has the flower suffix, for which reason 朵 [(duǒ) measure words for flowers] is also used as its measure word. Therefore, 'a snowflake' can be translated into 一片雪/雪花 (yīpiànxuě/xuěhuā) or 一朵雪花 (yīduǒxuěhuā).

From the empirical study, about 10% of the intermediate and 8% of the advanced L2 learners have chosen 张 [(zhāng) (for flat things or things with a flat surface)] to measure 'a snowflake'. Although 张 (zhāng) and 片 [(piàn) the measure word for 'a snowflake'] can be used to describe the same items such as 一张皮 (yīzhāngpí) and 一片皮 (yīpiànpí) [both mean a skin], the former describes the feature of stretchable [things that can be stretched out and rolled back] and the latter describes things that are flat and thin without the feature of 'stretchable'. 'A snowflake' cannot be stretched out and rolled back thus 张 (zhāng) is not used to describe it, and the error of translating 'a snowflake' into '一张雪花 (yīzhāngxuěhuā)' is caused by the interference (negative transfer) from learners' existing knowledge of 张 (zhāng). In the model of the process of CMW acquisition, this error mainly appears at the integration stage.

About 10% of the intermediate L2 learners have translated the phrase using the general measure word 个 (gè) which is used to describe and measure things that do not have a particular feature. 'A snowflake' has obvious features of flat and thin, thus 个 (gè) is not used as its measure word. Also about 5% of the intermediate learners have chosen 只 (zhī) as the measure word to translate the phrase incorrectly. This word can be used for animals, boats and things that are in pairs such as 一只手 (yīzhīshǒu), but it cannot be used to measure 'a snowflake'. About 8% of the advanced level learners have translated the phrase using 滴 (dī) which was originally a verb that means fluid dripping down, and it is expanded to use as a measure word to

describe and measure fluid that is dripping, such as 一滴水 [(yīdīshuǐ) a drop of water]. ‘A snowflake’ is light and it is not fluid thus ‘一滴雪 (yīdīxuě)’ is not its correct translation. There are also 8% of the advanced learners who have translated the phrase using 颗 (kē) which is used to describe and measure small things that are round and granular, such as 一颗豆子 [(yīkēdòuzi) a bean]. ‘A snowflake’ does not have any feature of round and granular thus cannot be described and measured by the measure word 颗 (kē). These errors discussed in this paragraph are mainly caused by generalising (negative transfer) L2 learners’ knowledge of other CMW, and these errors mainly appear at the integration stage in the model of the process of CMW acquisition.

Furthermore, about 8% of the advanced learners have translated the phrase using 团 (tuán) which means round and things gather together. This word can be used to measure 雪 [(xuě) snow] in 一团雪 [(yītuánxuěhuā) a cloud of snow] which means a large quantity of snow gathered together, but it is not used to describe ‘a snowflake’. Also about 8% of the advanced learners have translated the phrase using 块 (kuài) which is normally used to measure lumps of things, and it can be used for 雪 [(xuě) snow] in 一块雪 (yīkuàixuě) which means ‘a lump of snow’. About 8% of the advanced learners have translated the phrase using 场 (chǎng) which is a dual function measure word that describes the course of things that have happened. This word can be used for 雪 [(xuě) snow] in 一场雪 (yīchǎngxuě) that means ‘a snow’. Generally speaking, the errors of using 团 (tuán), 块 (kuài) and 场 (chǎng) in translating ‘a snowflake’ are mainly caused by the interference (negative transfer) from the L2 learners’ knowledge of CMW that can be used for 雪 [(xuě) snow] which equals to 雪花 [(xuěhuā) snowflake] only in 一片雪= 一片雪花[5] [(yīpiànxuě = yīpiànxuěhuā) a snowflake]. These errors

[5]一片雪 = 一片雪花 [(yīpiànxuě = yīpiànxuěhuā) a snowflake] when 片 (piàn) is used as a measure word to describe thin and flat item.

mainly appear at the integration stage in the model of the process of CMW acquisition.

To summarise, L2 learners have difficulties in the application of individual nominal measure words in the phrase translation tasks and two reasons are counted for these difficulties: learners' lack of knowledge of Chinese and negative transfer (overgeneralising) from learners' existing knowledge of other CMW. This result complies with the prediction by CAH that the language elements that do not have equivalents in learners' first language are difficult. In the model of the process of CMW acquisition, the main problems happen at the noticing stage (lower level learners) and the integration stage (intermediate level and advanced level learners).

6.7.2 The Results of Individual Nominal Measure Words in Gap-Filling Tasks

Fifty-one Chinese phrases that require measure words are examined in the empirical study.

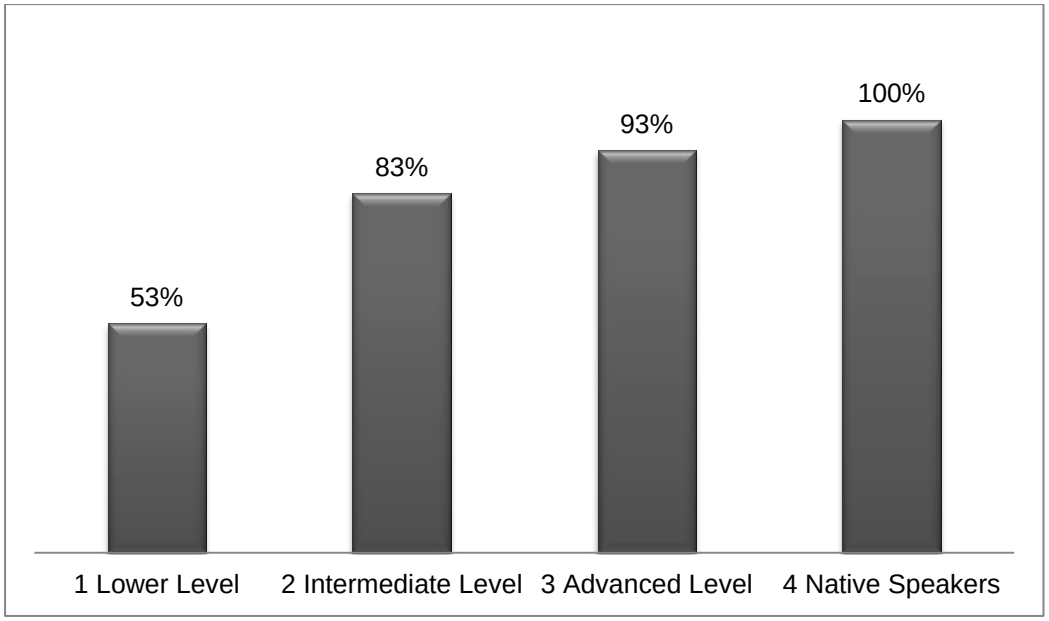
Table 6.7.2.1 The Significant Probability of the Results of Individual Nominal Measure Words in Gap-Filling Tasks

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-29.30769*	.011
	3	-40.00000*	.004
	4	-47.00000*	.000
2	1	29.30769*	.011
	3	-10.69231	.683
	4	-17.69231*	.027
3	1	40.00000*	.004
	2	10.69231	.683
	4	-7.00000	.858
4	1	47.00000*	.000
	2	17.69231*	.027
	3	7.00000	.858

* The mean difference is significant at the 0.05 level.

According to the results presented above, the lower level L2 learners' mean score of the correct answers of the gap-filling tasks is significantly different from the native speakers ($p<0.05$), and it is also significantly different from the intermediate level and the advanced level group learners ($p<0.05$). There is also a significant difference between the intermediate level group and the native speaker group ($p<0.05$). However, the mean score of the correct answers of the intermediate level learners is not significantly different from the advanced level group ($p>0.05$). There is also no significant difference between the advanced level group learners and the native speakers ($p>0.05$).

Figure 6.7.2.1 Percentages of the Correct Answers in the Application of Individual Nominal Measure Words in Gap-Filling Tasks



As the figure above presents, about 53% of the answers from the lower level learners, 83% of the answers from the intermediate level learners, 93% of the answers from the advanced level learners are correct comparing with 100% of the correct answers from the native speakers. This suggests that the L2 learners from all groups[6] have some difficulties in the application of nominal measure words in the gap-filling tasks, and these difficulties match the prediction by CAH that the language elements that do not have equivalent in learners' first language are not easy (Chapter 2 has discussed that individual nominal measure words do not have equivalents in learners' first language which is English).

[6] Still about 7% of the errors are incorrect from the advanced level learners although this group's mean score of the correct answers in not significantly different from the native speaker group.

The main difficulties for the L2 learners lie in the phrase 一( ) 柜子 [(yī( ) guìzi) a ( ) cupboard], in which more than one CMW are accepted as the noun 柜子 (guìzi) can be described by different measure words when no particular context is set, for example 一排柜子 [(yīpáiguìzi) a row of cupboards], 一组柜子 [(yīzǔguìzi) a set of cupboard] and 一个柜子 [(yīgèguìzi) a cupboard].

Table 6.7.2.2 Errors in Filling the Gap of '一( )柜子 [(yī( )guìzi) a ( ) cupboard]'

Errors	Lower	Intermediate	Advanced	Native Speaker
根 (gēn)	25%	0%	0%	0%
张 (zhāng)	25%	33%	0%	0%
把 (bǎ)	0%	0%	50%	0%

As presented in the table above, the main errors for the lower level (25%) and the intermediate level (33%) learners are filling the gap using the measure word 张 (zhāng) which can be used for furniture with a flat surface such as 一张桌子 [(yīzhāngzhuōzi) a table/a desk], but it cannot be used for 柜子 [(guìzi) cupboard] as the referent of this noun does not have the flat surface as its obvious and important characteristic as 桌子 [(zhuōzi) table/desk] does[7]. About 25% of the lower level learners also use the measure word 根 (gēn) to measure 柜子 [(guìzi) cupboard] incorrectly. 根 (gēn) is originally a noun that refers to the roots of plants, and it is generated to use as a measure word to describe and measure the plants that have

[7]桌子 [(zhuōzi) table/desk] has a flat surface on the top and supported by legs at the bottom and its surface can be used to put things on or for doing other jobs. The importance and the obviousness of the surface of 桌子 [(zhuōzi) table/desk] guide people to choose 张 [(zhāng) measure word for flat things] as the measure word to count and describe it. However, flat surface is not the obvious and important feature of 柜子 [(guìzi) cupboard] thus 张 (zhāng) is not applied to describe this noun.

roots, things that have roots (一根头发 [(yīgēntóufā) a hair]) and things that are long and stick like (一根柱子 [(yīgēnzhùzi) a pillar]). However, 柜子 [(guìzi) cupboard] does not have the main features that could be described by 根 (gēn) thus this word is not suitable to measure the noun 柜子 [(guìzi) cupboard]. Also about 50% of the advanced learners have chosen 把 (bǎ) to match 柜子 [(guìzi) cupboard]. When 把 (bǎ) is used as a measure word, it describes and measures items that have handles/arms, such as 一把椅子 [(yībǎyǐzi) a chair]. Although some 柜子 [(guìzi) cupboard] have handles, they are not their typical and salient feature thus 把 (bǎ) is not the appropriate measure word to describe 柜子 [(guìzi) cupboard].

Generally speaking, the errors in filling the gap for the phrase 一( )柜子 [(yī ( ) guìzi) a ( ) cupboard] are mainly caused by generalising (negative transfer) L2 learners' existing knowledge of the measure words 张 (zhāng), 把 (bǎ) and 根 (gēn). This type of error normally appears at the integration stage in the model of the process of CMW acquisition when learners trying to refer to their previous knowledge in the search of the appropriate measure word to match the noun. Furthermore, the results from the gap-filling tasks match the prediction by CAH that the language elements that do not have equivalents in learners' first language are not easy.

6.7.3 The Results of Individual Nominal Measure Words with Similarities in Writing and Pronunciation (Multiple Choice Tasks)

Four groups of individual nominal measure words that are similar in writing and pronunciation are examined, including 棵 (kē) and 颗 (kē), 分 (fēn) and 份 (fèn), 节 (jié) and 截 (jié), 只 (zhī), 支 (zhī) and 枝 (zhī).

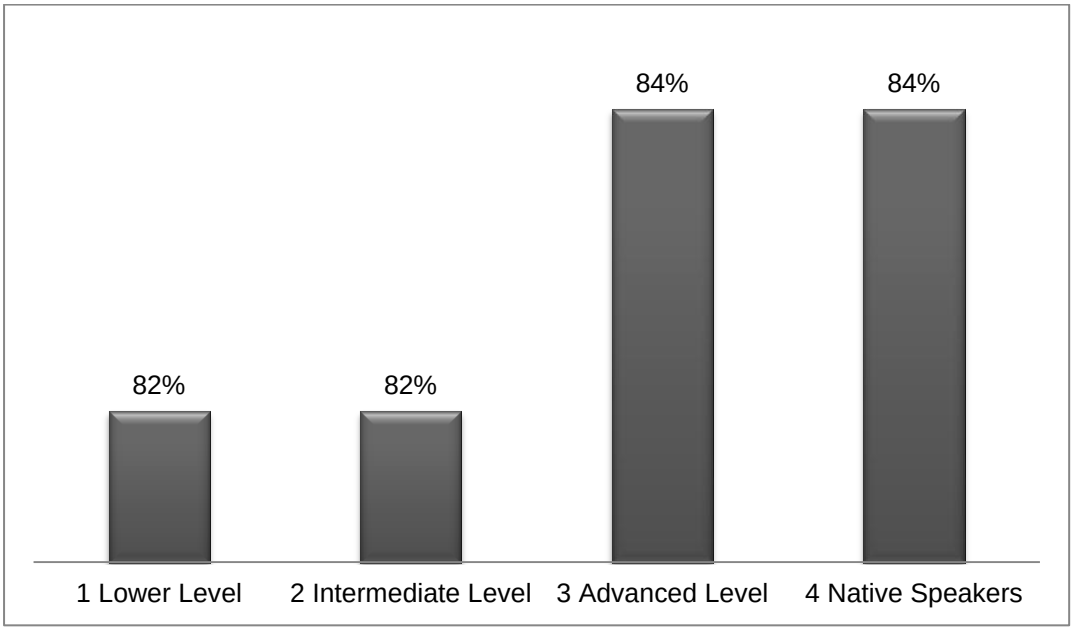
Table 6.7.3.1 The Significant Probability of the Results of Individual Nominal Measure Words with Similarities (Multiple Choice Tasks)

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	1.64706	.993
	3	-.44444	1.000
	4	1.93103	.986
2	1	-1.64706	.993
	3	-2.09150	.973
	4	.28398	1.000
3	1	.44444	1.000
	2	2.09150	.973
	4	2.37548	.951
4	1	-1.93103	.986
	2	-.28398	1.000
	3	-2.37548	.951

* The mean difference is significant at the 0.05 level.

According to the results from the table above, there is no significant difference of the mean scores of the correct answers between the different L2 groups ($p>0.05$). There is also no significant difference between the L2 groups and the native speaker group ($p>0.05$)

Figure 6.7.3.1 Percentages of the Correct Answers in the Application of Individual Nominal Measure Words with Similarities (Multiple Choice Tasks)



As the figure above presents, about 82% of the answers from the lower level group, 82% of the answers from the intermediate level group, 84% of the answers from the advanced level group and also 84% of the answers from the native speaker group are correct in the multiple choice tasks of the individual nominal measure words that have similarities in writing and pronunciation. This indicates that both the L2 learners and the native speakers have difficulties in distinguishing individual nominal measure words that have similarities although the degrees of the two language groups are different. The difficulties from the L2 learners correspond with the prediction that the language elements that do not have equivalents in learners' first language are difficult by CAH as Section 2.3 of Chapter 2 has discussed that individual nominal measure words do not have equivalents in learners' first language which is English.

According to the results, the main difficulties lie in distinguishing of 分 (fēn, fèn) and 份 (fèn), and 节 (jié) and 截 (jié).

Table 6.7.3.2 The Error of 几份生气 (should be 几分生气 [(jǐfēnshēngqì) a little bit angry])			
Lower	Intermediate	Advanced	Native Speaker
60%	38%	33%	0%

As presented in the table above, a large number of the L2 learners have chosen 份 (fèn), which is mainly used for substantial things to match 生气 (shēngqì). This error is mainly caused by the negative transfer from the L2 learners' existing knowledge of 份 (fèn) as this word and the measure word 分 (fēn) that can be used for 生气 (shēngqì) are similar in writing and pronunciation[8]. In the model of the process of CMW acquisition, this type of error mainly appears at the integration stage.

Table 6.7.3.3 The Results of Choosing 节 (jié) and 截 (jié)				
Errors	Lower	Intermediate	Advanced	Native Speakers
一节电线 (yījiédiànxiàn)	60%	38%	44%	90%

[8] These two characters have the same component 分 (fēn) and the same initial and final, and they can be used to replace each other to express the same meaning in certain phrases, such as 花一分力气，就会有一分收成 = 花一份力气，就会有一份收成 [(huā yīfēnlìqì, jiùhuì yǒu yīfēnshōuchéng = huā yīfènlìqì jiùhuì yǒu yīfènshōuchéng) an effort]. However, 份 (fèn) expresses portion or part of something and the things that can form a group: 一份礼 [(yīfènlǐ) a gift] and 一份报纸 [(yīfènbàozhǐ) a newspaper], while 分 (fēn) is a measure word mainly used for time and points such as 一分钟 [(yīfènzhōng) a minute], 一百分 [(yībǎifēn) 100 points], and it also can be used to estimate abstract things: 几分生气 [(jǐfēnshēngqì) a little bit angry]. 份 (fèn) is mainly used for substantial things thus 几份生气 (jǐfènshēngqì) is not an appropriate expression.

According to Table 6.7.3.3 above, about 60% of the lower level L2 learners, 38% of the intermediate level L2 learners, 44% of the advanced level learners and 90% of the native speakers have matched 电线 (diànxiàn) with 节 (jié). According to the established dictionary, the word 节 (jié) was originally a noun which refers to the joints of things, and it is generated to use as a measure word to describe and measure 'a section of an item (things that have joints or naturally formed by sections joint together)', for instance, 一节竹子 [(yījiézhúzi) a section of a bamboo] [9].

Generally speaking, there is a gap between the L2 learners and the native speakers in the application of individual nominal measure words that have similarities in writing and pronunciation. This gap suggests that this type of measure word is not easy for the L2 learners, which again matches the prediction that the language elements that do not have equivalents in learners' L1 are difficult by CAH. The difficulties are mainly caused by the interference (negative transfer) from the L2 learners' existing knowledge of other CMW. In the model of the process of CMW acquisition, the application of the individual nominal measure words with similarities mainly happen at the integration stage.

[9] There are different measure words for 电线 [(diànxiàn) electricity cable] depending upon the states of a cable: 一条/根电线 (yītiáo/gēndiànxiàn) is an electricity cable, 一卷电线 (yījuǎndiànxiàn) is an electricity cable curled together and 一截电线 (yījiédiànxiàn) is a section of the electricity cable that is cut from the original one. In the native speakers' conception, 电线 [(diànxiàn) electricity cable] are the most common cables that can be seen on the road side which are divided by the poles that support them thus it looks like that it is formed by different sections. For this reason, most of the native speakers have chosen 节 (jié) to describe and measure the noun 电线 [(diànxiàn) electricity cable]. The results from the native speakers suggest that the usages of the measure word 节 (jié) are extended to describe and measure things that are not naturally formed by sections as in 一节电线 [(yījiédiànxiàn) a section of electricity cable]. This also provides evidence that the usages of CMW are developing.

6.7.4 The Results of Individual Nominal Measure Words Repetition (Multiple Choice Tasks)

In the empirical study, the repetitions of the measure words 家 (jiā), 团 (tuán) and 个 (gè) are examined.

Table 6.7.4.1 The Significant Probability of the Results of Individual Nominal Measure Words Repetition (Multiple Choice Tasks)

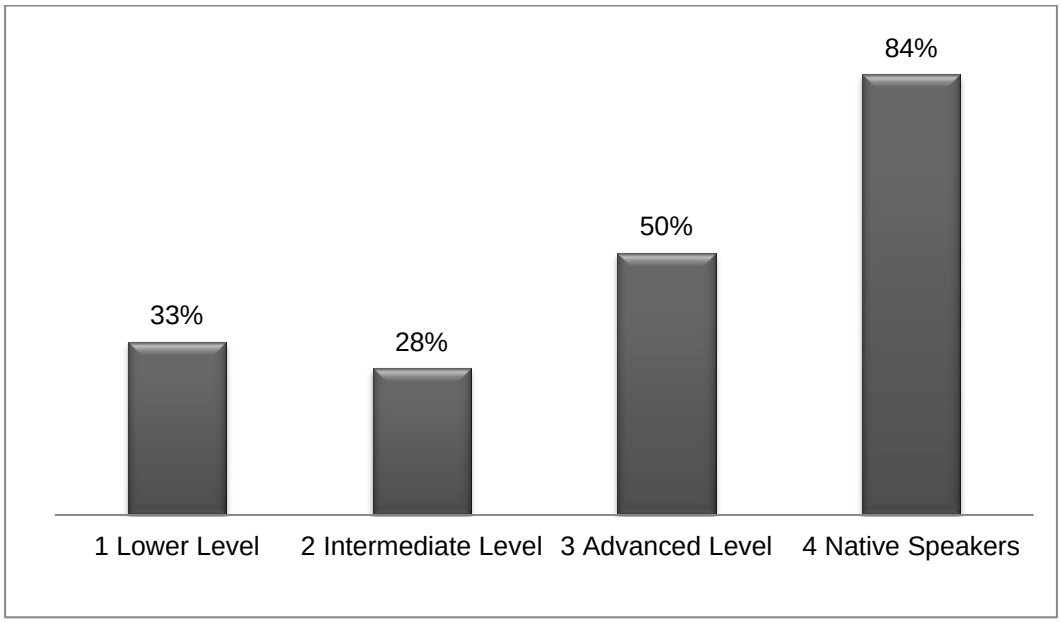
1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	5.33333	.982
	3	-16.66667	.743
	4	-50.80460*	.002
2	1	-5.33333	.982
	3	-22.00000	.324
	4	-56.13793*	.000
3	1	16.66667	.743
	2	22.00000	.324
	4	-34.13793*	.024
4	1	50.80460*	.002
	2	56.13793*	.000
	3	34.13793*	.024

* The mean difference is significant at the 0.05 level.

According to the results from Table 6.7.4.1, the mean scores of the correct answers of the individual nominal measure words repetition between the L2 groups and the native speaker group are significantly different ($p<0.05$). This means that the L2 learners have difficulties in using individual nominal measure words repetition, and these difficulties comply with the prediction by

CAH that the language elements that do not have equivalents in learners' L1 are difficult, as individual nominal measure words repetition cannot be translated into English (learners' first language) directly.

Figure 6.7.4.1 Percentages of the Correct Answers in the Application of Individual Nominal Measure Words Repetitions (Multiple Choice Tasks)



According to the figure above, about 33% of the answers from the lower group learners, 28% of the answers from the intermediate level group learners and 50% of the answers from the advanced level group learners are correct, comparing with more than 80% of the correct answers from the native speakers. This suggests that there is a disparity between the L2 groups and the native speaker group in the application of CMW repetition, and the L2 learners' application of this type of usage is much behind the level of the Chinese native speakers.

As discussed in Chapter 2, the previous studies on CMW repetition have provided evidence that CMW repetition is complicated, which is also demonstrated by the current study from the native speaker group (about 16% mistakes). CMW repetitions have different meanings from their original forms, which have been discussed in Section 6.3.3 where the repetitions of the collective nominal measure words have been analysed. In this section, one example is going to be analysed to support the discussion of the results of the individual nominal measure words repetition.

我(　　)都调查了。

[A. 家 (jiā)　B. 家家 (jiājiā)　C. 一家 (yījiā)　D. 一家家 (yījiājiā)

Wǒ (　　) dōu diàochá le.

I (CMW) all investigated.

[A. household　B. every household C. one household　D. many households]

For the example above, the word 家 [(jiā) household] appears in all the choices. This word is normally a noun and it is used as a measure word to describe family/household in 一家人 [(yījiārén) a family/a household]. When 家 [(jiā) household] is repeated into 家家 (jiājiā), it emphasises each household. When the numeral 一 (yī) is added into the phrase, 一家家 (yījiājiā) emphasises the large quantity of households. To make the correct choice, the L2 learners first need to notice the differences among them, and then they need to understand the basic meanings of each choice. The results from Figure 6.7.4.1 present that the majority of the L2 learners have difficulties in choosing the correct answers for the sentences that require CMW repetitions. This indicates that the L2 learners have problems in understanding the choices and the sentences.

The current study believes that the L2 learners' lack of knowledge of CMW repetition is one of the reasons for the difficulties. Because of the similarities and the differences between the choices for the sentences, the present

study also suggests that the difficulties in using CMW repetitions for the L2 learners are caused by the complexity of this type of usage. This complexity causes problems in understanding the usages of CMW repetitions. The difficulties of the individual nominal measure words repetitions from the L2 learners also correspond to the prediction by CAH that the language elements that do not have equivalents in learners' L1 are difficult. These difficulties could happen at the noticing stage and the understanding stage in the model of the process of CMW acquisition.

6.7.5 The Results of Literary Usages of Individual Nominal Measure Words (Matching Tasks)

In the empirical study, there are six individual nominal measure words tested in the literary usages, including 抹 (mǒ), 轮 (lún), 弯 (wān), 盏 (zhǎn), 丝 (sī) and 线 (xiàn).

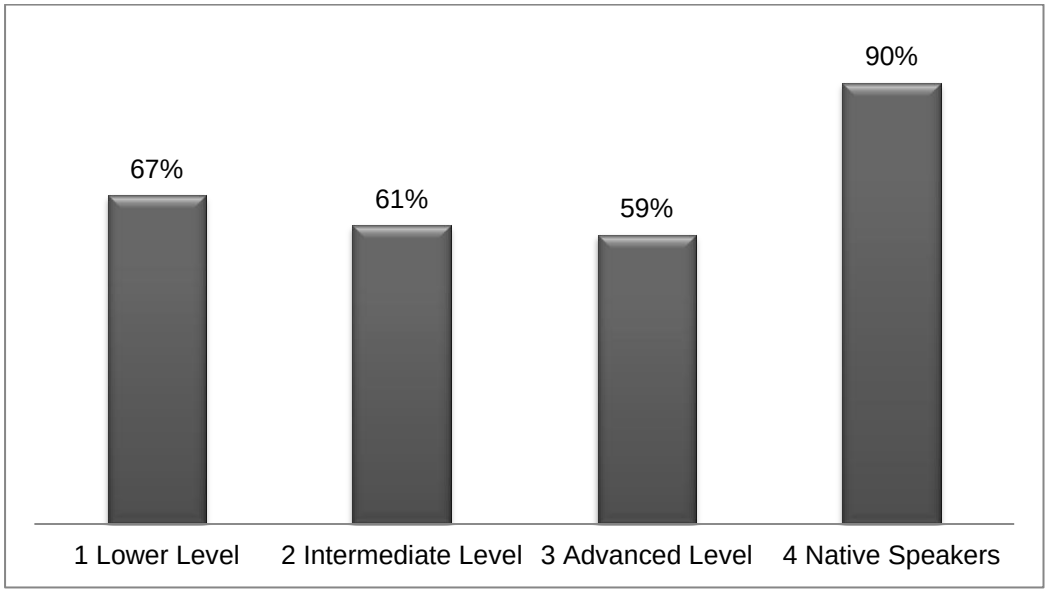
Table 6.7.5.1 The Results of Literary Usages of Individual Nominal Measure Words (Matching Tasks)

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	5.58974	.939
	3	7.22222	.898
	4	-23.50575*	.049
2	1	-5.58974	.939
	3	1.63248	.997
	4	-29.09549*	.000
3	1	-7.22222	.898
	2	-1.63248	.997
	4	-30.72797*	.001
4	1	23.50575*	.049
	2	29.09549*	.000
	3	30.72797*	.001

* The mean difference is significant at the 0.05 level.

According to Table 6.7.5.1, no significant differences of the mean scores of the correct answers between the L2 groups are found ($p>0.05$), but there is a significant difference between all the L2 groups and the native speaker group ($p<0.05$). The L2 learners' application of individual nominal measure words in literary context has not reached the similar level of the native speakers.

Figure 6.7.5.1 Percentages of the Correct Answers in the Application of Literary Usages of Individual Nominal Measure Words (Matching Tasks)



As the figure above presents, on average, about 60% of the answers from all the L2 learners are correct, comparing with around 90% of the correct answers from the native speaker group. This means that about 40% of the answers from the L2 learners are incorrect which indicate the L2 learners' difficulties in the application of the literary usages of individual nominal measure words. These difficulties again comply with the CAH prediction that the language elements that do not have equivalents in the L2 learners' L1 are difficult for them, as this type of usage cannot be translated into English directly. The current study proposes that the complexity of the literary usages of individual nominal measure words is the main reason for the difficulties, and this is also supported by the fact that some native speakers (10%) also have made mistakes in the application of these usages. In order to clarify the above points, the following sentences from the test are analysed here.

A 轮 [(lún) wheel or wheel like]　　B 弯 [(wān) bend or crescent]

撩开幔子，我看见一(A)明月，高悬在远远的塔尖。

Liáokāi mànzi, wǒ kànjiàn yī (A) míngyuè, gāoxuán zài yuǎnyuǎn de tǎjiān.

[I open the curtain and see a ( ) moon hanging over the peak of the tower.]

椰子树梢上挂着一(B)月牙。

Yēzishùshāo shàng guàzhe yī (B) yuèyá.

[There is a ( ) moon hanging on the top of the coconut tree.]

In the above two sentences, 明月 [(míngyuè) full moon] and 月牙 [(yuèyá) crescent moon] are the words that need measure words. The L2 learners need to understand that although both of the nouns represent the moon, the former is a full moon while the latter is a crescent moon. They also need to analyse the available answers and understand that A 轮 [(lún) wheel or wheel like] is used to describe the full moon and B 弯 [(wān) bend or crescent] is used for the crescent moon to make the correct match of 一轮明月 [(yīlúnmíngyuè) a full moon] and 一弯月牙 [(yīwānyuèyá) a crescent moon].

In general, for the matching tasks of the individual nominal measure words in the literary usages, the participants are required to understand the meanings of the sentences first and then they need to understand the meanings of the choices to complete the sentences appropriately. The results from the empirical study indicate that the L2 learners have difficulties in understanding the sentences or the choices, or even both of the sentences and the choices in the matching tasks that involve literary usages of individual nominal measure words. These difficulties could be caused by the L2 learners' lack of knowledge of this type of usage of individual nominal measure words, and also the interference (negative transfer) from the L2 learners' existing knowledge of other CMW.

In the model of the process of CMW acquisition, the difficulties mainly appear at the noticing stage, the understanding stage and the comprehension stage. Moreover, the results of the literary usages of individual nominal measure words also match the prediction by CAH that this type of usage is difficult as they do not have equivalents in the L2 learners' first language.

6.7.6 The Results of Individual Nominal Measure Words Regarding Quantity Relationship (in Cloze Test)

The quantity relationship of different measure words is one of the main reasons for the difficulties in the L2 learners' application of CMW, especially for the individual nominal measure words. These measure words measure and describe the represents of nouns, and different individual nominal measure words represent different quantities of the items they are measuring. One individual measure word can be used for multiple nouns, and one noun can be measured by different nominal measure words depending upon the quantity of the represents of this noun.

In order to explore the L2 learners' understanding of the quantity relationships of different individual nominal measure words, a cloze test is adapted in the empirical study. In this test, different gaps that require different CMW for the same noun 烟 [(yān) cigarette] are employed to test the L2 learners' application of CMW that represent different quantities, including 一根烟/一支烟 [(yīgēnyān/yīzhīyān) a cigarette] <一包烟/一盒烟 [(yībāoyān/yīhéyān) a pack of cigarette] < 一条烟 [(yītiáoyān) a carton of cigarettes] < 一箱烟 [(yīxiāngyān) a large box of cigarettes].

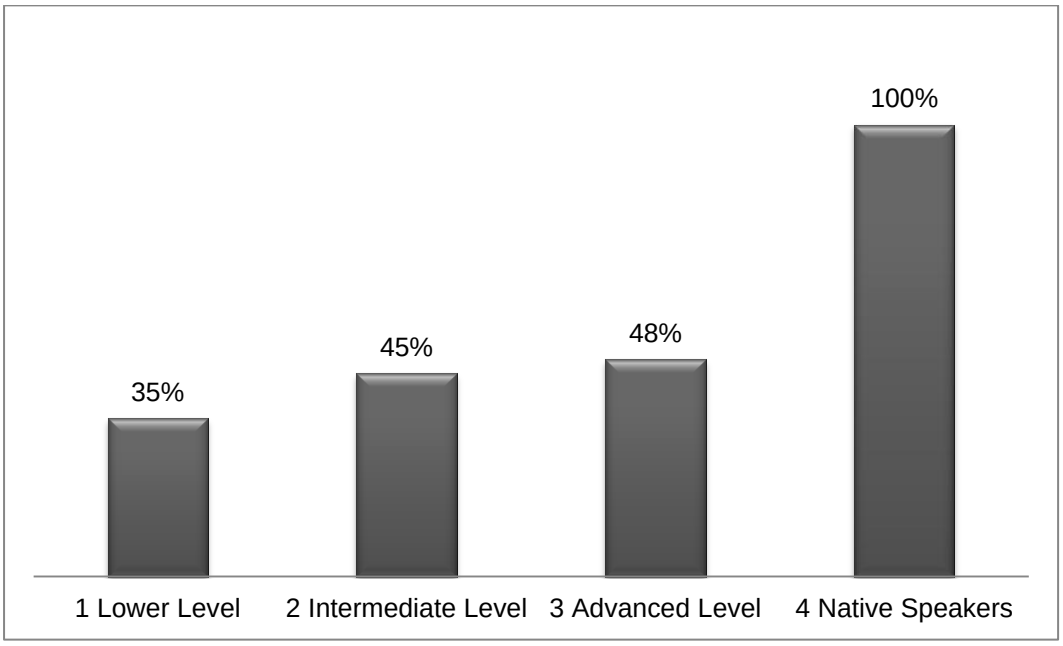
Table 6.7.6.1 The Results of Individual Nominal Measure Words Regarding Quantity Relationship (in Cloze Test)

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-10.25000	.719
	3	-12.75000	.742
	4	-50.10345*	.000
2	1	10.25000	.719
	3	-2.50000	.996
	4	-39.85345*	.000
3	1	12.75000	.742
	2	2.50000	.996
	4	-37.35345*	.004
4	1	50.10345*	.000
	2	39.85345*	.000
	3	37.35345*	.004

* The mean difference is significant at the 0.05 level.

According to the results above, no significant differences of the mean scores of the correct answers are found between all the L2 groups ($p>0.05$). However, there is a significant difference between all the L2 groups and the native speaker group ($p<0.05$). This means that the L2 learners have difficulties in the application of individual nominal measure words regarding quantity relationship. These difficulties are consistent with the prediction by CAH that the individual nominal measure words are difficult for the English native speakers as measure words do not have equivalents in English.

Figure 6.7.6.1 Percentages of the Correct Answers in the Application of the Individual Measure Words in Context (in the Cloze Test)



According to the figure above, about 35% of the answers from the lower level learners, 45% of the answers from the intermediate level learners and 48% of the answers from the advanced level learners are correct, comparing with 100% of the correct answers from the native speakers in the application of the individual nominal measure words regarding quantity relationship. This indicates that the L2 learners have problems in comprehending the usages of Chinese measure words. From the empirical study, the main difficulties lie in the following paragraphs.

教师的学生学习很用功，参加工作后表现也突出，三十几岁就当上了局长。可是没有想到，突然就被抓了。老师去看他，带了(Q1)烟。本来老师看学生带东西怎么也说不过去，怎奈老师考虑学生在看守所里待着买烟不方便，带点也表示一下师生的情份。就这么件简单的事，却引出了一连串的问题。老师的学生就是在一些看起来是小事上犯了大事的。

学生看到烟，嘴唇哆嗦了好多下，说“拿这么多干什么？有(Q2)抽就行了。”“还客气什么，无非就是些烟嘛。”“老师，你说的怎么与有些企业界经理、老板说的话一样？那时候，他们知道我抽烟，隔三差五给我送，开始时是

(Q3)，后来是(Q4)，再后来就是(Q5)。当时我也觉得无非就是烟嘛，便收下了。”

……

In the above passage, participants are required to fill out the gaps with appropriate CMW or CMW phrases, and the relationship of the quantity among the questions are Q2<Q1 and Q3<Q4<Q5.

Table 6.7.6.2 Q1				
Errors	Lower	Intermediate	Advanced	Native Speakers
支/一支 (zhī/yīzhī)	50%	20%	29%	0%
根 (gēn)	33%	13%	14%	0%
这条 (zhètiáo)	0%	7%	0%	0%
几缕 (jǐlǚ)	0%	7%	0%	0%
枝 (zhī)	0%	7%	0%	0%

According to the table above, the most common errors in Q1 are filling the gaps with the measure word for ‘a cigarette’. About 50% of the lower group participants, 20% of the intermediate group participants and 29% of the advanced group participants have filled the gap with 支/一支 (zhī/yīzhī). About 33% of the lower group participants, 13% of the intermediate group participants and 14% of the advanced level participants have also filled the gap using the measure word 根 (gēn). Basically speaking, 一支烟 (yīzhīyān) and 一根烟 (yīgēnyān) are both appropriate CMW phrases. However, 支 (zhī) and 根 (gēn) are the smallest quantity for 烟 [(yān) cigarette] thus it is not appropriate for Q1 as Q1>Q2. These errors indicate that a large number of the L2 learners have difficulties in understanding the text, which is the reason for choosing these two words.

Generally speaking, the errors from Q1 are mainly caused by the learners' lack of knowledge of understanding the text and the interference from the other CMW that are used for 烟 [(yān) cigarette]. In the model of the process of CMW acquisition, these difficulties mainly appear at the understanding stage and the integration stage. In addition, the errors from Q1 also confirm the conclusion in Section 6.7.3 that the L2 learners have difficulties in distinguishing CMW that have similarities, as about 7% of the intermediate level learners have used the inappropriate word 枝 (zhī) that is similar in writing and pronunciation to the measure word for 'a cigarette' [支 (zhī)].

Table 6.7.6.3 Q2

Errors	Lower	Intermediate	Advanced	Native Speakers
个 (gè)	17%	7%	0%	0%
只 (zhī)	0%	0%	14%	0%
Q3>Q1	0%	13%	0%	0%
Q3=Q1	0%	33%	0%	0%
Missing answers	17%	13%	29%	0%

Q2 requires a CMW that represents a smaller quantity than Q1, and few CMW are possible for this gap, including all the CMW that can be used for the noun 烟 [(yān) cigarette] such as 支/根 (zhī/gēn), 包 (bāo) and 条 (tiáo) depending upon the answer for Q1. The results present that about 13% of the intermediate level learners have chosen a measure word which has a smaller quantity than Q1, and about 33% of them have chosen an answer which is equal to Q1. This result indicates that some L2 learners do not understand the relationship between Q1 and Q2. There are also 17% of the lower level learners, 13% of the intermediate level learners and 29% of the advanced level learners did not answer the question, which also suggests that the L2 learners have difficulties in understanding Q2. These two types of

errors are mainly caused by the L2 learners' lack of general knowledge of Chinese.

Moreover, about 14% of the advanced learners have filled the gap with 只 [(zhī) mainly used as a measure word for animals and one of the items that are in pairs], which has the same pronunciation as the measure word for 'a cigarette' [支 (zhī)]. Again these results support the results from Section 6.7.3 that some L2 learners have problems in distinguishing the individual nominal measure words that have similarities. Furthermore, some lower level learners and intermediate level learners have filled the gap with the general measure word 个 (gè). This is caused by the overgeneralisation of the L2 learner's existing knowledge of this word. Generally speaking, in the model of the process of CMW acquisition, the errors from the Q2 mainly appear at the noticing stage, understanding stage and integration stage.

Table 6.7.6.4 Q3

Errors	Lower	Intermediate	Advanced	Native Speakers
只 (zhī)	17%	0%	0%	0%
个 (gè)	0%	7%	14%	0%
Missing Answers	67%	67%	57%	0%

Table 6.7.6.5 Q4				
Errors	Lower	Intermediate	Advanced	Native Speakers
支 (zhī)	0%	0%	14%	0%
只 (zhī)	17%	0%	0%	0%
个 (gè)	0%	7%	14%	0%
Missing answers	67%	67%	57%	0%

Table 6.7.6.6 Q5				
Errors	Lower	Intermediate	Advanced	Native Speakers
只 (zhī)	17%	0%	0%	0%
个 (gè)	33%	7%	43%	0%
Missing answers	83%	73%	57%	0%

According to the tables Q3, Q4 and Q5, on average, more than 60% of the answers are missing from these questions, which indicate that the L2 learners have problems in understanding these gaps, and this error is mainly caused by learners' lack of general knowledge of Chinese.

Filling the gaps with 支 (zhī) that can be used to describe and quantify '烟 [(yān) cigarette] is another error for the L2 learners. This mainly appears in the advanced level learners' answers (14%) in Q4. 支 (zhī) represents the smallest quantity in quantifying 烟 [(yān) cigarette], and it cannot meet the requirement Q4 > Q3, thus it is not appropriate for the gap Q4. This means that some L2 learners have not understood the relationship among Q3, Q4

and Q5. This also indicates that some learners have acquired the measure word for a single cigarette, but they have not acquired other CMW that are used to measure ‘cigarette’ depending upon the quantity and the containers they are in.

Using 只 (zhī)[10] is also another error that has appeared in the L2 learners, as about 17% of the lower level learners have filled Q3, Q4 and Q5 with this word respectively. This again confirms the conclusion that some L2 learners have difficulties in distinguishing individual nominal measure words that are similar in writing and pronunciation as discussed in Section 6.7.3. There are also some L2 learners have filled the gap with the general measure word 个 (gè), and this error has appeared in all the three gaps. This is caused by overgeneralising the learners’ existing knowledge of this measure word.

According to the model of the process of CMW acquisition, the errors from the Q3, Q4 and Q5 appear at the noticing stage, the understanding stage, the comprehension and the integration stage, and it is mainly the complexity of the measure words that causes the difficulties.

6.7.7 Conclusion

The different usages of individual nominal measure words have been discussed in Section 6.7. In a word, some individual nominal measure words are difficult for the English native speakers. Many L2 learners have difficulties in matching some nouns with their individual nominal measure words appropriately. They also have difficulties in the application of individual nominal measure words repetition, individual nominal measure words in literary context, and individual nominal measure words as regards

[10] This word is mainly used as a measure word for animals and one of the items that are in pairs.

different quantities, and they also have difficulties in distinguishing individual nominal measure words that are similar in writing and pronunciation.

Generally speaking, these difficulties mainly happen at the noticing stage, the understanding stage, the comprehension and the integration stage in the model of the process of CMW acquisition depending on the usages of this type of measure word. Moreover, the L2 learners' lack of knowledge of Chinese is one of the reasons for the difficulties in the application of individual nominal measure words, and the negative transfer (interference) from the L2 learners' existing knowledge of other CMW is also a reason for the difficulties. These difficulties from different usages of the individual nominal measure words all match the prediction by CAH that the language elements that do not have equivalents in learners' first language are difficult as individual nominal measure words do not have equivalents in English which is the L2 learners' first language.

6.8 Temporary Nominal Measure Words

In the empirical study, temporary nominal measure words are examined in two types of tasks: phrase translation tasks and matching tasks.

6.8.1 The Results of Temporary Nominal Measure Words in Phrase Translation Tasks

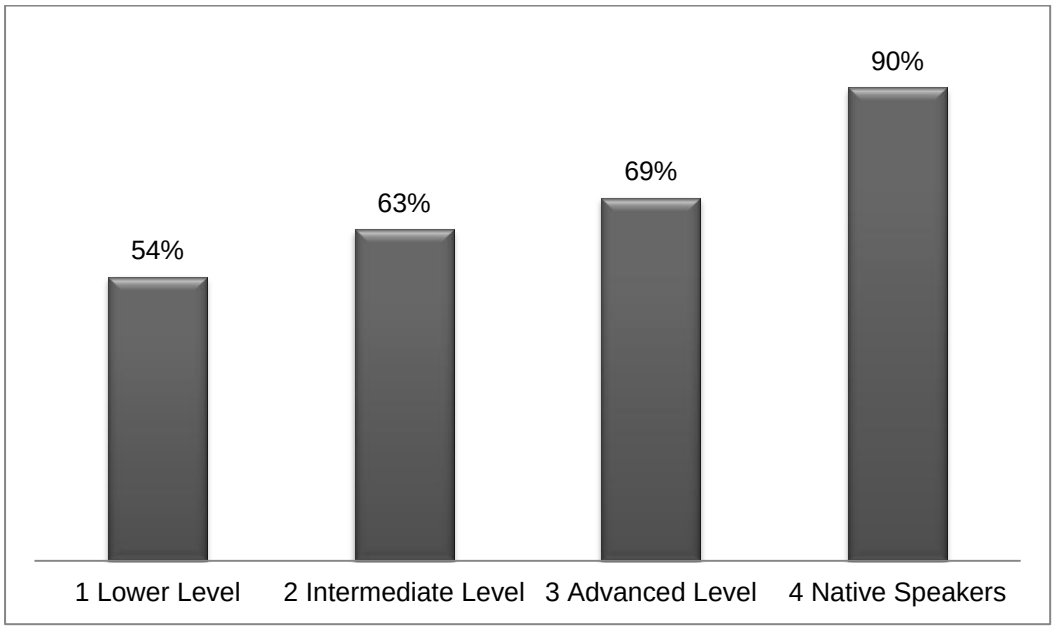
In the phrase translation tasks, three phrases that need temporary nominal measure words are tested, including 'a full head of dark hair' which examines the use of 头 (tóu) as a measure word in 一头黑发 (yītóuhēifā), 'a handful of rice' which mainly examines 把 (bǎ) in 一把米 (yībǎmǐ) although it also means 'a small amount of [少量米 (shǎoliàngmǐ)] and 'a pocketful of

money' that examines 口袋 (kǒudài) as a measure word in 一口袋钱 [(yīkǒudàiqián)].

Table 6.8.1.1 The Results of Temporary Nominal Measure Words (Phrase Translation)			
1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-8.33333	.876
	3	-14.58333	.614
	4	-33.24713*	.015
2	1	8.33333	.876
	3	-6.25000	.890
	4	-24.91379*	.003
3	1	14.58333	.614
	2	6.25000	.890
	4	-18.66379	.114
4	1	33.24713*	.015
	2	24.91379*	.003
	3	18.66379	.114
* The mean difference is significant at the 0.05 level.			

According to the table above, for the phrase translation tasks, there is a significant difference of the mean scores of the correct answers between the lower group and the native speaker group as well as the intermediate group and the native speaker group ($p<0.05$), but there is no significant difference between the advanced group and the native speaker group ($p>0.05$).

Figure 6.8.1.1 Percentages of the Correct Answers in the Application of Temporary Nominal Measure Words in Phrase Translation Tasks



According to Figure 6.8.1.1, about 54% of the answers from the lower level learners, 63% of the answers from the intermediate level learners, 69% of the answer from the advanced level learners are correct, comparing with 90% of the correct answers from the native speaker group. This means that over 30% of the answers from the L2 learners are incorrect, which indicates that the L2 learners have difficulties in the application of temporary nominal measure words. These difficulties comply with the prediction that this type of measure word is difficult by CAH as they do not have equivalents in English.

Among the phrases examined, the phrases 一头黑发 [(yītóuhēifā) a full head of dark hair] and 一口袋钱 [(yīkǒudàiqián) a pocketful of money] are more straight forward as they have ‘equivalents’ from learners’ first language. Therefore, learners with higher proficiency of Chinese are better at these two phrases. For the L2 learners, the main difficulty in the phrase translation tasks lies in 把 (bǎ) in 一把米 [(yībǎmǐ) a handful of rice].

Table 6.8.1.2 L2 Learners' Errors in Translating 'a handful of rice'			
Errors	Lower	Intermediate	Advanced
一手米/米饭 (yīshǒumǐ/mǐfàn)	17%	50%	55%
一抱米 (yībàomǐ)	0%	0%	9%
一满手米饭 (yīmǎnshǒumǐfàn)	33%	14%	0%
满手米饭 (mǎnshǒumǐfàn)	0%	7%	9%
一拳米 (yīquánmǐ)	0%	0%	9%
一锅米饭 (yīguōmǐfàn)	17%	0%	0%

The table above shows that the main error is translating the phrase into 一手米/米饭 (yīshǒumǐ/mǐfàn), as about 17% of the lower level learners, 50% of the intermediate level learners and 55% of the advanced learners have made this mistake. This error is caused by the interference from learners' existing knowledge of the word 手 [(shǒu) hand][11] as this word is the direct translation of 'handful [refers to the quantity that can be held by one hand]'. Also about 9% of the advanced level learners have mistakenly translated 'handful' into 拳 [(quán) the direct translation for fist], which is caused by negative transfer from the L2 learners' existing knowledge of 拳 (quán) that refers to hand when it is held together.

满手米饭 (mǎnshǒumǐfàn) is another error from the L2 learners as about 7% of the intermediate level learners, 9% of the advanced level learners and 3%

[11] When 手 (shǒu) is used as a measure word, it describes and measures a hand that is covered with something such as 一手墨水 [(yīshǒumòshuǐ) a hand that is covered with ink]. However, 手 (shǒu) does not refer to the quantity that can be held by a hand thus it is not the appropriate measure word for the phrase 'a handful of rice'.

of the native speakers have translated the phrase into 满手米饭 [(mǎnshǒumǐfàn) describes the situation that the hand is covered with rice] that is different from the original meaning of the English phrase 'a handful of rice'. Also about 33% of the lower level learners and 14% of the intermediate level learners have translated the phrase into 一满手米饭 (yīmǎnshǒumǐfàn). This type of error is mainly caused by learners' lack of knowledge of their L2 (Chinese for the English native speakers) and the interference of learners 'existing knowledge of the word 满手 [(mǎnshǒu) hand that is covered with][12]. In the model of the process of CMW acquisition, these errors mainly appear at the noticing and understanding stage.

The other errors for the L2 learners in translating 'a handful of rice' are caused by other CMW that can be used for 米/米饭 [(mǐ) rice], including 一抱米 [(yībàomǐ) quantity that can be held by two arms] and 一锅米饭 [(yīguōmǐfàn) a pot of rice]. These errors are caused by the difficulties in understanding 'handful', which is also caused by the lack of knowledge of Chinese.

[12] 满手 (mǎnshǒu) refers to the hand is covered with something such as 满手糖 [(mǎnshǒutáng) hand covered with sugar] and 满手汗 [(mǎnshǒuhàn) hand covered with sweat].

Generally speaking, the difficulties in translating ‘ a handful of rice’ is mainly caused by the negative transfer from the L2 learners’ existing knowledge of Chinese as well as their lack of knowledge of translating ‘a handful’. The current study believes that the complexity of the measure word 把 (bǎ) [13] which is the appropriate CMW for ‘handful’ is another reason for the difficulties. In the model of the process of CMW application, these difficulties mainly appear at the noticing stage and the understanding stage. Furthermore, these difficulties also match the prediction by CAH that the language elements that do not have equivalents in learners’ L1 are difficult.

6.8.2 The Results of Temporary Nominal Measure Words in Matching Tasks

Besides the phrase translation tasks, temporary nominal measure words are also examined in the matching tasks, including 鼻子 (bízi) in 碰了一鼻子灰 (pèngle yībízihuī), 手 (shǒu) in 一手汗 (yīshǒuhàn), 身 (shēn) in 一身鸡皮疙瘩 (yīshēnjīpígēdá), 屁股 (pìgǔ) in 一屁股债 (yīpìgǔzhài), 脸 (liǎn) in 一脸怒气 (yīliǎnnùqì), 肚子 (dùzi) in 一肚子意见 (yīdùziyìjiàn) and 嘴 (zuǐ) in 一嘴口水 (yīzuǐkǒushuǐ).

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[13]把 (bǎ) is originally a verb which means 握住 [(wòzhù) hold something] and 把持 [(bǎchí) hold something]. It is extended to a noun as 把手 [(bǎshǒu) handle] and 把柄 [(bǎbǐng) handle], then it is extended to be used as a measure word. As a measure word, 把 (bǎ) has nine usages: 1. 把 (bǎ) is used to measure utensils that have ‘a handle’ as its feature: 一把椅子 [(yībǎyǐzi) a chair] and 一把刀 [(yībǎdāo) a knife]. 2. It is used to express the quantity that can be held by one hand: 一把米 [(yībǎmǐ) a handful of rice] and 一把糖 [(yībǎtáng) a handful of sweets]. 3. It is used to measure items that can be grabbed by one hand or long things that been bound together by a piece of string or bundle of something: 一把面 [(yībǎmiàn) a bundle of noodle]. 4. It is used for abstract things that have large quantity: 一把年纪 [(yībǎniánjì) age over 50]. 5. It is used to describe people who are good at something: 一把好手 [(yībǎhǎoshǒu) a master]. 6. For positions: 一把手 [(yībǎshǒu) a head of a team or department]. 7. For measuring actions that are related to hands: 拉了一把 [(lāle yībǎ) pull up]. 8. Extended for exaggerate things: 捏了一把汗 [(niēle yībǎhàn) hold a handful of sweat]. 9. To measure things that has certain quantity: 一把筷子 [(yībǎkuàizi) normally eight or ten pairs].

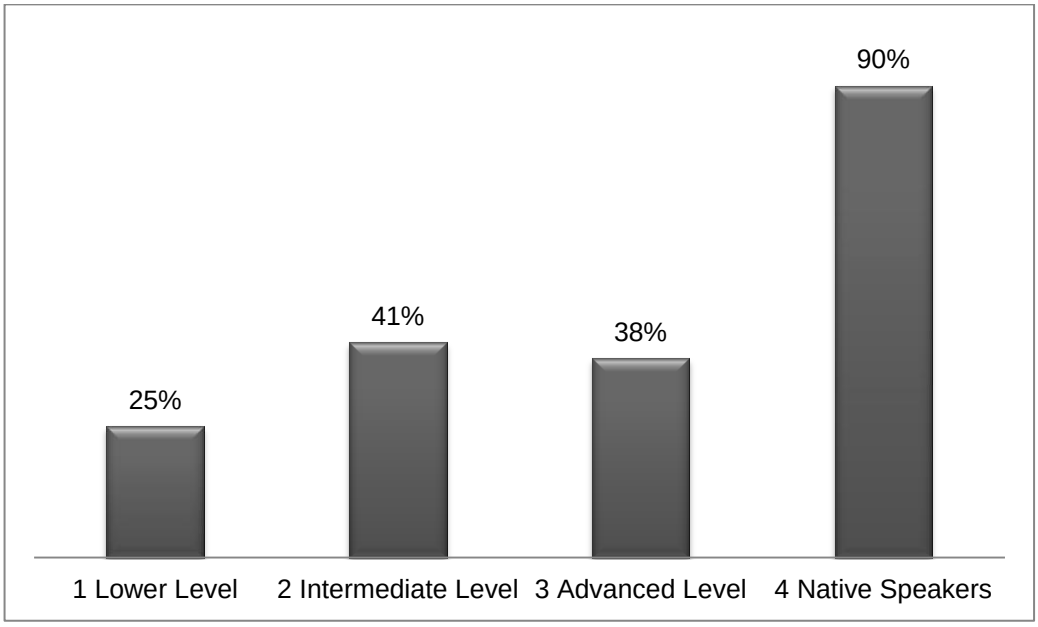
Table 6.8.2.1 Results of Temporary Nominal Measure Words (Matching Tasks)

1=Lower 2=Intermediate 3=Advanced 4=Native Speaker	1=Lower 2=Intermediate 3=Advanced 4=Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-16.00000	.407
	3	-2.50000	.996
	4	-52.79310*	.000
2	1	16.00000	.407
	3	13.50000	.474
	4	-36.79310*	.000
3	1	2.50000	.996
	2	-13.50000	.474
	4	-50.29310*	.000
4	1	52.79310*	.000
	2	36.79310*	.000
	3	50.29310*	.000

* The mean difference is significant at the 0.05 level.

For the matching tasks, the mean scores of the correct answers from the L2 groups are significantly different from the native speaker group ($p<0.05$). This indicates that the L2 learners have difficulties in the application of temporary nominal measure words in the matching tasks, and these difficulties are consistent with the prediction by CAH that the temporary nominal measure words are difficult as they do not have equivalents in English (L2 learners' L1).

Figure 6.8.2.1 Percentages of the Correct Answers in the Application of Temporary Nominal Measure Words in Matching Tasks



According to the results from the figure above, the majority of the L2 learners have difficulties in applying temporary nominal measure words in matching tasks as only around 35% of the correct answers from the L2 learners on average. This result indicates a disparity between the L2 learners and the native speakers.

As discussed in Chapter 2, temporary nominal measure words are semantically difficult to construe. Most of these measure words do not have similar expressions in English and they cannot be directly translated. Some of the usages of the temporary nominal measure words are set by Chinese people, such as 碰了一鼻子灰 [(pèngle yībízihuī) encounter snub] and 欠了一屁股债 [(qiànle yīpìgǔzhài) owe lot of debt]. As the above two examples presents, the relationship between the nouns and the measure words is so vague that the L2 learners can hardly associate 一鼻子灰 [(yībízihuī) nose covered with dust] with the situation that somebody is experiencing embarrassment, and they also hardly associate 屁股 [(pìgǔ) bottom] with

debt. This again proposes that the difficulties in the application of temporary nominal measure words are caused by the complexities of this type of word.

Conclusion

To sum up, the difficulties in applying temporary nominal measure words are mainly caused by the complexity of this type of measure word. In the model of the process of CMW acquisition, the problems of applying this type of measure word mainly lie in the noticing and the understanding stage: It is difficult for the L2 learners' to notice the use of temporary nominal measure words as it is not straight forward as a 'measuring unit'. The multiple matches of a noun with different temporary nominal measure words in different context also cause confusion in understanding them.

6.9 Borrowed Verbal Measure Words

As discussed in Chapter 2, borrowed verbal measure words includes two sub-categories: verbal measure words borrowed from nouns and verbal measure words borrowed from verbs. Verbal measure words borrowed from time nouns are examined in the phrase translation tasks. The other verbal measure words borrowed from nouns are tested in the matching tasks. Verbal measure words borrowed from verbs are tested in the translation tasks.

6.9.1 Verbal Measure Words Borrowed from Nouns

6.9.1.1 The Results of Verbal Measure Words Borrowed from Time Nouns

In the empirical study, three source phrases requiring verbal measure words borrowed from time nouns are examined: ‘wait a year’, ‘work a month’ and ‘borrow the necklace for four days’.

Table 6.9.1.1.1 Results of Verbal Measure Words Borrowed from Time Nouns (Phrase Translation Tasks)

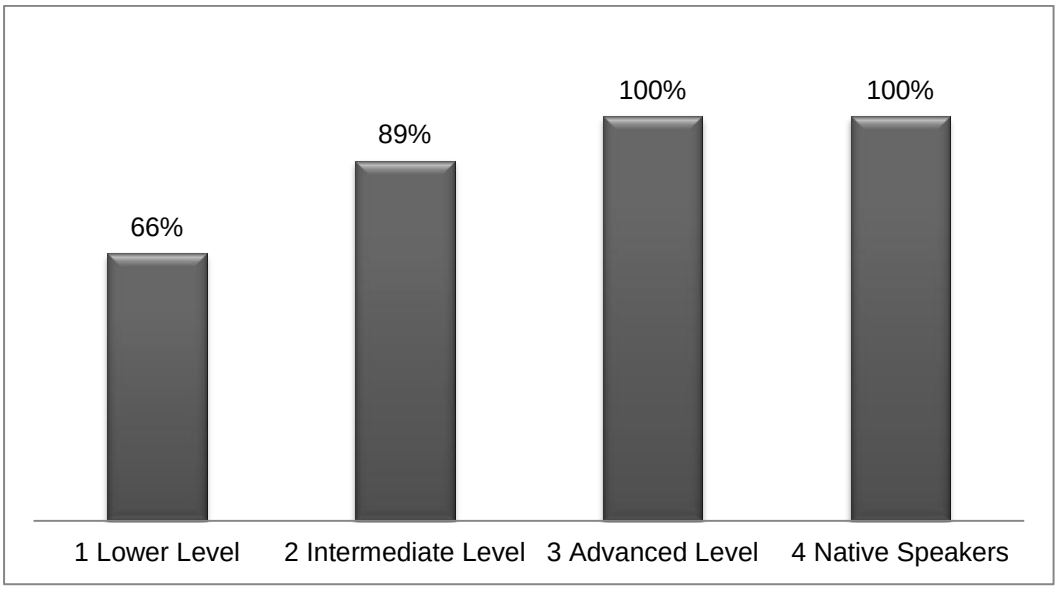
1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-22.22222	.187
	3	-33.33333*	.041
	4	-33.33333*	.011
2	1	22.22222	.187
	3	-11.11111	.645
	4	-11.11111	.387
3	1	33.33333*	.041
	2	11.11111	.645
	4	.00000	1.000
4	1	33.33333*	.011
	2	11.11111	.387
	3	.00000	1.000

* The mean difference is significant at the 0.05 level.

According to Table 6.9.1.1.1, the mean score of the correct answers of the lower level leaners is significantly different from the advanced L2 group

leaners and the native speaker group ($p<0.05$). However, the mean score of the correct answers of both the intermediate level learners and the advanced level learners are not significantly different from the native speaker group and the native speaker group ($p>0.05$), which indicates that these two level learners' application of verbal measure words borrowed from time nouns have reached the similar level as the native speakers.

Figure 6.9.1.1.1 Percentages of the Correct Answers of Verbal Measure Words Borrowed from Time Nouns (Phrase Translation Tasks)



According to the figure above, errors in the application of verbal measure words borrowed from time nouns mainly exist in the lower level learners (34%) and the intermediate level learners (11%). The advanced group learners' application of the verbal measure words borrowed from time nouns has reached the same level as the native speakers. The errors from the lower and the intermediate level learners suggest that some L2 learners have difficulties in the application of this type of measure word, and the difficulties mainly lie in the phrase 'wait a year'.

Table 6.9.1.1.2 L2 Learners' Errors in Translating 'wait a year'			
Errors	Lower	Intermediate	Advanced
一年等 (yīnián děng)	17%	0%	0%
一年在等 (yīnián zài děng)	17%	0%	0%
等一个年 (děngyīgènián)	0%	11%	0%

As Table 6.9.1.1.2 shows, about 17% of the lower level learners have translated the phrase into 一年等 [(yīnián děng) a year wait], 17% of the lower level learners have translated the phrase into 一年在等 [(yīnián zài děng) a year at wait], and about 11% of the intermediate level learners have translated the phrase into 等一个年 (děngyīgènián). All of the errors are caused by overgeneralising the L2 learners' existing Chinese knowledge. Among the errors, the first two are mainly caused by overgeneralising L2 learners' existing knowledge of the time words as adverbials in Chinese.[14] The error '等一个年 (děngyīgènián)' is caused by overgeneralising the L2 learners' existing knowledge of the time word 月 [(yuè) month.[15] These difficulties indicate that the CAH prediction that the language elements that have equivalents in learners' first language are easy is not accurate as verbal measure words borrowed from time nouns can be translated into English directly. In the model of the process of CMW acquisition, these difficulties for the lower and intermediate level learners mainly happen at the integration stage.

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[14] As adverbials, the time words normally precede the verbs to denote the time the actions take place, such as 明年毕业 [(míngnián bìyè) graduate next year] and 明天上商店 [(míngtiān shàng shāngdiàn) go to the shop tomorrow].

[15] In Chinese language, 'wait a month' is translated into '等一个月 (děng yīgèyuè)' as a measure word is need for the time word 月 (yuè) to distinguish it from 一月 [(yīyuè) January]. However, other 'time words' such as 天 (tiān) and 年 (nián) do not need a measure word as they contain 'measuring unit' themselves. Therefore, the mistakes in translating 'wait a year' into '等一个年 (děng yīgènián)' is the error in overgeneralizing the rule for the time word '月 [(yuè) month]'.

6.9.1.2 The Results of Verbal Measure Words Borrowed from Nouns (Tool, Body and Concomitant)

In the empirical study, eight verbal measure words borrowed from nouns (tool, body and concomitant) are tested in the matching tasks, including 针 [(zhēn) needle], 口 [(kǒu) mouth], 笔 [(bǐ) pen], 耳光 [(ěrguāng) slap], 刀 [(dāo) knife], 觉 [(jiào) sleep], 脚 [(jiǎo) foot], and 声 [(shēng) voice].

Table 6.9.1.2.1 Results of Verbal Measure Words Borrowed from Nouns (Tool, Body and Concomitant) (Matching Tasks)

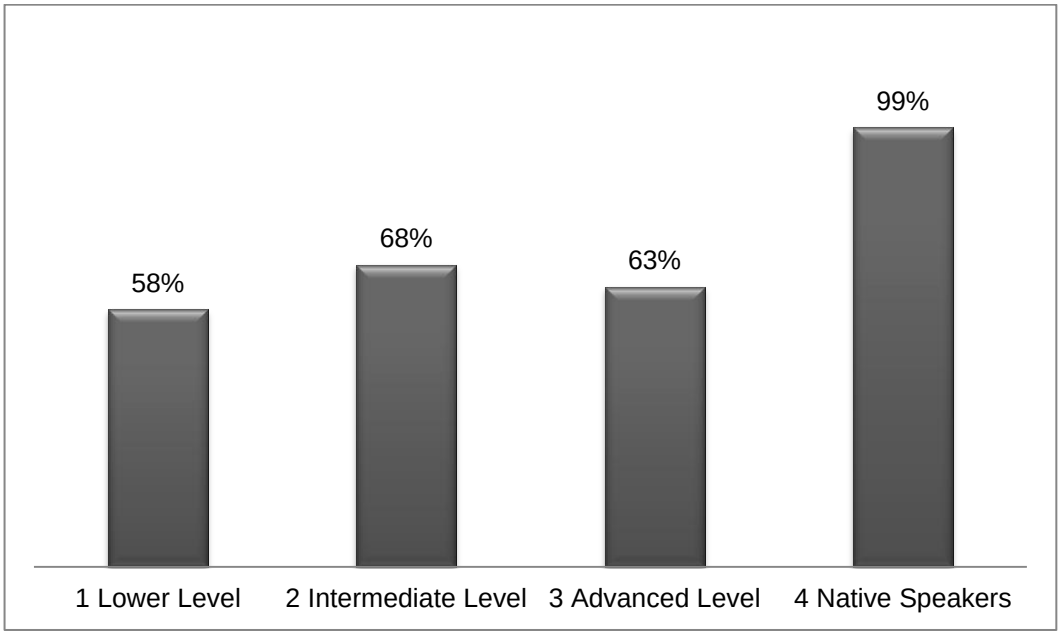
1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-9.33333	.808
	3	-4.08333	.989
	4	-40.47126*	.000
2	1	9.33333	.808
	3	5.25000	.971
	4	-31.13793*	.001
3	1	4.08333	.989
	2	-5.25000	.971
	4	-36.38793*	.008
4	1	40.47126*	.000
	2	31.13793*	.001
	3	36.38793*	.008

* The mean difference is significant at the 0.05 level.

As the table above presents, there is no significant difference of the mean scores of the correct answers among the L2 groups ($p>0.05$). However, the

mean scores of all the L2 groups are significantly different from the native speakers ($p<0.05$) in the application of verbal measure words borrowed from nouns (tool, body and concomitant). These results indicate that the L2 learners have difficulties in the application of these types of measure words.

Figure 6.9.1.2.1 Percentages of the Correct Answers of the Verbal Measure Words Borrowed from Nouns (Tool, Body and Concomitant) (Matching Tasks)



According to the figure above, about 58% of the answers from the lower level learners, 68% of the answers from the intermediate level learners, 63% of the answers from the advanced level learners are correct, comparing with about 99% of the correct answers from the native speakers. This indicates that the L2 learners have difficulties in the application of verbal measure words borrowed from nouns (tool, body and concomitant). These difficulties comply with the prediction by CAH that these types of measure words are difficult for the English native speakers as they do not have equivalents in the L2 learners' first language (English).

To assist the discussion of the reasons for the difficulties in the application of verbal measure words borrowed from nouns (tool, body and concomitant), the following examples are taken from the eight sentences examined in the empirical study.

他叫了他妈妈三(声)，但是妈妈没听见。

Tā jiàole tā mama sān (shēng), dànshì māmā méi tīngjiàn.

*He called his mother three voice, but mother did not hear.

He called his mother three times, but his mother did not hear him.

王明砍了三(刀)终于把树砍倒了。

Wángmíng kǎnle sān (dāo) zhōngyú bǎ shù kǎn dǎole.

*Wangming cut three knives, finally the tree fell.

Wangming cut three times and the tree finally fell down.

任伟群甩起腿，又在门上踢了三(脚)。

Rènwěiqún shuǎiqǐ tuǐ, yòu zài ménshàng tīle sānjiǎo.

Renweiqun swings legs, again on the door kicked three foot.

Renweiqun swings one of his legs and kicked the door three times.

As the sentences above present, the verbal measure words borrowed from nouns (tool, body and concomitant) cannot be translated into English directly. These measure words are borrowed from the referents of the nouns of the items that did the action or the results of an action to quantify the actions. For example, 刀 [(dāo) knife] is the tool that did the action in '砍 [(kǎn) cut]' and 声 [(shēng) sound/voice] is the result of '叫 [(jiào) call]'. These measure words are not straight forward to be noticed and understood by the L2 learners. In the model of the process of CMW acquisition, the

difficulties in the application of verbal measure words borrowed from nouns (tool, body and concomitant) mainly happen at the noticing and understanding stages.

6.9.1.3 Conclusion

Section 6.9.1.1 and Section 6.9.1.2 have discussed the results of the application of the verbal measure words borrowed from nouns in the phrase translation tasks and the matching tasks. Generally speaking, the L2 learners have difficulties in the application of this type of measure word. The difficulties from the verbal measure words borrowed from time nouns again suggest that the CAH prediction has not covered all the aspects in language learning and acquisition as the verbal measure words borrowed from time nouns are not easy for the lower level and the intermediate level L2 learners although this type of word has equivalent in learners' first language. However, the difficulties from the verbal measure words borrowed from nouns (tool, body and concomitant) comply with the prediction by CAH that the language elements that do not have equivalents in learners' first language are difficult. In the model of the process of CMW acquisition, the difficulties in the application of verbal measure words borrowed from nouns mainly appear at the noticing stage, the understanding stage and the integration stage.

6.9.2 Verbal Measure Words Borrowed from Verbs

As discussed in Chapter 2, verbal measure words borrowed from verbs are mainly used to express the short duration of an action. In Chinese language, the verbal measure word 下 (xià) and the verb repetitions such as 看看 (kànkàn) can also be used to express the short duration of an action. Therefore, the current study has employed three English source sentences

to examine whether the L2 learners would adopt verbal measure words borrowed from verbs in expressing short duration of an action.

Let me have a look then I can tell you whether it is broken or not.

让我看一看/看一下/看看然后我告诉你它坏没坏。

Ràng wǒ kànyīkàn/kànyīxià/kànkàn ránhòu wǒ gàosù nǐ tā huài méi huài.

She had a jump and broke her leg.

她跳一跳/跳一下/跳了跳弄坏了腿。

Tā tiàoyītiào/tiàoyīxià/tiàoletiào nòng huàile tuǐ.

Let us have a feel inside the bag.

让我摸一摸/摸一下/摸摸包的里面。

Ràng wǒ mōyīmō/mōyīxià/mōmō bāo de lǐmiàn.

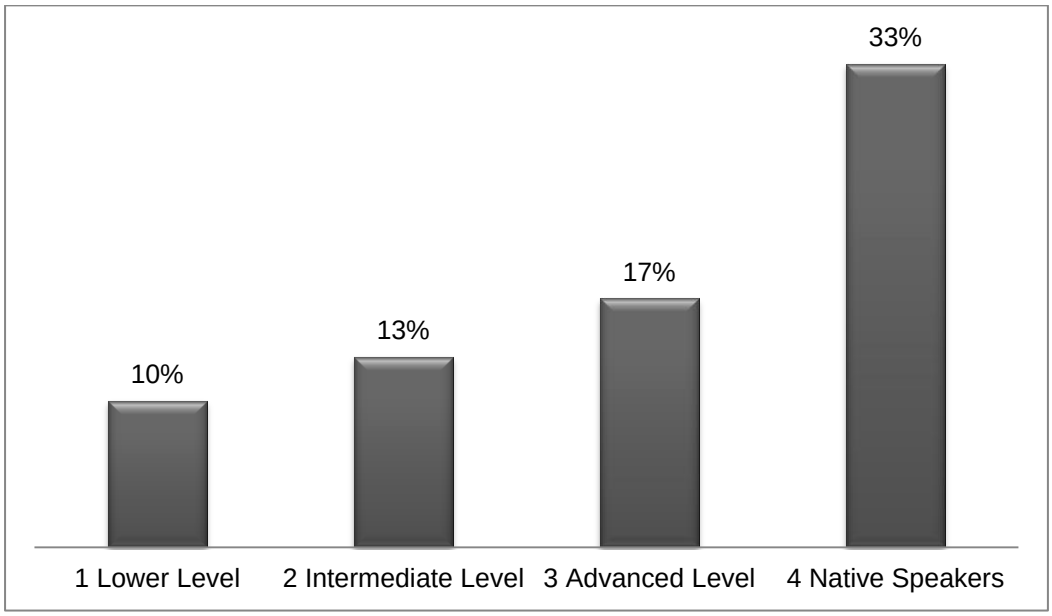
Table 6.9.2.1 Results of Verbal Measure Words Borrowed from Verbs

1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	1= Lower 2= Intermediate 3= Advanced 4= Native Speaker	Mean Difference of the Percentage of the Correct Answers	Significant Probability
1	2	-3.33333	.995
	3	-7.50000	.953
	4	-24.48276	.218
2	1	3.33333	.995
	3	-4.16667	.983
	4	-21.14943	.098
3	1	7.50000	.953
	2	4.16667	.983
	4	-16.98276	.279
4	1	24.48276	.218
	2	21.14943	.098
	3	16.98276	.279

* The mean difference is significant at the 0.05 level.

According to Table 6.9.2.1, no significant differences of the mean scores of the correct answers among the L2 groups are found ($p>0.05$), and there is also no significant difference between all the L2 groups and the native speaker group ($p>0.05$). This result indicates that the L2 learners' application of verbal measure words borrowed from verbs has reached a similar level to the native speakers.

Figure 6.9.2.1 Percentages of the Sentences Translated Using Verbal Measure Words Borrowed from Verbs



As displayed in the figure above, only 10% of the lower level learners, 13% of the intermediate level learners, 17% of the advanced level learners and 33% of the native speakers have translated the sentences using verbal measure words borrowed from verbs. This indicates that both the L2 learners and the native speakers prefer to use other ways to express short duration in the sentences, as for most circumstances, verbal measure words borrowed from verbs can be replaced by the standard verbal measure word to indicate the short duration of an action such as 下 (xià) in 摸一下 (mōyīxià) and the repeated verb 摸摸 (mōmō).

Generally speaking, avoiding the use of verbal measure words borrowed from verbs is mainly caused by other expressions that are equivalent to this type of measure word. In the language learning process, this phenomenon cannot be seen as the difficulties in using verbal measure words borrowed from verbs. However, the results from the empirical study reveal that the

verbal measure words borrowed from verbs are not the most popular choice when the L2 learners are expressing a short duration of an action.

6.10 Conclusion

This chapter has discussed the results of the application of different CMW from the empirical study. Generally speaking Chinese measure words are difficult for the English native speakers who are learning Chinese as a second language, and three main reasons are counted for the difficulties in the application of Chinese measure words: L2 learners' lack of knowledge of Chinese measure words, negative transfer (interference and overgeneralisation) from L2 learners' existing Chinese, and the complexity of the Chinese measure words themselves.

Based on the average percentages of the correct answers in the application of different Chinese measure words, 'The hierarchy of the difficulties in the application of different CMW for the English native speakers (from the most difficult to the least difficult)' is proposed in the following table 6.10.1. This table not only provides a summary of all the difficult CMW categories for the English native speakers but also presents where these difficulties lie in the model of the process of CMW acquisition.

Table 6.10.1 The Hierarchy of the Difficulties in the Application of Different CMW for the English Native Speakers					
Grade	**Measure Words**	**Noticing**	**Understanding**	**Comprehension**	**Integration**
1	Temporary Nominal Measure Words	V	V		
2	Individual Nominal Measure Words	V	V	V	V
3	Borrowed Verbal Measure Words	V	V		V (time)
4	Standard Verbal Measure Words	V	V		V
5	Container Measure Words	V	V		
6	Collective Nominal Measure Words		V		
7	Weights and Measures	V			

Besides the hierarchy of the difficulties in the application of different CMW, the difficulties of the application of different usages of CMW are also summarised in the following table.

Table 6.10.2 Summary of the Difficulties of Different CMW Usages

Usages	Noticing	Understanding	Comprehension	Integration
Repetition	V	V		
Literary Use	V	V	V	
CMW with Similarities	V	V		V

Among these usages, very few L2 learners can master measure words in CMW repetition and literary usage, which are the main difficulties in the application of some measure words. The L2 learners also have difficulties in distinguishing CMW that are similar in writing and pronunciation. In the model of the process of the CMW acquisition, difficulties in the application of different usages of measure words appear at the different stages, including noticing stage, understanding stage, comprehension stage and integration stage.

This chapter has presented and discussed the results of different CMW and discovered where the difficulties lie. The subsequent chapter is going to discuss the difficulties in the context of second language pedagogy in the hope of finding solutions to aid the acquisition of these words. Additionally, the limitations of the current study and suggestions for further research on CMW will also be discussed.

Chapter 7 Conclusion

So far, the preceding chapters have discussed the English native speakers' application of CMW in learning and teaching Chinese as a second language. As such, the present chapter reviews this study, from which we have tentatively generalised some pedagogical methods to aid the L2 learners' learning and acquisition of CMW. It will also reveal the limitations of the present study and suggest further studies in the area of CMW learning and acquisition.

7.1 The Present Study in Perspective

7.1.1 A New Categorisation

This study has generated a new CMW categorisation based on the previous CMW studies: the main categorisations of CMW are nominal measure words and verbal measure words; for the nominal measure words category, six main sub-categories have been specified, including weights and measures, individual nominal measure words, collective nominal measure words, temporary nominal measure words, container measure words, and quasi-measures; for the verbal measure words category, two main sub categories have been clarified, which are standard verbal measure words and borrowed verbal measure words. Under each sub-category, more types of measure words are classified to present a clear and comprehensive hierarchy within these categories. It is worth emphasising that by discussing and reviewing the measure words that can be used to measure both nouns and verbs, this study has regarded these words as members of the standard verbal measure words.

7.1.2 Difficult CMW Categories for English Speaking Chinese L2 Learners

The results from the discussion of the English native speakers' application of CMW have reached the conclusion that these words are difficult for the English native speakers who are learning Chinese as a second language. Although English native speakers have difficulties in the application of most of the CMW categories, some are easier than others. The English native speakers are better at the weights and measures, collective nominal measure words and container measure words than standard verbal measure words, borrowed verbal measure words, individual nominal measure words and temporary nominal measure words.

English native speakers have mastered most of the weights and measures, but they still encounter difficulties in using some of the words under this category, especially for the combined nominal measure words.

English native speakers have also mastered most of the collective nominal measure words, especially the definite measure words. Nevertheless, some English native speakers still experience difficulties in the application of some collective nominal measure words, especially the indefinite measure words such as 群 [(qún) a herd of].

Similar to the weights and measures and the collective nominal measure words, the English native speakers have mastered most of the container measure words albeit the difficulties in using some of these words. More specifically, the English native speakers do not have difficulties in using the container measure words like 杯 [(bēi) cup] and 瓶 [(píng) bottle], but

experience difficulties in using the container measure words like 车 [(chē) truckload/carload] that are compounds in their native language.

Comparing with weights and measures, collective nominal measure words and container measure words, the English native speakers have more problems in the application of standard verbal measure words, borrowed verbal measure words, individual nominal measure words and temporary nominal measure words.

For the standard verbal measure words, both dual function measure words and exclusive verbal measure words are difficult for the English native speakers. The difficulties mainly include misusing the measure words, failing to use the measure words when they are needed, and writing incorrect Chinese characters.

Despite the fact that the verbal measure words borrowed from verbs are not a popular choice for the English native speakers in expressing a short duration of an action, the difficulties in the application of this CMW category mainly lay in the verbal measure words borrowed from nouns. Among the verbal measure words borrowed from nouns, although some English native speakers still encounter difficulties in the application of verbal measure words borrowed from time nouns, the main difficulties exist in the verbal measure words borrowed from nouns (tool, body and concomitant).

The difficulties in the English L2 learners' application of individual nominal measure words mainly occur in applying measure words that can be used for multiple nouns. For instance, the English native speakers have employed 张 (zhāng) the measure word for the furniture like 桌子 [(zhuōzi) table] to measure 柜子 [(guìzi) cupboard] which cannot be measured by this word. Furthermore, the English native speakers have even more difficulties in

matching different measure words to the same noun regarding different quantities. For example, the English native speakers have used the measure words 条/根 (tiáo/gēn) that are used to measure ‘a string’ to quantify ‘a piece of string’ which requires ‘截 (jié) or 段 (duàn)’ as measure words. (see Section 6.7.1 in Chapter 6 for more details)

Among the different measure words categories, temporary nominal measure words are the most difficult for the English native speakers, such as 鼻子 (bízi) in 碰了一鼻子灰 [(pèngle yībízihuī) encounter snub], 屁股 (pìgǔ) in 欠了一屁股债 [(qiànle yīpìgǔzhài) owe lot of debt].

Besides the simple matches of measure words and nouns/verbs, English native speakers also encounter problems in distinguishing the measure words that are similar in writing and pronunciation, such as 幅 (fú) and 副 (fù). A larger number of English native speakers also have not mastered the repetition usages of measure words such as 簇簇 (cùcù), and the literary usages of measure words such as 轮 [(lún) wheel or wheel like] in 一轮明月 [(yīlúnmíngyuè) a full moon].

7.1.3 English L2 Learners’ Difficulties in CMW Application and the Model of the Process of CMW Acquisition

Section 7.1.1 and Section 7.1.2 have summarised the new CMW categorisation and the difficult CMW categories for the English native speakers in Chinese language learning and acquisition. This section is going to review these difficulties in the model of the process of CMW acquisition.

The English native speakers’ difficulties in the application of most of the weights and measures, some of the container measure words, standard

verbal measure words, borrowed verbal measure words, individual nominal measure words and temporary nominal measure words happen at the noticing stage. Their difficulties in the use of the collective nominal measure words, some of the container measure words, standard verbal measure words, borrowed verbal measure words, individual nominal measure words and temporary nominal measure words appear at the understanding stage. Furthermore, the comprehension stage is where some of the English native speakers' difficulties in the application of individual nominal measure words occur. While at the integration stage, the difficulties that arise are the use of some standard verbal measure words, borrowed verbal measure words and individual nominal measure words.

In addition, most of the English native speakers' difficulties in the application of the measure words repetition, the literary usages of CMW, and some of the measure words that are similar in writing and pronunciation appear at the noticing and understanding stage. Some English native speakers' employing of the CMW in literary context also appears at the comprehension stage, and some English native speakers' application of the CMW that have similar pronunciation and characters exist at the integration stage.

7.1.4 English L2 Learners' Difficulties in CMW Application and CAH

Although the current study did not intend to test the validity of Lado (1957)'s contrastive analysis hypothesis (CAH), the difficulties in the application of some CMW have confirmed the validity of this hypothesis, while some problems in the English native speakers' use of other CMW have also proved that CAH has not covered all the aspects in the L2 learning and acquisition.

The English native speakers' success in mastering the quasi-measures like 年 (nián) in 两年时间 [(liǎngniánshíjiān) two years' time] has supported the CAH hypothesis that the language elements have equivalents in leaners' first language are easy for them. The difficulties in the application of individual nominal measure words, temporary nominal measure words, standard verbal measure word (dual), verbal measure words borrowed from nouns (tool, body and concomitant), and verbal measure words borrowed from verbs have confirmed that the language elements that do not have equivalents in leaners' first language are difficult for them.

However, the difficulties in the English native speakers' application of weights and measures, collective nominal measure words, container measure words, standard verbal measure words, and verbal measure words borrowed from nouns (time) have provided evidence that the L2 elements having equivalents in learners' first language are easier for them is not accurate.

7.2 Teaching Chinese Measure Words in Second Language Learning and Acquisition

Section 7.1 has summarised the difficulties in the English native speakers' application of different CMW categories, and the stages where these difficulties appear in the model of the process of CMW acquisition. This section is going to consider these difficulties from a pedagogical perspective.

7.2.1 Focus on Form Instruction and CMW Teaching

Focus on form instruction is an approach that draws learners' attention to grammatical form of language features when necessary as part of communicative language teaching. This instruction is introduced by Long (1991) as drawing students' attention to linguistic elements (words, collocations, grammatical structures, pragmatic patterns, and so on), in context, as they arise incidentally in lessons whose overriding focus is on meaning, or communication. Focus on form instruction is between focus on forms (limited to focus on grammatical forms) and focus on meaning instruction (pay little or no attention to grammatical form).

To examine the effectiveness of the focus on form instruction, Leeman, Arteagoitia, Fridman, and Doughty (1995) has conducted an experiment among two groups of US college students in advanced Spanish classes. One of these two groups received the focus on form instruction and the other group received meaning instruction. By comparing the post-tests results from these two groups, they discovered that the students in the group that received the focus on form instruction were more accurate in the production of Spanish verbs.

Based on the above mentioned research, this study proposes that for the CMW and CMW usages that the English native speakers (L2 learners) have difficulties at the noticing stage in the model of the process of CMW acquisition, the focus on form instruction could improve the learners' application of these words and usages. The following table provides a list of these measure words categories and usages.

Table 7.2.1.1 CMW Categories and Usages that the L2 Learners have Difficulties at the Noticing Stage
Temporary Nominal Measure Words
Individual Nominal Measure Words
Borrowed Verbal Measure Words
Standard Verbal Measure Words
Container Measure Words
Weights and Measures
Repetition
Literary Use
CMW with Similarities

For the temporary nominal measure words, the focus on form instruction not only involves shifts learners' attention to the meaning of these words in context but also entail raising the awareness of the form of this type of measure word. These words are nouns that are borrowed to be used as nominal measure words temporarily, and they are not straightforward as measuring units, for instance, 头 (tóu) in 一头黑发 (yītóuhēifā), 手 (shǒu) in 一手汗 (yīshǒuhàn) and 嘴 (zuǐ) in 一嘴口水 (yīzuǐkǒushuǐ). Therefore, the language instructors need to draw the learners' attention to the grammatical features of this type of word. To be more specific, the language instructors could make mention that temporary nominal measure words are nouns that are temporarily borrowed to use as measure words, and they can normally be used with the numeral 一 (yī).

Regarding some individual nominal measure words, especially the ones that the L2 learners lack knowledge of, the focus on form instruction mainly refers to raising the L2 learners' attention to certain matches of measure words and nouns. Take the phrase 'a snowflake' that some L2 learners have

difficulties in translating as an example. The phrase refers to 雪花 [(xuěhuā) snowflake] that is a form of 雪 [(xuě) snow]. Many L2 learners have adopted the measure words for the noun 雪 [(xuě) snow] as CMW because the character 雪 [(xuě) snow] appears in 雪花 [(xuěhuā) snowflake] as well. Therefore, planned focus on form instruction from the language instructors is valuable not only in raising the learners' awareness of the differences between these two nouns in form but also the differences in meanings. Precisely, the language instructors' focus on form instruction should make the L2 learners aware that 雪花 [(xuěhuā) snowflake] and 雪 [(xuě) snow] refer to different things and they require different CMW. Moreover, the language instructors' focus on form instruction on individual nominal measure words should also involve raising the L2 learners awareness of the matches of different CMW with the same noun in different context, such as 一支烟 (yīzhīyān), 一包烟 (yībāoyān) and 一条烟 (yītiáoyān).

Among the borrowed verbal measure words, the focus on form instruction is particularly helpful for the verbal measure words borrowed from nouns (tool, body and concomitant), such as 口 (kǒu) in 咬一口 (yǎoyīkǒu), 笔 (bǐ) in 划一笔 (huàyībǐ), 觉 (jiào) in 睡一觉 (shuìyījiào). Similar to the temporary nominal measure words, these words are not straight forward as measuring units. Therefore, the language instructors' focus on form instruction should not only involve mentioning the origin of this type of word but also the grammatical structure of them. Firstly, these words are borrowed from the referents of nouns of the tools or the body parts that do the actions, or referents of the nouns for the results of the actions. Secondly, verbal measure words borrowed from nouns (tool, body and concomitant) can collocate with any numerals in the 'number + CMW + noun' construction.

As for the standard verbal measure words, the focus on form instruction is mostly valuable for the dual function measure words. The language instructors need to draw the L2 learners' attention to the match of these

words and the nouns as the dual function measure words are verbal measure words that are used to measure verbs as well as nouns, such as 一场/次地震 (yīcháng/cìdìzhèn). Moreover, the language instructors should also shift the learners' attention to the written forms of some of the dual function measure words, especially the ones that are similar in writing with other Chinese words such as the dual function measure word 阵 (zhèn) that is similar to the word 陈 (chén).

The focus on form instruction on container measure words largely involves making the L2 learners notice the usages or origins of some of these words. For instance, the language instructors' planned guidance on which measure words are used in translating the phrases 'a truckload of sand' is vital for the L2 learners in using the noun 卡车 [(kǎchē) truck] as a measure word correctly. The language instructors should make the L2 learners' aware that the word 卡车 [(kǎchē) truck] is originally a noun, and it is also used as a measure word to express a quantity of goods that can be transported in a truck.

For the weights and measures, the focus on form instruction mainly refers to raising the L2 learners' attention to some of these words. This especially true for the combined nominal measure words such as 平方公里 [(píngfānggōnglǐ) square kilometre] as many L2 learners lack knowledge in using this type of word.

Repetitions and literary usages of CMW are popular usages of CMW, and most of the L2 learners have not noticed these usages. Therefore, essentially, the language instructors' focus on form instruction concerns increasing the L2 learners' awareness of them. For instance, the language instructors should draw the L2 learners' attention to the CMW repetition 家家

(jiājiā) in the sentence 我家家都调查了 [(wǒ jiājiā dōu diàochále) I have investigated each household].

The language instructors' focus on form instruction is also helpful for the CMW with similar pronunciations and characters. More specifically, language instructors' emphasis of the similarities and differences of the words that are similar is important in raising the L2 learners' awareness of the differences of these words, and thus succeed in mastering them. For instance, the language instructor should make the L2 learners notice that the words 幅 (fú) and 副 (fù) are different both in form and meaning in order to process them further.

7.2.2 Explicit Explanation and CMW Teaching

Explicit explanation in the current study not only entails meaning focused explanation but also involves the grammar centred clarification. For the CMW that the learners have difficulties at the understanding stage, comprehension stage and integration stage, the Chinese language instructors' explicit explanation could improve the L2 learners' learning and acquisition of these words. Moreover, explicit explanation also complements the focus on form instruction in aiding the learning and acquisition of CMW, particularly the CMW that the L2 learners' have difficulties at the noticing stage as well as the understanding, comprehension and integration stages in the model of the process of CMW acquisition.

The following table lists the CMW categories and usages that the L2 learners have difficulties at the understanding, comprehension and integration stages.

Table 7.2.2.1 CMW Categories and Usages that the L2 Learners have Difficulties at the Understanding, Comprehension and Integration Stages
Temporary Nominal Measure Words
Individual Nominal Measure Words
Borrowed Verbal Measure Words
Standard Verbal Measure Words
Container Measure Words
Collective Nominal Measure Words
Repetition
Literary Use
CMW with Similarities

7.2.2.1 Explicit Explanation and Temporary Nominal Measure Words

Both meaning and grammar focused explicit explanation are important in assisting the L2 learners' learning and acquisition of temporary nominal measure words. As suggested in the last section, raising the L2 learners' attention to the grammatical features of these measure words is important. However, noticing the existence of these words does not necessarily mean the L2 learners' success in learning and acquisition of them as these words normally appear as custom usages such as 鼻子 (bízi) in 碰了一鼻子灰 (pèngle yībízihuī), 身 (shēn) in 一身鸡皮疙瘩 (yīshēnjīpígēdá), 屁股 (pìgǔ) in 一屁股债 (yīpìgǔzhài). Therefore, The language instructors not only need to explicitly explain that some temporary nominal measure words are nouns that are borrowed to use to match with nouns to express certain meanings in the custom usages, but also need to explicitly explain the meanings of these matches. For instance, language instructors should explain that the noun 屁股 (pìgǔ) is borrowed to use as a measure word in 一屁股债 (yīpìgǔzhài) to express the meaning of 'owe lots of debt', and this is a custom usage.

Moreover, the language instructors should also emphasise that most of the temporary nominal measure words are nouns that are temporarily ‘borrowed’ to combine with the numeral one to express the quantity of ‘full’, such as 一嘴口水 [(yīzuǐkǒushuǐ) mouthful of water]. With the fact that numbers larger than one are normally not allowed, the quantifying feature is not obvious in the temporary measure words. Therefore, language instructors’ instruction on when temporary nominal measure words are used and what meanings they normally express is highly helpful for the L2 learners.

7.2.2.2 Explicit Explanation and Individual Nominal Measure Words

For the individual nominal measure words, the language instructors’ explicit explanation complements the focus on form instruction in aiding the learning and acquisition of some of this type of measure word. This explicit explanation should not only include the measure words themselves but also concern the nouns that are measured. Take the phrase ‘a snowflake’ that has been discussed in the last section as an example. Some of the errors in translating this phrase are caused by the interference from the measure words for the noun 雪 [(xuě) snow], including 团 (tuán), 块 (kuài) and 场 (chǎng). The language instructor’s explicit explanation on the differences between 雪 [(xuě) snow] and 雪花 [(xuěhuā) snowflake] is important, i.e. 雪 [(xuě) snow] is the general term for snow while 雪花 [(xuěhuā) snowflake] describes the appearance of snow. The former can be measured by many different CMW depending upon the quantity while the number of CMW that can be used to describe the latter is limited [片 (piàn) and 朵 (duǒ)].

Furthermore, the language instructors’ explicit explanation of some general principles of individual nominal measure words are beneficial in assisting the L2 learners’ understanding, comprehension and integration of some

individual nominal measure words, especially the ‘temporary principle’, the ‘categorical principle’ and the ‘descriptive principle’.

The ‘temporary principle’ of individual nominal measure words indicates that the combination of CMW and nouns are not fixed and different measure words that express different quantities can be adapted to measure one noun depending on quantity. One noun can be measured by multiple measure words, and one measure words can be used for multiple nouns. For instance, the measure word for ‘a cigarette [一支/根烟 (yīzhī/gēnyān)]’ is 支 (zhī) or 根 (gēn), the measure word for ‘a package of cigarettes [一包烟 (yībāoyān)]’ is 包 (bāo), the measure word for ‘a carton of cigarettes [一条烟 (yītiáoyān)]’ is 条 (tiáo) and the measure word for ‘a box of cigarette [一箱烟 (yīxiāngyān)]’ is 箱 (xiāng); the measure word 支 (zhī) can be used for ‘a cigarette’ in 一支烟 (yīzhīyān), it can also be used to measure ‘a pen’ in 一支笔 (yīzhībǐ) and ‘a gun’ in 一支枪 (yīzhīqiāng).

The ‘categorical principle’ of the individual nominal measure words means that some individual nominal measure words cluster referents of nouns having certain features together such as shape, size and function. This is the salient feature of some of this type of measure word, for example, the measure word 条 (tiáo) is mainly used for long items like 一条裤子 [(yītiáokùzi) a pair of trousers], 一条蛇 [(yītiáoshé) a snake] and 一条线 [(yītiáoxiàn) a string]; the measure word 只 (zhī) is normally for animals like 一只鸟 [(yīzhīniǎo) a bird] 一只兔子 [(yīzhītùzi) a rabbit] and 一只猫 [(yīzhīmāo) a cat].

The 'descriptive principle’ of the individual nominal measure words denotes that these measure words depict the referents of nouns. The language instructors’ explicit explanation of the ‘descriptive principle’ could aid the L2 learners in adjusting their mental representations to the match of some

individual nominal measure words and nouns. For example, in the native speakers' cognition, 'a snow flake' is 一朵雪花 [(yīduǒxuěhuā) a snowflake] as snowflake is a flowerlike item thus 朵 (duǒ) for describing and measuring flowers are used to describe 'a snowflake'. Nevertheless, English speakers hardly relate snowflakes with flowers. Therefore, the explicit explanation for the reason for the use of 朵 (duǒ) in 一朵雪花 [(yīduǒxuěhuā) a snowflake] is essentially helpful for the L2 learners.

7.2.2.3 Explicit Explanation and Borrowed Verbal Measure Words

The language instructors' explicit explanation of the rules of the borrowed verbal measure words, especially the verbal measure words borrowed from nouns (tool, body and concomitant) could help the L2 learners in understanding these measure words and process them further. More specifically, the language instructors need to explain to the L2 learners that the verbal measure words borrowed from nouns (tool and body) are borrowed from the referent of nouns of the tools or body parts that carried out the actions to quantify the actions, such as 刀 (dāo) in 砍三刀 [(kǎnsāndāo) cut three times] and 脚 (jiǎo) in 踢三脚 [(tīsānjiǎo) kick three times]; verbal measure words borrowed from nouns (concomitant) are borrowed from the nouns for the results of some actions to count the actions such as 睡一觉 [(shuìyījiào) have a sleep]. Moreover, the explanation of the meanings of the verbal measure words borrowed from nouns (tool, body and concomitant) and the rule that any numerals can be collocates with these measure words also vital in assisting the L2 learners in understanding these types of measure words.

7.2.2.4 Explicit Explanation and Standard Verbal Measure Words

Similar to the individual nominal measure words, explicit explanation of principles of standard verbal measure words, especially the 'descriptive principle' and 'categorical principle' could be valuable in aiding the L2 learners' understanding and integration of some of these words in application.

The 'descriptive principle' of standard verbal measure mainly refers to the salient feature of this type of measure word i.e. standard verbal measure words describe the duration, the procedure, and the course of the actions. The explicit explanation of this principle complements the focus on form instruction in assisting the L2 learners' understanding of some dual function verbal measure words. More specifically, the language instructors could explicitly explain the meanings of the dual function measure words and thus aid the L2 learns in applying them appropriately. For example, the language instructors could make clear that the measure word 场 (chǎng) emphasises the course of an event thus it is used for describing and measuring events like 战争 in 一场战争 (yīchǎngzhànzhēng) a war] and 比赛 (bǐsài) in 一场比赛 [(yīchǎngbǐsài) a match].

Likewise, the explicit explanation of the 'descriptive principle' could also assist the L2 learners in distinguishing the differences between different verbal measure words and thus using these words more efficiently. For instance, the language instructor could stress that 次 (cì) is used 'to count repeated actions without emphasising the process and it is also used as a nominal measure word to count the items that appear repeatedly', while 遍 (biàn) refers to 'a completed action from the beginning to the end'. By fully understanding the usages of these two words, the L2 learners should not make mistakes like 去一遍 (qùyībiàn) as the action 去 (qù) cannot be

continued, and 读一次 (dúyīcì) in expressing ‘read something from the beginning to the end’ as 次 (cì) does not denote ‘from beginning to the end’.

The ‘categorical principle’ of standard verbal measure words means that these words classify types of actions. The explicit explanation of this principle could be helpful for the L2 learners in applying their existing knowledge of some standard verbal measure words with efficiency. Take the common standard verbal measure word 下 (xià) that the L2 learners come across at an early stage in Chinese language learning as an example. By demonstrating that the measure word 下 (xià) is used to describe ‘the short duration of actions’, the L2 learners would be able to applying this word to express the short duration of different actions appropriately such as in 打一下 [(dǎyīxià) hit once], 拍两下 [(pāiliǎngxià) beat twice] and 动三下 [(dòngsānxià) move three times].

7.2.2.5 Explicit Explanation and Container Measure Words

The explicit explanation of some container measure words complements the focus on form instruction and assists the L2 learners in understanding some of this type of measure word. This is especially true when the English native speakers search the appropriate measure word to translate the phrases like ‘a truckload of apples’ and ‘a boatload of people’. The words ‘truckload’ and ‘boatload’ refer to ‘the amount a truck/boat can carry’, thus they are not straight forward in terms of translating into Chinese.

Therefore, the language instructors’ explicit explanation is the key to success in the L2 learners’ translation of phrases as listed above. Firstly, the language instructors need to make clear the meanings of the ‘truckload/boatload’, and then they need to clarify the Chinese translations for these two words. Secondly, they also need to make the L2 learners

understand that container measure words are transferred from the ‘container/tool’ to express the quantity that the ‘container/tool’ can carry. By doing so, the language instructors would aid the L2 learners in translating the phrase ‘a truck load of apples’ correctly into ‘一车苹果 (yīchēpíngguǒ)’ and ‘a boatload of people’ into 一船人 (yīchuánrén), and generalise this rule in translating other similar phrases.

7.2.2.6 Explicit Explanation and Collective Nominal Measure Words

Regarding the collective nominal measure words, the language instructors’ explicit explanation promotes the success in the English native speakers’ understanding of some of this type of measure word. This is especially true when the L2 learners are looking for collective nominal measure words to translate the English measuring units. For instance, the L2 learners have problems in translating the phrase ‘a herd of elephants’ and the main reason for the difficulty is the difference between Chinese and English. The English phrase involved is an ‘article + noun + of + noun’ structure and the equivalent translation for ‘herd’ are actually 兽群 (shòuqún) and 牧群 (mùqún) in Chinese. Both translations are nouns which do not express the same meaning as the original English phrase. The language instructors need to clarify that there is no equivalent for the English measuring unit ‘herd of’, and the direct translation for the word ‘herd’ is a noun not a measure word. In aiding the L2 learners’ success in applying the appropriate measure word 群 (qún) for ‘a herd of elephants, the explicit explanation of this measure word is necessary as this word was originally a noun which means ‘a heard of sheep’ and it is generated to use as a measure word to measure a group of animals, people and other things.

Therefore, the language instructors not only need to analyse the differences between the English measuring units and the Chinese collective nominal measure words, but also need to explicitly explain the origin and meaning of the correct measure word for the English phrase.

7.2.2.7 Explicit Explanation and CMW Repetition

The language instructors' explicit explanation of the CMW repetition mainly works with the focus on form instruction to facilitate the L2 learners' understanding of this type of usage. Firstly, the language instructors' explanation on CMW repetition involves analysing the structure: CMW repetition can be used on its own such as 个个 (gègè) in 五个新产品个个畅销。[(wǔgè xīnchǎnpǐn gègè chàngxiāo) each of the five new products sells well], and also work together with the numeral 一 (yī) as 一个个 (yīgègè) in 桌上分散地摊放着一个个鸡蛋 [(zhuōshàng fēnsàndì tānfàngzhe yīgègè jīdàn) there are a lot of eggs scattered on the table]. Secondly, the meanings of the different forms of the CMW repetition also need to be explained in detail to assist the L2 learners' understanding. The language instructors need to emphasise that when the measure words repetitions work on their own like 个个 (gègè), they emphasis each of the noun/item involved, while when the CMW repetitions are used with the numeral 一 (yī) they indicate the large quantity.

7.2.2.8 Explicit Explanation and Literary Use of CMW

For the literary usages of CMW, the language instructors' explicit explanation complements the focus on form instruction and aids the understanding and comprehension of some CMW in literary context. This explanation not only entails the meanings but also the origins and usages of the CMW. Take the following sentence as an example:

偶然一(　线　)阳光从岩石缝里露过来。

Ǒurán yī (xiàn) yángguāng cóng yánshífènglǐ lù guòlái.

*Occasionally, a (line) of sunshine shows from the crack of the rock.
Occasionally, sunshine shows from the crack of the rock.

The language instructors need to explicitly explain the meaning of the sentence first, and then describe the meaning of the measure word 线 (xiàn) which refers to line/string or things like a string/line. The language instructors' explanation should also include the reason for using this measure word in the sentence, i.e. the crack in the rock looks like a line which is the shape for the light that comes through the crack, thus the word that describe the shape of the crack/sunshine is adopted to be used as measure word. By analysing the measure words like 线 (xiàn) in the example above, the language instructors could help the L2 learners understand and comprehend this type of usage and apply these usages correctly.

7.2.2.9 Explicit Explanation and CMW with Similarities

Explicit explanation of the differences between the CMW that are similar in writing or pronunciation or similar in both writing and pronunciation could aid the L2 learners in understanding and integrating these words with the learners existing knowledge thus using these words more accurately. For instance, as mentioned in Chapter 6, the detailed explanation of the similarities and differences between the measure words 份 (fèn) and 分 (fēn) is crucial for the L2 learners as these two characters have the same component 分 (fēn) and the same initial and final, and they can be used to replace each other to express the same meaning in certain phrases. However, 份 (fèn) is mainly used for substantial things, including portion or part of something and the things that can form a group: 一份礼 [(yīfènlǐ) a gift] and 一份报纸 [(yīfènbàozhǐ) a newspaper], while 分 (fēn) is a measure word mainly used for time and points such as 一分钟 [(yīfènzhōng) a minute], 一百分 [(yībǎifēn) 100 points], and it also can be used to estimate abstract things such as 几分生气 [(jǐfēnshēngqì) a little bit angry].

7.2.2.10 Explicit Explanation and the General Measure Word 个 (gè)

Besides the CMW categories and usages analysed above, the explicit explanation of the general measure word 个 (gè) would also be helpful for the L2 learners in using this word more efficiently, especially reducing the error of overuse of this word. More specifically, it is helpful to make clear: 个 (gè) is the most widely used measure word, but it cannot be used for all the nouns; the referents of the nouns that have certain salient features do not normally require 个 (gè) as the measure word; it is mainly used to measure the nouns that do not have a particular CMW; it is used for items that do not have an outstanding feature or even too many features; it is used for abstract things. For instance, 个 (gè) is used for 一个人 [(yīgèrén) a person], 一个柜子 [(yīgèguìzi) a cupboards], 一个苹果 [(yīgèpíngguǒ) an apple], 一个太阳 [(yīgètàiyáng) a sun], 一个小时 [(yīgèxiǎoshí) an hour], 一个瓶子 [(yīgèpíngzi) a bottle], 一个工厂 [(yīgègōngchǎng) a factory] and 一个建议 [(yīgèjiànyì) a suggestion].

7.2.3 Summary

This section has made tentative suggestions regarding different measure words in the context of CMW teaching. In a word, this study proposes that the language instructors' Focus on Form Instruction and Explicit Explanation complement each other in aiding the L2 learners in noticing, understanding, comprehension and integration of the CMW information. Although language instructors cannot control what L2 learners take in, they can make sure maximum CMW data is provided for the potential intake for the L2 learners.

7.3 Further Study in CMW Learning and Teaching

Although this study has examined English native speakers' learning and acquisition of different Chinese measure words, due to the time restriction on the doctorate project, many aspects of CMW have not been explored.

From a linguistics perspective, more studies on different CMW are needed to accomplish the studies in the field of CMW research, including studies on the development of CMW and the different usages of CMW. From an applied linguistics perspective, more in-depth researches on the difficulties in L2 learners' application of different CMW categories are necessary.

This study has only included the English native speaking university students who are learning Chinese as a second language. Therefore, further studies on the English native speakers of Chinese language learners on other levels would be practical in contributing to the researches of CMW in SLA.

In general, due to the variety, flexibility and complexity of CMW, not all the aspects of CMW learning and acquisition have been covered. More studies on CMW are needed to complement the study of these words, not only from linguistic point of view but also from pedagogical aspects; not only from the language instructors' perspective but also from the psychological internal process of the language learners.

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Appendix English Students' Learning of Chinese Measure Words

Dear all,

I am conducting a research on Chinese measure words in learning and teaching Chinese as a second language for my doctorate at the University of Leeds. I need some feedback on your knowledge of Chinese measure words. Please complete the following survey. Don't worry if you can't answer all the questions as I am trying to cover all the possible usages of measure words, therefore you might find some words and their usages that you don't know. This survey is only for research purposes and it should take no more than 2 hours to complete. **All the information will be treated as confidential. The data collected will be mainly for my Phd thesis and might be published in future.**

PART ONE Please tick to provide some information about you.

1. Gender: Female ☐ Male ☐
2. What is you native language?

   _____

3. Do you have experience in learning another foreign language other than Chinese?

   No☐ Yes☐ (please specify which language/languages and which level)

   _____

4. What level do you think your Chinese are?

   Very good ☐ good ☐ average ☐ beginner ☐
5. How many hours do you spend on learning and using your Chinese each week?

   1-2 hour ☐ 2-3 hours ☐ 3-4 hours ☐ over 5 hours ☐

6. Do you have native Chinese speaking language partners or friends?

   Yes ☐ No ☐

7. How often do you do the following in Chinese outside the classroom?

	Most of the time	Often	Sometimes	Seldom	Never
Reading					
Listening					
Writing					
Speaking					

Chinese Language Test

一. 请选出正确的答案。

1．他已下定了决心，_____把这件事情搞个水落石出决_____罢休！

A 没有……不……　B 没有……没有……　C 不……没有…… D 不……不……

2．现在他又搬到漂亮的房间里去住，又_____。

A 穿起漂亮的衣服了　B 穿漂亮的衣服起来了

C 穿起漂亮的衣服来了　D 起来穿了漂亮的衣服

3．人们给自行车打一次气，就_____。

A 扔碗里进一毛钱　B 扔进一毛钱碗里　C 一毛钱碗里扔进　D 扔进碗里一毛钱

4．参加这次会议的五百余位代表，_____来自工矿、农村、部队等生活第一线。他们在创造物质财富的_____，利用文学、电影、电视、音乐、美术等各自喜爱的艺术_____，创作出许多颇受欢迎的文艺作品，有些成为全国_____的佳作。

A.大量 时候 方法 广播　B.大约 时刻 方式 传播

C.大都 同时 形式 流传　D.大概 同步 形态 传诵

5. 如果你去买一件普通的衣服，一般来说不要花费____时间。但是当你想要买一件最_____自己身份的服装时，就非得_____一番功夫不可了。最好是找一家你_____的商店，利用店里生意较为_____-的时候去购买，这样便于认真挑选。

A.多少 合适 有 看得起 淡季　　B.什么 适当 来 买得起 平淡

C.多少 适应 做 合得来 淡淡　　D.什么 适合 下 信得过 清淡

二．请快速阅读并根据它的内容选择惟一恰当的答案

春生子是长白山溪流中的小鱼。这种鱼只有一拃长，白亮光洁，寿命极短。它春天悄然生来秋天默然死去。人们叫它们鱼食。只为大鱼生，专为水鸟长。它们生存的目的就是供给别人吃。为了便于别人吞噬，它们形体光滑细小；为了满足别人数量上的需求，它们成群结队绵绵不绝；为了适应别人繁衍生长的季节，它们成熟在夏日。善良的人们常常把怜悯廉价地抛给这类小生灵。其实大可不必。当它们葬身于别人腹腔肠壁时，定然会满足和庆幸。否则腐烂在污泥之中，这必定是它们极大的悲哀。凡生长于自然的生灵必然归宿于自然。只是形式不同罢了。春生子选择了最直接的方式完美地完成了这一永恒的循环，并为之创造了柔顺与和谐。我认为这是明智之举。我惊奇地在市场上发现了白亮亮的春生子安详地躺在筐篓里，一些人围着买。“买吧，鱼小干净，不用开膛破肚。用油一炸，酥脆香鲜。“女老板边收款边招揽生意。春生子竟然成为“万物之灵”的智慧和力量的源泉。如果春生子有魂灵，那么人类高贵的胃肠就是他们的天堂。

【1】根据作者的描述，春生子：

A　成熟在春天

B　生长在海洋

C　爱单独行动

D　活的时间短

【2】人们把春生子叫做“鱼食”，是因为它们：

A　专门吃小鱼

B　味道很鲜美

C　是大鱼吃的食物

D　是人钓鱼的鱼饵

【3】作者认为，人们觉得春生子可怜，这其实是：

A　假装的

B　不必要的

C　有道理的

D　不可理解的

【4】作者赞美春生子，主要因为它们：

A　为别人而活着

B　又干净又漂亮

C　敢跟敌人斗争

D　是团结的集体

【5】作者认为，假如没人吃春生子，它们一定会感到：

A　自豪

B　幸运

C　痛苦

D　气愤

【6】卖鱼的叫卖时，向人们强调春生子：

A　吃起来很方便

B　要用水煮着吃

C　得洗干净再吃

D　个又大肉又多

三. 在答卷的空格中填上最恰当的汉字。每个空格只填一字。

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该刊以传递知识信(　　)、提高读书兴趣为宗旨，抓住当前读书热点，全方位地展示最新中外图书之(　　)华。该刊文字优美，知识性、可读性强，通过有限的篇幅，能够(　　)足读者多层次的阅读兴趣。

CMW Test

1. Please translate the following phrases into Chinese.

(Note: You can use pinyin if you do not know how to write the character.)

a bottle of beer ( )
a cup of coffee ( )
a truckload of sand ( )
a bowl of soup ( )
a basket of apples ( )
a glass of orange juice ( )
a piece of paper ( )
a piece of string ( )
a piece of advice ( )
a piece of wood ( )
a piece of cake ( )
a bar of soap ( )
a snowflake ( )
a watch ( )
a watermelon ( )
two metres of cloth ( )
four litres of water ( )
ten inches of ice ( )
thirty kilometres per hour ( )
five square kilometres ( )
a machinegun ( )
a course ( )
a pair of socks ( )
a group of students ( )
a bunch of grapes ( )
a herd of elephants ( )
a pile of files ( )
some sand ( )
some apples ( )
a full head of dark hair ( )
a handful of rice ( )
a pocketful of money ( )
an earthquake ( )
a war ( )
an accident ( )
a shower(i.e. rain) ( )
a round of applause ( )
wait a year ( )
work a month ( )
borrow the necklace for four days ( )

2. Please choose the appropriate measure word for each phrase.

(Note: You can use pinyin if you do not know how to write the character.)

一( )狗　一( )羊　一( )猪
一( )马　一( )鱼　一( )苍蝇
一( )母鸡　一( )大象　一( )骆驼

一(　　)鼻子	一(　　)眼睛	一(　　)腿
一(　　)眉毛	一(　　)头发	一(　　)胳臂
一(　　)脚	一(　　)手	一(　)手指头
一(　　)自行车	一(　　)木船	一(　　)轮船
一(　　)火车	一(　　)飞机	一(　　)汽车
一(　　)炮弹	一(　　)军舰	一(　　)坦克
一(　　)火箭	一(　　)轰炸机	一(　　)导弹
一(　　)子弹	一(　　)桌子	两(　　)椅子
一(　　)柱子	一(　　)床	一(　　)门
一(　　)柜子	两(　　)帽子	一(　　)鞋
一(　　)手套	一(　　)衣服	一(　　)裤子
一(　　)围巾	一(　　)上衣	一(　　)口袋
一(　　)主意	一(　　)惊喜	一(　　)制度
一(　　)愿望	一(　　)妙计	一(　　)方式

3. Please choose the appropriate measure word for each phrase.

一(　　)白杨 [A. 棵　B. 颗]	四(　　)爱心 [A. 棵　B. 颗]
一(　　)眼镜 [A. 副　B. 幅]	一(　　) 牌 [A. 副　B. 幅]
一(　　)礼［A. 分　　B. 份]	几(　　)生气［A. 分　B. 份]
一(　　)电线［A.节B. 截]	一(　　)车厢［A.节　B. 截]
一(　　)玫瑰［A. 只　B. 支　C. 枝]	一(　　)耳环［A. 只　B. 支　C. 枝]
一(　　)队伍［A. 只　B. 支　C. 枝]	一(　　)歌曲［A. 只　B. 支　C. 枝]

4. Please choose the right measure words for each sentence.

(A 线、B 抹、C 团、D 轮、E 弯、F 丝、G 盏)

衬着蓝色的天幕，又飘来一(　　)晚霞。

树色是阴阴的，乍看像一(　　)烟雾；但杨柳的风姿，便在烟雾里也辨得出来。

雾气已经消失了，没有一(　　)风，却干巴巴的冷。

偶然一(　　)阳光从岩石缝里露过来。

椰子树梢上挂着一(　　)月牙。

一(　　)宫灯似的太阳，挂在京西暮霭缠绕的峰峦上。

撩开幔子，我看见一(　　)明月，高悬在远远的塔尖。

5. Please choose the most appropriate measure words for each sentence.

[A. 次　B. 通　C. 番　D.阵　E.顿　F. 回　G. 趟　H.遍　I.下　J.场] (Note: these measure words can be used more than once and some questions have more than one answer.)

他认真地研究了一(　)。

没有多久就迟到香喷喷的饭菜，用竹筒当锅头煮出来的野菜另有一(　)风味。

他们这样安排，是先把参观者吓唬一(　　)，增加好莱坞的神秘感，吸引参观者继续下去。

这部电影我已经看过两(　)了。

一(　)大风过后， 小村庄又恢复了平静 。

每天三(　)饭，是大多数人的习惯。

这是非常大的一(　)盛会，参加的人真是人山人海。

他被他爸爸打了一(　)。

今天下了两(　)雨。

他去了(　)上海。

这个故事他听过三(　)了。

帮我把桌子抬一(　)。

把设备仔细检查一(　)。

6. Please choose the most appropriate phrase to finish the following sentences.

我(　　)都调查了。[A. 家　B. 家家　C. 一家　D. 一家家]

在一个地方河面窄了。(　　)的绿叶伸到水面上来。

[A.簇　B.簇簇　C.一簇　D.一簇簇]

(　　)的雪花，像撕不开的棉絮，纷纷扬扬，吞没了高大、壮观的建筑物。

[A. 团　B. 团团　C.一团　　D. 一团团]

桌上分散地摊放着(　　)鸟蛋。

[A.个　　B.个个　　C.一个　D.一个个]

两年来，他们从市场找出了 5 个课题，开发出 5 个新产品，(　　)畅销。

[A.个　　B.个个　　C.一个　D.一个个]

7. Please fill in the gap with the words provided.

A 屁股、B 手、C 身、D 脸、E 鼻子、F 肚子、G 嘴

冠名没想到自己会碰这么一(　　)灰。

我们全都有一(　　)意见。

老婆见他一(　　)怒气，问他什么事。

大头为了给老婆治病欠了一(　　)的债。

咕咚一声咽下去一(　　)口水。

用手将脸一摸，摸了一(　　)冷汗。

他惊吓得一抖腿，起了一(　　)鸡皮疙瘩。

A. 针　B. 口　C. 笔　D.耳光　E. 刀　F.　觉　G. 脚　H. 声

他叫了他妈妈三(　　)，但是妈妈没听见。

老张在白纸上画了一(　　)。

王明砍了三(　　)终于把树砍倒了。

小红说睡一(　　)明天就没事了。

小狗咬了小王一(　　)。

爸爸扇了小明一(　　)。

他被缝了三(　　)。

任伟群甩起腿，又在门上踢了三(　　)。

8. Please translate the following sentences into Chinese.

Let me have a look then I can tell you whether it is broken or not.

_____

She had a jump and broke her leg.

_____

Let us have a feel inside the bag.

_____

He has given me three days to consider his offer.

_____

People of two countries are against the policy.

_____

9. Please finish the following paragraphs using appropriate measure words.

教师的学生学习很用功，参加工作后表现也突出，三十几岁就当上了局长。可是没有想到，突然就被抓了。老师去看他，带了(　　)烟。本来老师看学生带东西怎么也说不过去，怎奈老师考虑学生在看守所里待着买烟不方便，带点也表示一下师生的情份。就这么件简单的事，却引出了一连串的问题。老师的学生就是在一些看起来是小事上犯了大事的。

学生看到烟，嘴唇哆嗦了好多下，说“拿这么多干什么？有(　　)抽就行了。”“还客气什么，无非就是些烟嘛。”“老师，你说的怎么与有些企业界经理、老板说的话一样？那时候，他们知道我抽烟，隔三差五给我送，开始时是(　　)，后来是(　　)，再后来就是(　　)。当时我也觉得无非就是烟嘛，便收下了。”

“收了烟就有了接下来的事。他们为了找我办事，看中了我手中的权力。就开始给我送钱。刚开始是一千、两千、一万、两万，反正是人家的一(　　)心意。我也不知道怎么就这么快，我已收了人家数百万元。拿人家的手短，吃人家的嘴短，我已经成了他们的工具了。”

_____

Thank you!