

# **Modal Auxiliaries in Learning and Teaching Chinese as a Second Language**

Xiaoxi Zhao

Submitted in accordance with the requirements for the degree of  
<Doctor of Philosophy>

The University of Leeds  
<East Asian Studies>  
<School of Languages, Cultures, and Societies>

< April, 2021 >

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

This copy has been supplied on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

© <2021> The University of Leeds and <Xiaoxi Zhao>

## **Acknowledgements**

I am most thankful to my supervisor Dr Yang Lan. Without his insights, comments and support, the completion of this PhD project would be impossible. My thanks go to my second supervisor Frances Weightman and Dr Irena Hayter, who kind-heartedly guided me through the ethical review procedure. My special thanks go to Advisor Dr Caroline Fielder and Karen Priestley to support me mentally when I am in great pain and despair due to family issues. I also thank all the active and cooperative participants in the duration of data collection. Last but not least, I am most grateful to my parents Zhao Zhizhong and Yang Junfei, who supported me both mentally and physically, even during a tough time while my mother was fighting colon cancer. To my dear mother, I dedicated this thesis.

## **Abstract**

Chinese modal auxiliary is one of the most important language elements in the Chinese language. Therefore, to effectively and efficiently fulfil the communicative purpose, learning modal auxiliaries is necessary for second language learners. However, modal auxiliaries are still a) a comparatively weak point in Chinese research as well as b) a challenge for foreign students who learn Chinese as a foreign language. To lay a theoretical foundation for the later empirical study: this study constructs a new definition and categorisations of Chinese modal auxiliaries; 13 Chinese modal auxiliaries are thoroughly studied; a comparison between Chinese modal auxiliaries and English modal verbs is explored; errors that the students made in the application of Chinese modal auxiliaries are analysed, categorised and summarised; the deep reasons behind the errors are explored from a syntactic and pedagogical perspective.

The study proves that explicit instructions from the language instructors are a critical countermeasure against CMA application difficulties. Interaction with peers and language partners benefits L2 learners' acquisition of the second language. After-class exercises and corrective feedback from language instructors are supplementary solutions. And the study points out that language instructors have attached great importance to the unique grammatical structures of the Chinese modal auxiliaries, suggesting that the semantics of different Chinese modal auxiliaries should be the instructional focus in future teaching practice.

## Table of Contents

<b>Acknowledgements</b> .....	<b>iii</b>
<b>Abstract</b> .....	<b>iv</b>
<b>Table of Contents</b> .....	<b>v</b>
<b>List of Tables</b> .....	<b>vii</b>
<b>List of Figures</b> .....	<b>ix</b>
<b>Chapter 1 Introduction</b> .....	<b>1</b>
1.1 Research Context .....	1
1.2 Objectives.....	9
1.3 Significance of the Research.....	11
1.4 The Structure of the Thesis .....	12
<b>Chapter 2 Chinese Modal Auxiliaries: A Linguistic and Applied Linguistic Account</b> .....	<b>15</b>
2.1 Introduction.....	15
2.2 Linguistic Properties of Chinese Modal Auxiliaries.....	15
2.2.1 Terms and Definitions for Chinese Modal Auxiliaries.....	15
2.2.2 Criteria for Chinese Modal Auxiliaries.....	18
2.2.3 Categorisation of Chinese Modality and the Semantics of Chinese Modal Auxiliaries.....	23
2.2.4 CMA Usages .....	62
2.3 The Comparative Study of CMA and English Modal Verbs .....	75
2.4 Review on CMA in Learning and Teaching Chinese as a Second Language.....	77
<b>Chapter 3 Research Methodology</b> .....	<b>83</b>
3.1 Introduction.....	83
3.2 Chinese Language Performance Test.....	84
3.3 CMA Test.....	85
3.4 Data Analysis .....	92
3.5 Ethical Considerations .....	95
<b>Chapter 4 Results and Discussion of the Overall Test</b> .....	<b>97</b>
<b>Chapter 5 Results and Discussion of the Different Application of CMA</b> .....	<b>105</b>
5.1 The Results of the Application of 能/能够 and 可以 .....	106
5.2 The Results of the Application of 要 and 会 .....	112
5.3 The Results of the Application of 能 and 会.....	116

5.4 The Results of the Application of 想, 要, 愿意, 肯 .....	122
5.5 The Results of the Application of 应该/应当, 该, 得, 要 .....	126
5.6 The Results of the Application of CMA and Words of other Properties .....	131
5.7 The Results of the Application of CMA Co-occurrence in Succession...	136
5.8 The Results of the CMA Past Tense Application .....	140
5.9 The Results of the CMA Subjunctive Mood Application.....	143
5.10 The Results of the CMA Future Tense Application.....	147
5.11 The Results of the CMA in Conditional Sentences .....	150
5.12 The Results of CMA Normal Negation Application.....	153
5.13 The Results of CMA Double Negation Application.....	157
5.14 The Results of CMA Application in Question and Rhetorical Question Sentences .....	161
5.15 The Results of CMA Redundancy .....	165
5.16 The Results of CMA Omission.....	168
<b>Chapter 6 Conclusion .....</b>	<b>172</b>
6.1 Difficulties, Acquisition Stages and Suggestions .....	172
6.2 Research Limitations and Further Work.....	177
<b>List of References .....</b>	<b>178</b>
<b>Bibliography .....</b>	<b>185</b>
<b>List of Abbreviations .....</b>	<b>194</b>
<b>Appendix A Chinese Language Test .....</b>	<b>195</b>
<b>Appendix B Modal Auxiliaries Test And Average Difficulty of Each Question .....</b>	<b>197</b>
<b>Appendix C Nomality Test Results.....</b>	<b>207</b>

## List of Tables

Table 1-0-1 Clifford Prator: Hierarchy of Difficulty .....	10
Table 2-0-1 Terms that Scholars Use to Refer to CMA .....	17
Table 2-0-2 The Semantic Differences of the Volition CMA.....	37
Table 2-0-3 Semantic Differences between 会 and 能 .....	49
Table 2-0-4 Semantic Differences between 应该 and 该 .....	55
Table 2-0-5 The Asymmetric Feature of the CMA Negation Form .....	73
Table 2-0-6 The Comparison Between CMA and EMV .....	75
Table 2-0-7 The Difficulties in CMA Application .....	79
Table 2-0-8 Klein's L2 Acquisition Model .....	81
Table 2-0-9 Model of the Process of CMA Acquisition .....	82
Table 4-0-1 The Overall Results of CMA Application Test.....	98
Table 4-0-2 The Results of CMA Semantics Test .....	100
Table 4-0-3 The Results of CMA Succession Test.....	101
Table 4-0-4 The Results of CMA Aspect Test.....	102
Table 4-0-5 The Results of Negation Test .....	103
Table 4-0-6 The Results of CMA Redundant & Missing Test .....	104
Table 5-0-1 The Results of the Application of 能/能够 vs 可以.....	106
Table 5-0-2 The Results of the Application of 要 vs 会 .....	112
Table 5-0-3 The Results of the Application of 能 vs 会 .....	116
Table 5-0-4 The Results of the Application of 想, 要, 愿意, 肯 .....	122
Table 5-0-5 The Results of the Application of 应该/应当, 该, 得, 要.....	126
Table 5-0-6 The Results of the Application of CMA vs Words of Other Properties .....	131
Table 5-0-0-7 The Results of the Application of CMA Succession .....	136
Table 5-0-8 The Results of the CMA Past Tense Application.....	140
Table 5-0-9 The Results of the CMA Subjunctive Mood Application .....	143
Table 5-0-10 The Results of the CMA Future Tense Application.....	147
Table 5-0-11 The Results of the CMA Conditional Sentence Application .....	150
Table 5-0-12 The Results of CMA Normal Negation .....	153
Table 5-0-13 The Results of CMA Double Negation .....	157
Table 5-0-14 The Results of CMA Application in Question Sentences .....	161

Table 5-0-15 The Results of the Redundant Usage of CMA.....	165
Table 5-0-16 The Results of the Missing Usage of CMA .....	168
Table 6-0-1 Difficulties, Acquisition Stages and Suggestions.....	173
Table 6-0-2 The Five Steps of the CMA Semantics Instruction.....	175

## List of Figures

Figure 2-0-1 The CMA Categorisation of the Current Study .....	24
Figure 2-0-2 CMA in Different Types of Modality .....	25
Figure 2-0-3 The Scope of Modality.....	64
Figure 2-0-4 The Semantic Division of CMA .....	65
Figure 3-0-1 The Semantics Division of CMA.....	87
Figure 3-0-2 Succession Feature Examined.....	89
Figure 3-0-3 Division of the CMA Cooccurrence with Aspect.....	90
Figure 3-0-4 Division of CMA Negation Application.....	91
Figure 3-0-5 The Redundant and Missing Usage of CMA .....	92
Figure 3-0-6 Normal Test Result of Multiple Choice Question 1 .....	94
Figure 5-0-1 Percentages of the Correct Answers in the Application of 能/能够 vs 可以 .....	107
Figure 5-0-2 Percentages of the Correct Answers in the Application of 要 vs 会.....	113
Figure 5-0-3 Percentages of the Correct Answers in the Application of 能 vs 会.....	117
Figure 5-0-4 Percentages of the Correct Answers in the Application of 想, 要, 愿意, 肯.....	123
Figure 5-0-5 Percentages of the Correct Answers in the Application of 应该/应当, 该, 得, 要.....	127
Figure 5-0-6 Percentages of the Correct Answers in the Application of CMA vs Words of Other Properties.....	132
Figure 5-0-7 Percentages of the Correct Answers in the Application of CMA Succession.....	137
Figure 5-0-8 Percentages of the Correct Answers in CMA Past Tense Application.....	141
Figure 5-0-9 Percentages of the Correct Answers in CMA Subjunctive Mood Application.....	144
Figure 5-0-10 Percentages of the Correct Answers in CMA Future Tense Application.....	148
Figure 5-0-11 Percentages of the Correct Answers in CMA Conditional Sentence Application .....	151
Figure 5-0-12 Percentages of the Correct Answers in CMA Normal Negation Application.....	154
Figure 5-0-13 Percentages of the Correct Answers in CMA Double Negation Application.....	158

Figure 5-0-14 Percentages of the Correct Answers in the CMA Application in Question Sentences .....	162
Figure 5-0-15 Percentages of the Correct Answers in the Redundant Usage of CMA .....	166
Figure 5-0-16 Percentages of the Correct Answers in the Missing Usage of CMA .....	169

## Chapter 1 Introduction

### 1.1 Research Context

Chinese Modal Auxiliaries (CMA) is one of the most critical language elements in the Chinese language. And modal research bears a long history in Chinese grammar studies. Ma Jianzhong (1898) first used the term 助动字 *zhudongzi* 'auxiliary verb' to define a category of words that did not describe the action of the verb itself but followed by a full verb to indicate a tendency of projected action suggested by that succeeding verb (Ma: 183, 1983). Since then, various literature on Chinese grammar has investigated Chinese modality and modal auxiliaries from different perspectives. The academic debate among scholars was one reason that led to the summit of modal research in the 80s last century.

The research on modality and English modal verbs remains a hot topic among linguists and philosophers. Quirk (1972) distinguishes modal auxiliary and primary auxiliary with a detailed description of "additional features" (Quirk: 127 - 128, 1985) of modal auxiliary verbs. He also pays special attention to the relationship between modal auxiliaries and tense and aspect. Johannesson (1976) explores and analyses the modal auxiliaries in sentence context from a pragmatic point of view and mentions the speaker's three main types of involvement with a proposition, which are "volition, attitude to the truth of a proposition and evaluation of an event" (Johannesson:11, 1976). Lyons (1977) recognises two kinds of modality, epistemic and deontic and defines them: "epistemic necessity has to do with the truth of a proposition; deontic modality is concerned with necessity or possibility" (Lyons: 823, 1977). For Palmer (2001), modal notions range beyond Lyons' definition, and the third type of dynamic modality needs to be added. It "refers to events that are not actualised, events that have not taken place but are merely potential" (Palmer: 10, 2001). Bybee et al. (1994)

recategorise modality into four types and use new terms "speaker - oriented modality" associating obliges or permits and "agent-oriented modality" (Bybee et al.:179, 1994), indicating the "existence of internal and external conditions on an agent" (Bybee et al.: 177, 1994). Kratzer's. C. Davis et al. (264, 2007) propose that evidentiality is a new modal form, and should be distinguished from epistemic modality. Portner (265, 2009) further points out evidentiality is related to tense, aspect and deixis, as other modality forms. Many Chinese scholars borrow their notions, categorisations and framework in their later research during the 1980s. The borrowing and wide acknowledgement of the English modal verbs' theories greatly provoked and promoted research on Chinese modal auxiliaries.

Although a perfect amount of research results have been achieved, the terms and definitions especially for Chinese modals remain controversial. The status of modal auxiliaries has not reached an agreement. Some argue that they belong to verbs, while others believe that they belong to adverbs. Some believe parts of modal auxiliaries belong to verbs and parts of them belong to adverbs. The criteria for modal auxiliaries stay problematic. The number of members which belonged to modal auxiliaries was never unified.

Therefore, the research on the acquisition of modal auxiliaries is built on scholars' own definition systems accordingly. For example, Ma (1898) first uses the term 助动字 *zhudongzi* 'auxiliary verb' to indicate its tendency to help the succeeding verb. There are only four forms 可 *ke* 'may', 足 *zu* 'be sufficient to', 能 *neng* 'can', 得 *de* 'can' consisted in this category. Wang (1997) adopts the term 能愿动词 *nengyuandongci* 'possibility - desire verbs', which are put under the category of adverbs, later recognised as modal verbs, and distinguishes them from auxiliary verbs used in a passive sentence such as 被 *bei* and 为 *wei*. Li & Tompson (1981) regard auxiliary verbs as an independent class from verbs and adverbs. They also discuss Chinese verbs' properties and suggest they do not "take aspect markers and cannot be modified by intensifiers" (Li & Tompson: 173, 1981). Zhu's (1982)

5 criteria for Chinese modal verbs are the most recognised ones. He treats modal verbs as a sub-class of verbs and briefly explores the meanings of several modal verbs. Further and detailed discussion will be carried out in Chapter 2 Section 2.1.

Due to these uncertain natures of Chinese modal auxiliaries, it is common for British students to misuse full verbs and adverbs for modal auxiliaries. For example:

(1) \*我非常喜欢大自然，很想念回到家乡那片原野里。（想）

I very love Mother Nature, very want to back to the open field.

I love Mother Nature, and I would love to go back to my hometown's open field.

(2) \*爸爸的工资不太高，所以妈妈一定去外边工作。（得）

Father wage not too high, so mother must go out work.

My father earned an inadequate wage; therefore, my mother had to find a job.

In sentence a, 想念 *xiangnian* 'want' is a verb used to modify the nominal predicate. But 回到 *huidao* 'go back to' is a verb that needs to be modified by the modal verb 想 *xiang* 'would love to'. In sentence b, the adverb 一定 *yiding* 'must' indicates a subjective prediction. 'Mother had to work' is not a prediction but a reality, thus modal auxiliary 得 *dei* 'have to' should be used instead.

Coates comments that the meaning distinctions of modal verbs are "blurring" and "confusion" (Coates: 146, 1995). Chinese modal auxiliaries bear the same characteristic, which is polysemic. Moreover, one modal auxiliary can have various synonyms. The meaning differences are so trivial and nuanced

between some modal auxiliaries that extra difficulties are added to the learning process. Language learners are prone to mix up meanings of different modal auxiliaries. Even for native Chinese speakers, the meanings and contextual implications are not always straightforward. For example:

(3) \*我现在非常要做关于销售的工作。(想)

I now very determine to do sales job.

Now, I pretty much want to get a sales job.

As dynamic modal verbs (Palmer, 2001), both 要 *yao* 'be prepared to' and 想 *xiang* 'want to' can express willingness. But there is a gradability meaning difference between the two. 想 stays at the thinking phase, while 要 indicates a solid decision right before the phase of taking action. In this sentence, 'to get a sales job' is a wish rather than a made-up decision, so 想 is the appropriate one.

Most important of all, Chinese modal auxiliaries have unique features, one of which is succession. Chinese modal auxiliaries can co-exist consecutively in one sentence following a certain order. These modal auxiliaries cannot be distributed into one sentence randomly. Thus common disorder error is not rare among English learners. For example:

(4) 他们很可能能帮助你。

They very possible can help you.

They probably can help you.

The term 'epistemic' is derived from Greek, meaning 'knowledge'. Epistemic modality is concerned with the speaker's knowledge and opinion towards the truth of the proposition. The term 'deontic' is also derived from Greek, meaning 'duty'. Deontic modality thus is concerned with necessity and

obligation. In many languages, "an epistemic meaning arises out of a deontic one" (Joseph & Janda: 632, 2003). Thus one may boldly presume that epistemic modal auxiliaries are higher than deontic modal verbs from a syntactic perspective. Picallo (1990) suggests epistemic and deontic modal verbs are inserted/merged at a different level in a sentence; epistemic modal verbs are merged somewhere within the IP (Inflection Phrase) level, and roots (deontic), somewhere within the VP (Verb Phrase). In the above sentence, 可能 *keneng* 'probably' has an epistemic meaning while 能 *neng* 'can' has a deontic interpretation, therefore 可能 must present before 能 and take entire proposition into its scope. In the meantime, 能 is part of the proposition and serves as a modifier of the verb 帮助 *bangzhu* 'help'.

Peter Robison acknowledges "speakers can make generalisation at many different levels of abstractness" (Robinson: 410, 2008). Just as Richards (1971) observes, learners are able to create a structure on the basis of their experience of other structure of the target language. This might easily lead to "overgeneralisation", that is, the establishment of a deviant structure. Unlike the negation of English modal verbs, generally speaking, the negation of Chinese modal verbs is to add negation marker 不 *bu* 'not' before the modal auxiliary instead of after it. And the negation form cannot be abbreviated. However, it is not always appropriate. For example:

(5) 在英国，我能吃到中国菜。

In Britain, I can eat Chinese cuisine.

In Britain, I am able to taste Chinese cuisine.

(6) \*在英国，我不能吃到中国菜。

In Britain, I not can eat Chinese cuisine.

In Britain, I cannot taste Chinese cuisine.

(7) 在英国，我吃不到中国菜。

In Britain, I eat not Chinese cuisine.

In Britain, I am not able to taste Chinese cuisine.

The sentence (5) shows an affirmative usage of modal auxiliary 能 *neng* 'be able to'. It denotes the possibility concerning epistemic modality, indicating the theoretical possibility of propositions being true or not true. Its negative form 不能 *buneng* 'cannot' in the sentence (6) falls into the deontic modality category, expressing possibility and necessity in terms of freedom to act and making this sentence ungrammatical. The proper negative should be 吃不到 *chibudao* 'be not able to taste', which carries epistemic meaning in the sentence (7). The same phenomenon applies to the phrase of similar structure 能看到 *neng kandao* 'be able to see', of which the proper negation is 看不到 *kanbudao* 'be not able to see' instead of 不能看到 *buneng kandao* 'cannot see'. This asymmetrical negation structure and mismatch between epistemic and deontic meaning hinder learners' acquisition of Chinese modal verbs.

Another unique feature of Chinese modal auxiliaries is that they do not have tense. For English modal verb, their past tense can be used to indicate a euphemistic or polite mood. For example, 'could you lend me some money' is politer than 'can you lend me some money'. Their past tense also implicates a different meaning of gradability. Take the following sentences as examples:

- a. Jenny may lend you money.
- b. Jenny might lend you money.

Sentence a suggests there is a slight possibility of getting money from Jenny, while sentence b indicates there is almost no possibility of getting that money. As to Chinese modal auxiliaries, they do not have tense or changes of form, so to depict different hierarchy of possibility, obligation or ability, different modal auxiliaries have to be chosen. As for more differences between Chinese modal auxiliaries and English modal verbs, the further comparative study takes place in Chapter 2.

The study of Chinese modal auxiliaries continues in the 21<sup>st</sup> century mainly from three perspectives. a) From Chinese language perspective: Lu (2003) does profound research on Chinese modal auxiliaries on a semantic level. She discusses the similarities and nuanced differences of various meanings of each polysemic modal auxiliary. Her comparison of synonymous modal auxiliaries would help language learners distinguish between modal auxiliaries that carry similar meanings but function differently. But her research is mainly based on classic literature, and her illustrative sentences are mostly from literature instead of daily conversations, which makes it less practical in teaching practice. The research of Song (2004) exhaustively covers the grammatical features of 能 neng 'can' from the perspective of negation. His study further reveals the negation structure of Chinese modal auxiliaries, particularly their asymmetrical feature differentiating from the English modal verbs. His research doesn't present a comparison study between the negation form of 能 and the negation forms of other Chinese modal auxiliaries, which are error-prone for English students. Peng (2005) approaches modal auxiliaries on a macro level. He examines modal verbs in the whole modality system and takes advantage of the fruits of studies on the modality in logic as well as in natural language. He holds the view that the polysemy issue is more straightforward to cope with in English than that in Chinese. Among Chinese polysemy modals, the prototype degree varies greatly. Mao (2010) profoundly explores the function of volition modal auxiliaries in expressing dynamic modality. She points out dynamic modality is an atypical modality that including ability, courage and volition. Volition modal auxiliaries can be divided into two groups: one is spontaneous, initiative and active, while the other one is responsive, optional and passive. Her categorisation of volition modal auxiliaries includes some verbs other than modal verbs. Cui (2006) investigates the syntactic properties of modal auxiliaries in Chinese and proposes root modal auxiliaries originate in ASPP and have complementary distribution with aspect markers, while epistemic modal auxiliaries are in COMP and have complementary distribution with nonassertive contexts. Her theory greatly explains the succession or co-existence of Chinese modal auxiliaries.

b) From a comparative study perspective: Li (2004) and Xiang (2011) both accomplish a comparative study of Chinese and English modal auxiliaries. From a typological perspective, the former contributes significantly to Chinese modal auxiliaries' distinctive properties, establishes them as a unique sub-class of verbs, and distinguishes them from adverbs. Inspired by Huddleston (1976) 's "NICE" criteria for English modal verbs, he establishes "NORA" criteria for Chinese ones, which are "occurrence with full verbs, negation with bù, reduplication not allowed and aspect/phase markers not taken" (Li: 130, 2004). The latter explains various language phenomena such as the negation and succession of Chinese modal auxiliaries from a syntactical perspective within generative grammar scope. She points out "both Chinese and English modal verbs are usually situated at the predicate – initial position in sentences" and explores the movements of modal verbs in interrogative sentences. Her analysis of sentences is based upon general linguistics, which is beneficial for language instructors to grasp the nature of a sentence but is unfavourable in teaching practice, especially for primary and intermediate level students who are studying Chinese.

c) From a second language acquisition perspective: Xia (2012) and Li (2013) both analyse some common problems that existed during the learning process of Chinese modal auxiliaries and summed up some patterns of error analysis (Corder, 1981). Xia classifies modal auxiliary acquisition errors into five categories - omission, addition, disorder, mixture and negation errors. A careful analysis of the possible causes of errors has been carried out. Mother language negative transfer, target language negative transfer, native speakers' learning strategies and teaching factors are considered leading causes. Li's research is from a corpus linguistics perspective. By deducting and analysing learners' errors from several corpora of linguistic research institutions, advice on improving textbook exercises has been made. Sha (2012) does profound research on Chinese modal auxiliary acquisition sequence based on the natural corpus. Sha establishes three acquisition ranks – easy, general and difficult. The modal auxiliaries existing in the low

rank must be acquired earlier than those in the high rank. Her choice of corpus does not separate second language learners and native Chinese speakers. Therefore, it is hard for language instructors to design well-directed courses for targeted L2 learners.

## **1.2 Objectives**

Contrastive Analysis Hypothesis claims that a “scientific structural analysis of the two languages would enable …linguists and language teachers to predict the difficulties a learner would encounter” (Brown: 248, 2007). To fulfil the objective of better guiding learners through modal auxiliaries’ learning process, profound research and understanding of modal verbs in two languages is necessary, leading to the adoption of the Contrastive Analysis Hypothesis (Lado: 2, 1957). He observes that second language learners have a tendency to transfer the forms and meanings of their native language to the foreign language, and the transfer effect can be either positive or negative. He proposes that ‘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. Woltz (2000) points out that error rates can be much higher when the negative transfer occurs than when no previously learned behaviour exists.

Clifford Prator (1967) further captured the essence of a grammatical and phonological hierarchy of difficulty in the following categories:

**Table 1-0-1 Clifford Prator: Hierarchy of Difficulty**

Clifford Prator: Hierarchy of Difficulty	
Level 0	Transfer. One to one correspondence. No difference or contrast.
Level 1	Coalescence. 2 items in L1 coalesce into one item in L2
Level 2	Underdifferentiation. An item in L1 is absent in L2, and the learner avoids such an item.
Level 3	Reinterpretation. An item in L1 is given a new distribution in L2.
Level 4	Overdifferentiation. An entirely new item needs to be learned in L2.
Level 5	Split. One item in L1 becomes two or more in L2, requiring the learner to make a new distinction.

Chinese modal auxiliaries (CMA) are significantly different from English modal verbs:

- (1) they do not have a tense change; thus, the aspect is expressed by the inner meaning of the modal auxiliary itself;
- (2) they can be used in succession while the English modal verbs (EMV) cannot;
- (3) their negation have asymmetrical features and unique construction that is double negation form not+MV+not;
- (4) one EMV is usually equivalent to several CMA, which falls into the most complex level - level 5 split. For example, 'can' can be interpreted as 能 *neng*, 可能 *keneng*, 可以 *keyi*.

It makes practical sense that "if teachers know what is hard to acquire and practise it more in the classroom, they will be in a more favourable position

to help learners achieve better fluency and higher accuracy in the second language” (Mayo: 7, 2013). Learners are facing difficulties grasping the essence of Chinese modal auxiliaries.

Therefore, this study employs empirical research to examine different CMA applications by English native speakers learning Chinese as a second language. By investigating the difficulties, where the difficulties locate, and the causes of difficulties, this study will further improve the learning and teaching of CMA for second language learners from a pedagogical perspective.

### **1.3 Significance of the Research**

The study of modality has a close relationship with a wide variety of fields, regarding philosophy, logic, linguistics and pragmatics, etc. Modal auxiliaries, modal adverbs, particles, and other constructions are realised by modal auxiliaries, among which modal auxiliaries are the most important. As Halliday suggests, the most fundamental purposes in any communicative exchange are giving (and taking) or demanding (and being given) a commodity of some kind (Halliday: 68, 1994). Modality serves the purpose of expressing the speaker’s subjective attitudes (guess, assessment, evaluation, proposal, etc.) and even emotions and ideology towards an utterance, involving necessity, possibility, contingency, ability and other relevant notions. Therefore, to effectively and efficiently fulfil the communicative purpose, learning modal auxiliaries is necessary for second language learners.

However, modal auxiliaries are still a) a comparatively weak point in Chinese research as well as b) a hard point to international students who learn Chinese as a second language. The extensive separate studies on English modal verbs and Chinese modal auxiliaries lead to a chaos of definition and

modality categorisation. The meanings of modal verbs remain fuzzy and confusing. A comprehensive study on Chinese modal auxiliaries is then required to lay a solid theoretical foundation for the later empirical research. Lado assumes that “those elements that are similar to one’s native language will be simple for him, and those elements that are different will be difficult” (Lado: 2, 1957). To better facilitate the effect and efficiency of teaching methods, a comparative study is inevitable as well.

The study will be a comprehensive and systematic study of Chinese and English modal auxiliaries' similarities and differences. To lay a theoretical foundation for the later empirical study:

A new definition and categorisations of Chinese modal auxiliaries will be explored;

13 Chinese modal auxiliaries will be thoroughly studied, and the usages of the CMA is compared with the English ones.

Errors that the students made in the application of Chinese modal auxiliaries will be analysed, categorised and summarised;

The deep reasons behind the errors will be explored from the syntactic and pedagogical perspective.

The study aims at contributing to 1) the theoretical foundation of Chinese modal auxiliaries 2) and the comparative study of Chinese and English modality from lexical and syntactical perspective 3) and understanding of Chinese pedagogy and help language learners and teachers.

## **1.4 The Structure of the Thesis**

The thesis consists of 6 chapters to present a profound study on Chinese modal auxiliaries and learning and teaching of them in second language acquisition for native British students.

Chapter 1 consists of an introduction to related background theories, analytical approach and data origin, and the significance of the research.

Chapter 2 provides a detailed discussion on the linguistic properties of Chinese modal auxiliaries, including terms and definitions for modal auxiliaries, criteria suggested for and criticised of modal auxiliaries, new criteria established for them from a typological perspective and status of them. A detailed semantic exploration of 13 CMAs is conducted. This chapter also includes a comparative study between English modal verbs and Chinese modal auxiliaries. Similarities and differences between these two will both be explored.

Chapter 2 also explores the theory on CMA acquisition. Literature review on teaching and learning of modal auxiliaries will be included.

In Chapter 3, various scientific tests are designed in order to find the reason behind the misuse of modal auxiliaries.

Chapter 4 demonstrates CMA application's overall results to find out how difficult CMA are for English native speakers compared to native Chinese speakers.

Chapter 5 will analyse the individual results respectively. A detailed analysis of English speakers' usage of CMA is generated. This chapter focuses on what are the difficulties that the English native speakers are facing. Errors are analysed to a textual level.

Chapter 6 is the conclusion, summarises the main idea of this thesis, provides solutions for teaching and learning of Chinese modal auxiliaries. It also discusses the limitations of the current study and points out some topics for further studies on Chinese modal auxiliaries.

## **Chapter 2 Chinese Modal Auxiliaries: A Linguistic and Applied Linguistic Account**

### **2.1 Introduction**

Although various research has been carried out to explore modal auxiliaries from the syntactic approach and fruitful results have been reached, the definition and categorisation of Chinese modal auxiliaries remain controversial. There are endless redefinition and re-categorisation of them, resulting in an “endless flow of terminology” (Bolinger: 554, 1977). Different scholars hold different criteria to distinguish modal auxiliaries from normal verbs and adverbs, leading to a vast number gap of modal auxiliaries from four to more than a hundred. Section 2.2 discusses the linguistic properties of the CMA, including the definition of modal auxiliaries, the semantics of single Chinese modal auxiliary, and CMA usages. Section 2.3 presents a comparative study between Chinese modal auxiliaries and English modal verbs.

### **2.2 Linguistic Properties of Chinese Modal Auxiliaries**

#### **2.2.1 Terms and Definitions for Chinese Modal Auxiliaries**

Modality refers to semantic domains involving possibility and necessity (van der Auwera & Plungian: 80, 1998). In English, these notions are expressed by modal verbs like *can* and *should*. In Chinese, there are relatively equivalents like 能够 *nenggou* ‘can’ and 应该 *yinggai* ‘should’. These forms

appear before verbs and combine with verbs to indicate modality. These forms are found to share common characteristics different from other word class. How are these forms termed and defined by Chinese linguists?

Ma(1898) first used the term 助动字 *zhudongzi* 'auxiliary verb' to define a category of words which did not describe the action of the verb itself, but followed by full verb to indicate a tendency of projected action suggested by that succeeding verb (Ma: 183, 1983). There are only four forms 可 *ke* 'may', 足 *zu* 'be sufficient to', 能 *neng* 'can', 得 *de* 'can' consisted in this category. For him, auxiliary verbs help to realise the function of the succeeding verb.

Chen(1922) held a different opinion from Ma. He argued that it was not necessary to imitate the Western grammar system and established a category of words named auxiliary verbs. He believed Ma's auxiliary verbs behave the same as adverbs, thus should belong to adverbs.

Lv(Lv: 17, 1982) established a new category named 判断限制 *panduan xianzhi* 'restrictive for judgement' to indicate relevant notions like possibility, necessity, etc. Auxiliary verbs were put under adverb class. Wang (1997) echoed Lv's opinion. He adopted the term 能愿式 *nengyuanshi* to represent adverbs expressing the speaker's attitude and will. The term 能愿动词 *nengyuan dongci* 'possibility – desire verbs', was first used in *The Tentative Program of Chinese Grammar Teaching* and was admitted by Xing(1991), to distinguishes them from auxiliary verbs used in a passive sentence such as 被 *bei* and 为 *wei*

Gao(1948) rejected all the previously mentioned terms and invented a new terminology 能词 *nengci* 'possibility words'. Chen(Chen: 71,1978) argued that these words were used for evaluating the tendency of an event, thus should be named 衡词 *hengci* 'evaluation words', which was a subtype of verbs. Zhu's (Zhu: 62,1982) also treated these words as a sub-class of verbs

and adopted the term modal verbs. The following table summarises these representative opinions:

**Table 2-0-1 Terms that Scholars Use to Refer to CMA**

Scholars	Auxiliary Verb	Adverb	Néngyuàn Verb	Néng -cí	Héng -cí	Modal Verb
Ma	X					
Chen		X				
Lv			X			
Wang			X			
Xing			X			
Gao				X		
Chen					X	
Zhu						X

Auxiliary verb is an adoption of Western terms. The term in Chinese is used to represent modal auxiliaries and depict other auxiliaries such as 被 *bei* and 为 *wei* used in a passive sentence. Nengyuan Verb, neng – ci, heng – ci cannot fully cover what modal auxiliaries are able to express. They can express ability, obligation, judgement and etc., besides possibility, will and evaluation. The term modal verb presumably indicates these forms of words are subclass of verbs, which remains controversial. Modal auxiliaries are different from adverbs and main verbs. It can help fulfil the function of succeeding verbs and, most important of all, express various modal meanings. Thus in this thesis, the modal auxiliary is used to implicate an independent class of words expressing modal meanings. The reason why modal auxiliaries are different from adverbs and verbs will be discussed in 2.2.2 in detail.

## 2.2.2 Criteria for Chinese Modal Auxiliaries

Due to this uncertain nature of Chinese modal verbs, some members within this class function more like adverbs while others share more attributes with normal verbs. I will investigate the criteria suggested for Chinese modal auxiliaries by Chinese linguists. The criteria will be numbered chronologically with Arabic numerals for a better and clear discussion and criticism.

Zhu (Zhu: 61, 1982) believes the only standard of categorising word class is its grammatical function. Based on this belief, he suggests five criteria for Chinese modal auxiliaries, which are widely accepted among most scholars and be regarded as authoritative guidance in many grammar books :

1. They can only take predicate object, not entity word.
2. They cannot be reduplicated.
3. They cannot combine with particles of 了 *le* 着 *zhe* 过 *guo*.
4. They have A – not – A form.
5. They can appear alone.

For (1), in other words, modal auxiliaries appear in construction “MA+V+N”, instead of “MA+N”. They cannot take entity word as an object while verbs can. Sentence (8) is acceptable, whereas sentence (9) is not.

(8) 她能开车。

She can drive car.

She can drive a car.

(9) \* 她能车。

She can car.

She can drive a car.

Criterion (1) is problematic. Firstly, under certain circumstances, when a demonstrative pronoun refers to a predicate phrase, modal auxiliaries can take that pronoun as an object.

a. 应该好好休息

should have a good rest

b. 应该这样

should (like) this

Secondly, if scholars accept this property, typical modal auxiliaries like 会 *hui* 'can', 要 *yao* 'must' would be excluded from auxiliaries since both of them can be followed by entity words directly. For example, 会书法 *huishufa* 'calligraphy', 要钱 *yaoqian* 'want money'. Many alike forms can be easily categorised into more than one class. If a full verb follows a word, it may be modal auxiliaries; if it is followed by entity words, then it is a full verb. By analogy, when duplication is allowed, 高兴 *gaoxing* 'happy' in sentence 她不高兴回家 'she is not happy to go home' is a full verb; if not, it belongs to modal auxiliaries. When 好 *hao* 'good' is followed by predicate objective like 吃饱肚子好干活 'get full before one starts to work', it will become modal auxiliary. Otherwise, it belongs to adjectives. It is not appropriate to randomly categorise words randomly, leading to a boundless word class containing numerous modal auxiliaries.

For Criterion (2), normally, verbs can be reduplicated while modal auxiliary cannot. Thus sentences like the followings are not acceptable.

(10) \* 我要要回中国。

I want want go back to China.

I am going back to China.

(11) \* 我会会去留学。

I will will go to study abroad.

I will go to study abroad.

The criterion is still not a definite one. Because many full verbs do not allow reduplications either, such as 以为 *yiwèi* 'think', 看到 *kàndào* 'see'.

For Criterion (3), particles of 了 *le* 着 *zhe* 过 *guo* implies perfect phase, progressive aspect and past tense respectively. Unlike English modal verbs, Chinese modal auxiliaries do not have aspect and tense. Therefore, they do not take aspect or phase markers. Phrases like 敢了做 *gǎnle zuo* 'can do', 能着学 *néngzhe xue*, 'can learn', 愿过唱 *yuanguo chang* 'willing to sing' are incorrect.

For Criterion (4), most of the Chinese modal auxiliaries have A - not – A form illustrated by:

a. 应该不应该坚持

should not should insist on

should or should not insist on

b. 可以不可以离开

can not can leave

can or cannot leave

\*c. 得不得

must not must

have to or not have to

Modal auxiliary 得 *dei* 'have to' does not have this construction.

For Criterion (5), modal auxiliaries can be used alone if its succeeding full verb has occurred in the preceding context, especially used to answer questions. Take the following sentence as an instance:

(12) 他今天会不会来?

He today will not will come?

Will he come today?

会。

Will.

He will.

However, not all of the modal auxiliaries can be used alone in this situation, such as 可 *ke* 'may', 得 *de* 'can', 应 *ying* 'should'.

Although many linguists have made efforts to search for Chinese modal auxiliaries' properties and set up their scope, their criteria are usually applicable to a limited number of forms, when exceptions can always be

found. The real consensus of modal auxiliary properties is never really reached, indicating purely semantic or syntactic analysis might not be enough. Will researchers be able to establish relatively reasonable criteria for modal auxiliaries then? With the adoption of prototype-based methodology, not only the criteria can be justified, classification of typical and atypical modal auxiliaries becomes possible, which will help the Chinese teaching practice.

Ungerer & Schmid point out “categories are not homogeneous, but have a prototype, good and bad members, and have fuzzy boundaries” (Ungerer & Schmid: 38, 1996). From the prototypical perspective, not only epistemic and deontic modality as typical modalities, but also dynamic modality as an atypical modality are included in this paper, taking modal auxiliaries relating to ability, volition and courage into scope.

A combination of semantic and syntactic approach helps to establish the criteria of modal auxiliaries. The criteria can be summarised as MARON:

M Modality must be expressed.

O Occurrence can act as outside-proposition element (subjectivity conveying system) or inside-proposition element (objective conveying system) or both.

A Aspect suffix markers cannot be taken.

R Reduplication is not allowed

N Negation is with *bu*, *fei*, or *mei*.

M is an essential attribute. It distinguishes modal auxiliaries from other auxiliary verbs. Modality expresses the speaker’s subjective opinion or attitude towards the possibility or necessity of a proposition or event; in a broad sense, it can also relate to ability, volition and courage. Therefore, as the marker for modality, modal auxiliaries must express possibility, necessity, ability and desire. O helps bypass the still unsolvable dispute between

predicate-object and modifier-head structures and imply the internal difference between epistemic + deontic and atypical dynamic modal auxiliaries. A & R indicate modal auxiliaries are different from full verbs while N distinguishes them from adverbs. The more a modal auxiliary accord with these criteria, the more typical it is a modal auxiliary.

In terms of these properties, thirteen forms can be identified as modal auxiliaries: monosemic ones include 肯 ken 'be willing to', 想 xiang 'want to', 愿意 yuanyi 'be willing to', 可能 keneng 'may', 敢 gan 'dare to'; polysemic ones include 得 dei 'have to, can', 要 yao 'must, will', 会 hui 'can, will', 能 neng 'can', 能够 nenggou 'can', 可(以) keyi 'may, could', 应该/应当 yinggai/yingdang 'should', 该 gai 'should'. All thirteen auxiliaries must express modality meanings either from the sentence speaker's perspective or the sentence subject's perspective. They cannot take aspect suffix markers '了' '着' '过' directly to form a phrase, such as '应该着吃'. They cannot be reduplicated in succession, such as '可能可能'. All of them can take negation prefix markers to form negation.

### **2.2.3 Categorisation of Chinese Modality and the Semantics of Chinese Modal Auxiliaries**

#### **2.2.3.1 Categorisation of Chinese Modality**

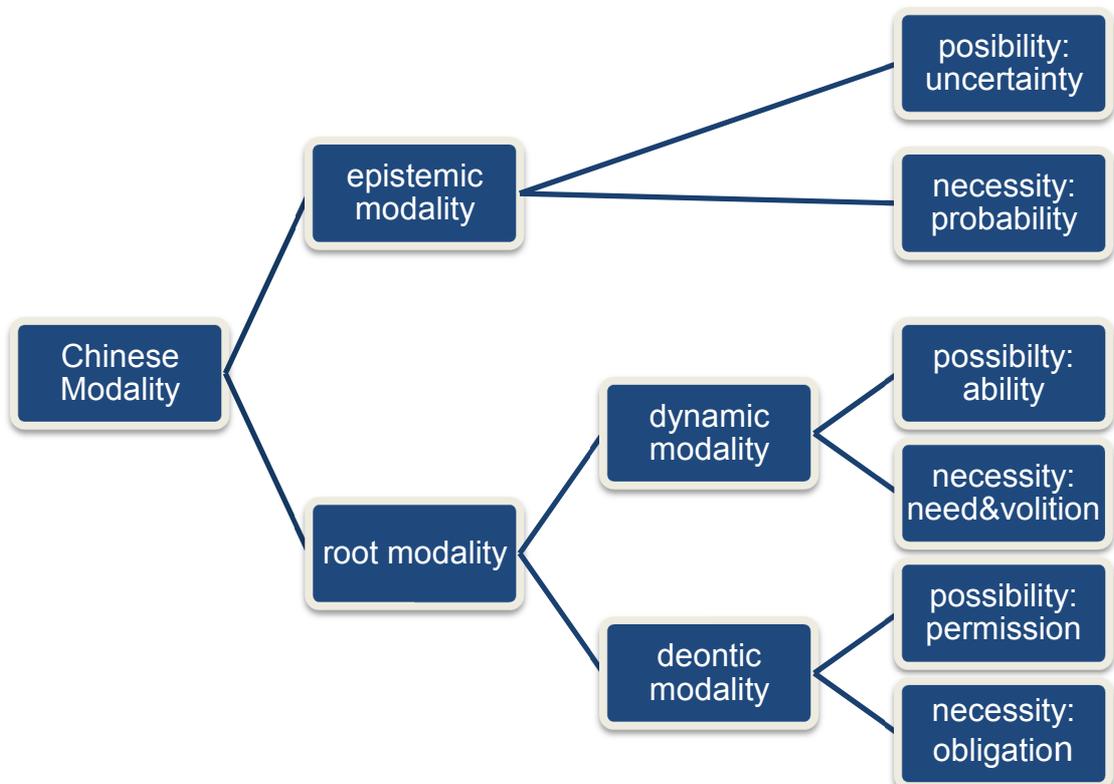
Modal meaning crucially involves the notions of necessity and possibility or rather, involves a speaker's judgment that a proposition is possibly or necessarily true or that the actualisation of a situation is necessary or possible (Depraetere & Reed 2006: 274).

Start from these two central notions, and we can make an initial distinction between epistemic and nonepistemic modality. Epistemic modality is concerned with the speaker's attitude towards the propositional content of his utterance. The speaker judges the likelihood of the truth of a proposition.

This likelihood has an inner gradability, ranging from weak epistemic possibility, that is uncertainty to strong epistemic necessity, that is probability.

The non-epistemic modality, also recognised as root modality, is concerned with the speaker's judgments about factors influencing the actualisation of the situation referred to in the utterance. There are two categories within root modality, namely dynamic and deontic modality. The former one includes the subjects' physical and mental powers and circumstances that affect them (Palmer 2001:10). The latter "identifies the enabling or compelling circumstances external to the participant as some person(s), often the speaker, and/or as some social or ethical norm(s) permitting or obliging the participant to engage in the state of affairs" (Auwera 2001:81). Chinese modality is categorised and presented with a clear hierarchy system in Figure 2-0-1.

**Figure 2-0-1 The CMA Categorisation of the Current Study**



Chinese modal auxiliaries are polyfunctional. Many can express all the modality notions, and few of them describe only one modality notion, as shown in Figure 2-0-2. Therefore, there is a great possibility that second language learners will mix and misuse polysemantic & polyfunctional CMA. And if monosemantic CMA expresses the same notion but functions differently, there will also be an error-prone tendency.

**Figure 2-0-2 CMA in Different Types of Modality**

uncertainty	probability	ability	need	permission	obligation
<ul style="list-style-type: none"><li>• 能 neng</li><li>• 能够 nenggou</li><li>• 可能 keneng</li><li>• 可以 keyi</li><li>• 会 hui</li></ul>	<ul style="list-style-type: none"><li>• 会 hui</li><li>• 要 yao</li><li>• 该 gai</li><li>• 应该 yinggai</li></ul>	<ul style="list-style-type: none"><li>• 能 neng</li><li>• 能够 nenggou</li><li>• 可以 keyi</li><li>• 会 hui</li></ul>	<ul style="list-style-type: none"><li>• 要 yao</li><li>• 想 xiang</li><li>• 愿意 yuanyi</li><li>• 肯 ken</li><li>• 敢 gan</li></ul>	<ul style="list-style-type: none"><li>• 能 neng</li><li>• 能够 nenggou</li><li>• 可以 keyi</li></ul>	<ul style="list-style-type: none"><li>• 要 yao</li><li>• 得 dei</li><li>• 应该 yinggai</li><li>• 该 gai</li></ul>

### 2.2.3.2 The Semantic Features of Chinese Modal Auxiliaries

#### Monosemantic CMA

可能 keneng 'may'

可能 is a modal auxiliary specialised for epistemic modality, expressing possibility. It is used to estimate whether something will become a fact or not.

(13) 他今天没有来上课，可能生病了。

He didn't come to the class, maybe because he got ill.

(14) 天上有很多云，一会儿可能会下雨。

There are heavy clouds in the sky. It might rain in a moment.

(15) 昨晚我梦到了金子，今天我可能中大奖。

Last night I dreamt of gold. Therefore I may win the lottery.

Sentences (13) – (15) all carry the meaning of possibility. The prediction can be true or not in reality. In (13), the reason he didn't come to class does not have to be illness. In (14), whether it will rain or not remains to be testified. In (15), a dream has no connection with lottery winning, and it is a pure wish.

敢 gan 'dare'

敢 is another monosemantic modal auxiliary specialised for dynamic modality. It relates to strong courage, which comes to cause the ultimate action or event. Lv (1980: 186) expresses that 敢 means have the courage to do sth.

(16) 文文面对着严厉的公婆，不敢再骂，只敢低头坐了下来。

Wenwen faces strict parents-in-law, not gan curse again, only gan bows her head and sits down.

Wenwen dare not curse again in front of her strict parents-in-law but bows her head and sits down.

(17) 她很是不满，心想，等我给你们生了孙子，看你们还敢这么对我？

She is very unsatisfied, thinks, when I am pregnant with your grandson, see if you still can treat me like this?

She is very unsatisfied, thinks that if she could be pregnant with their grandson, they dare not mistreat her.

In sentence (16), 敢 appears in its negation form 不敢 *bù gǎn* 'not dare', to express sb dare not do sth. And it is often combined with the adverb 只 *zhǐ* 'only', to form a set phrase 只敢 *zhǐ gǎn* 'only dare', to indicate sb has no other choice but to do sth with courage. In sentence (17), 敢 occurs in the interrogative construction (还 *hái*+) CMA+Verb (+吗 *ma* 'sentence particle') +?. 敢 combines with a verb, usually, add 还 to intensify the rhetorical mood, does not express question, but strong confirmation. In sentence (17), it means 'dare not' instead of 'still dare'.

According to Lv (1980: 187), 敢 can also indicate sb has the confidence of judging sth is true or not.

(18) 她今晚肯不肯来参加你的生日晚会，我还不肯肯定。

She tonight is willing not willing to come to your birthday party. I still dare not confirm.

Whether she is willing to come to your birthday party, I am not sure yet.

The sentence's central notion (18) is not about sb having the courage to do sth, but about whether sb can judge the true or false of a situation or event. How this judgement is made is related to the speaker's courage. Even if 敢 appears in a judgemental sentence, it still indicates dynamic modality instead of indicating epistemic modality.

肯 ken 'be willing to'

肯 ken is a modal auxiliary specialised for dynamic modality. It relates to the participant's subjective willingness. Liu (1983: 776) explores three implications of 肯.

Firstly, 肯 can express the intention of striving for sth, even facing difficulties.

(19) 遇到困难，他肯动脑筋、想办法。

When facing difficulties, he is willing to search for solutions.

(20) 在学习方面，小李是肯下苦工夫的。

Xiao Li is willing to work very hard on the study.

When expressing willingness, 肯 implicate difficult situation, or there will be obstacles to conquer as shown in the sentence (19) and (20).

Secondly, 肯 implicates that sb hands favourable conditions to others. Under this implication, 肯 is often in the form of negation 不肯 buken 'is not willing to'.

(21) 大家都很渴，但这杯水谁也不肯喝。

Everybody is thirsty, but nobody is willing to drink the last cup of water.

(22) 还有这么多工作要做，他怎么肯先走？

There is still so much work to do. How could he be willing to leave earlier than others?

In the sentence (22), 肯 occurs in the rhetorical question construction 怎么 zenme 'how'+肯+verb, and also carries a negative meaning 'is unwilling to'.

Thirdly, 肯 expresses the agreement to sb's request.

(23) 你答应我的条件我才肯去。

I am willing to go unless you agree to my requirement.

(24) 工人们坚持所提出的条件，一点也不肯让步。

The workers stick to their demand and are unwilling to compromise.

The modal auxiliaries 想 xiang and 愿意 yuanyi also express dynamic modality, means 'is willing to'. But there are differences between 想, 愿意 and 肯.

Unlike 想 and 愿意, which can be modified by 很 hen 'very', 肯 cannot be modified by the adverb of degree. The sentence (25) & (26) are grammatical, while the sentence (27) is not.

(25) 我很想跟你结婚。

I very want to marry you.

I am very willing to marry you.

(26) 我很愿意跟你结婚。

I very wish to marry you.

I am very willing to marry you.

(27) \*我很肯跟你结婚。

\*I very ken marry you.

I am very willing to marry you.

And unlike 想, 肯 and 愿意 suggest that sb is responsive to an offer, a request or a suggestion, which I name as “responsive selection”. It means that there has to be a precondition for the sentence participant to agree to or not. In the sentence (26) & (27), there should be sb who proposes first as a precondition, then the sentence participant ‘I’ chooses to agree or not. In other words, the sentence participant is the one who accepts a proposal. But in sentence (25), the sentence participant ‘I’ can be the one who makes the proposal instead of accepting it.

While 肯 and 愿意 can both implicate responsive selection, there are still semantic differences.

愿意 is at the thinking phase, while 肯 is accompanied by action. When willingness is opposite to action, 肯 cannot be used. The sentence participant does not necessarily need to do sth he/she 愿意 do, and the participant can do sth he/she 不+愿意 bu yuanyi ‘is unwilling to’ do. As to 肯, if the participant is willing to do sth, then he/she will do it, and vice versa.

(28) 王红当然不愿意与小林争执，但是她无论如何也不能放任小林去招摇撞骗。

Wanghong is unwilling to quarrel with Xiaolin, but she cannot simply let him go and defraud others of money.

(29) \*王红当然不肯与小林争执，但是她无论如何也不能放任小林去招摇撞骗。

\* Wanghong will not quarrel with Xiaolin, but she cannot simply let him go and defraud others of money.

In sentence (28), if Wanghong wants to prevent Xiaolin from committing fraud, she has no choice but to fight him. 愿意 implicates that though she is unwilling to quarrel, she will fall into a dispute inevitably. But in the sentence (27), if Wanghong 不肯 buken 'not ken' fight with Xiaolin, she will not fight him. But she needs to prevent him from committing a crime, which makes dispute inevitable. The sentence then becomes illogical.

(30) 李明丢了工作。他没钱，没住处，没饭吃，只好来和老乡老方一块儿过。不过，李明不愿意白住人家家，他盼着有份工作，自食其力。

Liming lost his job. He became homeless and breadless. And he had no choice but to live with his fellow townsman Laofang. But he didn't want to be a freeloader. He wanted to find a new job and earn his own living.

(31) \*李明丢了工作。他没钱，没住处，没饭吃，只好来和老乡老方一块儿过。不过，李明不肯白住人家家，他盼着有份工作，自食其力。

Liming lost his job. He became homeless and breadless. And he had no choice but to live with his fellow townsman Laofang. But he determined he was not a freeloader. He wanted to find a new job and earn his own living.

In sentence (30), Liming had already lived with Laofang because of his unemployment. Though he 不愿意 was unwilling to be a freeloader, in reality, he was one. In sentence (31), if Liming 不肯 be a freeloader, then he couldn't live in Laofang's house without paying rent. But he already resided in Laofang's house freely, and there is no way he is not a freeloader in reality. The sentence becomes illogical again.

想 xiang 'be willing to'

Modal auxiliary 想 *xiang* relates to hope, intention, or interest, which may cause the ultimate action or event. Polyfunctional modal auxiliary 要 *yao* can also indicate 'decide to do sth'. And under this notion, 要 is specialised for dynamic modality, which I categorised as 要 1. These two volition modal auxiliaries are similar in semantics. But there are also differences between them, making them irreversible under certain circumstances.

Firstly, 想 can be modified by adverbs of degree, such as 很 *hen* 'very', 非常 *feichang* 'very', 最 *zui* 'most', 真 *zhen* 'very', 极 *ji* 'extremely', 特别 *tebie* 'especially' and etc. But 要 1 can not be modified by these adverbs. As the following examples demonstrate, the sentences (31) & (33) are grammatical while the sentences (32) & (34) are not.

(31) 胃里空空如也，极想吃点什么。

My stomach is so empty that I want to eat something desperately.

(32) \*胃里空空如也，极要吃点什么。

\*My stomach is so empty that I desperately determine to eat something.

(33) 可以给我留个电话吗？特别想再联系你。

Could you please leave me your contact number? I really want to contact you again in the future.

(34) \*可以给我留个电话吗？特别要再联系你。

\*Could you please leave me your contact number? I really determine to and will contact you again in the future.

Secondly, 想 is at the thinking phase, while 要 1 demonstrates more vital determination that will be accompanied by action. When willingness is opposite to ultimate action or event, 要 1 cannot be used.

(35) 我想学中文，可是我却按照父亲的要求考进了哲学系。

I wanted to learn Chinese, but I finally learnt Philosophy under my father's requirement.

(36) \*我要学中文，可是我却按照父亲的要求考进了哲学系。

\* I would learn Chinese, but I finally learnt Philosophy under my father's requirement.

(37) 我想学中文，可是父亲非让我报考哲学系。

I want to learn Chinese, but my father wants me to study Philosophy.

(38) 我要学中文，可是父亲非让我报考哲学系。

I decide to learn Chinese, but my father wants me to study Philosophy.

In the above sentences (35) & (36), the result of 'learning Philosophy' is an actual reality opposite to the participant's wish, so that 想 is used instead of 要 1. In sentences (37) & (38), whether the participant learns Philosophy or not remains unknown. In other words, it is unknown to the reader whether the willingness is opposite to the actual reality or not. Thus, both 想 and 要 1 can be used.

Thirdly, since 要 1 indicates a more vital determination than 想, when adverbs such as 一定 yiding 'must', 非 fei 'have to', 偏 pian 'have to', 硬 ying 'impose on' and so on appear before the modal auxiliary, 想 cannot be used. The same goes for adverbial modifiers that intensify participant's willingness. For example, 决心 juexin 'determine', 坚决 jianjue 'resolve', 执意 zhiyi 'insist on', 竭力 jieli 'strain every nerve' and etc. In the following sentences, the sentences (39) & (41) is grammatical, while the sentences (40) & (42) are not.

(39) 这次一定要好好跟他谈谈，让他不要轻言放弃。

This time, I will undoubtedly have a good talk with him to prevent him from giving up so easily.

(40) \*这次一定想好好跟他谈谈，让他不要轻言放弃。

\*This time, I want to undoubtedly have a good talk with him to prevent him from giving up so easily.

(41) 我执意要叫出租车送她回家。

I insist on sending her home by taxi.

(42) \*我执意想叫出租车送她回家。

\*I insist on wanting to send her home by taxi.

Fourthly, from a pragmatic perspective, when the wish or intention of the sentence participant is related to another person, for example, when asking for suggestions, 想 is very polite. But 要 1 implicates imposing one's request on somebody. The word 您 nin in the sentence (43) is an honorific form of the word 你 ni in the sentence (44).

(43) 我想求您办点事儿

I want to beg you for help.

(44) 我要找你办点事儿。

I am gonna require you to help me.

愿意 yuanyi 'be willing to'

This dynamic modal auxiliary expresses that a certain action or situation conforms to the sentence participant's wish.

As we have briefly explored in the above content, like 想, 愿意:

1) can be modified by the adverb of degree such as 很 hen 'very', 非常 feichang 'very', 特别 tebie 'very' and etc.

(45) 咱们约个时间吧, 我很愿意和你们聊天。

Let's set up an appointment, and I will be very pleased to chat with you.

2) can remain on a thinking phase without actual action, and the real action can be opposite to the wish.

(46) 本来他不愿意告诉我们的, 但是架不住我们死缠烂打, 最后还是告诉我们的了。

He didn't wish to tell us the truth but eventually told us since we insisted on knowing.

3) cannot replace 要 1, when adverbs such as 一定 yiding 'must', 非 fei 'have to', 偏 pian 'have to', 硬 ying 'impose on', or adverbial modifiers that intensify participant's willingness such as 决心 juexin 'determine', 坚决 jianjue 'resolve', 执意 zhiyi 'insist on', 竭力 jieli 'strain every nerve' and so on appear before the modal auxiliary. The sentence (48) is ungrammatical, while the sentence (47) is correct.

(47) 我非要/坚决要去圣诞舞会。

I insist on attending the Christmas dancing party.

(48) \*我非愿意/坚决愿意去圣诞舞会。

\*I very wish to attend the Christmas dancing party.

But unlike 想, 愿意 is responsive to an offer, a request or a suggestion. It means that there has to be a precondition for the sentence participant to agree to or not.

(49) 暑假我想去上海，那儿好玩儿吗？

I want to go to Shanghai on summer vacation. Is Shanghai fascinating?

(50) \*暑假我愿意去上海，那儿好玩儿吗？

\*I agree to go to Shanghai on summer vacation. Is Shanghai fascinating?

(51) 暑假大家可以选择去上海、北京、成都玩儿，我愿意去上海。

Among Shanghai, Beijing and Chengdu, I wish to go to Shanghai.

In the sentence (49), the sentence participant 'I' is subjective initiative, so that 想 is used. In the sentence (50), nobody suggests going to Shanghai. 愿意 as a responsive modal auxiliary becomes illogical because there is no one to respond to. But in the sentence (51), there are three places to choose from as a precondition, so that 愿意 can be used here.

It has to be emphasised that regarding 愿意's responsive selection feature, it can form a positive-negative construction 愿意+不 bu 'not'+愿意, to ask if the sentence participant is willing to do something or not, implicating making a choice.

(52) 你愿意不愿意做我的学生？

Are you willing to be my student?

(53) 小王愿意不愿意穿蓝色的裙子？

Is Xiaowang willing to wear a blue dress?

Table 2-0-2 summarise the similarities and differences among monosemantic volition modal auxiliaries 想, 要 1, 愿意, 肯.

**Table 2-0-2 The Semantic Differences of the Volition CMA**

<b>Features</b> <b>Volition</b> <b>CMA</b>	subjective initiative	thinking phase	action phase	thinking & action reversible
想 xiang	x	x		x
要 1 yao 1	x		x	
愿意 yuanyi		x		x
肯 ken			x	

As the table presents, 想 relates to subjective initiative, can remain at a thinking phase without taking actual action. If real action happens, it can be opposite to the will. 要 1 also relates to subjective initiative, but thinking is accompanied by action so that the real action cannot be opposite to the wish. 愿意 is responsive, can remain at a thinking phase, and can generate action opposite to wish. 肯 is responsive and accompanied by action and cannot cause real action that is the opposite of the thinking phase.

### **Polysemantic CMA**

能 neng 'can'

能 can be used in speech to indicate permission. While it can be interpreted to mean ability, the primary notion is still permission. 能够 is the synonym of 能. Therefore the current study will focus on 能. Lv (1982: 246) explores six situations where 能 is used.

能 indicates sb is good at doing sth, and it can be modified by adverbs of degree 很 hen 'very' and 最 zui 'most'.

(53) 这个人真是能说会道。

This person has the gift of gab.

(54) 他很能照顾周围的人。

He is very good at taking care of the people around him.

能 can express epistemic modality, demonstrating the speaker's conjecture. In the sentence (55), it indicates a possibility about whether he is capable enough of coming or not due to late time.

(55) 这么晚了他能来吗?

It is very late, will he be able to come?

能 expresses sb is permitted to do sth according to human reason. And it is usually used in a negative sentence or interrogative sentence. In the sentence (56), the speaker 'I' have the ability to tell sb the correct answer but cannot do so because of human reason. The permission notion is not generated by an actual person but by external conditions.

(56) 我可以告诉你这道题该怎么做，可是不能告诉你答案。

I can tell you how to do this exercise, but I cannot directly tell you the answer.

能 expresses sb is permitted to do sth according to external circumstances. And it is usually used in a negative sentence or interrogative sentence. In the sentence (57), 能 forms a rhetorical question form with the help of

interrogative phrase 怎么 zenme 'how'. It implicates people are not permitted to pick flowers in the garden. 'Garden' here is the external circumstances.

(57) 公园的花怎么能随便摘呢?

How could you pick flowers at your will in the garden?

能 explicitly expresses the meaning of ability: sb or organisation has the ability or condition to do sth.

(58) 他的腿伤好多了，能慢慢儿走几步了。

His leg is healing, and he can walk a little slowly.

(59) 因为缺少教员，学校暂时还不能开课。

The school cannot reopen under the condition of staff shortage.

能 can also express sth has a particular function. Instead of human's ability, it refers to non-living things' capabilities.

(60) 橘子皮儿还能做药。

The orange peel can make medicine.

The current study finds Lv's six definitions of 能 overlap each other. As demonstrated above, definitions (1) & (5) are related to the human inner ability. (2), (3) & (4) are about external conditions and circumstances. (6) is to express non-living things' capacity. To further conclude the meaning of 能, it can be (a) subjective, expressing the internal ability of people or things; or (b) objective, indicating the permission of external circumstances.

可以 keyi 'can'

可以 expresses two notions, one is possibility that is named 可以 1, and the other is permission that is named 可以 2.

When indicating a kind of possibility, 可以 1 expresses internal ability, internal desire or external conditions.

(61) 十英镑可以买一件衬衫，对吗？

Ten pounds can buy one shirt, right?

(62) 我可以参加这场辩论会。

I can attend this debate.

(63) 我要是有这么个女儿，下半辈子就可以衣食无忧了。

If I have such a good daughter, I will be kept warm and fed when I am old.

The above sentence (61) explains what 10 pounds can afford, which relates to inner ability. The sentence (62) implies the speaker can and have the intention to attend a debate, which indicates internal desire inexplicitly. In the sentence (63), 'a good daughter' is a precondition of good later life for the sentence participant 'I'.

When indicating a kind of permission, 可以 2 expresses permission of social or ethical norms, or permission of the speaker. The speaker's permission presents two pragmatic usages, one indicates suggestion, and the other is to 'allow sb to do sth'.

(64) 小王犯了故意伤害罪，根据情节可以判处五年徒刑。

Xiaowang convicted of intentional assault, and can be sentenced to five years in prison.

(65) 既然他写过诗，冒充一下大文学家有什么不可以？

He wrote poems before. Why can't he pretend to be a litterateur?

(66) 水开了才可以把饺子下进去。

Only when the water is boiling can dumplings be put into the pot.

In the sentence (64), the five-year sentence is permitted by law. The sentence (65) indicates a person is not allowed to pretend to be a litterateur regarding ethical norms. While in the sentence (66), the correct way to boil dumplings is instructed by common social sense.

(67) 你如果不认识路的话，可以叫出租车。

You can call a taxi if you don't know the way.

(68) 这本书很有趣，你可以买来看看。

This book is fascinating, and you could buy and read it if you want.

(69) 我可以帮你打个电话问一问。

I can make a phone call for you.

(70) 我可以给你介绍几个不错的老师。

I can introduce some good teachers to you.

The above sentences are presenting the speaker's suggestions. When making suggestions, there are always other people involved. So the sentence subject often takes a second-person perspective, such as the

sentences (67) & (68). The speaker can also suggestively offer help so that the sentence subject is first-person, as the sentences (69) & (70) present.

可以 2 can express permission explicitly. The speaker directly allows the sentence participant to do something, as the following examples present:

(71) 下课了，你可以回家了。

The class is over, and you can go home.

(72) 你可以问我三个问题，我会如实回答。

You can ask me three questions which I will answer honestly.

能 and 可以 1 both carry the meaning of ability. But 能 can be preceded by phrases of degree to emphasise the notion of quantity, while 可以 1 cannot function like this. The adverbs of degree should imply a high degree, and the adverbs indicating a low degree cannot perform as 能's modifier. Adverbs such as 很 hen 'very', 挺 ting 'very', 非常 feichang 'very', 特别 tebie 'very', 十分 shifen 'very' and 最 zui 'most' express a high degree. A low degree is exemplified by 稍微 shaowei 'a little', 有点儿 youdianer 'a little', 有些 youxie 'some' and etc.

(73) 他很能吃，又很能喝，还很能干。

He eats a lot, drinks a lot, and works a lot.

(74) \*他很可以吃，又很可以喝，还很可以干。

\*He very can eat, very can drink, and very can work.

(75) 结婚生子是人生大事，特别能改变人。

Marriage and pregnancy are significant life milestones for a person, which can change that person immensely.

(76) \*猫咪有点儿能睡觉，一天能睡十几个小时。

The cat likes to sleep a little and can sleep for over ten hours a day.

很能 henneng in the sentence (73) does not only express one has the ability to eat, drink and work, but also emphasises one can eat and drink a lot and undertake plenty of work. 能 indicates active participation. A high degree adverb cannot modify 可以 1. 可以 1 implicates there are no obstacles for sb to do sth, involving a notion of passive acceptance. The sentence (74) turns out to be ungrammatical. 能 in the sentence (75) does not explicitly mean quantity, but still demonstrates that marriage and pregnancy will change people's life significantly. In the sentence (76), 能 implies cat likes to sleep and sleeps a lot, if the low degree adverb 有点儿 modifies 能, the sentence becomes illogical.

(77) 我可以去，但是你那儿太远了，咱们找个近点儿的咖啡馆吧。

Although I can go, your place is too far, let's find a nearby cafe.

(78) \*我能去，但是你那儿太远了，咱们找个近点儿的咖啡馆吧。

\*I can go, but your place is too far, let's find a nearby cafe.

你下星期二能来上课吗？

Can you come to the class next Tuesday?

(79) 我可以来，但是我每天上午都得去医院。

Although I can come to the class, I have to go to the hospital every morning.

(80) \*我能来，但是我每天上午都得去医院。

\*I can come to the class, but I have to go to the hospital every morning.

As the current study mentions, 能 relates to active participation while 可以 1 relates to passive acceptance. 可以 1 can be used to suggest that even if the sentence participant is not willing to perform an action under disadvantages, but when things become inevitable, the participant can manage to act reluctantly. 能 suggests the sentence participant has a strong will and ability to take action. In the above sentences (77) - (80), the sentence participant 'I' present other preference or other priority in reality. The latter half of the sentences indicates his/her real wish. Thus, the former half-sentences express not strong will but reluctant acceptance. Therefore, the above sentences (78) & (80) are grammatically correct but semantically illogical.

会 hui 'can'

Lv (1982: 246) points out 会 expresses the ability to do something or not. The current study explores this usage of 会 in detail as 会 1.

会 1 indicates someone knows how to do something or has the ability to do something.

(81) 他不但会作词，也会谱曲。

He is a lyricist as well as a composer. (He can write lyrics and music.)

(82) 她完全不会做三文鱼。

She doesn't know how to cook salmon.

Similar to 能, 会 1 also expresses someone is good at something, and can be preceded by adverbs of degree, such as 很 hen 'very', 真 zhen 'very', 最 zui 'most' and so on.

(83) 精打细算，很会过日子。

Sb is shrewd in money matters and can live a very good life.

Further to Lv's argument, Zhu (1982: 62) emphasises 会 1 mainly indicates skills acquired by learning or training. The current study adds that this learned knowledge and skills have constancy and are not related to a specific time and place.

(84) 你会滑雪吗?

Do you know how to ski?

(85) \*你今天会滑雪吗?

Do you know how to ski today?

(86) \*你在阿尔卑斯山上会滑雪吗?

Do you know how to ski in the Alps?

Ski is not an inborn ability but a skill acquired. Once you learnt it, you will always know how to ski. It does not matter with time or place. You know how to ski today, tomorrow, the day after tomorrow and in a longer time. You know how to ski in the Alps, in other mountains or any ski resort. It is illogical in sentences (85) & (86) that one only knows how to ski today and only in the Alps.

Xu (1993: 45) points out that when modified by the adverbs of degree, 会 1 means very good at something. But when preceded by the adverbs of range, including 只 zhi 'only' and 就 jiu 'only', 会 1 indicates complaint.

(87) 一天到晚就会发牢骚。

(Sb) does nothing but only whines all day.

(88) 成天只会给家人添麻烦。

(Sb) does nothing but only causes troubles for family members.

Besides dynamic modality, 会 expresses possibility of an event. The Chinese modal auxiliaries have no variations in terms of tense. The tense can be indicated by temporal words or aspect makers 了 le, 着 zhe, 过 guo or the sentence end particles 的 de. 会 can express possibility of past or present or future, depending on the moment the speaker speak the sentence. 会 of this usage is regarded as 会 2.

(89) 你怎么会知道的?

How could you come to know the truth?

(90) 现在他不会在家。

He should not be at home now.

(91) 不久就会听到确实消息的。

(We) will receive a true message soon.

The sentence (89) is a rhetorical question sentence, with the sentence end particle 的 intensifying the past tense. It suggests that though 'you' should not know the truth, you already knew it. The sentence (90) is speculation of the present. When the speaker is speaking the sentence, he/she makes speculation of sb's current location. The sentence (91) suggests the intrinsic futurity of 会 2. This sentence is a typical prediction of the future event.

Based on the speaker's timing of speaking the sentence, 会 2 can be related to the notion of aspect. By expressing aspect, 会 2 can predict the possibility

of a future event, conjecture about a virtual event under subjunctive mood, and explain a current situation under real condition.

(92) 花不久就会开的。

The flowers will bloom soon.

(93) 要不是他们的支持，我们的处境会更困难。

If they hadn't supported us, we would be facing more complex situations.

(94) 你的病之所以会加重，是因为你太不注意休息。

You pay little attention to rest, aggravating your illness.

The sentence (92) indicates 会 2's prediction usage. The speaker predicts the future blossom of the flowers by observing their current conditions. The sentence (93) is 会 2's conjecture usage in subjunctive mood sentence. 会 2 expresses the present that would be different if something had not happened.

The sentence (94) indicates 会 2's explanation usage. 会 2 explains a certain reason under real condition. Under the condition that the speaker does not take enough rest, his/her illness gets worse.

Tao (1997: 80) argues that though 会 2 and 能 can both appear in the latter clause of the conditional sentence, 能 can also be used in the former clause of the conditional sentence while 会 2 can not.

(95) 大家既然有了您的支持，就会赢得胜利。

Since we already have your support, we will win.

(96) 大家既然有了您的支持，就能赢得胜利。

Since we already have your support, we can win.

(97) 如果你能把车借给我一星期，我可以给你两千块钱。

If you can lend me your car for one week, I can give you 2000 yuan.

(98) \*如果你会把车借给我一星期，我可以给你两千块钱。

\*If you will lend me your car for one week, I can give you 2000 yuan.

The former clause of the conditional sentence appears as a presupposed condition in form but a factual basis for the latter clause in function. The latter clause is a speculative result of the former clause. Since the former clause is a factual basis for the latter clause, it expresses factuality instead of prediction for the latter clause. Therefore, the CMA that expresses objective fact can be used in the former clause, while the CMA that expresses subjective conjecture cannot. In the sentences (95) & (96), our victory is an actual result of 'your support'; thus, 能 and 会 2 can both appear in the latter clause of a conditional sentence. In the sentence (97), 'you can lend me your car' functions as an objective fact, while in the sentence (98), 'you will lend me your car' suggests subjective prediction. The sentences (97) & (98) are grammatically correct but semantically illogical.

The following Table 2-0-3 summarises the differences between polyfunctional CMAs 能 and 会.

**Table 2-0-3 Semantic Differences between 会 and 能**

Semantic \ CMA		会	能
ability	skilful	x	
	volume		x
prediction	former clause of the conditional sentence		x
	inevitable result marker '的' and future adverbial modifier '将'	x	
negation 不+CMA	impossible	x	x
	prohibitive		x

Firstly, while 会 expresses ability notion, 能 emphasises the volume of the ability, while 会 emphasises the skillfulness of the ability.

(99) 小王特别能说。

Xiaoxi Wang talks too much.

(100) 小王特别能吃。

Xiao Wang eats a large amount of food.

(101) 小李特别会说。

Xiao Li is good at communication.

(102) 小李特别会吃。

Xiao Li is good at savouring food.

As the sentence (99) presents, 能 suggests that Xiao Wang talks a lot, which might be naggy and repetitive. In the sentence (100), Xiao Wang can eat a

large amount of food without actually evaluating the dishes quality. Xiao Wang is a ravenous eater of food. In the sentence (101), 会 1 suggests Xiao Li is excellent at communication skills. And in the sentence (102), Xiao Li is more of a gourmet than a big eater. 能 relates to the quantity, while 会 1 refers to the quality.

Secondly, as the current study has explored, 能 can be used in the former clause of a conditional sentence, while 会 2 cannot. It has to point out that though both of the CMAs can be used in the latter clause of a conditional sentence, when the latter clause is emphasising inevitable predictive result in combination with the result marker 的 de or adverbial modifier 将 jiang 'in the future' indicating future time, 会 2 is used instead of 能. The sentence (104) is grammatically incorrect.

(103) 斯内普教授一直在研究各种传染病，我相信将来会有奇迹发生的。

Professor Snape has been researching infectious diseases for many years, and I believe miracles will happen in the future.

(104) \*斯内普教授一直在研究各种传染病，我相信将来能有奇迹发生的。

\*Professor Snape has been researching infectious diseases for many years, and I believe miracles can happen in the future.

Thirdly, 能 and 会 can occur in the negation construction 不 bu 'not' + CMA, forming their negation forms 不能 and 不会. 不能 expresses impossibility or prohibition, which represent epistemic modality and deontic modality. In certain pragmatic situations, once the epistemic 不会 is changed into 不能, it describes deontic modality. Therefore, these two negation forms are not interchangeable.

(105) 你总是说谎，以致你说了真话，谁也不会往心里去。

You always tell lies; thus, no one will take it seriously even if you tell the truth.

(106) \*你总是说谎，以致你说了真话，谁也不能往心里去。

\*You always tell lies; thus, everyone is forbidden to take it seriously even if you tell the truth.

In the sentence (105), the speaker predicts that 'you' will not be trusted because of many records of previous lies. 不会 indicates speculation based on past factuality. In the sentence (106), 不能 suggests strict prohibition, and the speaker forbids people to trust 'you' when 'you tell the truth'. The sentence is grammatically correct but semantically illogical.

要 yao 'will'

要 demonstrates the central notions of necessity and obligation. The current study briefly introduced the first usage of 要 in the monosematic CMA section.

要 expresses subjective necessity that is volition. It can present the will of the speaker or the will of the sentence subject. This usage involving dynamic modality is regarded as 要 1. As exemplified by the following two sentences, the sentence (107) presents the determination of the sentence subject 'Xiao Wu', that is, 'paying the bills'. While the sentence (108) demonstrates the speaker's wish, that is, 'taking plane'. And its negation form is 不想 buxiang 'unwilling to'.

(107) 小吴坚持要由他请客。

Xiao Wu insisted on paying the bill.

(108) 我要坐飞机去，不想坐船去。

I am gonna take the plane. I don't want to take the boat.

要 also expresses necessity out of situations and reasons. It suggests an action that one has to perform. The usage involving deontic modality is regarded as 要 2. And its negation form is 不用 buyong 'do not need to' or 不要 buyao 'must not'. The sentence (109) indicates necessity from human reasons. People need to learn constantly to fulfil life. The sentence (110) presents necessity out of law (social conventions). These two sentences are necessities out of objective circumstances. The sentence (111) conveys a source of authority directly from the speaker, indicating necessities out of subjective requirements.

(109) 人活着就要学习，不然太空虚。

Living people need to learn constantly, or else the sense of emptiness will defeat them.

(110) 连环杀人犯要判死刑。

Serial killers must be sentenced to death.

(111) 他喜欢喝甜的，这杯咖啡一定要多放糖。

He likes a sweet drink, and you must put more sugar than usual in this cup of coffee.

要 can indicate epistemic modality. It suggests a certain situation is about to occur. The prediction of the situation is out of given time that does not have to be a concrete time point. The prediction can also base on factual symptoms out of sentence participant's observation or feelings. This usage will be referred to as 要 3.

(112) 我五点就要下班了。

I am about to get off work at 5 o'clock.

(113) 莉莉马上就要毕业了。

Soon, Lily is going to graduate (from the university).

(114) 燕子低飞要下雨。

The swallows are flying very low, and it must be going to rain.

(115) 脱口秀太好笑了，我肚子都要笑疼了。

The talkshow is so funny that my stomach's going to hurt.

The sentences (112) & (113) are based on known time. While the presumption in the sentence (112) is according to a specific time point, the prediction of the sentence (113) is based on the time range, that is, the university conventional graduation time. The sentence (114) is a traditional Chinese idiom. When the swallow is flying very low, it is of great possibility that the swallow is catching insects that are flying low due to the humidity of the air. The prediction is based on people's long time observation of the symptoms of rain. The sentence (115) is an exaggerated expression to demonstrate the funniness of the talk show, and it is based on the speaker's feelings.

要 can also suggest a certain situation must occur, and the negation form is 不会 buhui 'shall not'. This usage is regarded as 要 4.

(116) 期中考试不及格的要有十六人。

Sixteen students failed their mid-term exam.

(117) 大学讲师的工作并不很琐碎，行政部的工作要比之繁琐得多。

Administrator's work in the university is much more tedious than lecturer's work.

The sentence (116) presents an estimation based on the grading of examination papers. The marking results of the papers are concrete. Therefore, the estimated number of the failed students must be accurate. The sentence (117) demonstrates a comparison between the lecturer's work and the administrator's work. The comparison is based on the speaker's authentic experience in a specific university. Therefore, the comparison result is more of a fact than an inaccurate prediction.

要 3 and 要 4 present that grammaticalisation of 要 is from dynamic and deontic modality to epistemic modality. The 要 of these usages do not have an actual meaning but work functionally in a sentence. Once omitted, the sentence meaning will not change.

应该 yinggai 'should' & 该 gai 'should'

应该 and 该 both involve deontic necessity and epistemic estimation.

According to the XHCD (1978: 1370), they are explained as 'necessity out of some reasons'. The current study explores these two Chinese modal auxiliaries in comparison.

**Table 2-0-4 Semantic Differences between 应该 and 该**

Semantic CMA		应该	该
syllable structure	monosyllable		x
	disyllable	x	
sentence structure	directly followed by a verb		x
	precede modifiers modifying a verb	x	
pragmatic function	can answer a question alone	x	
	cannot answer a question alone		x
Pragmatic context	consistent with sentence participant's expectation	x	
	opposite to sentence participant's expectation		x

As Table 2-0-4 presents, 应该 is disyllable CMA that tends to collocate with disyllable word. 该 has a tendency to collocate with monosyllable word. While 应该 can collocate with quadrisyllable word, 该 is not as common as 应该 in combination with quadrisyllable word. The following examples demonstrate this syllabus combination feature. All four sentences are grammatically correct but function differently in pragmatical usage.

(118) 她已经六十多岁了，早该退休了。

She is already more than sixty, and she should retire much earlier.

(119) 她已经六十多岁了，早就应该退休了。

She is already more than sixty, and she should retire much earlier.

(120) 王副官认为他们小队应该天下闻名。

Lieutenant Wang believes their squad should be famous all over the world.

(121) \*王副官认为他们小队该天下闻名。

\*Lieutenant Wang believes their squad should be famous all over the world.

Lu (2003: 229) argues that 应该 can answer a question alone, while 该 cannot. When used alone, 该 not only carries the notion of necessity but also implicitly suggests sb deserves a negative situation.

我不应该热情款待你的亲朋好友吗？

Shouldn't I be hospitable to your relatives and friends?

(122) 应该。

You should.

(123) \*该。

\*You should. (You deserve it.)

Regarding sentence structure, 该 is usually directly followed by a verb. In comparison, 应该 can precede modifiers before the verb. As exemplified by the following sentences, in which 赚钱 zhuānqián 'earn money' and 长高 zhǎnggāo 'grow taller' are verbs, and 还能 hái néng 'still can' and 再 zài 'again' modify 赚钱 and 长高 respectively.

(124) 今年各地的桃子都大丰收，应该还能赚钱吧？

This year, peaches from different lands all have a good harvest. Should the big crop be profitable?

(125) \*今年各地的桃子都大丰收，该还能赚钱吧。

\*This year, peaches from different lands all have a good harvest. Should the big crop be profitable?

(126) 作为一个七岁的男孩子，他还应该再长高些。

As a 7-year-old boy, he should grow taller.

(127) \*作为一个七岁的男孩子，他还该再长高些。

\* As a 7-year-old boy, he should grow taller.

In terms of pragmatic context, when displaying subjective speculation, 应该 is consistent with the sentence participant's expectation. In contrast, 该 is opposite to the expectation of the sentence participant.

(128) 我一分钱也不会掏的。医疗费应该是保险公司出吧。

I will not pay a penny. The insurance company should cover the medical expense.

(129) 我给他使了半天眼色，他这么聪明，应该明白我的意思。

I shoot him several winks. As clever as him, he should understand my hint.

(130) 肖红未婚先孕，人家该笑话她了。

Xiao Hong gets pregnant before marriage. Thus, people will laugh at her.

(131) 杰克闯下了大祸，又该挨批评了。

Jack gets into big trouble, and he will be scolded again.

In the sentence (128), the speaker expects the insurance company to pay for the medical expense. And the speaker 'I' make a presumption that the company will cover the cost. In the sentence (129), the speaker 'I' make winks, hoping 'he' will get the hint. 'I' predict that 'he' will get my hint. 应该 in these two examples present expectation that is consistent with the speaker's presumption. In the sentence (130), the speaker makes an assumption that people will laugh at Xiao Hong's premarital pregnancy. The speaker is worried about her circumstances. In the sentence (131), the speaker is afraid of Jack being scolded again though the speaker admits the criticism is inevitable. 该 expresses prediction, which is opposite to the speaker's expectation.

得 dei 'have to'

得 has a deontic reading. It can indicate factual need instead of subjective necessity. This usage will be regarded as 得 1 by the current study. 得 also carries epistemic notion. It predicts that a future event must occur or appear. The current study deems this usage 得 2.

(132) 公司破产以后，王太太没钱雇用家庭厨子，她得自己下厨做饭。

After the company's bankruptcy, Mrs Wang does not have enough money to hire a family cook, and she has no other choice but to cook by all by herself.

(133) 要是宝宝出了什么意外，他们全家都得毁了。

If any incident happens to the baby, their whole family must be devastated.

In the sentence (132), Mrs Wang's future action does not come out of human reasons but of factual need. Whether she likes it or not, she has no other choice but to take the cooking chore. The sentence (133) emphasizes that if the baby comes across any incident, the whole family must fall into devastation with no doubt. There will be no other result for the family. 得 implies inevitability in both sentences.

By further exploring the inevitable action generated by 得 1, the current study argues that 得 1 can be used both in a reasonable situation and an unreasonable situation. Whether the condition is reasonable or not, somebody will have no choice but to form a certain action due to factual need. This usage is different from 应该/该. As the study previously explained, 应该 and 该 imply that a situation is necessarily so according to some reasons. Somebody 应该 'should' or 该 'should' do something if the condition is reasonable and should not do something if the condition is unreasonable.

(134) 别人抬眼看看她，她至少得骂半天街。

If people just take a glance at her, she must shout abuses in the street for quite a while.

(135) \*别人抬眼看看她，她至少应该骂半天街。

\*If people just take a glance at her, she should shout abuses in the street for quite a while.

(136) 他白天黑夜没命地干活。白天，得在工地搬砖，晚上，还得捡垃圾以卖废品补贴家用。

He works day and night without rest. In the daytime, he has to work as a building worker. At night, he has to collect waste to sell to add to his family income.

(137) \*他白天黑夜没命地干活。白天，应该在工地搬砖，晚上，还应该捡垃圾以卖废品补贴家用。

\*He works day and night without rest. In the daytime, he should work as a building worker. At night, he should collect waste to sell to add to his family income.

In the sentences (134) & (135), shouting abuses in public simply because other people glancing at the sentence participant 'she' is unreasonable. This action may be the sentence speaker's speculation based on 'her' factual personality and observation on 'her' daily life activities. In the sentence (136) & (137), working day and night without rest is not reasonable; the poverty reality forces the sentence participant 'he' to do so. These examples indicate that 得 can be used in unreasonable situations while 应该 and 该 cannot.

In a compound sentence using 应该/该, the latter clause can be opposite to the former clause. But in a compound sentence using 得, the latter clause should be consistent with the former one. The sentence participant does not necessarily perform an action that he/she should do. But the sentence participant has to perform an action that he/she 得 'has to' do, under the reason that the reality forces the person to take an action. As exemplified by the following sentences (138) & (139), the sentence participant 'I' do not need to attend the seminar in obligation according to the reason of being busy in the sentence (138). But 'I' must attend the seminar even the reality does not allow me to do so in the sentence (139). Therefore, the sentence (139) is illogical.

(138) 下午的研讨会我应该去参加，可是太忙去不了。

I should attend a seminar in the afternoon, but I am too busy to go.

(139) \*下午的研讨会我得去参加，可是太忙去不了。

\*I have no choice but to attend a seminar in the afternoon, but I am too busy to go.

应该 and 该 can be used to express that a situation or event has already happened. But 得 1 implies something has not been realized. It is intrinsically connected with futurity. In the sentence (140), Alice should have worked part-time, but she didn't. It is an action that happens in the past. The clause expresses a situation that already becomes a fact: she did not work part-time but gambled. The adverb 本 ben 'originally' reinforces the notion of the past tense. 得 1 indicates that Alice has to work part-time in the future due to the current money deficiency reality. The internal tense of the clauses in the sentence becomes contradictory. The sentence (141) is both grammatically and logically incorrect.

(140) 爱丽丝后悔得要命。她本该打工攒学费的，结果她沉迷赌博，反倒欠了一屁股债。

Alice is highly regretful. She should have worked part-time to save on tuition fees. But she is in debt now due to a gambling addiction.

(141) \*爱丽丝后悔得要命。她本得打工攒学费的，结果她沉迷赌博，反倒欠了一屁股债。

(142) \*Alice is highly regretful. She should have had to work part-time to save on tuition fees. But she is in debt now due to a gambling addiction.

得 1 indicates the factual need. This need varies in degree. Thus, 得 1 can be modified by the adverbs of degree, such as 一定 yiding 'certainly', 可 ke 'very' and so on. 应该 and 该 express the evaluation out of reasons regarding whether a situation is reasonable or not. It is irrelevant with the level or degree of need. The following sentence (143) is correct, while the sentence (144) is ungrammatical.

(143) 不论成功与失败，都是宝贵的人生经验，你一定得好好珍惜。

Success and failure are both precious life experiences that you certainly have to treasure.

(144) \*不论成功与失败，都是宝贵的人生经验，你一定应该好好珍惜。

\*Success and failure are both precious life experiences that you certainly should treasure.

## **2.2.4 CMA Usages**

After the exploration of the semantics of CMA, this section study the pragmatics of CMA to better facilitate the analysis of CMA test results in Chapter 4 & Chapter 5. Text error analysis is the crucial method to understand the CMA acquisition of the L2 learners.

### **2.2.4.1 Succession of CMA**

The previous sections divide Chinese modality into two sub-categories: epistemic and root modality. Palmer (1986: 103) claims that root modality is the source of epistemic modality. Sweetser's diachronic grammaticalisation research of modal auxiliaries also demonstrates that modality's grammaticalisation is from root modality to epistemic modality. Regarding root modality, deontic modality is more grammaticalised than dynamic modality.

The current study presents the grammaticalisation of the polyfunctional modal auxiliary 能. 能 can express dynamic modality, deontic modality and

epistemic modality, and it is the best example to demonstrate the semantic and modality changes at the different periods of history.

According to Duan (1980:1531), 能 originally refers to a person who is knowledgeable and has a strong ability in something. For example, in the phrase 推贤让能 tuixian rangneng 'recommend the worthy and give way to the able' from the Zhou Dynasty, 能 means the person who has the strong ability.

Later, 能 starts to mean somebody has some kind of abilities and expresses dynamic modality meaning. The following sentence is from a poem in the East Dynasty.

(145) 十三能织素。

When she is thirteen, she can weave.

能 also begins to express permission and gets deontic modality meaning. The following sentence is from another poem. 能 here indicates that the sentence participant is not allowed to say anything.

(146) 哀哉不能言！

Alas, I cannot say anything.

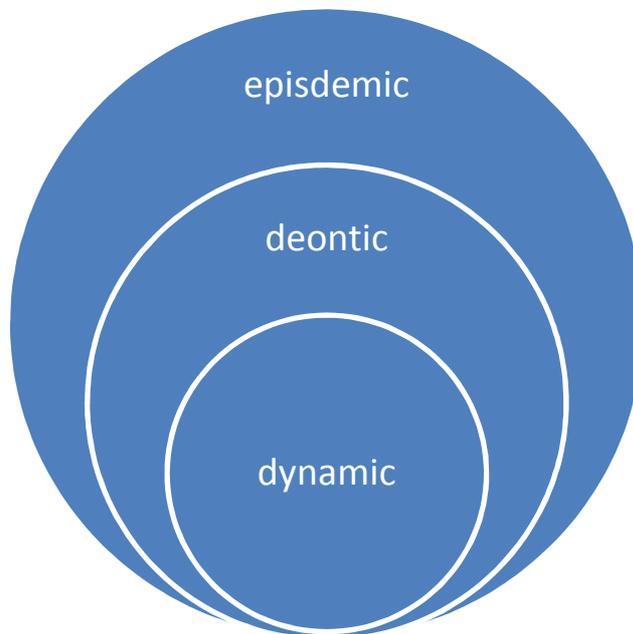
Later in the Han Dynasty, the speakers start to use 能 to show their opinions about something. More cognitive thinking is involved. 能's epistemic modality notion develops.

(147) 汝得罪上帝，我何能致力。

You offend God. How can I help you?

From the above examples of 能's diachronic grammaticalisation, as illustrated in Figure 2-0-3, deontic modality derives from dynamic modality, and epistemic modality derives from deontic modality. Therefore, the current study concludes that when three modalities co-occur with each other, the order is epistemic modality > deontic modality > dynamic modality.

**Figure 2-0-3 The Scope of Modality**



The CMA has a unique feature different from the English modal verbs. They can co-occur in succession. And the Chinese modal auxiliaries also follow the same rule when they occur in one sentence successively. The order should be epistemic > deontic > dynamic. According to Figure 2-0-4 below, there are four arrangement forms in theory when different modal auxiliaries co-occur in succession, and they are:

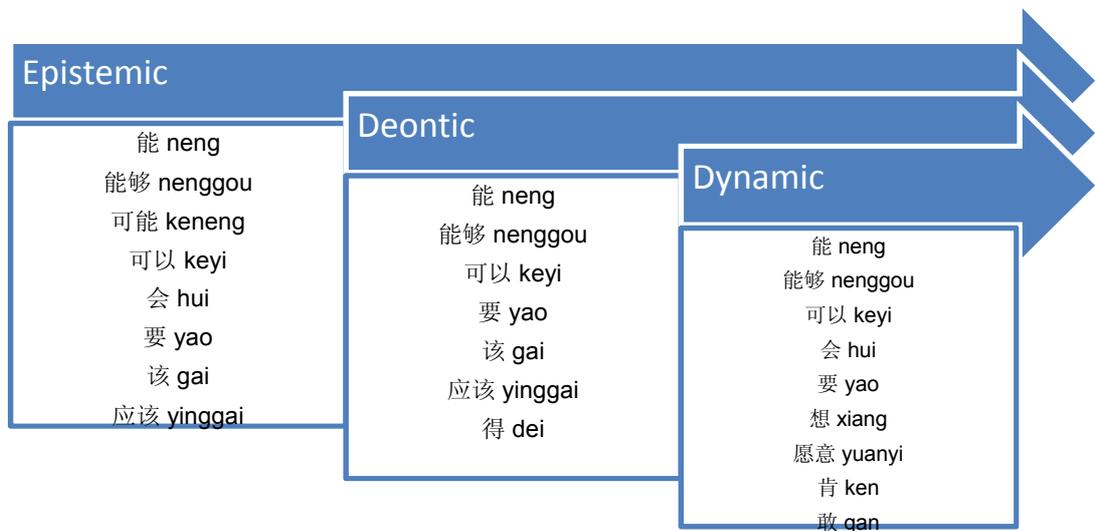
Ep > De

De>Dy

Ep>Dy

Ep>De>Dy

Figure 2-0-4 The Semantic Division of CMA



(148) 组长减轻了他的工作量，他可能可以按时下班回家。Ep>De

The group leader reduces his workload; he may can go home from work on time.

The group leader reduces his workload, and he may be able to go home from work on time.

(149) 露丝应该要做好分内的工作。De>Dy

Rose should will play her part well.

Rose should play her part well.

(150) 兰兰应该愿意接受我的求婚吧。Ep>Dy

Lan Lan should will accept my proposal.

Lan Lan should be willing to accept my proposal.

(151) 小方应该可以能完成这项任务。Ep>De>Dy

Xiao Fang should can can accomplish this task.

Xiao Fang should be able to accomplish this task.

In the sentence (148), 可能 has an epistemic interpretation, 可以 has deontic interpretation. The order of them should be 可能+可以, indicating the reduction of workload provides a possibility that the sentence speaker 'he' is allowed to go home on time. In the sentence (149), 应该 receives a deontic meaning, 要 receives a dynamic meaning. The order of them should be 应该+要. The sentence implies Rose is required to and is willing to fulfil her part of the job. In the sentence (150), 应该 carries an epistemic notion, 愿意 carries a dynamic notion. The sentence speaker 'I' make a presumption that Lan Lan is willing to accept the proposal. The order of the CMAs should be 应该+愿意. In the sentence (151), 应该 receives an epistemic interpretation, 可以 receives a deontic interpretation, 能 receives a dynamic interpretation. The order of them should be 应该+可以+能. The sentence speaker predicts that Xiao Fang is allowed and is able to accomplish the assigned task.

We can find the following arrangement forms in practical use. Different CMAs can co-occur in succession, but the CMAs that carry the same modality notion can also co-occur in succession in one sentence. The current study also explores the co-occurrence of the same modalities.

(152) 他们可能应该知道这个消息。Ep>Ep

They may should know this message.

It is possible that they should know this message.

(153) 他们应该可能知道这个消息。

They should may know this message.

It is possible that they should know this message.

(154) 林丹想要去英国。 Dy>Dy

Lin Dan want will go England.

Lin Dan will want to go to England.

(155) 林丹要想去英国。

Lin Dan will want go England.

Lin Dan will want to go to England.

(156) 她可能会能考上大学。 Ep>Ep>Dy

She might will can enter university.

It is possible that she will and can enter the university.

(157) \*她会可能能考上大学。

\*She will might can enter university.

\*It is certain that she might and can enter the university.

In the above sentence (152), 可能 has an epistemic interpretation; 应该 also has an epistemic interpretation. They are of the same type and can co-occur with each other. At the same time, the order can change in the sentence (153). The group of sentences demonstrate the speaker's speculation that the awareness of the message has a great possibility. In the sentence (154), 想 functions as a dynamic modal auxiliary; 要 is also a dynamic modal auxiliary. The order can also change in the sentence (155). This group of sentences emphasize the sentence participant Lin Dan's determination to go to England. The current study can conclude that the order of the modal auxiliaries of the same type can change with each other.

In the sentence (156), 可能 receives an epistemic notion. 会 also receives an epistemic notion. And 能 have a dynamic interpretation. The order of them is 可能+会+能. The speaker predicts that the sentence participant 'she' has a great possibility to enter the university. Though 可能 and 会 both have epistemic interpretation, their order cannot change with each other. The sentence (157) is illogical. Precisely speaking, the sentence (157) is grammatically correct but semantically contradictory. 可能 expresses that something has a possibility to happen, while 会 implies that something has a certainty to happen. When 会 precedes 可能, the logic indicates certainty for uncertain things. Thus, the sentence (157) is incorrect.

To sum up, when modal auxiliaries of different modality notions co-occur in one sentence, the order of multiple CMAs should be epistemic>deontic>dynamic. Not only can the different types of modal auxiliaries co-occur in succession, but also the same type of CMAs can succeed. The order of the same kind of CMAs can change only when their semantic meanings are not contradictory.

#### **2.2.4.2 Co-occurrence of CMA and Aspect**

The current study has explored one of the CMA characteristics in Section 2.2.2: Chinese modal auxiliaries do not directly take aspect or phase markers to form solid phrase structure. Phrases like 敢了做 *ganle zuo* 'can do', 能着学 *nengzhe xue*, 'can learn', 愿过唱 *yuanguo chang* 'willing to sing' are ungrammatical. Among the above phrases, particles of 了 *le* 着 *zhe* 过 *guo* suggest perfect phase, progressive aspect and past tense, respectively.

The Chinese language is tenseless. Although the CMA cannot form a set structure in combination with the aspect or phase markers, they can appear in one sentence simultaneously to express tense and aspect using temporal

words and CMAs. Peng (2005:130-132) observes that when a polysemantic CMA co-occurs indirectly with aspect markers in one sentence, it expresses epistemic modality, as exemplified by the following sentences.

(158) 她已经工作六年了，按理说应该习惯了朝九晚五的生活。

It has been six years since she joined the work. By rights, she should get used to a nine-to-five daily life.

(159) 你觉得我会闲着，什么也不做吗？

Do you think that I will just sit and wait and do nothing at all?

(160) 你还未成年，能去过那种酒吧？

You are underage, and it is impossible that you already went to that kind of bar.

In the sentence (158), the speaker makes an assumption that the sentence participant 'she' is used to a nine-to-five job. The rhetorical question sentence (159) implies the sentence participant 'I' will take actions in the future instead of waiting uselessly. The sentence (160) is also a rhetorical question, deducting that underage teenagers are impossible to enter a bar. All three sentences express epistemic modality when the CMAs co-occur with aspect markers 了, 着 and 过.

Regarding tense and aspect, the CMA can express a) past tense and subjunctive mood; b) future tense and conditional clause; c) present tense and progressive aspect.

(161) 王楠在酒席上几乎没动筷子，她可能在家吃过饭了。

Wang Nan hardly ate at the party. She probably ate at home already, so she was full.

(162) 要不是你引诱我参与诈骗，我本不会因为坐牢而放弃学业。

If you hadn't lured me into financial fraud, I wouldn't have dropped school due to a prison sentence.

(163) 我要离开故乡，外出闯荡了。

I will leave my hometown and seek a career in far regions.

(164) 如果你好好学习，将来肯定能考上大学。

If you study hard, you will be able to enter university in the future.

(165) 我此时此地就可以对你表白。

I can confess love to you right here right now.

(166) 你愿意一直陪着我跳一整晚舞吗？

Are you willing to accompany me all the time and dance with me the whole night?

The sentences (161) & (162) are past tense sentences. In the sentence (161), based on the fact that the sentence participant 'she' hardly ate at the party, the sentence speaker presumes that she already ate at home and was full. The sentence (162) expresses a subjunctive mood. It describes a past expectation that was opposite to the past reality. The speaker was regretful

of the financial fraud but could not change the past. He/She could only imagine what his/her life would be if a certain event had not happened.

The sentences (163) & (164) represent future tense. The sentence (163) demonstrates the speaker's determination to seek a career out of hometown and implies the speaker will take actions in the future instead of staying at a thinking phase. The sentence (164) is a conditional sentence to predict the possibility of a future event. Under the condition of studying hard, the sentence participant 'you' have a great probability of entering the university in the future.

The sentences (165) & (166) are present tense sentences. In the sentence (165), the present tense is expressed in combination with the temporal phrase 此时此地 'right now right here'. The sentence (166) indicates not only present tense but also progressive tense. The sentence participant 'you' are accompanying the sentence speaker 'I'. The sentence expresses 'my' wish that 'you' continue keeping me company and dancing with 'me'.

#### **2.2.4.3 Negation of CMA**

Generally speaking, the negation of Chinese modal auxiliaries is to add negation marker 不 *bu* 'not' before the modal auxiliary. And the negation form cannot be abbreviated.

The Chinese modal auxiliaries can also be negated by negation marker 没 *mei* 'not'. It has to be emphasized that not all CMAs can be preceded by 没. The negation marker 没 is compatible with dynamic modality, argued by Peng (2005: 182).

(167) 丈夫出事的时候，她正在英国进修，没能及时赶回来。

She was in England for further education when her husband fell into an accident. She could not come back in time.

(168) 没敢给您冲浓缩咖啡，怕您晚上睡不着觉。

I dare not serve you espresso in fear of your insomnia at night.

(169) 我没想让你受伤。

I do not want to get you injured.

(170) 小张不可以再拖延工作进程。

Xiao Zhang is not allowed to delay the task.

(171) \*小张没可以再拖延工作进程。

Xiao Zhang is not permitted to postpone the task.

(172) 你不应该践踏草坪。

You should not walk on the grass.

(173) \*你没应该践踏草坪。

You should not walk on the grass.

(174) 他不得(de)马上回家。

He is not permitted to go home right now.

(175) \*他没得马上回家。

He is not permitted to go home right now.

The sentences (167) – (169) express dynamic modality. The sentence (167) indicates the ability restricted by an external condition. The sentence (168) implies courage that relates to subjective volition. The sentence (170) relates to intention. The sentence speaker does not wish to cause the ultimate event.

The sentences (170) (172) and (174) suggest deontic modality. The sentence participants are not permitted to perform an action regarding moral suggestions or social requirements or request. The deontic modality is negated by 不. If the sentences are negated by 没, they will turn out to be ungrammatical, as exemplified by the sentences (171) (173) and (175).

**Table 2-0-5 The Asymmetric Feature of the CMA Negation Form**

CMA	Negation
想 xiang	不想 volition
要 1 volition	
得 2 prediction	不会 2 prediction
要 3 & 4 prediction	
会 2 prediction	
要 2 necessity	不用 'do not need to'
得 1 factual need	
能 1 internal ability	不能 1 subjective ability
可以 1 possibility	
可以 2 permission	不能 2 external permission
能+verb+complement	verb+不+complement

The CMA negation has an asymmetrical feature. According to Table 2-0-5, 想 and 要 1 are volition modal auxiliaries interpreting dynamic modality. They express subjective initiative that may prompt action. The negation form 不要 buyao presents request or permission. In the following sentence (176), the

speaker directly forbid the sentence participant 'you' from speaking continuously. Therefore, the appropriate negation form for 要 1 should be 不想, indicating intention or hope.

(176) 你不要再说了

Do not talk anymore.

The negation form of 得 2, 要 3, 要 4 and 会 2 is 不会 2. These four modal auxiliaries express an epistemic notion. They predict the possibility that a situation may occur under relative conditions. So they should be negated by 不会 2 that also carries predictive reading. The modality meaning of the CMA negation must be in accordance with the modality meaning of its original form. And this is the fundamental reason for the asymmetrical feature of CMA negation. As exemplified by the following sentences:

(177) 看上去要下雨。

It looks as if it is going to rain.

(178) \*看上去不要下雨。

\*It looks as if it is prohibited to rain.

(179) 看上去不会下雨。

It looks as if it is going to rain.

For the same reason, the negation form of 要 2 and 得 1 is 不用. All three have deontic interpretation expressing necessity. The negation form of 能 1 and 可以 1 is 不能 1. They express subjective ability regarding dynamic modality. The negation form of 可以 2 is 不能 2, relating to permission and obligation. They both suggest deontic implication.

The negation form of the special construction 能+verb+complement is verb+不+complement instead of 不能+verb+complement. This asymmetrical feature is explained in the example sentences (5) – (7).

In expressing double negation, the Chinese modal auxiliaries have a unique construction: 不+CMA+不. Not all modality meanings of each modal auxiliaries can form this construction.

Regarding polysemantic modal auxiliaries, 不能不 is negation for the epistemic (possibility) and deontic (permission) meaning of 能. 不应该不 is another negation for the epistemic (possibility) and deontic (obligation) meaning of 应该. 不会不 is negation for the epistemic (possibility) meaning of 会. 不要不 is negation for the deontic (obligation) meaning of 要. 不可以不 is also negation for the deontic (permission) meaning of 可以. 不得 de 不 is another negation for the deontic (permission) meaning of 得 dei.

As to monosemantic modal auxiliaries, 肯, 敢, 想 are categorised as volition modal auxiliaries expressing dynamic modality. They also have 不+CMA+不 construction 不肯不, 不敢不, 不想不. 不可能不 is negation for the epistemic (possibility) meaning of monosemantic CMA 可能.

### **2.3 The Comparative Study of CMA and English Modal Verbs**

**Table 2-0-6 The Comparison Between CMA and EMV**

Modal Auxiliaries Usages	Features	CMA	EMV	Difficulty Level
Semantic		many-to-one, many to many		split, Level 5
co-occurrence in succession		x		overdifferentiation, Level 4
negation	general negation form	negation marker+CMA	EMV+negation marker	reinterpretation, Level 3
	asymmetrical	x		overdifferentiation, Level 4
	不+CMA+不	x		overdifferentiation, Level 4
tense and aspect			x	underdifferentiation, Level 2

According to Table 2-0-6, Chinese modal auxiliaries (CMA) are significantly different from English modal verbs:

Firstly, from a semantic perspective, one EMV is usually equivalent to several CMAs, or even words of other property such as adverbs. For example, ‘can’ can be interpreted as 能 *neng*, 可能 *keneng*, 可以 *keyi*. ‘Will’ can be interpreted as 会, 要, 想. ‘Must’ can be interpreted by modal auxiliaries 应该, 该, 得 or adverbs 必须 *bixu* ‘must’, 一定 *yiding* ‘must’, 绝对 *juedui* ‘must’. Referring to Clifford Prator’s hierarchy of difficulty, the semantic usage of the CMA falls into the most complex level - level 5 split. Prator (1967) argues that if one item in L1 becomes two or more in L2, it is most difficult for second language learners.

Secondly, the CMA can be used in succession while the English modal verbs (EMV) cannot. The Section 2.2.4.1 explores the succession of the

CMA in detail. As the sentence (152) presents, the Chinese sentence is correct while the English one is ungrammatical.

(152) 小方应该可以能完成这项任务。

\*Xiao Fang should can can accomplish this task.

This feature falls into the hierarchy of level 4, implying an entirely new item needs to be learned in L2.

Thirdly, unlike the negation of English modal verbs, the negation of Chinese modal auxiliaries is to add negation marker 不 *bu* 'not' before the modal auxiliary instead of after it. The negation form of the English modal verbs is to add the negation marker 'not' after that EMV. The Chinese negation form cannot be abbreviated, while the English negation form can. The negation of the CMA has two unique features that the EMV does not have. One is the asymmetrical feature, and the other is double negation construction. The Section 2.2.4.3 demonstrates these two features thoroughly. The negation of the CMA is at difficulty level 4 in general.

Fourthly, the CMAs do not have a tense or aspect change; thus, the aspect is expressed by the inner meaning of the modal auxiliary itself in combination with temporal words or adverbs. This difference is at difficulty level 2 – underdifferentiation. It is a situation where an item in L1 is absent in L2, and the learner avoids such an item.

## **2.4 Review on CMA in Learning and Teaching Chinese as a Second Language**

This section provides a general overview of previous studies on CMA in learning and teaching Chinese as a second language. The current study

predicts the difficulties of CMA acquisition, proposes a new modal for the CMA acquisition process.

Xia (2012) classifies modal auxiliary acquisition errors into five categories - omission, addition, disorder, mixture and negation errors. She claims the possible causes of errors are mother language negative transfer, target language negative transfer, native speakers' learning strategies and teaching factors. Her analysis of mixture errors mainly focuses on the mixture between the CMA and the words of other property. From the above thorough exploration of the ontology research on the CMA, the current study presumes the mixture use among synonymous CMAs is the main error. Although she suggests the possible causes for the errors, she does not combine the causes with the CMA acquisition process. Furthermore, her choice of participants mainly focuses on one grade of students, which cannot cover the influence of different language environments and levels.

Li (2013) bases her research on HSK (Chinese Proficiency Test) corpus. By deducting and analysing learners' errors from the composition task of HSK, she categorises the usage errors of the CMA into four biases: omission bias, addition bias, negation bias and mixture bias. She mentions the importance of the quality of the exercises after class. The current study notices it is in accordance with the last stage of Bloom's Taxonomy (Cognitive Domain, 1956), involving knowledge and the development of intellectual skills. The last stage is creating, relating to continuous self-study. She neglects the misuse of the CMA succession. Since she uses the HSK corpus and does not discuss the definition and categorisation of modal verbs, her study on modal verbs focuses only on words within the HSK outline. Thus only the most commonly used CMAs are studied.

Wang (2012) investigate the development of Chinese Children's modality system acquisition. The researcher concludes the rule of modality acquisition: the deontic modality is antecedent to the epistemic modality, the uncertainty subjectivity is antecedent to the certainty subjectivity. Adult

students' cognitive ability and learning psychology are different from the children's. Therefore, her research can provide only a limited reference for the acquisition of CMA for second language learners.

Lai (2006) incorporates Klein's L2 acquisition model into analysing the causes for the CMA usage errors of the second language learners. The current study explores the cognitive model of Klein (1999), Bandura (1986) and Bloom (1956) to form a new model of the CAM acquisition process.

Zhou (2009) investigates the effects of multimedia teaching strategy on the teaching experiments of the CMA for second language learners. The research results indicate that pictures and flashes improve the teaching effects of the Chinese modal auxiliaries for lower-level learners.

Generally speaking, there are only a handful of studies on CMA in the second language acquisition field. The current study aims at providing an overall picture of CMA for both second language learners and instructors.

Based on the ontology research of CMA, the comparative study between CMA and EMV and CAH, the current study predicts the difficulties of the CMA application of the second language learners, as demonstrated in the following Table 2-0-7.

**Table 2-0-7 The Difficulties in CMA Application**

The Difficulties in CMA Application (Error-Prone)		
semantic mixture	a mixture among CMA	uncertainty 能/能够, 可以
		probability 要, 会
		ability 能, 会
		need 想, 要, 愿意, 肯
		permission & obligation 应该/应当, 该, 得, 要
	a mixture among words of other property	verb
		adverb
		conjunction
		adjective
	aspect and tense	past
subjunctive mood		
future		future tense
		conditional sentence
succession		
negation	negation	normal negation
		double negation
	question and rhetorical question	
redundant and missing	redundant	
	missing	

Klein (1986: 59-62) claims that language learning involves four tasks: analysis, synthetic, embedding and matching.

**Table 2-0-8 Klein's L2 Acquisition Model**

Tasks	Description
analysis	Segment the stream of acoustic signals into constituent units and bring the latter into line with the parallel information on concurrent events
synthetic	Put the sounds and words he has learnt together to produce and comprehend L2 utterances.
embedding	Make utterances fit the context—situational and linguistic—in which they occur.
matching	Continuously compare his current language variety with the target variety.

Klein's model presents the acquisition process of L2 learners. But in order to analyze language units, the learner should first notice the new language element. Bandura (1988) emphasizes that the process of knowledge acquisition or learning is directly correlated to the observation of models. Therefore, the current research suggests that observation comes before analysis, and attention should be given to specific language elements.

Bloom (1956) reflects the forms of thinking in education. According to his theory, the first stage of the cognitive process is knowledge, meaning recall or retrieve previous information. The current study observes that the language learners are required to refer to their existing knowledge to fulfil the synthetic task. The last stage of Bloom's model is creating. The learners build up a structure or pattern based on the previous stage of comprehension. The current study dedicates that the aim of continuous comparison between L2 learners' current language variety with the target variety is to form an interlanguage pattern that is infinitely close to the native speaker's language.

Based on the above discussion, the current study proposes a revised model for the CMA acquisition.

**Table 2-0-9 Model of the Process of CMA Acquisition**

Acquisition Stages	Empirical Activities Involved
attention	teacher instructions, textbooks, lecture, reading, audio, visual, multimedia
analysis	
knowledge	
synthetic	discuss with peers, consult dictionary, practice and use in real situations
embedding	
creating	self-study, after-class exercises, learning through errors, native language partners

To summarise, the current study aims to provide an overall picture of English native speakers' acquisition of CMAs and provide language instructors with systematical knowledge of the nature, difficulties, and teaching practice of CMAs. The research will answer the following questions:

1. Are Chinese modal auxiliaries difficult for English native speakers, and why?
2. What are the difficulties in their application of CMAs?
3. How to improve L2 learners' application of CMAs?

## **Chapter 3 Research Methodology**

### **3.1 Introduction**

Prior to the Chinese language performance test and CMA test, recruiting email was sent to students studying Chinese Degree at the University of Leeds from three grades, except for the sophomores, who are in an exchange study programme in cooperated Chinese Universities. Participants who are native English speakers are recruited.

Although the participants' language proficiency is naturally divided into three groups according to their year of study, there might be exceptions. Presumably, some students have friends or parents who can constantly practice Chinese with them after class. Or there might be students who are enthusiastic about Chinese TV drama, which leads to much extra study time outside of the university. The influence factors list can go on and on. Native English speakers' Chinese proficiency level has a high probability of being incompatible with their natural grades.

Thus, a Language performance test is carried out to reduce as many unnecessary factors affecting the reliability and validity of the research.

For the Chinese native speaking control group, students who have English-Chinese translation study background are chosen. They act as a norm in the current study to identify the significant difference between English native speakers and Chinese native speakers.

Among 60 students approached, 52 students participated and completed the language performance test and the CMA test. Excluded non-response papers, incomplete papers and poorly-answered papers, 24 test papers are qualified for text error analysis in this research.

### **3.2 Chinese Language Performance Test**

This test is designed in the form of an intensive reading test. It aims to test student's comprehension of the Chinese language and their grasp of grammar and vocabulary.

In this test, there are three types of questions. One, read and answer questions relating to the central theme of each paragraph. This is to test students' understanding of the Chinese language as a whole, including written style. As an editorial journal, this article tends to use modal auxiliaries. Students need to understand Chinese modal auxiliaries in context instead of isolating them from pragmatical usage. They will have a vague taste of the Chinese modal

Two, translate the underlined sentences into English. This is to test whether they can grasp the central meaning of a long sentence. To translate, they are required to obtain the ability to understand long sentence structure.

Three, use required words or sentence structure to make comprehensible sentences. Students' vocabulary and grammar are tested. And their ability to write Chinese characters is also examined.

According to the test result, they are divided into three groups, which are the lower, intermediate and advanced group.

### 3.3 CMA Test

As it is difficult to use a particular single method to test a particular language ability. Researchers should adopt more than one test method. Therefore, the CMA test combines different types of tasks, including multiple choice, multiple choice questions, true or false and correction, cloze test 1, cloze test 2, and translation task.

Instead of testing one CMA feature with one type of tasks, one specific feature of the Chinese modal auxiliaries is tested by various tasks. This method is applied to each CMA as well.

For example, suppose only multiple choice task is used for testing modal auxiliary 能 neng. In that case, there will be a strong possibility that students find out specific rules regarding the task items after making the same kind of choices consecutively. This kind of task design will unintentionally help students better complete the test. Therefore, it hinders the reliability and validity of the data analysis.

To test a particular language ability, I adopt splitting regulation while designing the test, from the types of the tasks to the order of the items in a certain task. In this way, this current test breaks the multiple choice items' order and avoid only using multiple choice task.

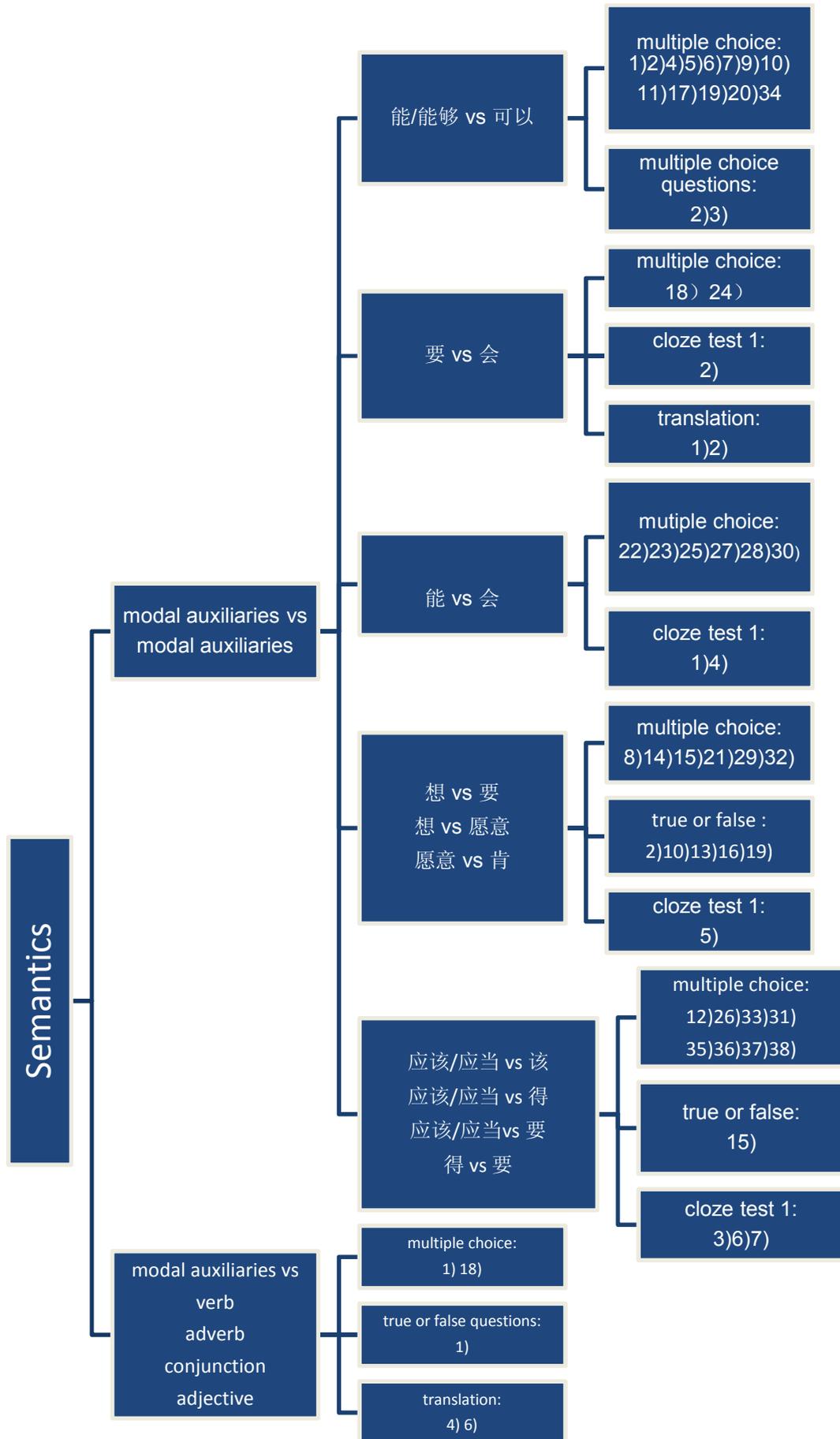
For example, there is no consecutive item order, from Item 1 to Item 10, aiming for the examination of uncertainty modality 能 and 可以. And semantic and grammatical features of 能 is spilt into different tasks. For example, the uncertainty feature of 能, is tested by multiple choice task and

multiple choice questions task. At the same time, its ability notion is examined by multiple choice task and cloze test 1 task.

After collecting the test paper, before the analysis of the data, a reverse process of splitting needs to be accomplished, which I summarised as merging regulation. The primary data will firstly be grouped back into well-organised groups according to CMA semantic and pragmatic features.

The following tables can explicitly present the splitting regulation of test design and merging regulation of data analysis. The merging process is in accordance with Chapter 2.2.3.2 and Chapter 2.4.

Figure 3-0-1 The Semantics Division of CMA



As shown in Figure 2-0-2, Chinese modal auxiliaries are polyfunctional. Many can express all the modality notions. The meanings of CMA are overlapping each other. There are both similarities and differences even between modal auxiliaries that fall into the same modality notion.

Modality can be realised via different method instead of modal auxiliaries. Modal auxiliaries are simply the most typical method. Modal adverbs and conjunctions can also express modality. Even verbs and adjectives can carry similar meaning with modal auxiliaries but function differently.

From a semantic perspective, the usage of modal auxiliaries is divided into two groups. One is the usage among modal auxiliaries, and the other is the usage between modal auxiliaries and other word class, which can also express modality.

According to Figure 3-0-1, 能/能够 and 可以 have central modal notion as ability and permission. So they will be tested in one group by multiple choice task item 1/2/4/5/6/7/9/10/11/17/19/20/34 and multiple choice questions task item 2/3.

The possibility modal notion intrinsically connected with futurity is most commonly observed in the use of 要 vs 会. They can be examined as a group by multiple choice task items 18/24, cloze test 1 item 1/2 and translation task item 1/2.

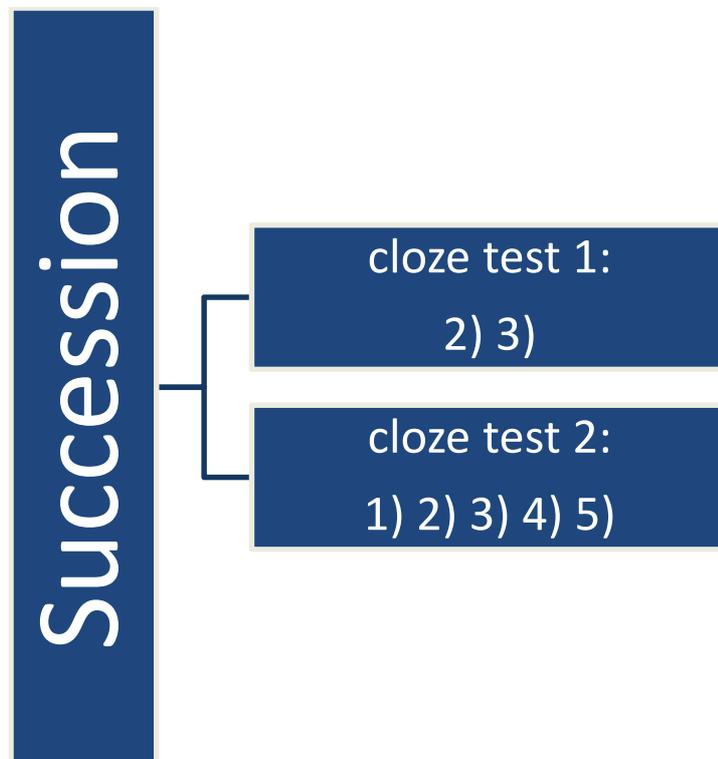
The ability modality notion is typically presented by CMA 能 and 会. They will be tested by multiple choice task item 22/23/25/27/28/30 and cloze test 1 item 1/4.

Modal auxiliaries 想, 要, 愿意, 肯, 敢 are demonstrating need or desire. This group of MA are examined by multiple choice task item 8/14/15/21/29/32, true or false task item 2/10/13/16/19 and cloze test 1 item 5.

MA 应该/应当, 该, 得, 要 carry the meanings regarding permission and obligation. They are tested by multiple choice task item 12/26/31/33/35/36/37/38, true or false task item 5 and cloze test 1 task item 3/6/7.

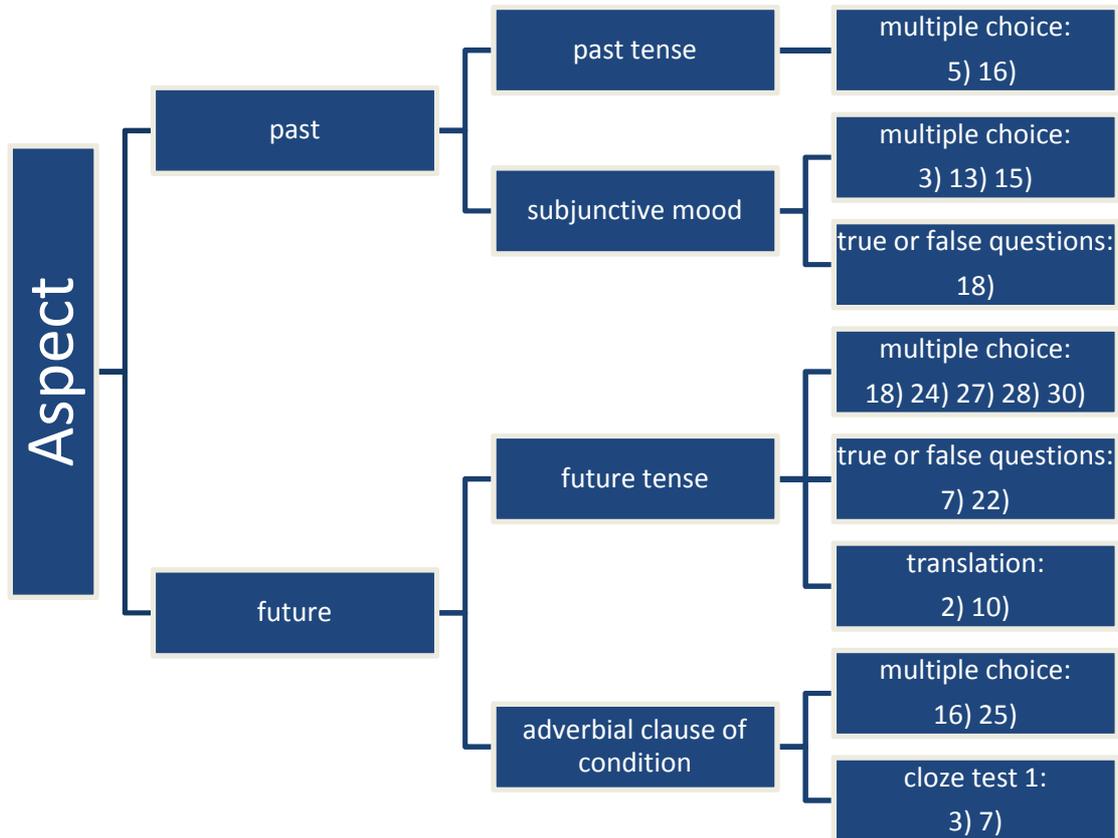
The misuse of CMA and other verb/adverb/adjective/conjunction will be examined as a whole by true or false task item 1, multiple choice task item 1/18 and translation task item 4/6.

**Figure 3-0-2 Succession Feature Examined**



The unique succession feature of the Chinese modal auxiliaries is tested by cloze test 1 item 2/3, cloze test 2 item 1/2/3/4/5, as Figure 3-0-2 demonstrated.

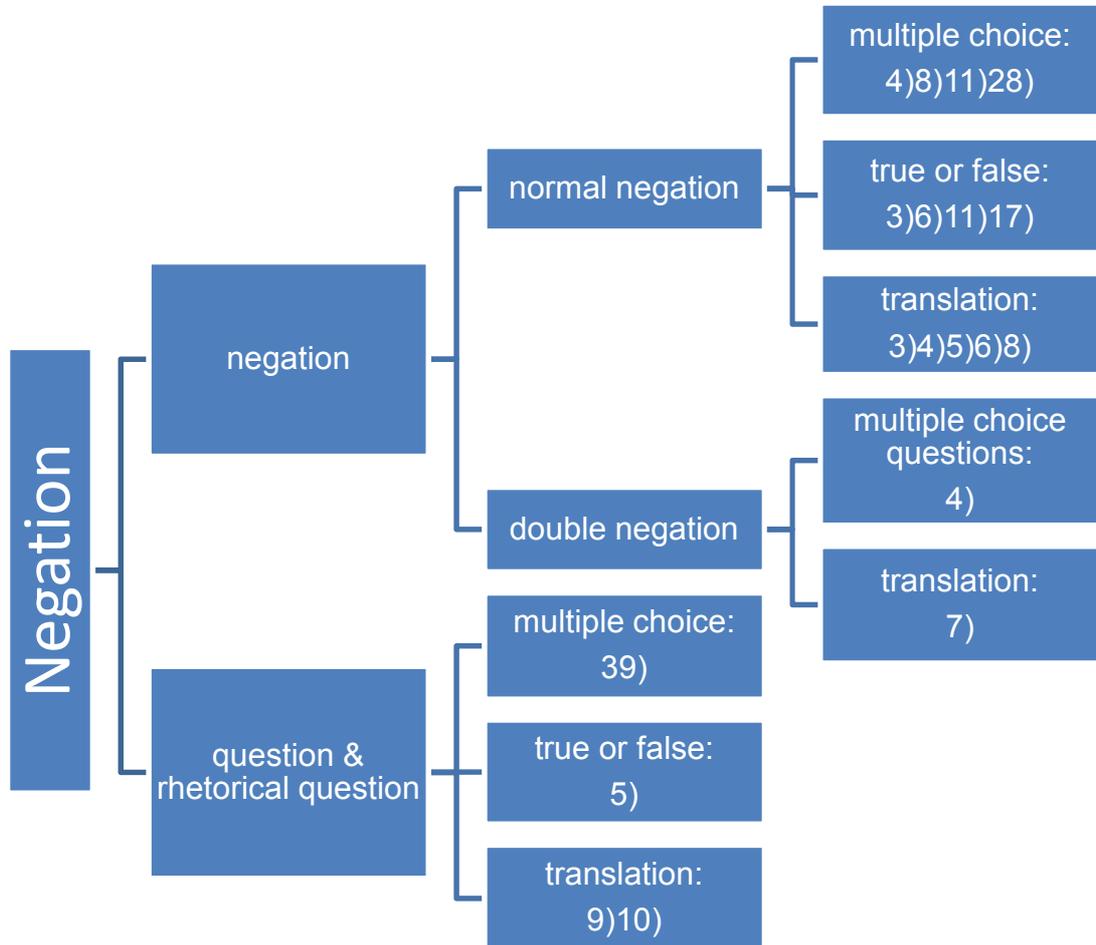
**Figure 3-0-3 Division of the CMA Cooccurrence with Aspect**



According to Figure 3-0-3, the past tense of the CMA is divided into two subgroups. The past tense usage of CMA is tested by multiple choice task item 5/16. And the subjunctive mood usage is examined by multiple choice task item 3/13/15 and true or false task item 18.

The future tense of the CMA is tested by multiple choice task item 18/24/27/28/30, true or false task item 7/22, translation task item 2/10. The conditional sentence usage is tested by multiple choice task item 16/25 and cloze test 1 item 3/7.

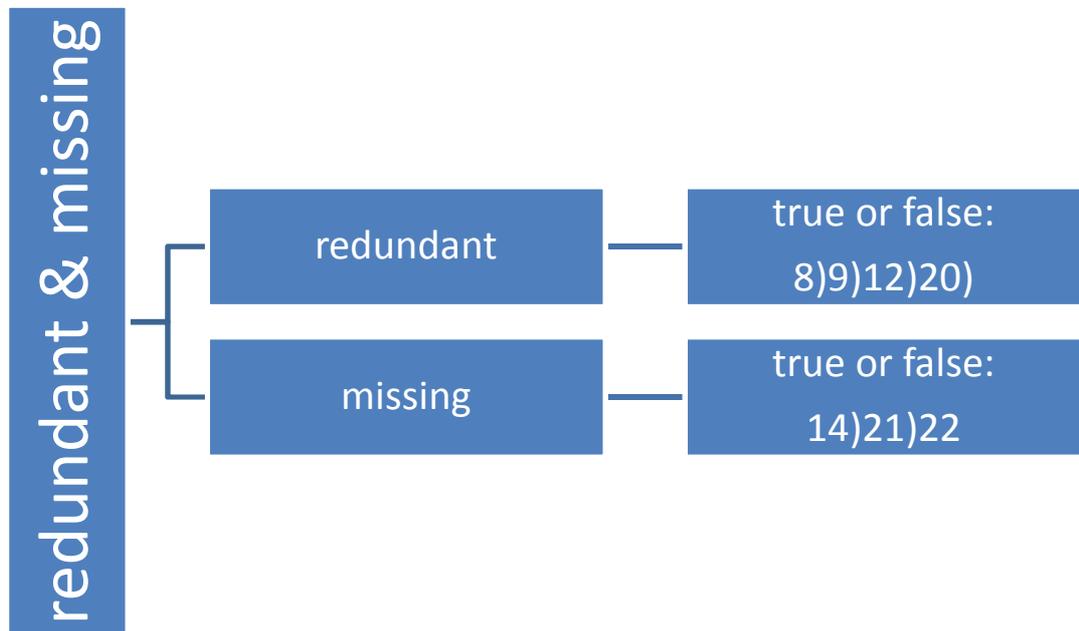
**Figure 3-0-4 Division of CMA Negation Application**



According to Figure 3-0-4, the negation feature of the CMA is divided into two subcategories. The normal negation is tested by multiple choice task item 4/8/11/28, true or false task item 3/6/11/17, and translation task item 3/4/5/6/8. The double negation is tested by multiple choice questions task item 4 and translation task item 7.

The negation of the Chinese modal auxiliaries can form question and rhetorical question sentences. This usage is examined by multiple choice task item 39, true or false task item 5 and translation task item 9/10.

**Figure 3-0-5 The Redundant and Missing Usage of CMA**



As the above Figure 3-0-5 presents, the redundant use of the CMA is tested by true or false task item 8/9/12/20. And the missing use of the CMA is examined by true or false task item 14/21/22.

### **3.4 Data Analysis**

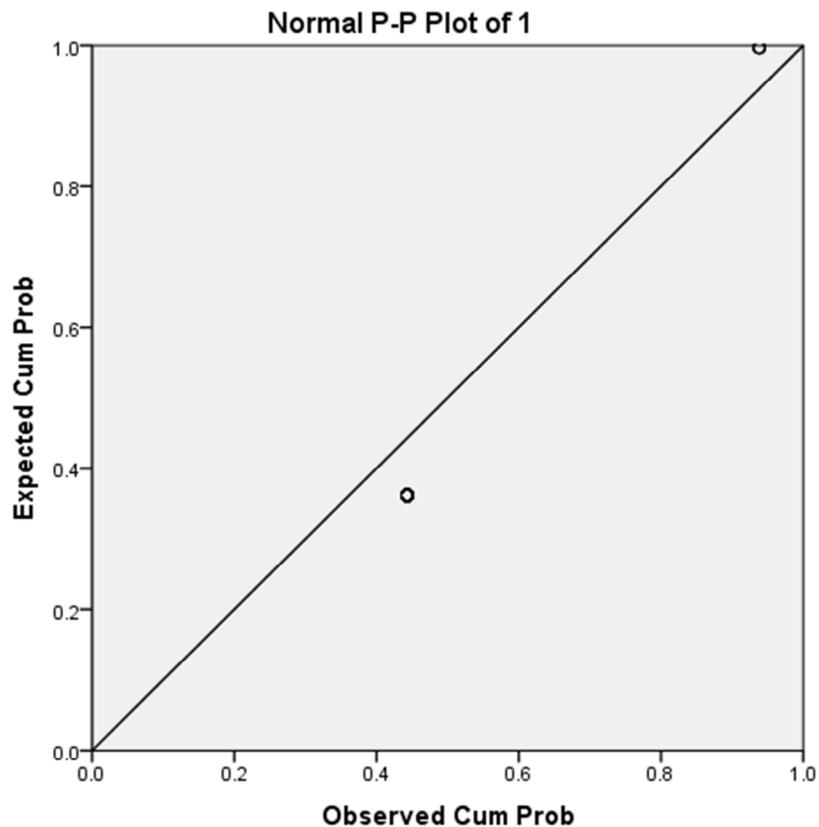
Firstly, the participants are divided into three groups according to their Chinese Language Performance Test results. The total score of the test is 100. The participants who achieved below 50 are categorized into lower-level second language learners and are coded as 1. The participants who achieved 51-70 are coded into 2 as intermediate level second language learners. The participants who achieved over 71 are coded into 3 as second language learners of advanced level.

The current study uses Statistical Package for Social Sciences (SPSS) software to assist in analysing the test data. ANOVA Test (one-way analysis of variance) in SPSS is adopted. It compares all the means to identify the significant difference among groups, including lower-level, intermediate-level, advanced level group and native group. Each group is compared with the other three groups separately. The mean difference represents the mean difference of the percentage of the correct answers. And the mean difference is significant at the 0.05 level. If the sig. number is bigger than 0.05, and there is no significant difference between groups. But if the sig. number is smaller than 0.05 or equal to 0.05; there is a significant difference between groups.

The insignificant difference will be reported as well if the test results are contradictory to the prediction of CMA difficulties. If the above research predicts the difficulty lies in language elements different from L1 for L2 learners, but the test results present contradictory, then the results are worth discussing.

Before ANOVA Test, the normality test is performed to ensure the validity of the ANOVA test. According to each question's P-P result (see Appendix C), the dots are near the diagonal line, proving the overall result obeys normal distribution. Therefore, the ANOVA test is valid. Take the following Figure 3-0-6 for example:

**Figure 3-0-6 Normal Test Result of Multiple Choice Question 1**



The dots are near the diagonal line, indicating the result obeys normal distribution.

As Gass et al (1998) suggest, interlanguage consists of the L2 system constructed in the L2 learner's mind and the language produced by the learner. Thus the L2 learner's language is independent of their L1 and the target language. During this production of interlanguage, L1 plays an important role. L2 learners can refer to their L1 when attempting to restructure their L2. This is regarded as the L1 transfer effect. The effect can be neutral, positive or negative, resulting from "the similarities and differences between the target language and the language previously acquired" (Odlin, 1989).

According to Schwartz and Sprouse (1996), if L1 English presents similar grammatical features to L2 Chinese, L2 learners tend to transfer L1

grammar entirely to L2. If lack of similarity between L1 and L2, L2 sentences will be problematic for L2 learners to interpret, as Hawkins and Hattori predict (2006). In order to find out the similarities and differences between L1 and L2, Contrastive Analysis is adopted in the current research. And to further explore the problems in the language transfer process, Error analysis is also regarded as an effective method.

Hammerley (1982) states that Contrastive Analysis provides a theoretical foundation for the explanation of errors, while Error Analysis confirms or rejects the prediction based on the Contrastive Analysis. The current study adopts Error Analysis regarding the empirical research.

The overall percentages of the correct answers in each usage of the CMA are calculated and presented in table form.

The result of every task item is presented in table form and is analysed accordingly. Because of the large number of task items from the CMA Test, the current study chooses some items from each category of application of the CMA for error analysis. The items that have small percentages of correct answers are chosen for later analysis in Chapter 5.

### **3.5 Ethical Considerations**

The current research is conducted under the guidance of the ethical policies of the University of Leeds. It is entirely voluntary from participants' own choice. All the tests are anonymous, without personal information being required.

Participants' language test paper will be destroyed by a paper shredder once being analysed. All data will only be used in my PhD thesis, while the research result may be used for relevant future research or educational practice. They will not be identified in any report or publication.

In order to show my thankfulness for students' cooperation, they will gain a printed handout of clarification and highlights of Chinese modal auxiliaries in the future. The summarised grammatical points are based on their test results to help second language learners achieve better comprehension and higher accuracy in the Chinese language.

## **Chapter 4**

### **Results and Discussion of the Overall Test**

Chapter 3 has demonstrated a detailed analytical framework for the current study. This chapter presents the overall results of CMA application of the second language learners. And the overall result of each subcategory of the CMA application is presented as well, including CMA application from a semantics perspective, application of succession, application of aspect and tense, application of negation and the redundant & missing usage of CMA.

**Table 4-0-1 The Overall Results of CMA Application Test**

**Multiple Comparisons**

Dependent Variable:

LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-2.571	.779
	Advanced Level	-4.571	.618
	Native Speakers	-68.971*	.000
Intermediate Level	Lower Level	2.571	.779
	Advanced Level	-2.000	.827
	Native Speakers	-66.400*	.000
Advanced Level	Lower Level	4.571	.618
	Intermediate Level	2.000	.827
	Native Speakers	-64.400*	.000
Native Speakers	Lower Level	68.971*	.000
	Intermediate Level	66.400*	.000
	Advanced Level	64.400*	.000

\*. The mean difference is significant at the 0.05 level.

According to Table 4-0-1, the lower level group is compared with the intermediate group. The Sig. number is  $0.779 > 0.05$ ; therefore, there is no significant difference between the two. When compared with the advanced group, no significant difference is found ( $\text{Sig. } 0.618 > 0.05$ ). When compared with the native speakers, a significant difference is found ( $\text{Sig. } 0.000 < 0.05$ ).

The intermediate group is firstly compared with the lower group, and there is no significant difference between the two ( $\text{Sig. } 0.779 > 0.05$ ). Then the

intermediate group is compared with the advanced group, and no significant difference is found (Sig. 0.827 > 0.05). Finally, the intermediate group is compared with the native speakers group, and a significant difference is found (Sig. 0.000 < 0.05).

When the advanced group is compared with the lower level group, there is no significant difference between the two (Sig. 0.618 > 0.05). The advanced group is then compared with the intermediate group, and no significant difference is detected (Sig. 0.827 > 0.05). The advanced group is finally compared with the native speaker group, and a significant difference is found (Sig. 0.000 < 0.05).

To summarise, there is no significant difference among L2 groups, whereas all three groups are significantly different from the native speaker group. The result indicates that the L2 learner's application of CMA is far from reaching the native speaker's level. The L2 learners have difficulties in using the Chinese modal auxiliaries. The result is in accordance with CAH prediction; that is, the second language elements that are different from the learner's native language will be difficult to learn.

The following tables demonstrate the sub-category application of the Chinese modal auxiliaries in the same pattern.

**Table 4-0-2 The Results of CMA Semantics Test**

**Multiple Comparisons**

Dependent Variable:  
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	2.000	.711
	Advanced Level	-2.000	.711
	Native Speakers	-34.886*	.000
Intermediate Level	Lower Level	-2.000	.711
	Advanced Level	-4.000	.461
	Native Speakers	-36.886*	.000
Advanced Level	Lower Level	2.000	.711
	Intermediate Level	4.000	.461
	Native Speakers	-32.886*	.000
Native Speakers	Lower Level	34.886*	.000
	Intermediate Level	36.886*	.000
	Advanced Level	32.886*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 4-0-2 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties in comprehending the semantics of synonymous Chinese modal auxiliaries. And L2 learners have not reached a similar level to the native speakers in the application of CMA from the semantics perspective.

**Table 4-0-3 The Results of CMA Succession Test**

**Multiple Comparisons**

Dependent Variable:  
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-2.143	.310
	Advanced Level	-.571	.784
	Native Speakers	-8.571*	.001
Intermediate Level	Lower Level	2.143	.310
	Advanced Level	1.571	.454
	Native Speakers	-6.429*	.009
Advanced Level	Lower Level	.571	.784
	Intermediate Level	-1.571	.454
	Native Speakers	-8.000*	.002
Native Speakers	Lower Level	8.571*	.001
	Intermediate Level	6.429*	.004
	Advanced Level	8.000*	.002

\*. The mean difference is significant at the 0.05 level.

As Table 4-0-2 demonstrates, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, there is a significant difference between the lower level group and the native speaker group (Sig. < 0.05). A significant difference is also found between the native speaker group and the advanced group (Sig. < 0.05). No significant difference is found between the intermediate group and the native speaker group (Sig. > 0.05).

**Table 4-0-4 The Results of CMA Aspect Test**

**Multiple Comparisons**

Dependent Variable:

LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	.286	.888
	Advanced Level	0.000	1.000
	Native Speakers	-14.400*	.000
Intermediate Level	Lower Level	-.286	.888
	Advanced Level	-.286	.888
	Native Speakers	-14.686*	.000
Advanced Level	Lower Level	0.000	1.000
	Intermediate Level	.286	.888
	Native Speakers	-14.400*	.000
Native Speakers	Lower Level	14.400*	.000
	Intermediate Level	14.686*	.000
	Advanced Level	14.400*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 4-0-4 presents, there is no significant difference among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties using Chinese modal auxiliaries to express aspect and tense. They have not reached a similar level to the native speakers. This result is consistent with the prediction of CAH; that is, L2 learners encounter difficulties when an item in L1 is absent in L2.

**Table 4-0-5 The Results of Negation Test**

**Multiple Comparisons**

Dependent Variable:  
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-1.571	.210
	Advanced Level	-1.429	.252
	Native Speakers	-6.829*	.000
Intermediate Level	Lower Level	1.571	.210
	Advanced Level	.143	.908
	Native Speakers	-5.257*	.001
Advanced Level	Lower Level	1.429	.252
	Intermediate Level	-.143	.908
	Native Speakers	-5.400*	.001
Native Speakers	Lower Level	6.829*	.000
	Intermediate Level	5.257*	.001
	Advanced Level	5.400*	.001

\*. The mean difference is significant at the 0.05 level.

As Table 4-0-5 demonstrates, there is no significant difference among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties in the negation application of Chinese modal auxiliaries. And L2 learners have not reached a similar level to the native speakers.

**Table 4-0-6 The Results of CMA Redundant & Missing Test**

**Multiple Comparisons**

Dependent Variable:

LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-1.143	.061
	Advanced Level	-.571	.333
	Native Speakers	-4.286*	.000
Intermediate Level	Lower Level	1.143	.061
	Advanced Level	.571	.333
	Native Speakers	-3.143*	.000
Advanced Level	Lower Level	.571	.333
	Intermediate Level	-.571	.333
	Native Speakers	-3.714*	.000
Native Speakers	Lower Level	4.286*	.000
	Intermediate Level	3.143*	.000
	Advanced Level	3.714*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 4-0-6 presents, there is no significant difference among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have a tendency to either overuse or lack use of the Chinese modal auxiliaries from a pragmatics perspective. And L2 learners have not reached a similar level to the native speakers.

## **Chapter 5**

### **Results and Discussion of the Different Application of CMA**

According to Table 2-1-3, the difficulties in the application of CMA are grouped into five categories: mixture use of CMA from a semantics perspective, CMA co-occurs in succession, the application of CMA in aspect and tense field, the negation of CMA and the redundant & missing use of the Chinese modal auxiliaries. Each category is further divided into several subcategories.

The mixture use of CMA includes two major types: one is the mixture use among the Chinese modal auxiliaries, and the other is the mixture use between CMA and words of other properties (verb, adverb, adjective and conjunction). The former one includes the comparisons between 能/能够 and 可以, 要 and 会, 能 and 会, volition CMA 想, 要, 愿意, 肯, obligation CMA 应该/应当, 该, 得, 要.

The application of CMA in aspect and tense field mainly focuses on the past tense and the future tense. The past tense is divided into the normal past tense and subjunctive mood, and the future tense is divided into the normal future tense and conditional sentence.

The application of CMA negation includes normal negation, double negation and negation usage in question and rhetorical question sentences.

In Chapter 5, the overall results of the five categories are explored and explained. And in the current chapter, the results of 16 subcategories are presented and analysed. The analysis is from a text analysis perspective and is integrated with error analysis and the acquisition process of CMA.

## 5.1 The Results of the Application of 能/能够 and 可以

**Table 5-0-1 The Results of the Application of 能/能够 vs 可以**

**Multiple Comparisons**  
Dependent Variable:  
LSD

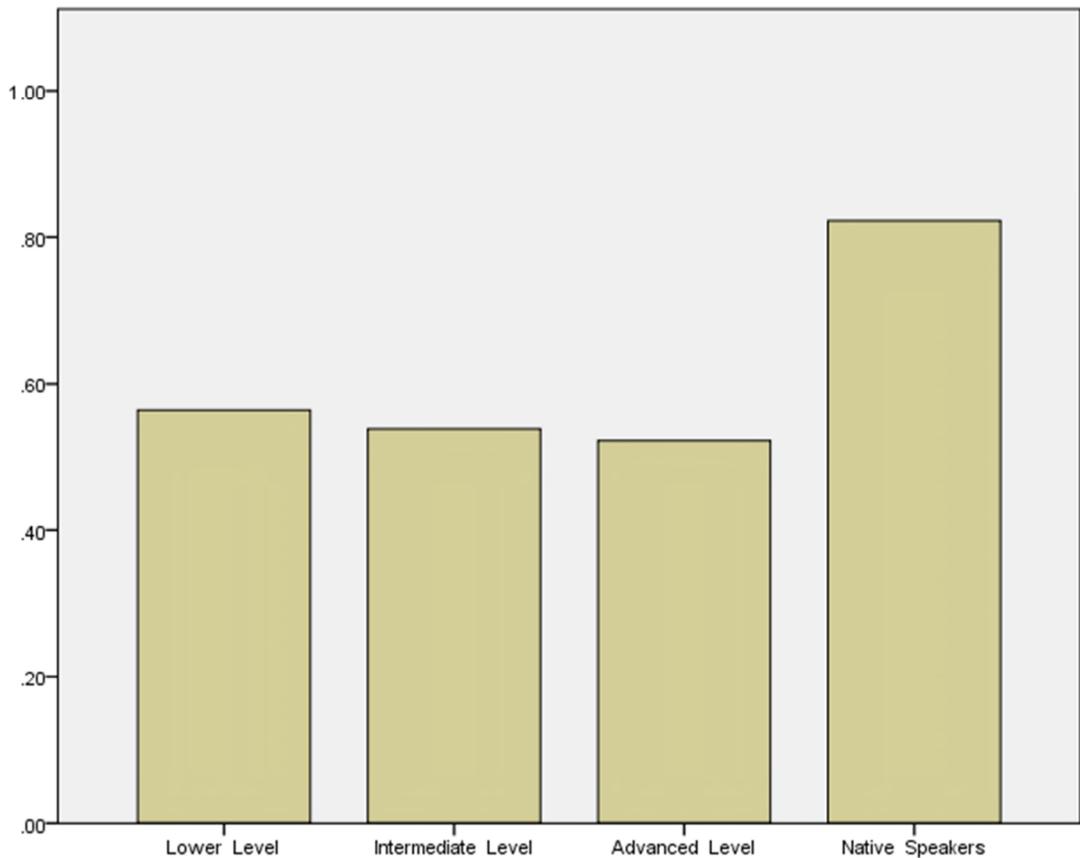
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	2.857*	.030
	Advanced Level	1.143	.363
	Native Speakers	-5.800*	.000
Intermediate Level	Lower Level	-2.857*	.030
	Advanced Level	-1.714	.177
	Native Speakers	-8.657*	.000
Advanced Level	Lower Level	-1.143	.363
	Intermediate Level	1.714	.177
	Native Speakers	-6.943*	.000
Native Speakers	Lower Level	5.800*	.000
	Intermediate Level	8.657*	.000
	Advanced Level	6.943*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-1 presents, there is a significant difference between the lower level group and the intermediate group (Sig. < 0.05). The mean difference of the percentage of the correct answers is not significantly different between the intermediate group and the advanced group (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties in comprehending the semantics of synonymous Chinese

modal auxiliaries 能/能够 and 可以. And L2 learners have not reached a similar level to the native speakers.

**Figure 5-0-1 Percentages of the Correct Answers in the Application of 能/能够 vs 可以**



As the above figure presents, around 58% of the answers from the lower level group, 57% of the answers from the intermediate group, 56% of the answers from the advanced group and about 82% of the answers from the native speaker group are correct. L2 learners are facing difficulties in distinguishing between 能/能够 and 可以. Furthermore, the native speaker also make mistakes in the application of these two modal auxiliaries.

### Multiple Choice Task Item 1

1、曹先生是大好人，必（能）原谅他，帮助他，给他出个好主意。

Mr Cao is a good man who can undoubtedly forgive him, support him and give suggestions to him.

A. 要    B. 可以    C. 能    D. 该

第 1 题	A	B	C	D	正确率
初级	71.43%	0.00%	0.00%	28.57%	0.00%
中级	57.14%	14.29%	0.00%	28.57%	0.00%
高级	71.43%	0.00%	0.00%	28.57%	0.00%
母语	20.00%	0.00%	60.00%	20.00%	60.00%

According to the above table, all three L2 groups choose a wrong option and option A is chosen most by the three groups. Around 71% of the lower level group, 57% of the intermediate group and 71% of the advanced group have chosen option A. In item 1, 必 bi ‘must’ is an adverb modifying the CMA after it; therefore, they are two separate words of different properties. In Chinese, 必要 biyao ‘necessary’ as an adjective is one word. The L2 learners choose A by mistaking adjective with phrase structure 必+CMA.

The error is caused by generalising learners’ learnt Chinese and is a negative transfer from L2. The error occurs at the knowledge stage in the process of CMA acquisition.

### Multiple Choice Task Item 7

7、他指着我说：“你怎么不爱说话了？你过去不是挺（能）说的么？”

He points at me and asks: “Why don’t you talk anymore? You love to talk a lot in the past, don’t you?”

A. 可以 B. 能 C. 想 D. 肯

第7题	A	B	C	D	正确率
初级	28.57%	14.29%	28.57%	28.57%	14.29%
中级	0.00%	0.00%	71.43%	28.57%	0.00%
高级	0.00%	0.00%	42.86%	57.14%	0.00%
母语	0.00%	100.00%	0.00%	0.00%	100.00%

As the above table presents, option C and option D are the most chosen wrong options by all three L2 groups. 能 in the item indicates sb is good at doing sth, and it is modified by the adverbs of degree 挺 ting 'very'. The sentence expresses that 'I' used to talk a lot. The phrase 不爱 buai 'do not like to' is opposite to 爱 ai 'like to'. And 爱 is a synonym of 想 and 肯.

This implies that the L2 learner again overgeneralise their previously learnt Chinese. The error happens at the knowledge stage.

#### Multiple Choice Task Item 9

9、那些日子里她每次上街都要有国庆走在身边，这样她就（可以）不必提心吊胆。

In those days, she had to be accompanied by Guo Qing whenever she went out. This way, she didn't have to feel nervous.

A. 能 B. 可以 C. 想 D. 应该

第9题	A	B	C	D	正确率
初级	28.57%	42.86%	14.29%	0.00%	42.86%
中级	42.86%	28.57%	14.29%	14.29%	28.57%
高级	42.86%	42.86%	0.00%	14.29%	42.86%
母语	40.00%	60.00%	0.00%	0.00%	60.00%

As the above table presents, the most chosen wrong option is option A for all L2 groups. As the current study mentions, 能 relates to active participation while 可以 1 relates to passive acceptance. Therefore, 可以 1 usually

precedes a negation structure while 能 does not. In item 9, 可以 1 precedes the construction 不必 bubi 'not'+ adjective.

The second language learners make mistakes because they do not know this usage of 可以 1. It is hard to distinguish between synonyms from a pragmatics perspective. The error happens at the embedding stage.

### Multiple Choice Item 11

11、（ 可以 ）说，这是我吃过的最丰盛的晚餐。

You can say that it is the best meal I have ever eaten.

A. 能     B. 不得     C. 可能     D 可以

第 11 题	A	B	C	D	正确率
初级	0.00%	14.29%	57.14%	28.57%	28.57%
中级	14.29%	0.00%	57.14%	28.57%	28.57%
高级	0.00%	14.29%	14.29%	71.43%	71.43%
母语	0.00%	0.00%	0.00%	100.00%	100.00%

The most chosen wrong option for the lower level group and the intermediate group is option C. 可以说 keyishuo 'it can be said that' is an idiom phrase in Chinese. The lower-level and intermediate groups may make mistakes because of lacking knowledge of the idiom, while the advanced group has that knowledge.

Furthermore, the EMV can is expressed by several CMA, such as 可能 and 可以. When one item in L1 becomes two or more in L2, the learner needs to make a new distinction. The L2 learners have difficulties in the embedding and creating stage due to the negative transfer of L1.

### Multiple Choice Question Item 2

2、他的腿伤好多了，（ ABC ）慢慢儿走几步了。

His injured leg becomes better and better, so he can walk a bit slowly.

A. 能 B. 能够 C. 可以 D. 可能

第 2 题	A	B	C	D	正确率
1	100.00%	71.43%	57.14%	28.57%	42.86%
2	100.00%	85.71%	71.43%	28.57%	57.14%
3	85.71%	57.14%	28.57%	42.86%	0.00%
4	100.00%	100.00%	100.00%	0.00%	100.00%

As the above table presents, all three groups of language learners make mistakes by choosing option D. The option A/B/C CMAs express dynamic modality (ability) while the option D CMA represents epistemic modality (speculation).

L2 learners face difficulties when distinguishing among synonymous CMAs due to L2 negative transfer. Moreover, it is hard for L2 learners to grasp one language element in L1 that splits in L2. The mother tongue negative transfer and second language negative transfer intertwine together, resulted in CMA application errors made by L2 learners.

## 5.2 The Results of the Application of 要 and 会

**Table 5-0-2 The Results of the Application of 要 vs 会**

**Multiple Comparisons**  
Dependent Variable:  
LSD

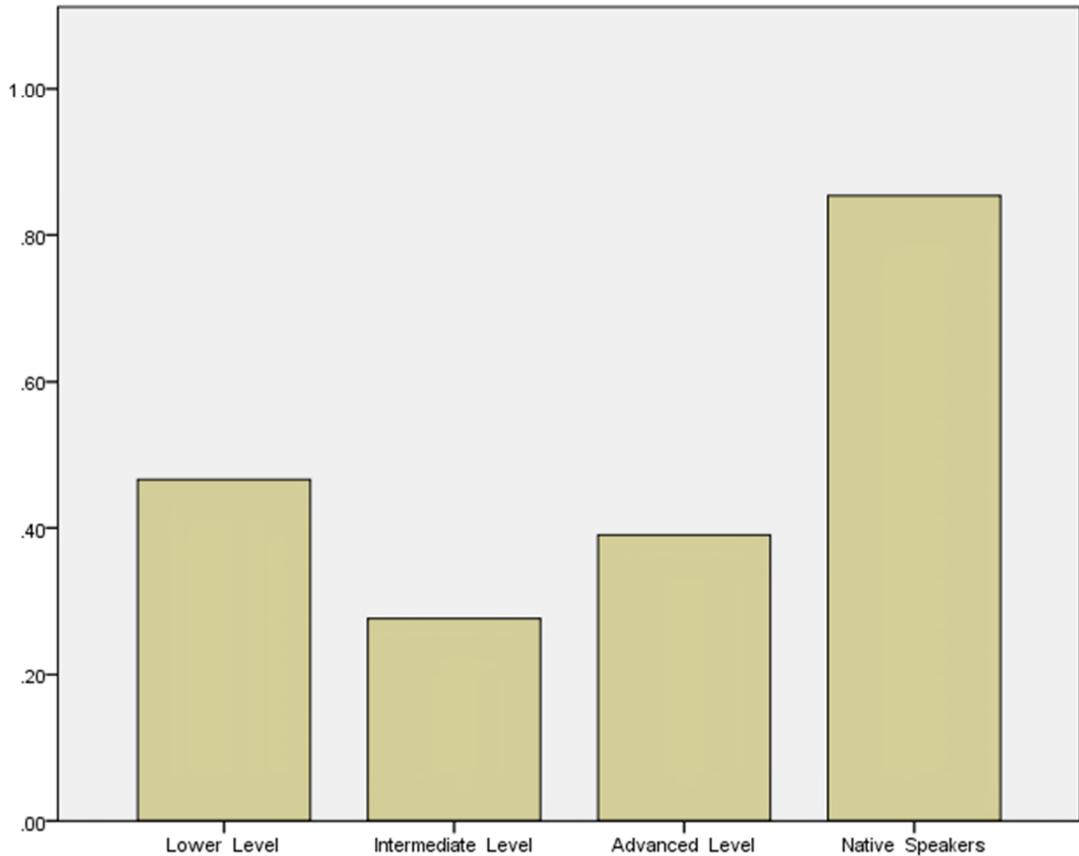
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-1.286	.215
	Advanced Level	0.000	1.000
	Native Speakers	-4.171*	.001
Intermediate Level	Lower Level	1.286	.215
	Advanced Level	1.286	.215
	Native Speakers	-2.886*	.016
Advanced Level	Lower Level	0.000	1.000
	Intermediate Level	-1.286	.215
	Native Speakers	-4.171*	.001
Native Speakers	Lower Level	4.171*	.001
	Intermediate Level	2.886*	.016
	Advanced Level	4.171*	.001

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-2 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties in comprehending the semantics of synonymous Chinese modauxiliaries 要 and 会. And L2 learners have not

reached a similar level to the native speakers in the application of CMA from the semantics perspective.

**Figure 5-0-2 Percentages of the Correct Answers in the Application of 要 vs 会**



As the above figure presents, around 43% of the answers from the lower level group, 25% of the answers from the intermediate group, 40% of the answers from the advanced group and about 83% of the answers from the native speaker group are correct.

L2 learners are facing difficulties in distinguishing between 要 and 会. Furthermore, the native speaker also make mistakes in the application of these two modal auxiliaries.

It has to be emphasized that error rates can be much higher when the negative transfer occurs than when no previously learnt language element exists. The lower level group's error rate is lower than the intermediate group can be from lacking L2 knowledge. As the second language learning progresses, the L2 learners are exposed to enough context situations, and the error rates will reduce. Thus, the error rate of the advanced group is lower than the intermediate group.

#### Multiple Choice Item 24

24、你们别逗了，我肚子都（ 要 ）笑疼了。

Don't make me laugh; my stomach is going to hurt.

A. 会    B. 想    C. 要    D. 可能

第 24 题	A	B	C	D	正确率
初级	71.43%	0.00%	28.57%	0.00%	28.57%
中级	71.43%	0.00%	14.29%	14.29%	14.29%
高级	28.57%	14.29%	57.14%	0.00%	57.14%
母语	0.00%	0.00%	100.00%	0.00%	100.00%

As the above table presents, the most chosen wrong option is option A. Around 71% of the lower level group, 71% of the intermediate group and 29% of the advanced group choose option A, suggesting that L2 learners have difficulties in the application of 要 and 会.

In this item, 要 is of its third usage 要 3, and 会 is of its second usage 会 2. 要 3 and 会 2 can both express subjective speculation. However, they have different focuses. 要 3 emphasises tendency while 会 2 focuses on results. In item 24, the sentence indicates a tendency that 'my' stomach will hurt possibly. In comparison, 会 2 implies the certainty of a stomachache. Language learners cannot express certainty for possible tendency.

L2 language learners are aware of the epistemic notion of 要 3 and 会 2.

However, their existing knowledge of L2 has a negative transfer effect on the practical application within context.

### Cloze Test 1 Item 2

2、要、会

明天（ 会 ）有明天必须（ 要 ）做的事。

Tomorrow, you will have other things that you have to do.

2.会		2.要	
0	1	0	1
42.86%	57.14%	57.14%	42.86%
14.29%	85.71%	28.57%	71.43%
42.86%	57.14%	71.43%	28.57%
0.00%	100.00%	0.00%	100.00%

In the above Table, 0 represents the wrong answer, and 1 represents the correct answer. As the table presents, all three L2 groups have a high error rate in applying 要 and 会. The 会 in the above item indicates an epistemic meaning, predicting tomorrow's workload. 要 presents a deontic meaning, emphasising that the work is required to accomplish. The epistemic modality precedes the deontic modality.

The L2 learners have difficulties in judging the types of modality that 要 and 会 express. Their lacking of knowledge causes the error.

### 5.3 The Results of the Application of 能 and 会

**Table 5-0-3 The Results of the Application of 能 vs 会**

**Multiple Comparisons**  
Dependent Variable:  
LSD

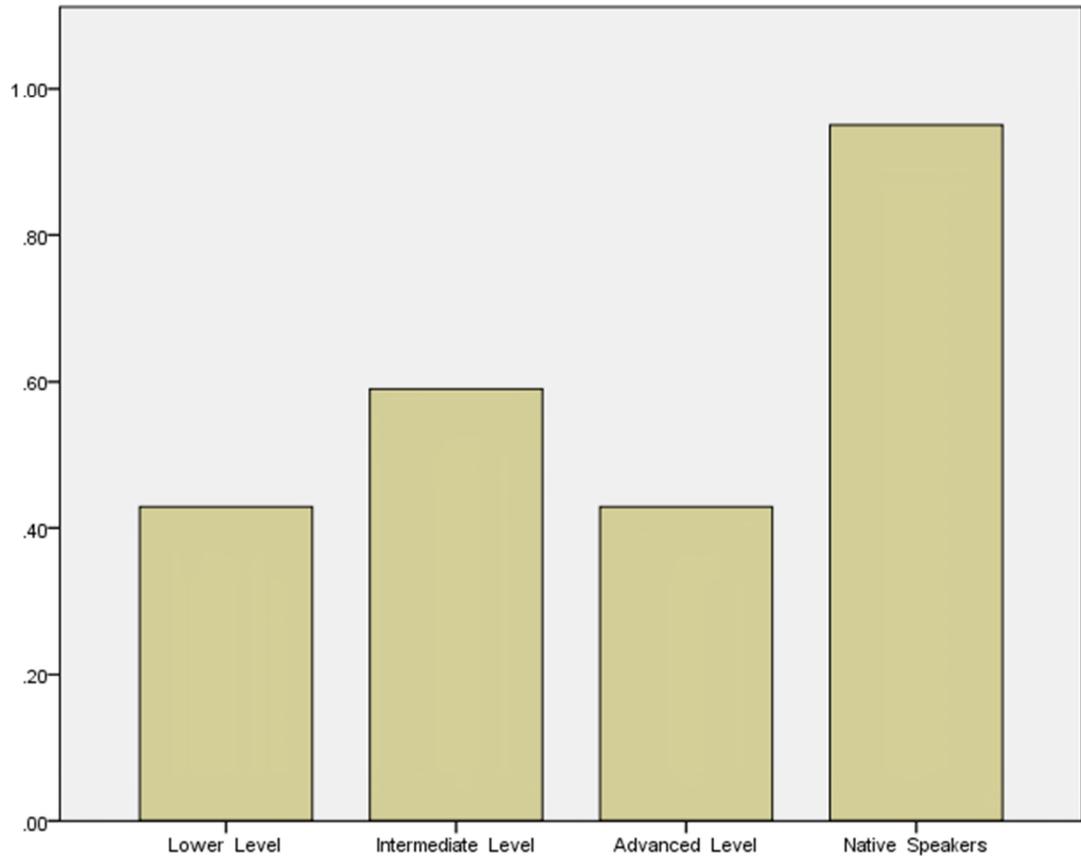
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.286	.829
	Advanced Level	.429	.746
	Native Speakers	-7.086*	.000
Intermediate Level	Lower Level	.286	.829
	Advanced Level	.714	.590
	Native Speakers	-6.800*	.000
Advanced Level	Lower Level	-.429	.746
	Intermediate Level	-.714	.590
	Native Speakers	-7.514*	.000
Native Speakers	Lower Level	7.086*	.000
	Intermediate Level	6.800*	.000
	Advanced Level	7.514*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-3 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties in comprehending the semantics of synonymous Chinese modal auxiliaries 能 and 会. And L2 learners have not

reached a similar level to the native speakers in the application of CMA from the semantics perspective.

**Figure 5-0-3 Percentages of the Correct Answers in the Application of 能 vs 会**



As the above figure presents, around 42% of the answers from the lower level group, 59% of the answers from the intermediate group, 42% of the answers from the advanced group and about 97% of the answers from the native speaker group are correct.

L2 learners are facing difficulties in distinguishing between 能 and 会. The L2 learners have not reached a similar level to the native speakers.

### Multiple Choice Item 22

22、甬叫她，她光（会）给我添乱。

Don't call her; she will only cause trouble.

A. 能    B. 会    C. 要    D. 该

第 22 题	A	B	C	D	正确率
初级	42.86%	57.14%	0.00%	0.00%	57.14%
中级	0.00%	100.00%	0.00%	0.00%	100.00%
高级	28.57%	57.14%	14.29%	0.00%	57.14%
母语	0.00%	100.00%	0.00%	0.00%	100.00%

As the above table presents, the most chosen wrong option is option A by the lower level group and the advanced group. The current study notices when preceded by the adverbs of range, including 只 zhi 'only' and 就 jiu 'only', 光 guang 'only', 会 1 indicates complaint.

The lower level group and intermediate group fail to notice the adverb of range 光; their errors happen at the attention stage in the process of CMA acquisition. The intermediate group has reached a similar level to the native speakers in the complaint application of 会 1. The result suggests that the level of CMA application is not necessarily in accordance with L2 learner's second language proficiency.

### Multiple Choice Item 27

27、你还年轻，有朝一日，你将（会）找到个比我胜强十倍的好姑娘的。

You are still young. One day, you will find a good girl ten times better than me.

A. 能    B. 会    C. 想    D. 要

第 27 题	A	B	C	D	正确率
初级	14.29%	85.71%	0.00%	0.00%	85.71%
中级	57.14%	42.86%	0.00%	0.00%	42.86%
高级	28.57%	28.57%	14.29%	28.57%	28.57%
母语	0.00%	100.00%	0.00%	0.00%	100.00%

As the above table presents, the most chosen wrong option is option A for all three L2 groups. Around 14% of the lower group, 57% of the intermediate group, and 29% of the advanced group have chosen option A 能.

The current study previously presented, both 能 and 会 2 can be used in the latter clause of a conditional sentence. However, when the latter clause is emphasising inevitable predictive result in combination with the result marker 的 de or adverbial modifier 将 jiang 'in the future' indicating future time, 会 2 is used instead of 能.

L2 language learners fail to notice the result marker 的 and adverbial modifier 将, and it is difficult for them to distinguish these two modal auxiliaries. Even if they notice 的 and 将, whether L2 learners have enough knowledge to facilitate their practical application of the CMA in context remains to be testified.

The errors happen at the attention and knowledge stage. Furthermore, it has to be emphasised that the lower lever group has the highest correct rate. This again proves that the CMA application level is not positively related to L2 proficiency level.

#### Multiple Choice Item 28

28、你是这样的平淡无奇，以至不管你说了什么，谁也（不会）往心里去。

You are so mediocre that no matter what you say, no one will take it seriously.

A. 不能    B. 不会    C. 没能    D. 不可以

第 28 题	A	B	C	D	正确率
初级	42.86%	14.29%	28.57%	14.29%	14.29%
中级	71.43%	28.57%	0.00%	0.00%	28.57%
高级	57.14%	42.86%	0.00%	0.00%	42.86%
母语	0.00%	100.00%	0.00%	0.00%	100.00%

As the above table presents, the most chosen wrong option is option A. Around 43% of the lower level group, 71% of the intermediate group, and 57% of the advanced group choose option A, suggesting that L2 learners have difficulties in the application of 能 and 会.

能 and 会 occur in the construction 不 + CMA to form a negation. 不能 expresses impossibility or prohibition, which represent epistemic modality and deontic modality. In item 28, once the epistemic 不会 is changed into 不能, it describes deontic modality. Therefore, these two negation forms are not interchangeable.

This asymmetrical feature of the CMA is entirely new in L2. The L2 learners' mother tongue has a negative transfer to their distinction between 能 and 会. The error occurs at the creating stage when L2 learners continuously compare their current language variety with the target variety.

#### Cloze Test 1 Item 1

1、可以、能、会、肯

阿兰做饭特别好吃，又（肯）下工夫研究菜谱，（可以）说很（会）吃。她的儿子南南饭量特别大，特别（能）吃。

A Lan is good at cooking and likes to spend time studying recipes; she is like a gourmet. Her son Nan Nan has a large appetite and can eat a lot of food.

1.会		1.能	
0	1	0	1
57.14%	42.86%	85.71%	14.29%
57.14%	42.86%	85.71%	14.29%
71.43%	28.57%	85.71%	14.29%
0.00%	100.00%	0.00%	100.00%

In the above Table, 0 represents the wrong answer, and 1 represents the correct answer. As the table presents, all three L2 groups have a high error rate in applying 会 and 能. They are far from reaching the native speakers level.

The current study points out that while expressing ability notion, 能 emphasises the volume of the ability, whereas 会 1 emphasises the skillfulness of the ability. The EMV can is divided into 会 1 and 能; thus, the L2 learners tend to overgeneralize their L1 knowledge.

The L1 negative transfer hinders L2 learners comprehension and practical application of the CMA in context at the synthetic stage and the embedding stage and continues to affect their future creating behaviour.

## 5.4 The Results of the Application of 想, 要, 愿意, 肯

**Table 5-0-4 The Results of the Application of 想, 要, 愿意, 肯**

**Multiple Comparisons**  
Dependent Variable:  
LSD

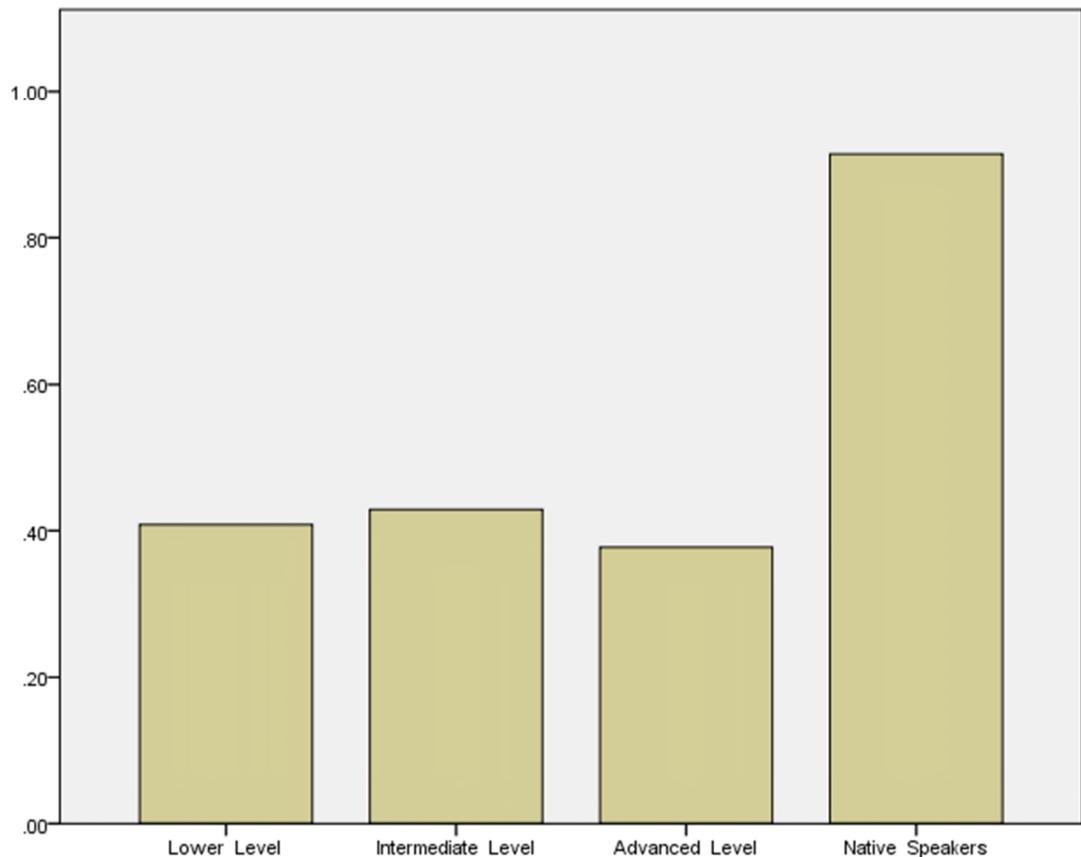
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.571	.661
	Advanced Level	-1.714	.196
	Native Speakers	-6.543*	.000
Intermediate Level	Lower Level	.571	.661
	Advanced Level	-1.143	.384
	Native Speakers	-5.971*	.000
Advanced Level	Lower Level	1.714	.196
	Intermediate Level	1.143	.384
	Native Speakers	-4.829*	.002
Native Speakers	Lower Level	6.543*	.000
	Intermediate Level	5.971*	.000
	Advanced Level	4.829*	.002

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-4 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). Meanwhile, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05).

The result indicates that second language learners have difficulties in comprehending the volition CMA 想, 要, 愿意 and 肯. And L2 learners are behind the level of the native Chinese speakers in the application of CMA from a semantics perspective.

**Figure 5-0-4 Percentages of the Correct Answers in the Application of 想, 要, 愿意, 肯**



As the above figure presents, around 40% of the answers from the lower level group, 42% of the answers from the intermediate group, 38% of the answers from the advanced group and about 87% of the answers from the native speaker group are correct.

L2 learners are facing difficulties in distinguishing between this category of Chinese modal auxiliaries. Furthermore, the native speaker also make mistakes in the application of volition modal auxiliaries.

### Multiple Choice Item 15

15、我没跑远，本来（想）去姨妈家的，走了一段，心里害怕又回来了。

I didn't run too far. I originally wanted to visit my aunt, but I was so afraid that I came back halfway.

A. 愿意    B. 会    C. 肯    D 想

第 15 题	A	B	C	D	正确率
初级	57.14%	0.00%	14.29%	28.57%	28.57%
中级	14.29%	0.00%	14.29%	71.43%	71.43%
高级	28.57%	0.00%	14.29%	57.14%	57.14%
母语	0.00%	0.00%	0.00%	100.00%	100.00%

As the above table demonstrates, the most chosen wrong option is option A. Around 57% of the lower level group, 14% of the intermediate group, and 28% of the advanced group choose option A, suggesting that L2 learners have difficulties distinguishing between 想 and 愿意.

According to Table 2-0-4, 想 and 愿意 both can remain at a thinking phase and can generate action opposite to the wish. The difference between the two is that 想 is subjective initiative, while 愿意 is responsive. In item 15, 想 implies 'my' independent initial thinking, and it is not a response to certain suggestion or requirement.

The L2 learners lack knowledge of the subtle implications of 想 and 愿意, leading to errors at the knowledge stage. According to the Chinese textbook used by the students of the University of Leeds, modal auxiliary 想 is taught before 愿意; therefore, the L2 learners may overgeneralize their existing L2 knowledge of 想 in the process of synthesising and comprehending 愿意.

The L2 negative transfer causes learners' errors at the knowledge stage and the synthetic stage. The intermediate group has the highest correct rate

among the L2 groups, indicating that the CMA application of 想 and 要 is not necessarily in line with L2 learners' proficiency level.

#### True or False Task Item 10

10、我肯跟你结婚，但是，我不能违背父母的意志。× 想/愿意

I agree to marry you. But, I can't marry you against my parents' wishes.

第 10 题	1	2	3
初级	28.57%	0.00%	71.43%
中级	14.29%	0.00%	85.71%
高级	28.57%	28.57%	42.86%
母语	60.00%	0.00%	40.00%

In the above table, 1 represents a situation when the second language learners correctly judge true or false and amend the sentence error correctly if needed; 2 represents a situation when the second language learners correctly judge true or false but amend the sentence error incorrectly if needed; 3 represents a situation when the second language learners incorrectly judge true or false.

As the above table presents, around 71% of the lower level group, 86% of the intermediate group, 43% of the advanced group and 40% of the native speaker group judge the truth of the ungrammatical sentence. About 29% of the advanced group identify the error of the sentence but change the CMA 肯 to 要 when correcting the sentence.

The CMA 肯 should be replaced with 想 or 愿意. As Table 2-0-4 presents, 想 and 愿意 can generate action opposite to wish. In comparison, 肯 and 要 cannot. The speaker wishes to marry sb, but her action is opposite to the wish under her parents' requirement. The item result indicates that not only L2 learners but also native speakers have difficulties distinguishing among volition CMA 想, 要, 愿意, 肯.

The learnt L2 language negative transfer is the main cause of this error at the knowledge stage and the synthetic stage. The learners have a tendency to overgeneralise their existing knowledge of 想 and 要, which are learnt before 肯 and 愿意.

### 5.5 The Results of the Application of 应该/应当, 该, 得, 要

Table 5-0-5 The Results of the Application of 应该/应当, 该, 得, 要

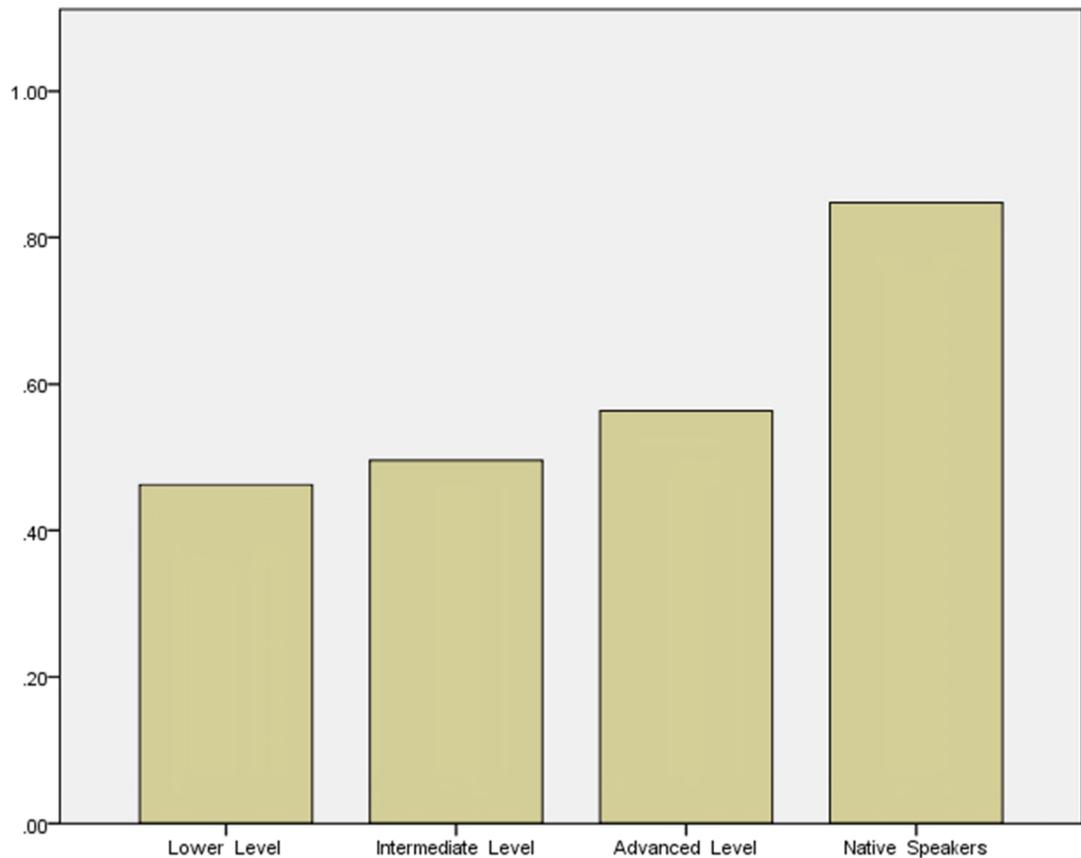
**Multiple Comparisons**  
Dependent Variable:  
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	.286	.857
	Advanced Level	-1.571	.326
	Native Speakers	-9.714*	.000
Intermediate Level	Lower Level	-.286	.857
	Advanced Level	-1.857	.248
	Native Speakers	-10.000*	.000
Advanced Level	Lower Level	1.571	.326
	Intermediate Level	1.857	.248
	Native Speakers	-8.143*	.000
Native Speakers	Lower Level	9.714*	.000
	Intermediate Level	10.000*	.000
	Advanced Level	8.143*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-5 presents, there is no significant difference among all L2 groups (Sig. > 0.05). And a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties in comprehending the semantics of synonymous Chinese modal auxiliaries 应该/应当, 该, 得 and 要. The L2 learners have not reached a similar level to the native speakers in applying this group of CMA from a semantic perspective.

**Figure 5-0-5 Percentages of the Correct Answers in the Application of 应该/应当, 该, 得, 要**



As the above figure presents, around 44% of the answers from the lower level group, 46% of the answers from the intermediate group, 59% of the answers from the advanced group and about 84% of the answers from the native speaker group are correct. L2 learners are facing difficulties in distinguishing among 应该/应当, 该, 得, 要. Moreover, the native speaker also make mistakes in the application of these two modal auxiliaries.

### Multiple Choice Item 31

31、如果你再不回去，老王又（该）说你了。

If you don't go back, Lao Wang will blame you again.

A. 应该    B. 应当    C. 该    D. 可

第 31 题	A	B	C	D	正确率
初级	14.29%	14.29%	42.86%	28.57%	42.86%
中级	0.00%	28.57%	57.14%	14.29%	57.14%
高级	42.86%	14.29%	42.86%	0.00%	42.86%
母语	0.00%	0.00%	100.00%	0.00%	100.00%

According to the above table, the most chosen wrong options are option A and option B. 应该 and 应当 are synonyms and can replace each other. The current study previously explains: when displaying subjective speculation, 应该 is consistent with the sentence participant's expectation. In contrast, 该 is opposite to the expectation of the sentence participant. In item 31, the speaker is afraid of 'you' being blamed again by Lao Wang. 该 expresses a prediction opposite to the speaker's expectation.

The L2 learners lack knowledge of this usage of 应该/应当 and 该. Moreover, there is negative transfer from their mother tongue as the one EMV should is divided into more than two CMA in Chinese.

### Multiple Choice Item 35

35、真是风度不减当年哪！他实在（应该）得意。

He is as charming as before when time goes by. He certainly should feel proud.

A. 该    B. 得    C. 要    D. 应该

第 35 题	A	B	C	D	正确率
初级	85.71%	0.00%	14.29%	0.00%	0.00%
中级	42.86%	14.29%	28.57%	14.29%	14.29%
高级	14.29%	0.00%	28.57%	57.14%	57.14%
母语	40.00%	0.00%	20.00%	40.00%	40.00%

As the above table indicates, the most chosen wrong options are option A and option C for all four groups. Table 2-0-8 presents, 应该 is disyllable CMA that tends to collocate with disyllable word, while 该 has a tendency to collocate with monosyllable word. This is the unique rhythmical feature of Chinese in practical use. 实在 shizai ‘certainly’ and 得意 deyi ‘proud’ are both disyllable words, and when used in conjunction with disyllable CMA 应该, the sentence acquires rhythmical beauty.

The L2 groups and the native speaker group fail to notice the syllabus feature of the CMA, leading to their errors at the attention stage. There is also a negative transfer from mother tongue for L2 learners since English does not require speakers to conform to the rhythm rule in the application of CMA. 应该 expresses epistemic modality (speculation), and 要 represents dynamic modality (volition); therefore, they are not interchangeable.

#### True or False Task Item 15

15、下午的会议我得去参加，可是太忙去不了。× 应该

I have no choice but to attend the meeting in the afternoon, but I am too busy to go.

第 15 题	1	2	3
初级	0.00%	42.86%	57.14%
中级	14.29%	0.00%	85.71%
高级	14.29%	0.00%	85.71%
母语	100.00%	0.00%	0.00%

As the above table presents, around 57% of the lower level group, 86% of the intermediate group, 86% of the advanced group fail to notice the ungrammatical application of 得 in the compound sentence. The L2 learners do not reach a similar level as the native speaker group (100% correct rate) in distinguishing between 得 and 应该.

Section 2.2.3.2 explains this language phenomenon. In a compound sentence using 应该/该, the latter clause can be opposite to the former clause. But in a compound sentence using 得, the latter clause should be consistent with the former one. The sentence participant does not necessarily perform an action that he/she should 应该 do. But the sentence participant has to perform an action that he/she 得 'has to' do. 'I' must attend the meeting even the reality does not allow 'me' to do so. Therefore, the sentence turns out to be illogical.

The L2 learners lack knowledge of this usage of 得 and 应该. Furthermore, the negative transfer from existing L2 knowledge hinders L2 learners differentiation between 得 and 应该.

## 5.6 The Results of the Application of CMA and Words of other Properties

**Table 5-0-6 The Results of the Application of CMA vs Words of Other Properties**

**Multiple Comparisons**  
Dependent Variable:  
LSD

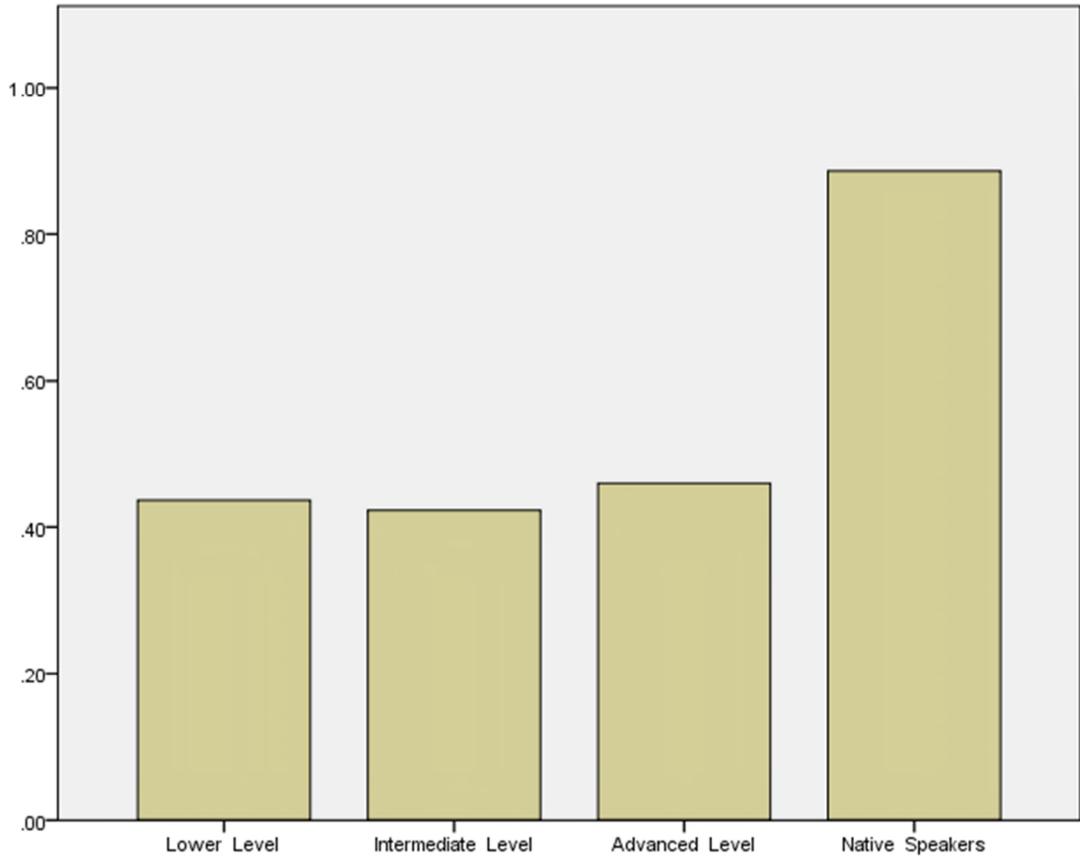
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	.286	.857
	Advanced Level	-1.571	.326
	Native Speakers	-9.714*	.000
Intermediate Level	Lower Level	-.286	.857
	Advanced Level	-1.857	.248
	Native Speakers	-10.000*	.000
Advanced Level	Lower Level	1.571	.326
	Intermediate Level	1.857	.248
	Native Speakers	-8.143*	.000
Native Speakers	Lower Level	9.714*	.000
	Intermediate Level	10.000*	.000
	Advanced Level	8.143*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-6 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second

language learners have a tendency to mix Chinese modal auxiliaries with words of other properties that also indicate modal notions.

**Figure 5-0-6 Percentages of the Correct Answers in the Application of CMA vs Words of Other Properties**



As the above figure presents, around 45% of the answers from the lower level group, 44% of the answers from the intermediate group, 49% of the answers from the advanced group and about 90% of the answers from the native speaker group are correct.

The L2 learners have not reached a similar level as the native speakers in distinguishing between modal auxiliaries and words of other properties.

#### True or False Task 1

1、我非常喜欢大自然，很想念回到家乡那片原野里。× 想

I love Mother Nature, and I would love to go back to my hometown's open field.

第 1 题	1	3
初级	42.86%	57.14%
中级	14.29%	85.71%
高级	57.14%	42.86%
母语	60.00%	40.00%

In the above sentence a, 想念 xiangnian 'want' is a verb used to modify the nominal predicate. But 回到 huidaο 'go back to' is a verb that needs to be modified by the modal verb 想 xiang 'would love to'. However, the semantic meaning of 想念 and 想 is similar, both indicating want.

Approximately 57% of the lower level group, 86% of the intermediate group, 43% of the advanced group and 40% of the native speaker group fail to detect the ungrammatical feature of the sentence. It implies that L2 learners and native speakers all have difficulties distinguishing between modal auxiliaries and verbs that carry similar meaning.

### Multiple Choice 18

18、圣诞节（ 要 ）到了。

Christmas is coming.

A. 会     B. 一定     C. 要     D. 得

第 18 题	A	B	C	D	正确率
初级	0.00%	71.43%	28.57%	0.00%	28.57%
中级	28.57%	42.86%	28.57%	0.00%	28.57%
高级	14.29%	28.57%	57.14%	0.00%	57.14%
母语	0.00%	0.00%	100.00%	0.00%	100.00%

According to the above table, the most chosen wrong option is option B.

Around 71% of the lower level group, 43% of the intermediate group and 29%

of the advanced group choose adverb 一定 yiding 'must' instead of modal auxiliary 要. The adverb 一定 indicates a subjective prediction that a certain situation is bound to occur. The exact time of Christmas is not a prediction but a reality. The sentence using 要 states the time is near to December 25<sup>th</sup> (fact).

The error may be caused by negative transfer from the L2 language. The EMV 'must' is divided into 一定 and 要, both express epistemic modality. The L2 learners tend to overgeneralize their existing L1 language when comprehending similar language elements in L2. It implies that L2 learners have difficulties distinguishing between modal auxiliaries and adverbs that carry similar meaning.

#### Translation Task 4

4、 Jack need not attend the meeting.

杰克不用参加会议。

第 4 题	1	2	3
初级	14.29%	57.14%	28.57%
中级	0.00%	28.57%	71.43%
高级	0.00%	85.71%	14.29%
母语	40.00%	40.00%	20.00%

In the above table, 1 represents a situation when the CMA is applied, and the translation is correct; 2 represents a situation when the CMA is applied, but the translation is incorrect; 3 represents a situation when the translation is correct without the application of CMA.

According to the table, around 29% of the lower level group, 71% of the intermediate group, 14% of the advanced group and 20% of the native speaker group translate the sentence correctly without using modal

auxiliaries but using words of other properties such as adverbs 不必 *bubi* 'not need to' instead.

This is caused by L2 negative transfer; the existing knowledge of L2 allows the language users to avoid using CMA by using a simpler word instead.

By analysing the results of the application of modal auxiliaries from Section 5.1 to Section 5.6 from a semantics perspective, the current study summarises:

- 1) The L2 learners have difficulties in distinguishing among synonymous Chinese modal auxiliaries, and they have difficulties in distinguishing between CMA and words of other properties that express the same modality notion. This is in accordance with the CAH hierarchy of difficulty presented by Table 1-1 and Table 2-1-3's prediction of CMA application difficulties.
- 2) The errors occur at the attention stage, the knowledge stage, the synthetic stage, the embedding stage and the creating stage, but mainly concentrated upon the attention stage, the knowledge stage and the synthetic stage.
- 3) The errors are caused by lacking knowledge of the second language, mother tongue negative transfer and second language negative transfer.
- 4) The level of CMA application does not always have a positive correlation with language proficiency.

## 5.7 The Results of the Application of CMA Co-occurrence in Succession

**Table 5-0-0-7 The Results of the Application of CMA Succession Multiple Comparisons**

Dependent Variable:

LSD

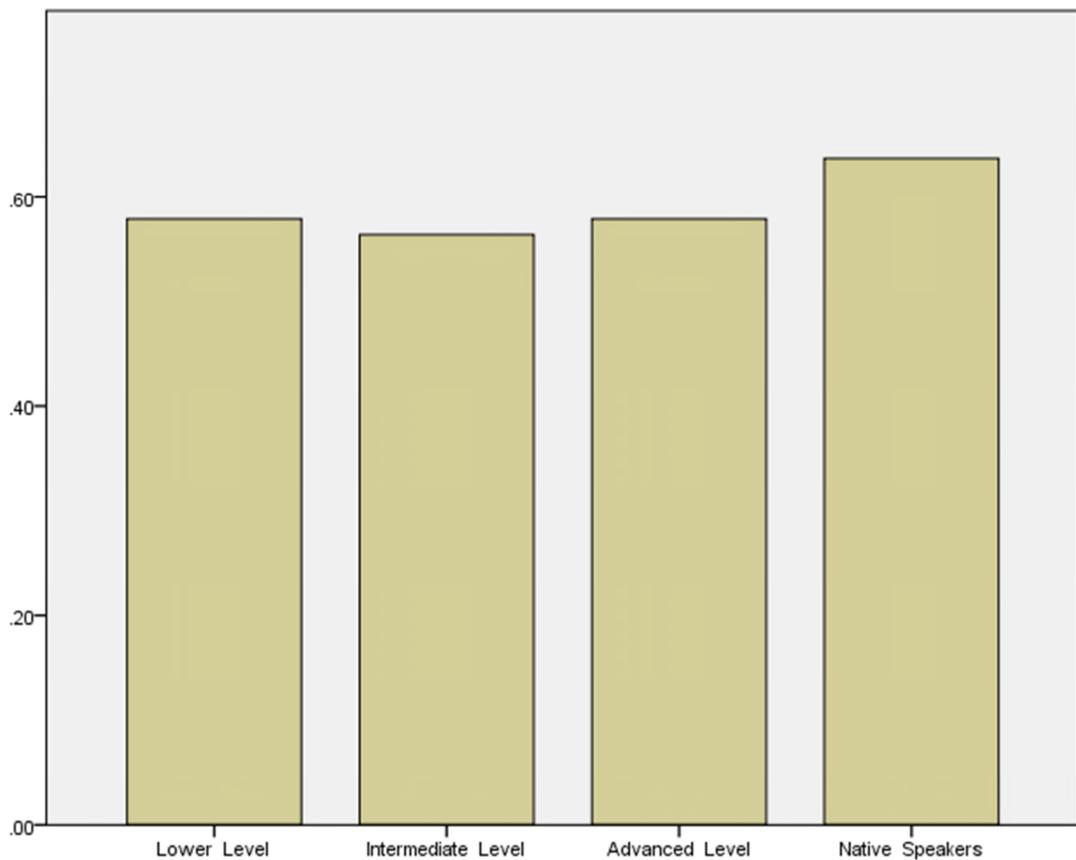
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-2.143	.310
	Advanced Level	-.571	.784
	Native Speakers	-8.571*	.001
Intermediate Level	Lower Level	2.143	.310
	Advanced Level	1.571	.454
	Native Speakers	-6.429*	.009
Advanced Level	Lower Level	.571	.784
	Intermediate Level	-1.571	.454
	Native Speakers	-8.000*	.002
Native Speakers	Lower Level	8.571*	.001
	Intermediate Level	6.429*	.009
	Advanced Level	8.000*	.002

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-7 demonstrates, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, there is a significant difference between the lower level group and the native speaker group (Sig. < 0.05). A significant difference is

also found between the native speaker group and the advanced group (Sig.  $< 0.05$ ). No significant difference is found between the intermediate group and the native speaker group (Sig.  $> 0.05$ ). This again proves that the level of CMA application does not necessarily have a positive correlation with language proficiency.

**Figure 5-0-7 Percentages of the Correct Answers in the Application of CMA Succession**



As the above figure presents, around 59% of the answers from the lower level group, 58% of the answers from the intermediate group, 60% of the answers from the advanced group and about 64% of the answers from the native speaker group are correct.

The correct rates of all four groups are high and around 60%. As co-occurrence in succession is a unique feature of CMA, the result is inconsistent with the prediction that the language elements that do not have

equivalents in second language learners' L1 are difficult. L2 learners have a better comprehension and application of CMA succession.

### Cloze Test 2 Item 2

2、可能、应该

香香（ ）（ ）已经知道这件事了。

Xiang Xiang might have known this thing already.

可能应该、应该可能

The current study points out that the same type of CMAs can succeed. The order of the same kind of CMAs can change when their semantic meanings are not contradictory. 可能 and 应该 both carry epistemic interpretation, and they are interchangeable. The correct rate of the above item is 100% due to the interchangeability of the modal auxiliaries. Therefore, the L2 learners have a high possibility to apply CMA in succession correctly by coincidence.

### Cloze Test 2 Item 3

3、能、可以、应该

我（ ）（ ）（ ）做好这几份卷子。

I can finish this test paper possibly.

应该可以能

第3题	3.应该		3.可以		3.能	
	0	1	0	1	0	1
1	28.57%	71.43%	42.86%	57.14%	28.57%	71.43%
2	14.29%	85.71%	42.86%	57.14%	42.86%	57.14%
3	14.29%	85.71%	28.57%	71.43%	28.57%	71.43%
4	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%

When modal auxiliaries of different modality notions co-occur in one sentence, the order of multiple CMA should be epistemic>deontic>dynamic. The correct order of the CMA in item 3 should be 应该可以能. In the above table, 0 represents the wrong answer, and 1 represents the correct answer.

As the table demonstrates, around 71% of the lower level group, 86% of the intermediate group, 86% of the advanced group and 100% of the native speaker group have put 应该 into the appropriate order. Around 57% of the lower level group, 57% of the intermediate group, 71% of the advanced group and 100% of the native speaker group use 可以 in the right order. Around 71% of the lower level group, 57% of the intermediate group, 71% of the advanced group and 100% of the native speaker group apply 能 in proper order.

The data indicate that L2 learners have a better comprehension and application of CMA succession. Since CMA succession is a unique feature in Chinese, language instructors pay special attention to it and give extra instructions in class regarding teaching practice. The L2 learners have the knowledge to comprehend, synthesize and apply CMA in succession.

To sum up this section:

(1) Due to the interchangeability of the Chinese modal auxiliaries, the L2 learners apply CMA in succession correctly by comprehension or by coincidence;

(2) Due to the particular instructions from the language instructors' teaching practice, the L2 learners grasp a good knowledge of the application of CMA succession;

(3) The L2 learners and the native speakers still face difficulties in this field. They have the knowledge of CMA succession construction and rules; in the meantime, they have difficulties in distinguishing among synonymous Chinese modal auxiliaries from a semantic perspective in practical usage.

### 5.8 The Results of the CMA Past Tense Application

**Table 5-0-8 The Results of the CMA Past Tense Application**

**Multiple Comparisons**  
Dependent Variable:  
LSD

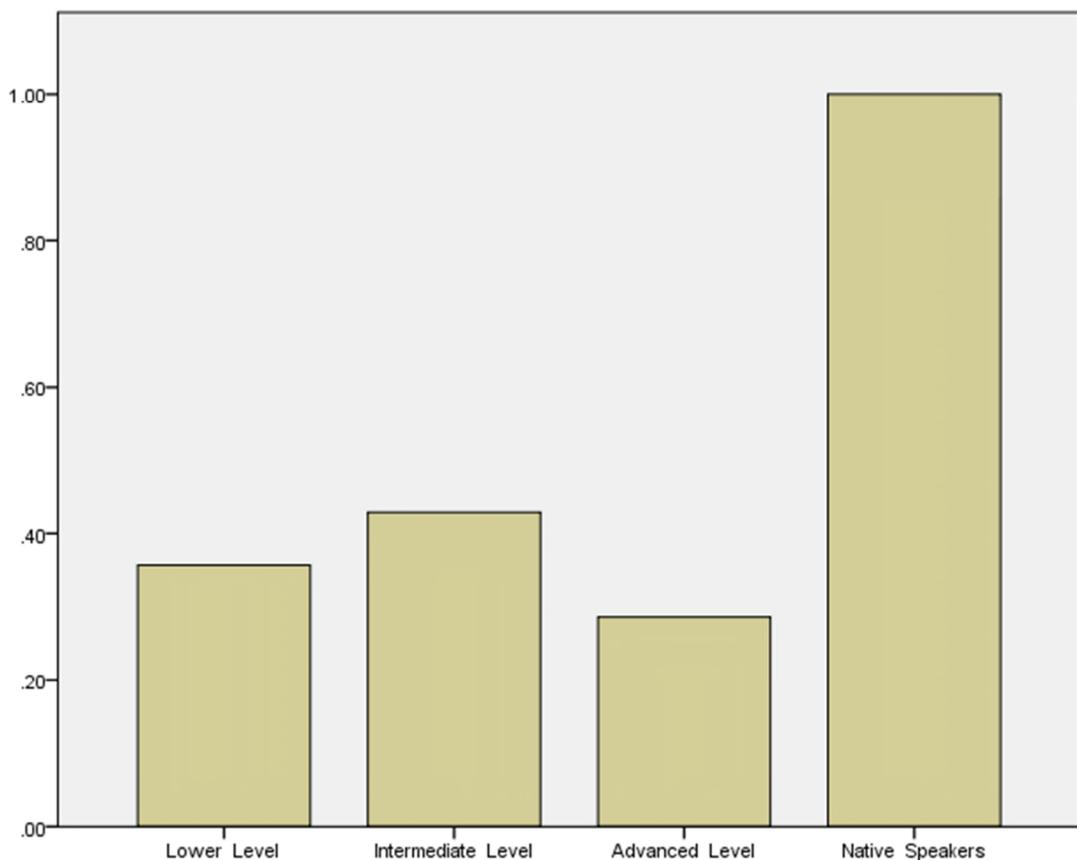
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.143	.696
	Advanced Level	.143	.696
	Native Speakers	-1.286*	.004
Intermediate Level	Lower Level	.143	.696
	Advanced Level	.286	.436
	Native Speakers	-1.143*	.008
Advanced Level	Lower Level	-.143	.696
	Intermediate Level	-.286	.436
	Native Speakers	-1.429*	.002
Native Speakers	Lower Level	1.286*	.004
	Intermediate Level	1.143*	.008
	Advanced Level	1.429*	.002

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-8 demonstrates, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. >

0.05). However, there is a significant difference between the lower level group and the native speaker group (Sig. < 0.05). A significant difference is also found between the native speaker group and the advanced group (Sig. < 0.05). There is no significant difference between the intermediate group and the native speaker group (Sig. > 0.05), implying that the level of CMA application is inconsistent with language proficiency.

**Figure 5-0-8 Percentages of the Correct Answers in CMA Past Tense Application**



As the above figure presents, around 38% of the answers from the lower level group, 42% of the answers from the intermediate group, 30% of the answers from the advanced group and about 100% of the answers from the native speaker group are correct. L2 learners are facing difficulties in CMA past tense application. They are far from reaching the similar level of the native speakers.

### Multiple Choice Item 16

16、相信所长吧，他既（能）找到咱们，也就一定会帮咱们找到妈妈。

Please believe in the director, he already found us, he will definitely find our mother for us.

A. 会    B. 能    C. 想    D. 该

第 16 题	A	B	C	D	正确率
初级	42.86%	42.86%	0.00%	14.29%	42.86%
中级	14.29%	57.14%	14.29%	14.29%	57.14%
高级	57.14%	14.29%	14.29%	14.29%	14.29%
母语	0.00%	100.00%	0.00%	0.00%	100.00%

As the above table presents, the most chosen wrong option is option A. Around 43% of the lower level group, 14% of the intermediate group, and 57% of the advanced group choose option A. Option D is also chosen at an average percentage of 14% of all three L2 groups. Around 14% of the intermediate group and 14% of the advanced group have chosen option C.

The results suggest that L2 learners have difficulties in the application of normal past tense. The conjunction word 既 ji 'already' implies a situation has already occurred, and it is intrinsically connected with the past tense. The modal auxiliaries 会 and 该 both express the prediction of a future event and are intrinsically connected with futurity. 想 expresses a wish that has not been realized. Among all four options, 能 does not have a tense connotation. Thus, option B is correct.

The current study explains CMA tense and aspect application in Section 2.2.4.2. Though Chinese modal auxiliaries have no tense change, they can still express aspect interpretation with the help of words relating to time or with the internal time implication of its own from a semantic perspective. The L2 learners fail to notice the past tense marker 既, and they lack knowledge of the futurity connotation carried by some Chinese modal auxiliaries. These

are the main causes for the errors that occur in the attention stage and the knowledge stage.

### 5.9 The Results of the CMA Subjunctive Mood Application

**Table 5-0-9 The Results of the CMA Subjunctive Mood Application**

**Multiple Comparisons**  
Dependent Variable:  
LSD

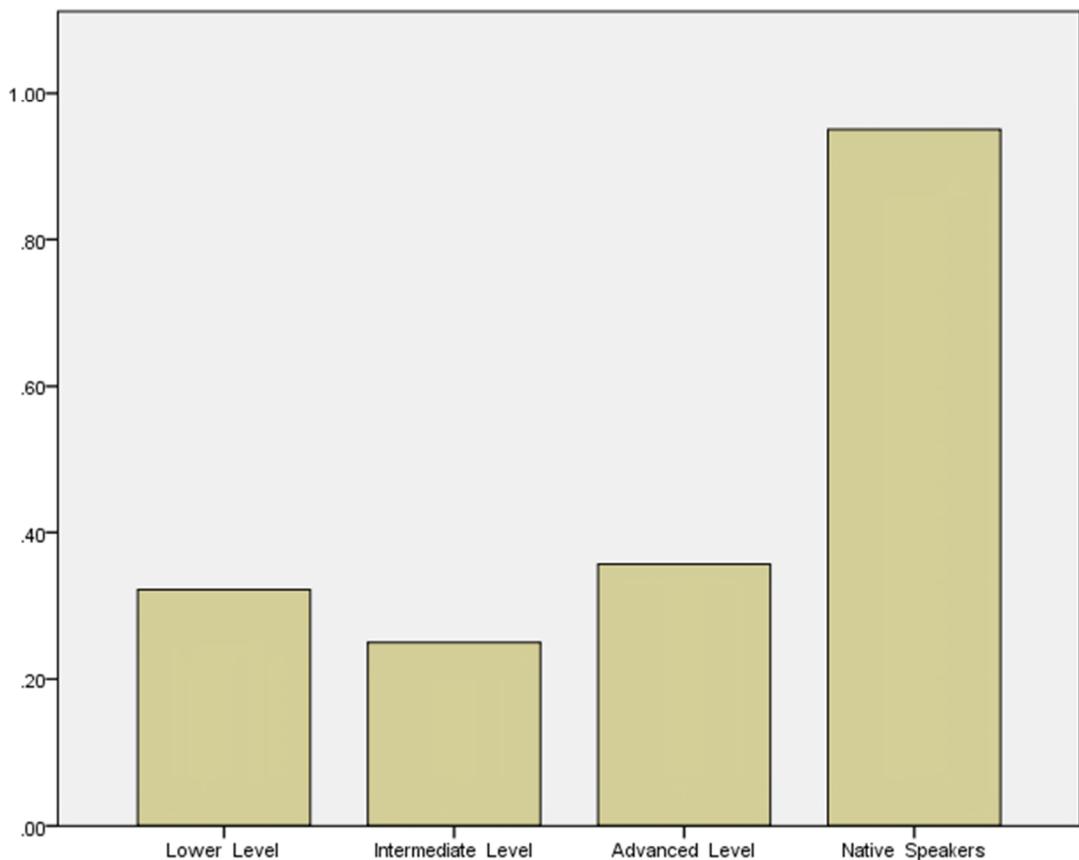
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.143	.696
	Advanced Level	.143	.696
	Native Speakers	-1.286*	.004
Intermediate Level	Lower Level	.143	.696
	Advanced Level	.286	.436
	Native Speakers	-1.143*	.008
Advanced Level	Lower Level	-.143	.696
	Intermediate Level	-.286	.436
	Native Speakers	-1.429*	.002
Native Speakers	Lower Level	1.286*	.004
	Intermediate Level	1.143*	.008
	Advanced Level	1.429*	.002

\*. The mean difference is significant at the 0.05 level.

As Table 5-0-9 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). There is a significant difference between the lower level group and the

native speaker group (Sig. < 0.05). A significant difference is also found between the advanced group and the native speaker group (Sig. < 0.05). However, there is no significant difference between the intermediate and native speaker groups (Sig. > 0.05), indicating that the level of CMA subjunctive mood application is inconsistent with language proficiency.

**Figure 5-0-9 Percentages of the Correct Answers in CMA Subjunctive Mood Application**



As the above figure presents, approximately 32% of the answers from the lower level group, 28% of the answers from the intermediate group, 36% of the answers from the advanced group and about 95% of the answers from the native speaker group are correct.

The L2 learners are facing difficulties in CMA subjunctive mood application. They are far from reaching native likeness. The result is consistent with the CAH prediction that L2 learners encounter difficulties when a language

element in L1 is absent in L2, and the learners tend to avoid using such an item.

### Multiple Choice Item 13

13、他要还在这儿，我（该）有多开心啊！

If he had been here, I would have been happy!

A. 应该    B. 要    C. 该    D. 能

第 13 题	A	B	C	D	正确率
初级	28.57%	42.86%	14.29%	14.29%	14.29%
中级	57.14%	28.57%	0.00%	14.29%	0.00%
高级	14.29%	42.86%	28.57%	14.29%	28.57%
母语	0.00%	0.00%	100.00%	0.00%	100.00%

According to the above table, all three wrong options are chosen almost equally by all three L2 groups. In item 13, 要 appears in the former clause of the sentence, indicating an assumption opposite to reality. The CMA in the latter clause should express the prediction of a possible event based on the assumption. Therefore, 应该 and 该 is appropriate to choose.

Furthermore, the assumption marker 要 appeared in the former clause is monosyllabic, indicating the prediction in the latter clause should be expressed by monosyllable CMA correspondingly. 应该 is disyllable CMA that tends to collocate with disyllable word, while 该 has a tendency to collocate with monosyllable word.

To conclude, 该 is the correct option. The L2 learners firstly fail to notice the assumption marker 要 that suggests epistemic modality in the latter clause. Then they either fail to notice the syllable feature of the Chinese modal auxiliaries or lack knowledge of Chinese rhythmical feature in practical

usage. Their errors occur mainly at the attention stage and the knowledge stage.

### True or False Task Item 18

18、唐爷爷后悔得要命。要真是一开口就能有车有钱，本得要两辆卡车的，钱也得加倍。× 该

Grandpa Tang was very regretful. He could have asked for more money and more trucks.

第 18 题	1	2	3
初级	14.29%	0.00%	85.71%
中级	0.00%	14.29%	85.71%
高级	0.00%	0.00%	100.00%
母语	80.00%	0.00%	20.00%

As the above table presents, 86% of the lower level group, 85% of the intermediate group, 100% of the advanced group and 20% of the native speaker group all fail to judge the incorrectness of the sentence. It suggests that both L2 learners and native speakers have difficulties applying CMA to subjunctive mood contexts.

Like multiple choice item 13, 要 appears in the former clause of the sentence and indicates an assumption opposite to reality. The adverb 本 ben 'originally' in the latter clause reinforces the assumption notion, indicating an occurrence of an event opposite to reality. 得 carries the implication of futurity, suggesting an event is yet to come. It is illogical to predict an event that has already happened. 该 in combination with 本, describes a past expectation that was opposite to the past reality.

The language users do not realize the appearance of 要 and 本, and they lack knowledge of the subjunction mood application of 该. The errors emerge at the attention stage and the knowledge stage.

## 5.10 The Results of the CMA Future Tense Application

**Table 5-0-10 The Results of the CMA Future Tense Application**

### Multiple Comparisons

Dependent Variable:

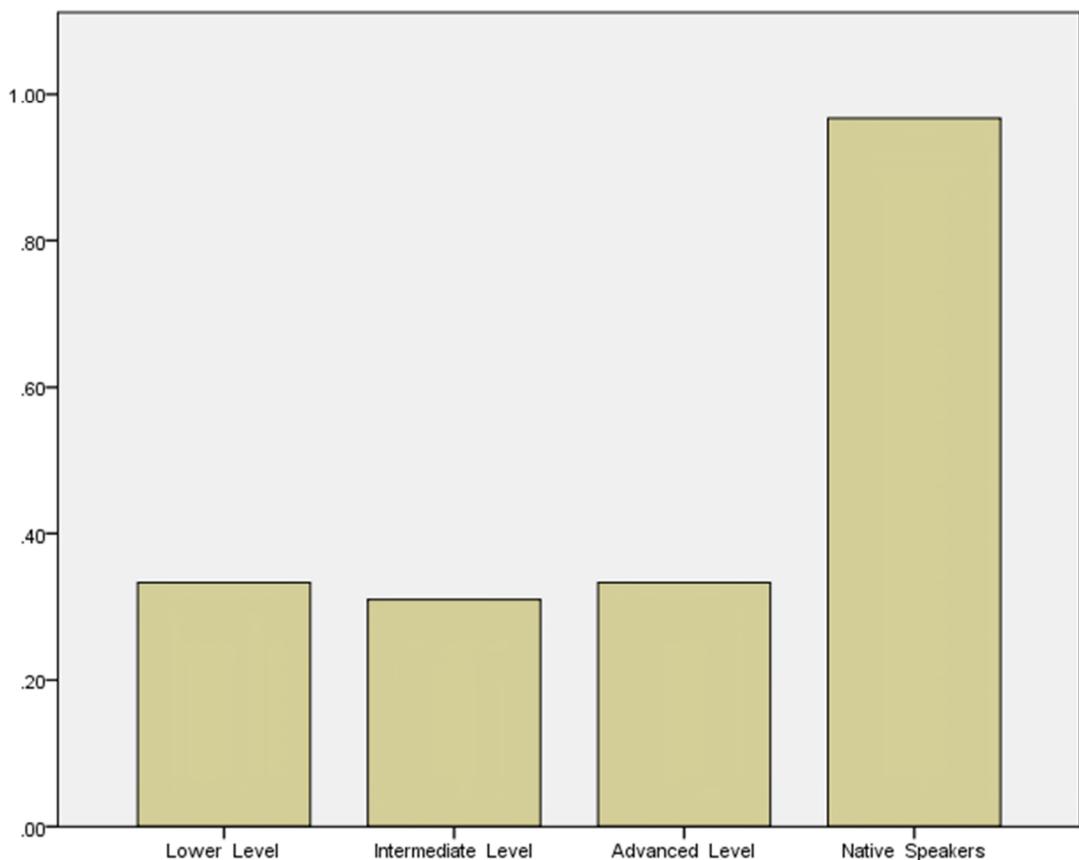
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.857	.404
	Advanced Level	-.143	.888
	Native Speakers	-5.171*	.000
Intermediate Level	Lower Level	.857	.404
	Advanced Level	.714	.486
	Native Speakers	-4.314*	.001
Advanced Level	Lower Level	.143	.888
	Intermediate Level	-.714	.486
	Native Speakers	-5.029*	.000
Native Speakers	Lower Level	5.171*	.000
	Intermediate Level	4.314*	.001
	Advanced Level	5.029*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-1-0 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties in applying modal auxiliaries in future tense contexts.

**Figure 5-0-10 Percentages of the Correct Answers in CMA Future Tense Application**



As the above figure presents, around 34% of the answers from the lower level group, 30% of the answers from the intermediate group, 35% of the answers from the advanced group and about 100% of the answers from the native speaker group are correct. The L2 learners face difficulties in CMA future tense application, and they have not reached a similar level as the native speakers.

### Translation Task 1

2、 It looks like he is going to die in a moment.

他看上去就要死了。

他快死了。(wrong translation of students)

第 2 题	1	3	4
初级	42.86%	42.86%	14.29%
中级	71.43%	28.57%	0.00%
高级	42.86%	57.14%	0.00%
母语	100.00%	0.00%	0.00%

In the above table, 1 represents a situation when the CMA is applied, and the translation is correct; 3 represents a situation when the translation is correct without the application of CMA; 4 represents a situation when the CMA is not applied and the translation is incorrect.

According to the table, around 43% of the lower level group, 29% of the intermediate group, 57% of the advanced group translate the sentence correctly without using modal auxiliaries. For example, the L2 learners use the adverb 快 kuai 'soon' that directly expresses future time to translate the sentence.

This is caused by L2 negative transfer; the existing knowledge of L2 allows the language users to avoid using CMA by using a simpler word instead. It has to be emphasised, though the L2 learners tend to express future tense without using CMA, it does not affect their communication in reality since they still create grammatically correct sentence that expresses future tense.

### 5.11 The Results of the CMA in Conditional Sentences

**Table 5-0-11 The Results of the CMA Conditional Sentence Application**

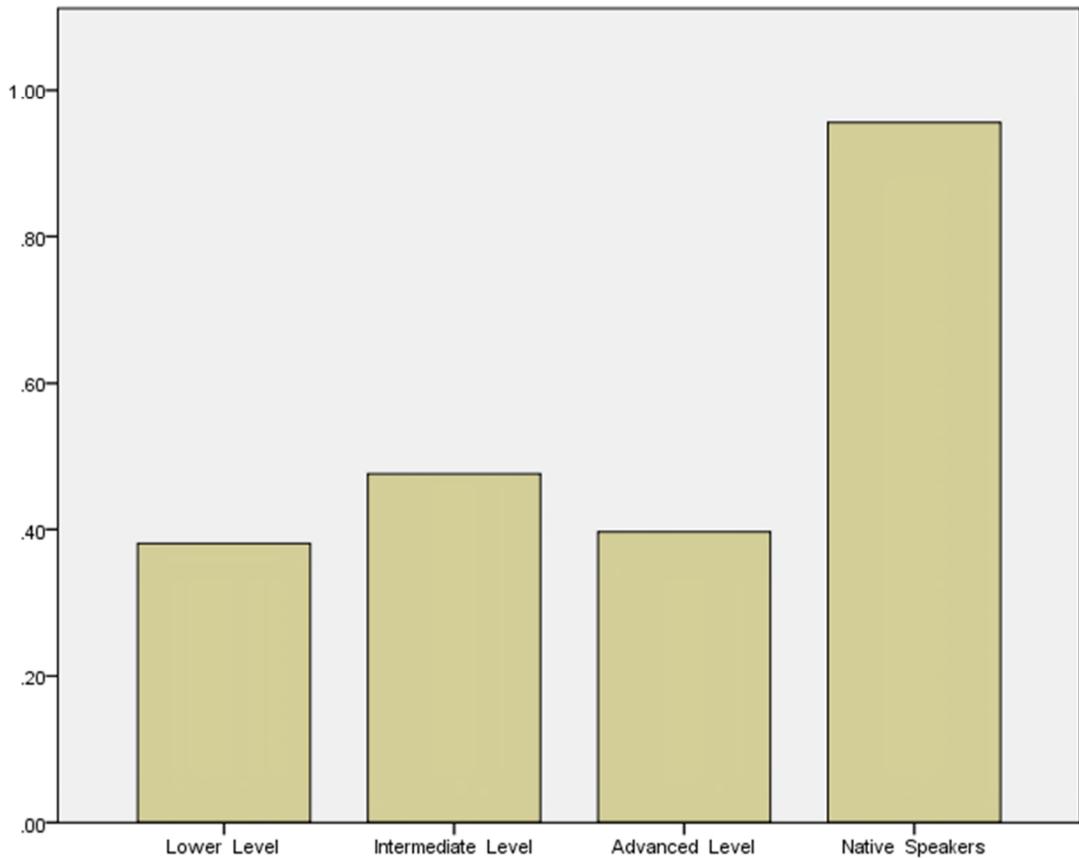
**Multiple Comparisons**  
Dependent Variable:  
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	1.000	.258
	Advanced Level	.143	.870
	Native Speakers	-5.429*	.000
Intermediate Level	Lower Level	-1.000	.258
	Advanced Level	-.857	.331
	Native Speakers	-6.429*	.000
Advanced Level	Lower Level	-.143	.870
	Intermediate Level	.857	.331
	Native Speakers	-5.571*	.000
Native Speakers	Lower Level	5.429*	.000
	Intermediate Level	6.429*	.000
	Advanced Level	5.571*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-1-1 indicates, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have difficulties in applying CMA in conditional sentences.

**Figure 5-0-11 Percentages of the Correct Answers in CMA Conditional Sentence Application**



As the above figure presents, around 40% of the answers from the lower level group, 50% of the answers from the intermediate group, 41% of the answers from the advanced group and about 98% of the answers from the native speaker group are correct. The L2 learners have not reached a similar level to the native speakers in the application of CMA in conditional sentences.

#### Multiple Choice Item 25

25、只有品行端正才能受人尊敬，否则就（ 会 ）遭到所有人的唾弃。

Only when a person has high morality, he will be respected. Or else he will be disdained by others.

- A. 能    B. 会    C. 能够    D. 可

第 25 题	A	B	C	D	正确率
初级	14.29%	42.86%	42.86%	0.00%	42.86%
中级	0.00%	42.86%	42.86%	14.29%	42.86%
高级	14.29%	57.14%	14.29%	14.29%	57.14%
母语	0.00%	100.00%	0.00%	0.00%	100.00%

As the above table presents, only around 42% of the lower group, 43% of the intermediate group, and 57% of the advanced group choose the correct option B.

According to Section 2.2.3.2, based on the speaker's timing of speaking the sentence, 会 can be related to the notion of aspect. 会's 会 2 usage explains a presumable result under a certain condition. Item 25 expresses under the condition that the speaker has good morality, he will not be disdained. The conjunction word 只有 zhiyou 'only if' is a condition marker, expressing essential conditions. The adverb 否则 fouze 'or else' implies a possible result if sth does not happen. Both 只有 and 否则 are related to conditions.

The L2 learners fail to notice the condition markers, leading to the occurrence of errors. And the lack of knowledge of 会's 会 2 usage further hinders their comprehension and application of CMA in conditional sentences. The error is concentrated in the acquisition stages of attention and knowledge.

In conclusion (Section 5.8 – Section 5.11):

1) The L2 learners are facing difficulties in the application of CMA in aspect and tense contexts. The results are consistent with CAH prediction that when an entirely new item needs to be learned in L2, errors are prone to occur.

2) The errors mainly happen at the attention and knowledge stage; therefore, failure of noticing and lack of knowledge are the leading causes.

## 5.12 The Results of CMA Normal Negation Application

**Table 5-0-12 The Results of CMA Normal Negation**

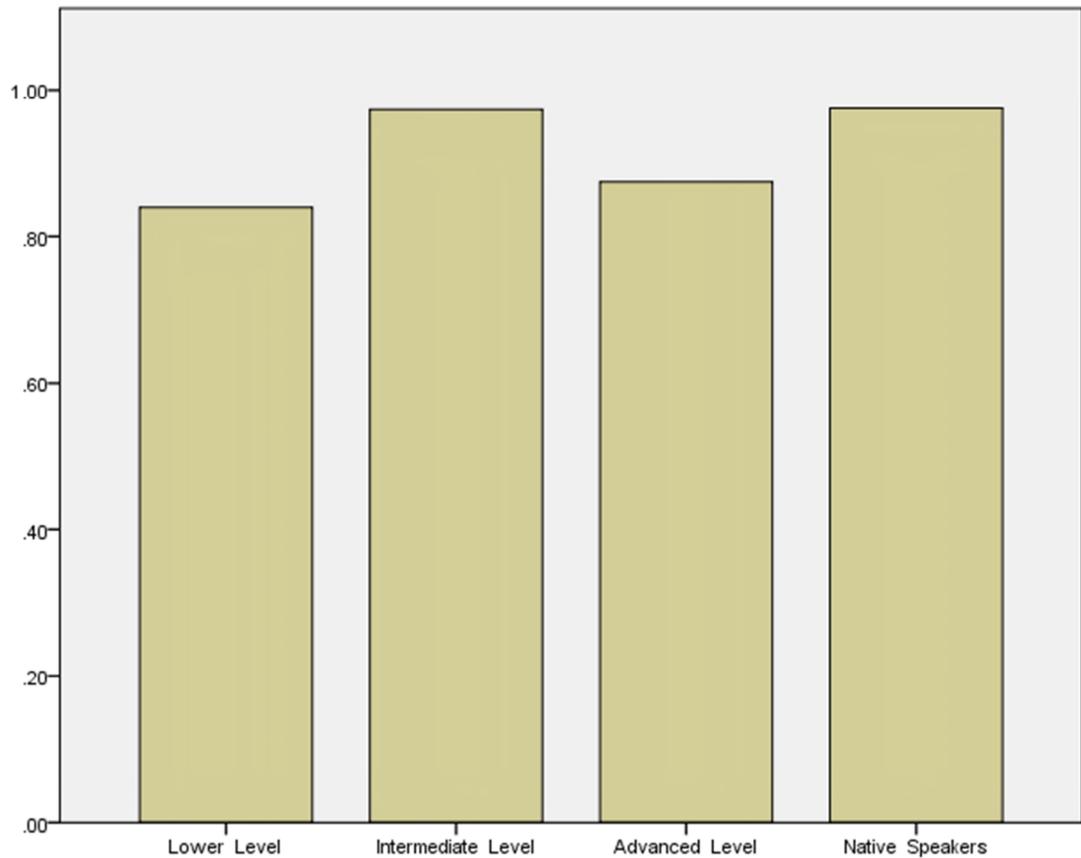
**Multiple Comparisons**  
Dependent Variable:  
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	0.000	1.000
	Advanced Level	-.429	.594
	Native Speakers	-4.657*	.000
Intermediate Level	Lower Level	0.000	1.000
	Advanced Level	-.429	.594
	Native Speakers	-4.657*	.000
Advanced Level	Lower Level	.429	.594
	Intermediate Level	.429	.594
	Native Speakers	-4.229*	.000
Native Speakers	Lower Level	4.657*	.000
	Intermediate Level	4.657*	.000
	Advanced Level	4.229*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-1-2 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05).

**Figure 5-0-12 Percentages of the Correct Answers in CMA Normal Negation Application**



As the above figure presents, around 82% of the answers from the lower level group, 97% of the answers from the intermediate group, 84% of the answers from the advanced group and about 97% of the answers from the native speaker group are correct. The results are inconsistent with the prediction by CAH since the CMA normal negation has a unique asymmetrical feature different from the EMV. This asymmetrical feature is demonstrated in two categories: semantic asymmetry and construction asymmetry.

#### Multiple Choice Item 28

28、你是这样的平淡无奇，以至不管你说了什么，谁也（不会）往心里去。

You are so mediocre; thus, people will not take it seriously no matter what you say.

A. 不能    B. 不会    C. 没能    D. 不可以

第 28 题	A	B	C	D	正确率
初级	42.86%	14.29%	28.57%	14.29%	14.29%
中级	71.43%	28.57%	0.00%	0.00%	28.57%
高级	57.14%	42.86%	0.00%	0.00%	42.86%
母语	0.00%	100.00%	0.00%	0.00%	100.00%

As the above table presents, the most chosen wrong option is option A. Around 43% of the lower group, 71% of the intermediate group, 57% of the advanced group choose option A.

As previously explored, 能 expresses ability, falling into the dynamic modality category. When changed into negation form 不能, it expresses permission ('be not allowed to do'), falling into the deontic modality category. The last clause of item 28 expresses epistemic interpretation; therefore, 不会 that implicate assumption is the appropriate choice.

This asymmetrical change of modality notions leads to the misuse of synonymous Chinese modal auxiliaries in normal negation form (不+CMA) from the semantics perspective. The error is caused by L2 negative transfer. L2 learners' existing knowledge of L2 hinders their comprehension of synonymous CMA due to overgeneralization. The L2 learners have difficulties in distinguishing among synonymous Chinese modal auxiliaries in negation form. The result is in accordance with the CAH prediction that the language elements which are different from L2 learners' first language are hard to master.

True or False Item 3

3、你用汉语讲，我不能听懂。×

You are speaking Chinese, and I can't understand.

你用汉语讲，我听不懂。√

第3题	1	2	3
初级	71.43%	0.00%	28.57%
中级	71.43%	28.57%	0.00%
高级	28.57%	0.00%	71.43%
母语	100.00%	0.00%	0.00%

In the above table, 1 represents a situation when the second language learners correctly judge true or false and amend the sentence error correctly if needed; 2 represents a situation when the second language learners correctly judge true or false but amend the sentence error incorrectly if needed; 3 represents a situation when the second language learners incorrectly judge true or false.

As the table demonstrates, around 71% of the lower group, 71% of the intermediate group, 29% of the advanced group judge and correct the sentence correctly. According to Table 2-1-1, 能+verb+complement has a unique asymmetrical negation construction. The negation form is not 不能+verb+complement, but verb+不+complement. The result contradicts the CAH prediction that the language elements which are different from L2 learners' first language are difficult.

The data indicate that L2 learners have a better comprehension of CMA negation from a structural perspective. Since this asymmetrical negation construction is a unique feature in Chinese different from English, language researchers have done adequate investigations on the structure. In addition, language instructors have paid particular attention to it and give additional instructions in class regarding teaching practice. The L2 learners have the knowledge to comprehend, synthesize and apply this CMA negation form. The L2 learners will also have better after-class exercises on the structure at the creating stage.

### 5.13 The Results of CMA Double Negation Application

**Table 5-0-13 The Results of CMA Double Negation**

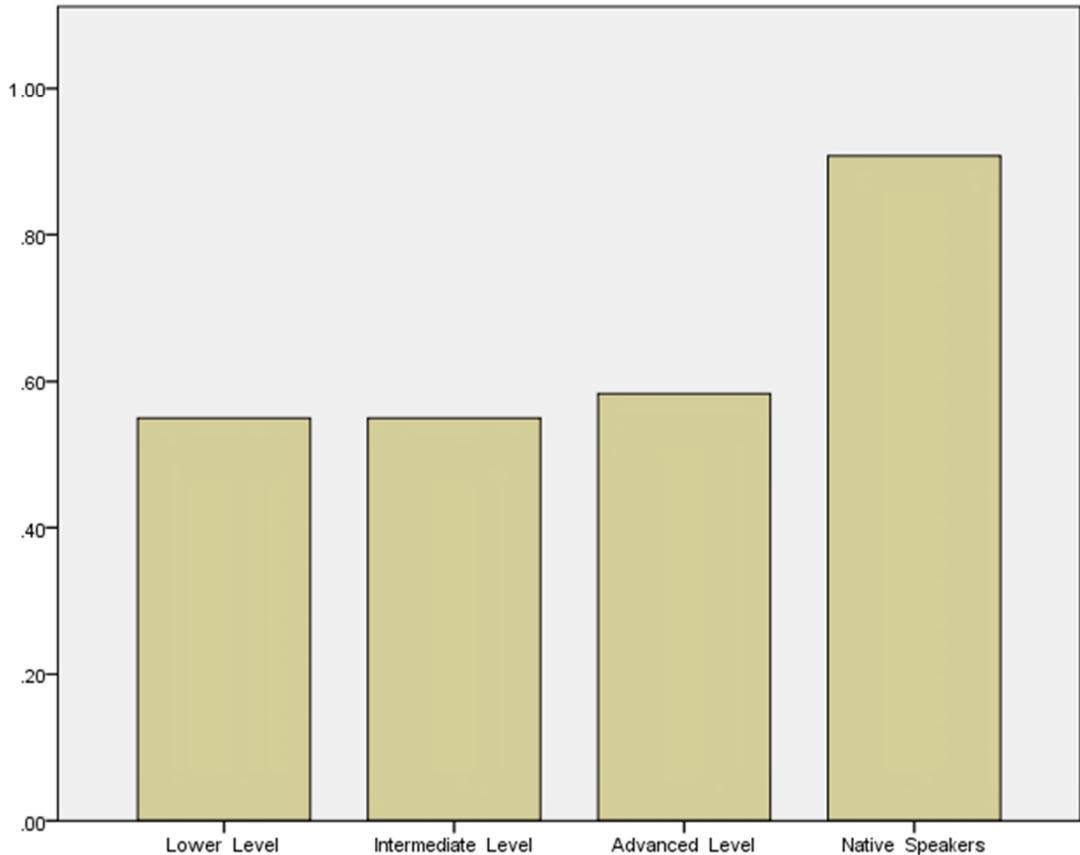
**Multiple Comparisons**  
Dependent Variable:  
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.714	.081
	Advanced Level	-.714	.081
	Native Speakers	-.457	.297
Intermediate Level	Lower Level	.714	.081
	Advanced Level	0.000	1.000
	Native Speakers	.257	.554
Advanced Level	Lower Level	.714	.081
	Intermediate Level	0.000	1.000
	Native Speakers	.257	.554
Native Speakers	Lower Level	.457	.297
	Intermediate Level	-.257	.554
	Advanced Level	-.257	.554

\*. The mean difference is significant at the 0.05 level.

As Table 5-1-3 presents, the mean difference of the percentage of the correct answers is not significantly different among all groups (Sig. > 0.05). The result indicates that second language learners are reaching a similar level to the native speakers in applying the CMA double negation form.

**Figure 5-0-13 Percentages of the Correct Answers in CMA Double Negation Application**



As the above figure presents, around 58% of the answers from the lower level group, 59% of the answers from the intermediate group, 60% of the answers from the advanced group and about 92% of the answers from the native speaker group are correct.

The correct rates of all L2 groups are high and around 60%. As double negation construction 不+CMA+不 is a unique sentence structure of CMA, the result is inconsistent with the prediction that the language elements that do not have equivalents in second language learners' L1 are difficult. L2 learners have better grasped CMA double negation form.

#### Multiple Choice Questions Item 4

4、一次不见，再去第二次，面子都给他，他也就（AD）回心转意了。

Saving his face by visiting him once and twice and more, he will have to come around.

A. 不能不    B. 可以不    C. 能不    D. 不得不

第 4 题	A	B	C	D	正确率
1	71.43%	28.57%	28.57%	71.43%	28.57%
2	100.00%	0.00%	42.86%	100.00%	57.14%
3	85.71%	14.29%	14.29%	85.71%	85.71%
4	100.00%	0.00%	0.00%	100.00%	100.00%

As the above table presents, around 71% of the lower group, 100% of the intermediate group, 86% of the advanced group and 100% of the native speaker group choose both option A and option D.

As previously discussed, Chinese modal auxiliaries have a unique form of double negation construction: 不+CMA+不. Though not all modality meanings of each modal auxiliaries can form this construction, 能 and 得 are among the group of CMA that can form a double negation structure.

The L2 learners successfully notice this special structure of CMA and make the right choices. It clearly proves that the L2 learners have existing L2 knowledge to recognize and use double negation structure.

#### Translation Task Item 7

7、She cannot but tell him the truth.

她不得不告诉他真相。

第 7 题	1	2	3	4
初级	85.71%	0.00%	14.29%	0.00%
中级	85.71%	14.29%	0.00%	0.00%
高级	85.71%	14.29%	0.00%	0.00%
母语	60.00%	0.00%	20.00%	20.00%

As the above table presents, around 86% of the lower group, 86% of the intermediate group and 86% of the advanced group have used the CMA double negation form and translated the sentence correctly.

Again this proves that the unique structures of CMA are the crucial teaching points for language instructors current teaching practice. Therefore, the L2 learners have a better chance of learning, comprehending and practising the CMA double negation form in-class. In addition, the L2 learners will also have better after-class exercises on the structure, for the structure is also a key learning point in textbooks.

### 5.14 The Results of CMA Application in Question and Rhetorical Question Sentences

**Table 5-0-14 The Results of CMA Application in Question Sentences**

**Multiple Comparisons**  
Dependent Variable:  
LSD

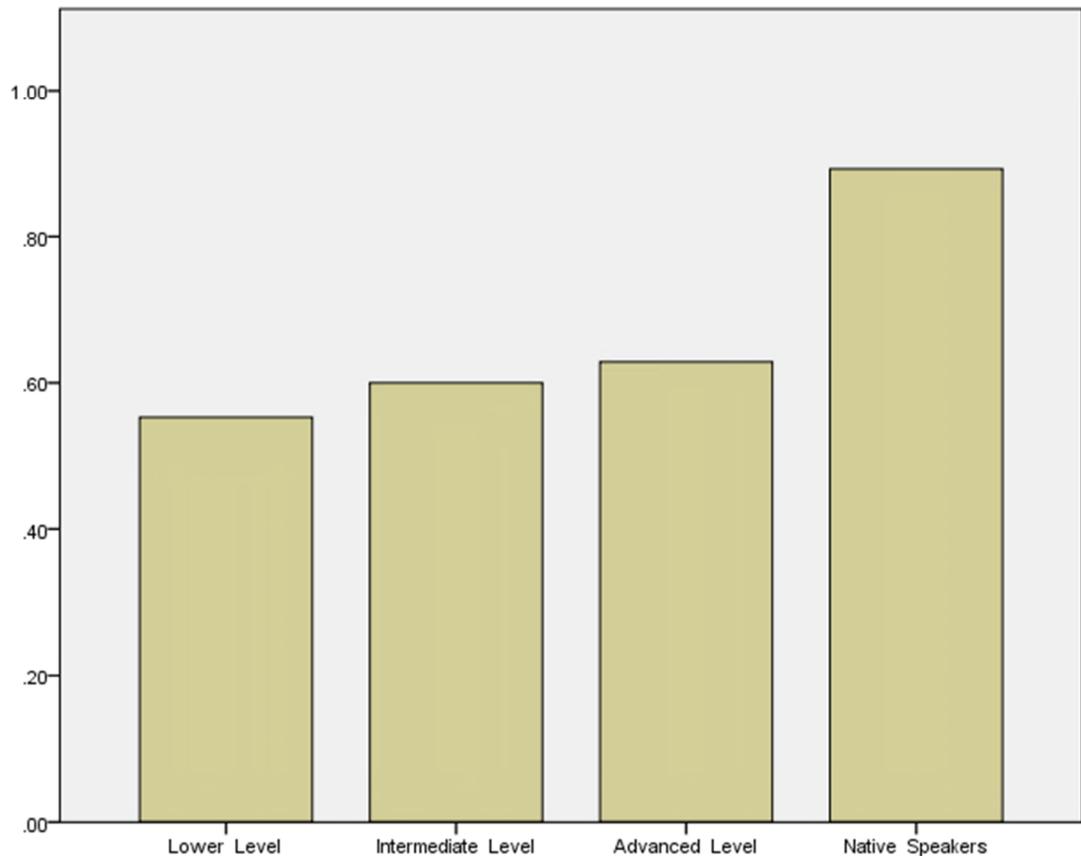
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.857	.184
	Advanced Level	-.286	.652
	Native Speakers	-1.714*	.020
Intermediate Level	Lower Level	.857	.184
	Advanced Level	.571	.370
	Native Speakers	-.857	.223
Advanced Level	Lower Level	.286	.652
	Intermediate Level	-.571	.370
	Native Speakers	-1.429*	.048
Native Speakers	Lower Level	1.714*	.020
	Intermediate Level	.857	.223
	Advanced Level	1.429*	.048

\*. The mean difference is significant at the 0.05 level.

As Table 5-1-4 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and the lower level group (Sig. < 0.05). There is also a significant difference between the advanced group and the native speaker group (Sig. < 0.05). But there is no significant difference between the intermediate

group and the native speaker group (Sig. > 0.05). The result suggests that the level of CMA application is not necessarily in accordance with L2 learner's second language proficiency.

**Figure 5-0-14 Percentages of the Correct Answers in the CMA Application in Question Sentences**



As the above figure presents, around 58% of the answers from the lower level group, 60% of the answers from the intermediate group, 62% of the answers from the advanced group and about 92% of the answers from the native speaker group are correct.

The correct rates of all L2 groups are high and around 60%. As positive-negative interrogative construction CMA+不+CMA is a unique sentence structure of CMA, the result is inconsistent with the prediction that the language elements that do not have equivalents in second language

learners' L1 are difficult. L2 learners have a good knowledge of this negation construction that expresses interrogative implication.

### Multiple Choice Item 39

39、“（ 要不要 ）给您上甜品？” 服务员问。

“May I serve dessert for you?” The Waitress asks.

A. 该不该    B. 得不得    C. 要不要    D. 会不会

第 39 题	A	B	C	D	正确率
初级	0.00%	42.86%	42.86%	14.29%	42.86%
中级	28.57%	14.29%	57.14%	0.00%	57.14%
高级	28.57%	0.00%	57.14%	14.29%	57.14%
母语	0.00%	0.00%	100.00%	0.00%	100.00%

As the above table presents, around 43% of the lower group, 57% of the intermediate group and 57% of the advanced group choose the correct option. The correct rates of the L2 groups are far below the native speaker's 100 percentage of correctness.

The results indicate that the L2 learners have difficulties distinguishing among synonymous Chinese modal auxiliaries in positive-negative negation form from a semantic perspective. The error is caused by L2 negative transfer. L2 learners' existing knowledge of L2 hinders their comprehension of synonymous CMA due to overgeneralization at the knowledge stage and the synthetic stage. The result is in accordance with the CAH prediction that the language elements which are different from L2 learners' first language are hard to master.

### Translation Task 10

10、I never knew if you would show up next time. But I was ready for the airy Waltz in the breezes in spring.

我不知道你下次会不会来。但是我已经准备好要在融融春风里跳一支优雅的华尔兹。

第 10 题	1	3	4	5
初级	42.86%	14.29%	14.29%	28.57%
中级	85.71%	0.00%	0.00%	14.29%
高级	42.86%	14.29%	28.57%	14.29%
母语	100.00%	0.00%	0.00%	0.00%

As the above table presents, around 43% of the lower group, 86% of the intermediate group and 43% of the advanced group have used the CMA positive-negative negation form and translated the sentence correctly.

Again this proves that the unique structures of CMA are the key teaching points for language instructors. Therefore, the L2 learners have a better chance of learning and comprehending this unique CMA negation form in-class. Furthermore, the L2 learners also have better after-class exercises on the structure, for the construction is also a key learning point in L2 textbooks.

By analysing the results of the application of modal auxiliaries from Section 5.12 to Section 5.14, the current study summarises:

1) The L2 learners have difficulties in distinguishing among synonymous Chinese modal auxiliaries in negation forms from a semantic perspective. This is in accordance with the CAH hierarchy of difficulty presented by Table 1-1 and Table 2-1-3's prediction of CMA application difficulties.

2) The errors occur at the knowledge stage and the synthetic stage, and are mainly caused by mother tongue negative transfer and second language negative transfer.

3) Regarding the applications of unique negation CMA construction from a structural perspective, including V+不+complement, 不+CMA+不, CMA+不+CMA, the result is inconsistent with the prediction that the language elements that do not have equivalents in second language learners' L1 are difficult. L2 learners have better knowledge of the unique CMA negation constructions than their semantic meanings.

### 5.15 The Results of CMA Redundancy

**Table 5-0-15 The Results of the Redundant Usage of CMA**

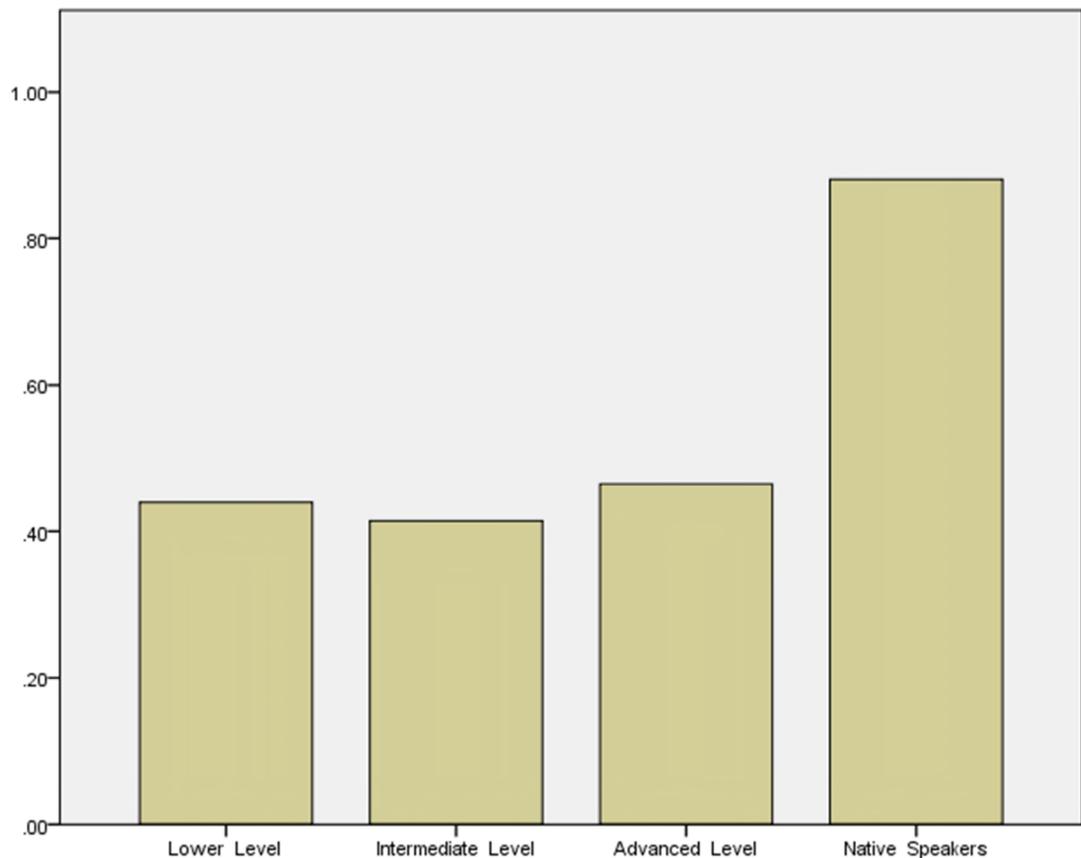
**Multiple Comparisons**  
Dependent Variable:  
LSD

(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.571	.239
	Advanced Level	-.571	.239
	Native Speakers	-2.714*	.000
Intermediate Level	Lower Level	.571	.239
	Advanced Level	0.000	1.000
	Native Speakers	-2.143*	.000
Advanced Level	Lower Level	.571	.239
	Intermediate Level	0.000	1.000
	Native Speakers	-2.143*	.000
Native Speakers	Lower Level	2.714*	.000
	Intermediate Level	2.143*	.000
	Advanced Level	2.143*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-1-5 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have a tendency to make redundancy error in the application of CMA. And L2 learners have not reached a similar level as the native speakers.

**Figure 5-0-15 Percentages of the Correct Answers in the Redundant Usage of CMA**



As the above figure presents, around 42% of the answers from the lower level group, 41% of the answers from the intermediate group, 43% of the answers from the advanced group and about 92% of the answers from the native speaker group are correct. L2 learners are facing difficulties recognizing the redundant usage of the Chinese modal auxiliaries.

True or False Task Item 12

12、麦克生气地会把书扔在桌子上。

Mike threw his book on the desk angrily.

第 12 题	1	2	3
初级	42.86%	0.00%	57.14%
中级	42.86%	0.00%	57.14%
高级	42.86%	28.57%	28.57%
母语	100.00%	0.00%	0.00%

As the above table presents, around 57% of the lower group, 57% of the intermediate group, 29% of the advanced group and 0% of the native speaker group misjudge the incorrectness of the sentence.

This error occurs at the attention stage when the L2 speakers fail to notice the redundancy of the CMA. In item 12, 'threw the book on the desk angrily' is an action that already happened. The modal auxiliary 会 is intrinsically connected with futurity. 会 has a future connotation in contrast with the tense of the sentence. The L2 learners lack knowledge of the internal connotation of 会, leading to redundant CMA usage at the knowledge stage.

## 5.16 The Results of CMA Omission

**Table 5-0-16 The Results of the Missing Usage of CMA**

**Multiple Comparisons**  
Dependent Variable:  
LSD

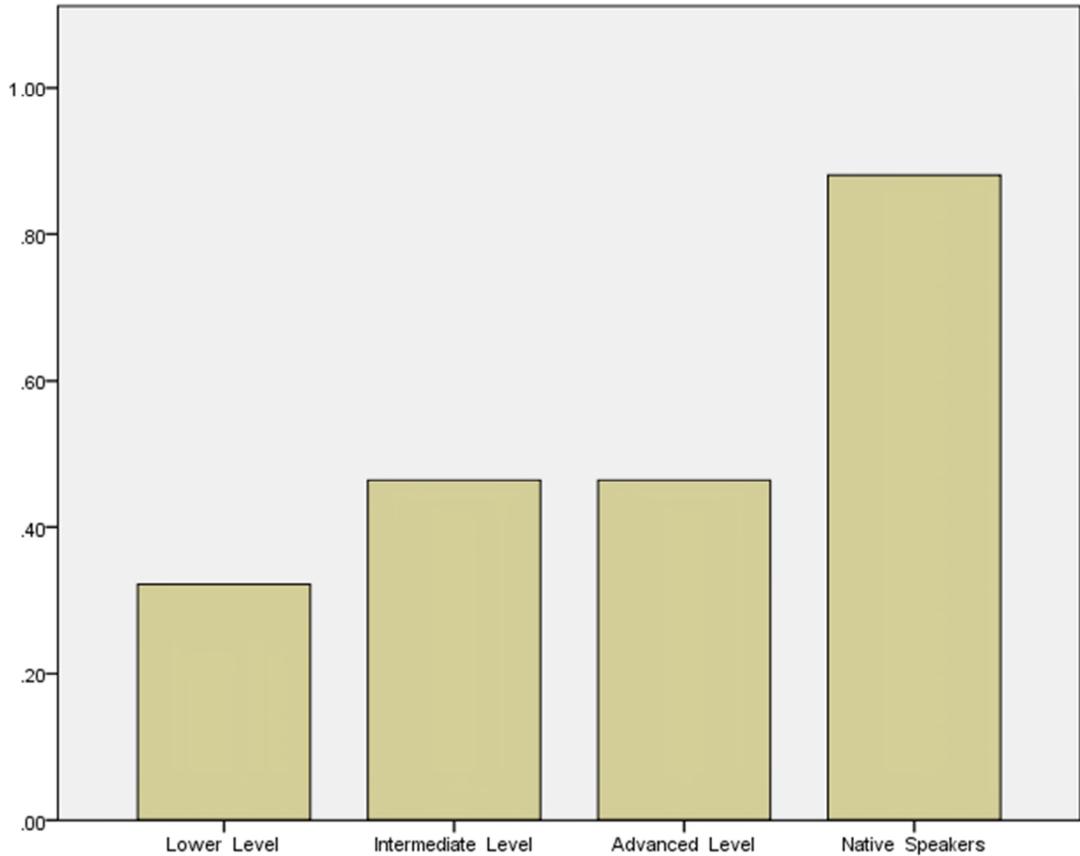
(I) 组别		Mean Difference (I-J)	Sig.
Lower Level	Intermediate Level	-.571	.117
	Advanced Level	0.000	1.000
	Native Speakers	-1.571*	.000
Intermediate Level	Lower Level	.571	.117
	Advanced Level	.571	.117
	Native Speakers	-1.000*	.016
Advanced Level	Lower Level	0.000	1.000
	Intermediate Level	-.571	.117
	Native Speakers	-1.571*	.000
Native Speakers	Lower Level	1.571*	.000
	Intermediate Level	1.000*	.016
	Advanced Level	1.571*	.000

\*. The mean difference is significant at the 0.05 level.

As Table 5-1-5 presents, the mean difference of the percentage of the correct answers is not significantly different among all L2 groups (Sig. > 0.05). However, a significant difference is found between the native speaker group and all the L2 groups (Sig. < 0.05). The result indicates that second language learners have a tendency to make omission error in the application

of CMA. And L2 learners have not reached a similar level as the native speakers.

**Figure 5-0-16 Percentages of the Correct Answers in the Missing Usage of CMA**



As the above figure presents, around 58% of the answers from the lower level group, 57% of the answers from the intermediate group, 56% of the answers from the advanced group and about 82% of the answers from the native speaker group are correct. L2 learners are facing difficulties noticing the lack of use of the Chinese modal auxiliaries.

#### True or False Task Item 21

21、爸爸的工资不太高，所以妈妈一定去外边工作。

My father doesn't earn much, so my mother has to go outside for work.

第 21 题	1	2	3
初级	42.86%	0.00%	57.14%
中级	57.14%	0.00%	42.86%
高级	42.86%	14.29%	42.86%
母语	100.00%	0.00%	0.00%

As the above table demonstrates, only around 43% of the lower group, 57% of the intermediate group and 43% of the advanced group realize the incorrectness of the sentence. In comparison, 100% of the native speaker group successfully detect the omission of the Chinese modal auxiliary.

In item 21, the adverb 一定 yiding 'must' indicates a subjective prediction. 'Mother has to work' is not a prediction, but a requirement of reality, thus modal auxiliary 得 should be added after the adverb 一定, indicating that 'mother' is forced to work by the poverty reality. 一定 implies future prediction, while 去外边工作 implies present reality. The second language learners fail to notice the tense contradiction within the sentence, leading to the CMA omission error.

#### True or False Task Item 22

22、我明天回国，回国以后很想念这里的生活。

I will go back to my home country tomorrow, and I will miss my time here after my return.

第 22 题	1	2	3
初级	42.86%	0.00%	57.14%
中级	57.14%	0.00%	42.86%
高级	14.29%	14.29%	71.43%
母语	100.00%	0.00%	0.00%

As the above table demonstrates, only around 43% of the lower group, 57% of the intermediate group and 14% of the advanced group are aware of the incorrectness of the sentence. In comparison, 100% of the native speaker group successfully detect the omission of the Chinese modal auxiliary.

In item 22, 想念 *xiangnian* 'want' indicates a present action. The former clause of the sentence expresses a future action. A present action cannot happen before a future action. Again, the second language learners fail to notice the tense contradiction within the sentence and make the CMA omission error.

In conclusion:

The analysis of the results from Section 5.15 to Section 5.16 proves that the CMA redundancy and omission error occurs at the attention stage, when the L2 learners fail to notice the contradictory tense within the sentence. The L2 learners do not reach the native speakers level.

## Chapter 6 Conclusion

### 6.1 Difficulties, Acquisition Stages and Suggestions

So far, this study has discussed and tried to answer the research questions in the preceding chapters.

1. Are Chinese modal auxiliaries difficult for English native speakers, and why?

Firstly, Lado proposes that 'those elements that are similar to the learner's native language will be simple for him, and those elements that are different will be difficult'. For Chinese modal auxiliaries, four unique features are different from the English modal verbs. They do not have a tense change; they can be used in succession; their negation has asymmetrical features and a unique double negation construction; one EMV is usually equivalent to several CMAs. The CAH predicts that English native speakers have difficulties applying CMAs, and the CMA test results confirm the prediction.

Secondly, there are endless redefinitions and re-categorisation of CMAs. Different scholars hold different criteria to distinguish modal auxiliaries from normal verbs and adverbs, leading to a vast number gap of modal auxiliaries from four to more than a hundred. If the language instructors cannot fully grasp the nature of CMAs, there will be problems during the teaching practice, leading to the problematic interpretations of CMAs from L2 learners.

2. What are the difficulties in L2 learners' application of CMAs?

As Table 6-0-1 presents, the study has generated a new CMA application difficulties categorisation. The difficulties are classified into 16 sub-categories under five major categories. Each sub-category difficulty occurs at different stages of the CMA acquisition, requiring corresponding solutions.

**Table 6-0-1 Difficulties, Acquisition Stages and Suggestions**

The Difficulties in CMA Application			Acquisition Stages	Solutions
semantic mixture	a mixture among CMA	uncertainty 能/能够, 可以	knowledge	explicit instruction
		probability 要, 会	knowledge	explicit instruction
		ability 能, 会	attention & knowledge	explicit instruction
		need 想, 要, 愿意, 肯	knowledge & synthetic	explicit instruction peer & language partner
		permission & obligation 应该/应当, 该, 得, 要	attention & knowledge	explicit instruction
	a mixture among words of other property	verb	knowledge	explicit instruction
		adverb		
		conjunction		
		adjective		
	aspect and tense	past	past tense	attention & knowledge
subjunctive mood				
future		future tense		
		conditional sentence		
succession			knowledge	explicit instruction on semantics
negation	negation	normal negation	knowledge & creating	explicit instruction on semantics after-class exercises corrective feedback
		double negation		
	question and rhetorical question			
redundant	redundant		attention &	explicit instruction

and missing	missing		knowledge	
-------------	---------	--	-----------	--

L2 learners face difficulties distinguishing among synonymous CMAs due to L2 negative transfer regarding semantic mixture. Moreover, it is hard for L2 learners to grasp one language element in L1 that splits in L2. The mother tongue negative transfer and second language negative transfer intertwine together, resulting in CMA application errors made by L2 learners. These errors often happen at the knowledge stage, which requires explicit instruction from language instructors.

Regarding aspect and tense of the CMAs, though Chinese modal auxiliaries have no tense change, they can still express aspect interpretation with the help of words relating to time or with the internal time implication of its own from a semantic perspective. If the L2 learners fail to notice the past tense marker or lack knowledge of the futurity connotation carried by some Chinese modal auxiliaries, they are prone to make errors in the application of CMAs. To improve their application, teachers should present explicit instructions on the Chinese aspect markers and the connotations of certain CMAs.

For the succession of CMAs, due to the interchangeability of the Chinese modal auxiliaries, the L2 learners may apply CMA in succession correctly by coincidence. And if the language instructors give clear instruction on the rules of the CMAs succession in teaching practice, the L2 learners will grasp a good knowledge of the application of CMA succession. The difficulties do not lie in CMA succession construction and rules but in distinguishing among synonymous Chinese modal auxiliaries from a semantic perspective.

As to the application of CMA negation, the test result is inconsistent with the prediction that the language elements that do not have equivalents in second language learners' L1 are difficult. L2 learners have better grasped the unique CMA double negation form. Again this proves that the unique

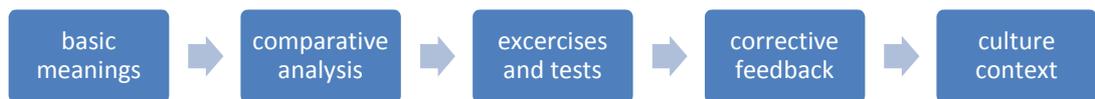
structures of CMA are the crucial teaching points for language instructors' current teaching practice. The application of CMA succession and negation proves that it is not the unique phrase structure that is difficult for L2 learners; it is the synonymous meaning of different CMAs that is difficult, which requires not only explicit instruction from language instructors but also after-class exercises and interaction with peers and native speakers.

The analysis of the results indicates that the CMA redundancy and omission error occurs at the attention and noticing stage. If the L2 learners fail to notice the internal connotation of CMAs, they tend to add verbs or adverbs to express modality, leading to redundancy. Or if there are already adverbs or verbs that carry a connotation of modality, L2 learners tend to omit modal auxiliaries, leading to ungrammatical sentences.

### 3. How to improve L2 learners' application of CMAs?

Once the study has located the difficulties in the application of the CMAs, solutions can be explored accordingly.

**Table 6-0-2 The Five Steps of the CMA Semantics Instruction**



The study points out that language instructors have attached great importance to the unique grammatical structures of the Chinese modal auxiliaries, suggesting that the semantics of different Chinese modal auxiliaries should be the instructional focus in future teaching practice.

The CMA semantics instruction follows the following five steps, as Table 6-0-2 demonstrates:

(1) Explicit instructions on the basic meanings of the CMAs from the language instructors are a critical countermeasure against CMA application difficulties.

(2) It is also necessary for teachers to emphasize linguistic variations between Chinese and English.

(3) & (4) Outside of class, after-class exercises and corrective feedback from language instructors are essential supplementary solutions for L2 learners to better grasp the nature of CMAs.

(4) Interaction with peers and language partners benefit L2 learners' acquisition of the second language. L2 learners are likely to judge what is grammatically acceptable in Chinese and understand the semantic meaning under a particular language environment.

## **6.2 Research Limitations and Further Work**

Although this study examines the learning and acquisition of different Chinese modal auxiliaries, due to the time and dissertation length restriction, many aspects of modal auxiliaries cannot be able to be explored.

From a purely linguistic perspective, not all Chinese modal verbs can be fully and profoundly explored in this doctoral project. Not every meaning of each polysemic modal auxiliary can be covered in detail. In order to help the L2 learners efficiently fulfil the process of modal auxiliary acquisition, the main focus will be on the most commonly used modal auxiliaries and their major meanings.

As far as this study, the work is built on a theoretical basis. The study on English modal verbs and the research on Chinese modal auxiliaries, including their definitions, criteria and categorisation, are mainly based upon English and Chinese grammar books instead of textbooks. Further research on Chinese learning textbooks should be carried out. The most commonly used Chinese textbooks and textbooks designed by different universities or even different teachers need to be taken into consideration. How do these textbooks arrange the study of modal auxiliaries, how many modal auxiliaries are contained in them, in which difficulty level are these modal auxiliaries arranged, and in what sequence do the modal auxiliaries appear in these textbooks, and so on.? The research from all of these perspectives needs to be carried out in future studies.

## List of References

Alderson, J.C. et al. 1995. *"Language Test Construction and Evaluation."* Cambridge: Cambridge University Press.

Bandura, A. 1986. *"Social foundations of thought & action: A social cognitive theory."* Upper Saddle River, NJ: PrenticeHall.

Bloom, B. S. 1956. *"Taxonomy of educational objectives, Handbook I: The cognitive domain."* New York, NY: David McKay Co Inc.

Bolinger, D. 1977. *"Aspects of Language, 2nd ed."* New York: Harcourt Brace Jovanovich. P554

Brown, H Douglas. 2007. *"Principles of Language Learning and Teaching."* Pearson Education. P248

Bybee, Joan, Revere Perkins & William Pagliuca. 1994. *"The Evolution of Grammar: Tense, Aspect and Modality in the Languages of the World."* Chicago: University of Chicago Press. P177, P179

Chen, Chengze. 1922. *"Draft for a Chinese Grammar."* Shanghai Commercial Press. P43 - 47

Chen, Wangdao. 1940. *"A Collection of Papers on the Reform of Chinese Grammar."* Shanghai: Academic Press.

- Coates, J. 1995. *"The expression of root and epistemic possibility in English."* Cambridge: Cambridge University Press. P146
- Corder, S.P. 1981. *"Error Analysis and Interlanguage."* Oxford: Oxford University Press.
- Cui, Jingjing. 2006. *"Syntactic Structure of Modal Auxiliaries in Modern Chinese."* Master Dissertation. Hunan University.
- Depraetere & Reed. 2006. *"The Handbook of English Linguistics."* Blackwell Publishing Ltd. P273-274
- Duan, Yucai. 1807. *"Notes to the Definitions and Explanations of Characters."* Shanghai: Guji Press
- Gao, Mingkai. 1948. *"On Chinese Grammar."* Shanghai: Kai Ming Bookstore.
- Halliday, M.A.K. 1994. *"An Introduction to Functional Grammar."* London: Edward Arnold. P68.
- Huddleston, Rodney D. 1976. *"Some Theoretical Issues in the Description of the English Verb."* *Lingua* 40: 331 - 80
- Johannesson, Nils – Lennart. 1976. *"The English Modal Auxiliaries: A Stratificational Account."* Stockholm: Almqvist & Wiksell International. P11.
- Joseph, Brian D. & Richard D. Janda. 2003. *"The Handbook of Historical Linguistics."* Malden, MA: Blackwell Pub. P632

Klein, W. 1986. *"Second Language Acquisition."* Cambridge: Cambridge University Press.

Lado, Robert. 1957. *"Linguistics across Cultures: Applied Linguistics for Language Teachers."* Ann Arbor: University of Michigan Press. P2

Lai, Peng. 2006. *"Causes of Errors in the Application of Chinese Neng-Yuan Verbs."* Language Learning and Research.

Li, Jiajiao. 2013. *"Bias Analysis of the Acquisition of Chinese Modal Verbs."* Master Dissertation. Northwest University (China).

Li, Renzhi. 2004. *"Modality in English and Chinese: A Typological Perspective."* Boca Raton, Florida. P130

Li, Charles N. & Tompson Sandra A. 1981. *"Mandarin Chinese: A Functional Reference Grammar."* University of California Press. P173

Liu, Yuehua. 1983. *"Practical Modern Chinese Grammar."* Foreign Language Teaching and Research Press.

Lu, Xiaokun. 2003. *"A Semantic Study of Modern Chinese Basic Auxiliary Verbs."* China Social Sciences Press.

Lv, Shuxiang. 1982. *"Outlines of Chinese Grammar."* Beijing: Commercial Press. P17 – 18

Lyons, John. 1977. *"Semantics: Vol. 2."* Cambridge: Cambridge University Press. P823

Ma, Jianzhong. 1898. *"Ma's Grammar."* Shanghai: Commercial Press.

Mayo, María del Pilar García & María Junkal Gutierrez Mangado, etc. 2013. *"Contemporary Approaches to Second Language Acquisition."* Amsterdam, Philadelphia: John Benjamins Publishing Company. P7

Mao, Yan. 2010. *"Research on Volition Auxiliary Verbs in Modern Chinese."* Master Dissertation. East China Normal University.

Palmer, Frank. 2001. *"Mood and Modality. 2<sup>nd</sup> ed."* Cambridge: Cambridge University Press. P10

Peng, Lizhen. 2005. *"On Modality of Modern Chinese."* Doctoral Dissertation. Fudan University.

Picallo, C. 1990. *"Modal verbs in Catalan."* NLLT 8, P285 - 312.

Prator, Clifford. 1967. *"Hierarchy of Difficulty."* Lecture handouts. University of California.

Quirk, Randolph. 1972. *"A Grammar of Contemporary English."* London: Longman. P84

Quirk, Randolph. 1985. *"A Comprehensive Grammar of the English Language."* London: Longman. P127 – 128

Richards, J.C. 1971. *"A Non - Contrastive Approach to Error Analysis."* Journal of ELT. 25, P204 - 219

Robinson, Peter & Nick Ellis. 2008. *"Handbook of Cognitive Linguistics and Second Language Acquisition."* London: Routledge. P410

Sha, Qian. 2012. *"The Analysis on American Students' Acquisition Sequence of Chinese Modal Verbs."* Master Dissertation. Nanjing University.

Song, Yonggui. 2004. *"A Negation of Modern Chinese Modal Verb 'neng'."* Doctoral Dissertation. Fudan University.

Sun, Dejin. 1996. *"The Scope of the Modal Verbs in Chinese."* Beijing: Language Institute Press. P286 - 291

Tao, Lian. 1997. *"Research on the Differences among 可能, 会, 能."* Shanghai. Fudan University.

Ungerer, Friedrich & Hans-Jörg Schmid. 1996. *"An Introduction to Cognitive Linguistics."* New York: Longman. P38

van der Auwera, Johan & Plungian. 1998. *"Modality's Semantic Map."* Linguistic Typology 2: P79 – 124, P81

Wang, Feihua. 2005. *"A Contrastive Study of the Mood System between Chinese and English."* Doctoral Dissertation. East China Normal University.

Wang, Li. 1997. *"Wang Li Linguistics Dictionary."* Shangdong Education Press. P420 – 421, P715.

Wang, Yueting. 2012. "*The Study of Acquisition on the Modality System on Early Mandarin Children.*" Master Dissertation. Capital Normal University.

Woltz, D. J., Gardner, M. K., & Bell, B. G. 2000. "*Negative transfer errors in sequential cognitive skills: Strong-but-wrong sequence application.*" *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 26(3), 601-635.

Xia, Qing. 2012. "*Error Analysis of the Overseas Students' Acquisition of Chinese Modal Verbs.*" Master Dissertation. Xi'an International Students University.

Xiang, Erlan. 2011. "*A Syntactic Comparison of Chinese and English Auxiliary Verbs.*" Doctoral Dissertation. Huazhong Normal University.

Xiao, Mingqi. 2009. "*A Contrastive Study on Image Schemas of English and Chinese Modal Auxiliaries.*" Doctoral Dissertation. Southwest University.

Xie, Jialing. 2002. "*Chinese Modal Verbs.*" Doctoral Dissertation. Huazhong Normal University.

XHCD. 1996. "*Modern Chinese Dictionary. 3<sup>rd</sup> ed.*" Beijing: Commercial Press.

Xing, Fuyi. 1991. "*Modern Chinese.*" Higher Education Press.

Zhou, Jing. 2009. "*Research on the Effect of in-class Multimedia Teaching on Neng-Yuan Verbs in TCSL.*" Master Dissertation. East China Normal University.

Zhou, Yin. 2014. *"The Study of Modern Chinese Modalities Co-occurrence."*  
Master Dissertation. Guizhou Normal University.

Zhu, Dexi. 1982. *"Grammar Handouts."* The Commercial Press. P61 – 66.

## Bibliography

Bolinger, Dwight. 1942. "Need, Auxiliary." *College English* 4: 62-5

Bybee, J. L. 1985. "Morphology: a study of the relation between meaning and form." Amsterdam and Philadelphia: John Benjamins.

Bybee, J. L. and Fleischman, S. 1995. "Modality in grammar and discourse: an introductory essay." In J. L. Bybee and S. Fleischman (eds.), "Modality in grammar and discourse." Amsterdam and Philadelphia: John Benjamins.

Bybee, Joan, Revere Perkins & William Pagliuca. 1994. *The evolution of grammar: Tense, aspect, and modality in the languages of the world*. Chicago: The University of Chicago Press.

Chafe, Wallace. 1995. The realis-irrealis distinction in Caddo, the Northern Iroquoian languages, and English. In Bybee, Joan & Suzanne Fleischman ( eds. ), *Modality and grammar in discourse ( Typological studies in language 32)* , 349—365. Amsterdam, Philadelphia: Joan Benjamins.

Chung, Sandra & Alan Timberlake. 1985. Tense, aspect, and mood. In Shopen, Timothy ( eds. ) , *Language typology and syntactic description, Vol III: Grammatical categories and the lexicon*, 202—258. Cambridge: Cambridge University Press.

Coates, J. 1983. "The semantics of the modal auxiliaries." London and

Canberra: Croom Helm.

Collins, Peter. 2009. *Modals and Quasi-Modals in English*. Amsterdam: Rodopi.

Comrie, Bernard. 1985. *Tense*. Cambridge: Cambridge University Press.

Cristofaro, Sonia. 2012. Descriptive notions vs. grammatical categories: Unrealised states of affairs and ‘irrealis’. *Language Sciences* 34: 131–146.

Depraetere, Ilse. 2014. “Modals and Lexically-regulated Saturation”. *Journal of Pragmatics* 71: 160–177.

Ding, Jinguo. 1996. “On theoretical principles in the contrastive study of Chinese and English.” *Foreign Language Teaching and Research* 3: 15-20

Huddleston, Rodney and Geoffrey Pullum et al. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.

Jespersen, Otto. 1992. *The Philosophy of Grammar*. Chicago, IL: University of Chicago Press.

Kennedy, Graeme. 2002. “Variation in the Distribution of Modal Verbs in the British National Corpus”. Eds. Randi Reppen, Susan Fitzmaurice and Douglas Biber. *Using Corpora to Explore Linguistic Variation*. Amsterdam: Benjamins.

Lyons, J. 1977. *Semantics*. Cambridge: Cambridge University Press.

McClosky, J. (2006). Questions and questioning in a local English. In Zanuttini, R., Herburger, E., Campos, H., and Portner, P. (eds), *Negation, Tense, and Clausal Architecture: Cross-Linguistic Investigations*. Washington, DC: Georgetown University Press, pp. 87–126.

McCready, E. and Ogata, N. (2007). Evidentiality, modality and probability. *Linguistics and Philosophy*, 30(2): 147–206.

McDowell, J. 1987. *Assertion and Modality*. PhD thesis, Los Angeles: USC.

MacFarlane, J. 2006. Epistemic modals are assessment sensitive. Ms., University of California at Berkeley. To appear in a collection edited by Brian Weatherson and Andy Egan.

McGee, V. 1989. Conditional probabilities and compounds of conditionals. *Philosophical Review*, 98: 485–542.

Mackie, J. L. 1973. *Truth, Probability, and Paradox*. Oxford: Oxford University Press.

McNamara, P. 2006. Deontic logic. In Zalta, E. N. (ed.), *The Stanford Encyclopedia of Philosophy*, available at: <<http://plato.stanford.edu/archives/spr2006/entries/logic-deontic/>>.

Nordlinger, Rachel and Elizabeth Closs Traugott. 1997. "Scope and the Development of Epistemic Modality: Evidence from Ought to", *English Language and Linguistics* 1.2: 295–317.

Nuyts, Jan. 2005. "The Modal Confusion. On Terminology and the Concepts behind It". Eds. Alex Klinge and Hendrik Høeg Müller. *Modality: Studies in Form and Function*. London: Equinox.

Palmer, F. R. 2001 "Mood and modality", 2nd ed. Cambridge: Cambridge University Press.

Papafragou, A. 2000. "Modality: issues in the semantics–pragmatics interface." Amsterdam and New York: Elsevier Science.

Peng, Lizhen. 2005. "On modality of Modern Chinese." PhD Dissertation. Fudan University.

Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J. 1985. "A comprehensive grammar of the English language." London and New York: Longman.

Searle, John R. *Expression and Meaning. Studies in the Theory of Speech Acts*. Cambridge: Cambridge University Press, 1979.

Van der Auwera, Johan and Vladimir Plungian. "Modality's Semantic Map". *Linguistic Typology* 2 (2008): 79–124.

Van Linden, An. *Modal Adjectives. English Deontic and Evaluative Constructions in a Synchronic and Diachronic Perspective*. Berlin: Mouton de Gruyter, 2012.

Verhulst, An, Ilse Depraetere and Liesbet Heyvaert. "Source and Strength of Modality: An Empirical Study of Root Should, Ought to and Be Supposed to in Present-day British English". *Journal of Pragmatics* 55 (2013): 210–22.

Von Wright, Georg H. "An Essay in Modal Logic". *Mind* 237 (1951): 1–15.

Williams, Chris. "Fuzziness in English. What Shall We Do with Shall?" Eds. Anne Wagner and Sophie Cacciaguidi. *Legal Language and the Search for Clarity*. Bern: Peter Lang, 2006. 237–263.

Xia, Qing. 2012. "Error Analysis of the Overseas Students' Acquisition of Chinese Modal Verbs." Master Dissertation. Xi'an International Students University.

Xiang, Erlan. 2011. "A Syntactic Comparison of Chinese and English Auxiliary Verbs." Doctoral Dissertation. Huazhong Normal University.

Xiao, Mingqi. 2009. "A Contrastive Study on Image Schemas of English and Chinese Modal Auxiliaries." Doctoral Dissertation. Southwest University.

Xing, Fuyi. 1991. "Modern Chinese." Higher Education Press.

Zhou, Yin. 2014. "The Study of Modern Chinese Modalities Co-occurrence." Master Dissertation. Guizhou Normal University.

崔, 希亮. 2003. 〈事件情态和汉语的表态系统〉, 《语法研究和探索》(十二), 北京: 商务印书馆。

崔, 诚恩. 2002. 《现代汉语情态副词研究》, 中国社会科学院研究生院语言系  
博士论文。

丁, 声树、吕, 叔湘、李, 荣等. 1961/2009. 《现代汉语语法讲话》, 北京: 商  
务印书馆。

郭, 志良. 1993. 试论能愿动词的句法结构形式及其语用功能, 《中国语文》第3  
期。

郭, 晓麟. 2010. 〈「希望」和「愿意」的愿望表达模式解析〉, 《云南师范大  
学学报》。

胡, 裕树、范, 晓. 1995. 《动词研究》, 开封: 河南大学出版社。

黄, 岳洲. 1956. 〈区别助动词、副动词、副词的一般方法〉, 《语文学习》。

黄, 郁纯. 1999. 《汉语能愿动词之语义研究》, 国立台湾师范大学学华语文教  
学研究所硕士论文。

黄, 盛璋. 1956. 〈助动词和动词等的界限问题〉, 《语文学习》。

纪, 国泰. 1993. 〈浅议「敢」字可以训「能」〉, 《西华大学学报》。

李, 明. 2001. 《汉语助动词的历史演变研究》, 北京大学中国语言文学系博士  
论文

刘, 月华等. 1983. 《实用现代汉语语法》, 外语教学与研究出版社。

鲁, 晓琨. 2004. 《现代汉语基本助动词语义研究》, 北京: 中国社会科学出版  
社。

吕, 叔湘. 2001. 〈汉语语法分析问题〉, 《吕叔湘集》, 北京: 中国社会科学  
出版社。

吕, 叔湘、王海棻编. 2005. 《《马氏文通》读本》, 上海: 上海世纪出版集团。

马, 建忠. 1998. 《马氏文通》, 北京: 商务印书馆。

马, 庆株. 1988. 〈能愿动词的连用〉, 《语言研究》, 后收入马庆株(2004)  
《汉语动词和动词性结构》北京: 北京大学出版社。

马, 庆株. 2004. 〈自主动词和非自主动词〉, 《汉语动词和动词性结构》, 北  
京: 北京大学出版社。

马, 庆株. 2004. 〈能愿动词的意义与能愿结构的性质〉, 《汉语动词和动词性  
结构》, 北京: 北京大学出版社。

苗, 文利. 1992. 〈试谈「敢, 不敢也」〉, 《聊城大学学报》。

齐, 春红. 2008. 《现代汉语语气副词研究》, 昆明: 云南人民出版社。

齐, 沪扬. 2002. 《语气词与语气系统》, 合肥: 安徽教育出版社。

彭, 利贞. 2007. 《现代汉语情态研究》, 北京: 中国社会科学出版社。

孙, 德金. 1996. 〈汉语助动词的范围〉, 胡, 明扬主编《词类问题考察》, 北京: 北京语言文化大学出版社。

王, 力. 1985. 《中国现代语法》, 《王力文集》第二卷, 济南: 山东教育出版社。

王, 力. 1984. 《中国语法理论》, 《王力文集》第一卷, 济南: 山东教育出版社。

王, 红卫. 2008. 〈汉语情态动词「能」语法化的类型学研究〉, 《淮北煤炭师范学院学报》。

谢, 佳玲. 2002. 《汉语的情态动词》, 国立清华大学语言学研究所博士论文。

谢, 佳玲. 2006. 〈汉语情态词的语意界定: 语料库为本的研究〉, 《中国语文研究》第21期。

徐, 晶凝. 2008. 《现代汉语话语情态研究》, 北京: 昆仑出版社。

袁, 毓林. 1995. 〈词类范畴的家族相似性〉, 《中国社会科学》

袁, 毓林. 2005. 〈基于隶属度的汉语词类的模糊划分〉, 《中国社会科学》

朱, 德熙. 1982 《语法讲义》, 北京: 商务印书馆。

朱, 冠明. 2003. 〈汉语单音情态动词语义发展的机制〉, 《解放军外国语学院学报》

朱, 冠明. 2005 〈情态与汉语情态动词〉, 《山东外语教学》。

## **List of Abbreviations**

CAH: Contrastive Analysis Hypothesis

CMA: Chinese Modal Auxiliaries

EA: Error Analysis

EMV: English Modal Verb

L1: First Language

L2: Second Language

MA: Modal Auxiliaries

NS: Native Speakers

SLA: Second Language Acquisition

## Appendix A Chinese Language Test

之前 20 年里，中国各大城市建了很多没有电梯的多层住宅，而现在城市人口老龄化又很严重，比如杭州目前 60 岁以上老人就占 20% 以上，这些人有一部分住在没有电梯的多层住宅里，上下楼梯的确很不方便。为此，杭州市政府决定在上城和江干两个区对既有住宅加装电梯，为此还要动用公共财政，补贴每部电梯 20 万。

那么，这样的政策真的是一个普惠于老百姓的“民生工程”吗？

首先，我不知道杭州市政府有没有调查过：目前，居住在多层无电梯公寓楼内的高层住宅中的老人到底占比有多少？假如这个比例并不高，比如是 10%，那么，我们补贴 10 部电梯才能惠及一个老人，每帮助一个老人的成本就不是 20 万，而是 200 万了。所以，1、这个政策一旦实行，实际上 80-90% 的财政经费会被补贴到那些本不需要补贴的人群中去。有人也许会说：年轻人难道就没有权利享受电梯了吗？回答是：的确没有！

老小区无电梯是从建成之日就被所有业主知晓的公开信息。人们去购买这类多层住宅的顶楼的时候，已经知道没有电梯不利于住户上下楼，所以其价格也远低于低楼层的住宅。比如这些多层住宅出售的时候，六楼的价格往往是三楼的 80-90%，一套房子 300 万的话，这个差价就有至少 30 万。这说明：市场已经对不同楼层的住宅给出了合理的补偿，它用 30 万来奖励那些愿意上下楼不方便的住户。现在，2、政府突然说要动用公共财政补贴高楼层的住户给他们加装电梯，实际上就是对原来用高价格买中低楼层的住户的极大不公和打击。

加装电梯的本质是改变了不同楼层住宅的相对价格，因为带电梯的高层公寓，每高一层楼，单价往往会提高数百元不等，一套公寓也就相差数万元。而这样 3、动用公共财政补贴电梯的最后结果，实际上是把私人财富从低楼层的住户手中转移到高楼层的住户手中，这既不合理，也不公平。

如果政府真的觉得有必要改善老人的居住状况，应该直接补贴老人，而不是补贴所有住在高楼层的住户，包括年轻住户，而让低楼层住户损失家庭财产。对老人的补贴也应该一视同仁，而不是只补贴住在高楼层的老人，不补贴住在低楼层的老人。4、因为高楼层的老人或许有上下楼不方便的问题，但是低楼层的老人也可能有阳光少的不舒适问题。

一、请阅读文章，并回答下列问题

- 1、杭州市政府为什么要为多层住宅加装电梯？
- 2、购买无电梯多层住宅高层有什么补偿？
- 3、根据这篇文章，政府应当如何改善老人居住状况？
- 4、作者对加装电梯政策的看法是什么？为什么？

二、请阅读文章，并将划线句子翻译成英文

- 1、
- 2、
- 3、
- 4、

三、请阅读文章，并用文中出现的词语分别造句。（注意：不可以照抄原文中出现的句子。）

- 1、假如/如果……那么（就）……
- 2、不是……而是……
- 3、难道
- 4、一视同仁

.

## **Appendix B**

### **Modal Auxiliaries Test And Average Difficulty of Each Question**

Dear all,

I am conducting research on Chinese modal auxiliaries in the field of Teaching Chinese as A Foreign Language. I am very much in need of your help to accomplish a survey. All information will be treated as confidential. The data collected will be mainly for my PhD thesis and might be published in future.

1. Please complete the following test.
2. You may consult the dictionary. But please finish the test independently without discussing it with the others.
3. Please mark the difficulty of each question according to your answer behind each question. (very easy 1, easy 2, neutral 3, difficult 4, most difficult 5)

Your help is very much appreciated.

**Modal Auxiliaries:** 能、能够、可能、得、该、应该/应当/应、可以/可、要、会、愿意、肯、敢、想

一、 单项选择，请从四个选项中选出一个正确答案。

1. Please choose the appropriate modal auxiliary for each sentence.

(Notes: There is **only one** proper answer.)

例：麦克一小时 ( A ) 写一篇一千个汉字的文章。【 2 】

A. 能 B.会 C. 肯 D. 敢

1、曹先生是大好人，必 ( ) 原谅他，帮助他，给他出个好主意。【 3 】

A.要 B.可以 C.能 D.该

2、—— “谁告诉你的？”

—— “谁 ( ) 告诉我呢？！” 我耸耸肩，“从外表上是看不出来的，只有我心里明白。” 【 3 】

A.可以 B.想 C.能 D.要

3、教室早就( )翻修了,现在还没翻修是学校的失职。【2.5】

A.得 B.要 C.应该 D.会

4、休息室( )抽烟,教室不( )抽烟。【2】

A.会,会 B.会,能 C.能,能 D.能,会

5、爸爸,我之所以( )获奖,与妈妈的辅导是分不开的。【2.5】

A.能 B.可以 C.要 D.应该

6、当她还是方家那个瘦瘦的小丫头凤凤的时候,她哪敢说这种话!结婚这么( )变化人。【3】

A.可以 B.应该 C.要 D.能

7、他指着我说:“你怎么不爱说话了?你过去不是挺( )说的么?【3】

A.可以 B.能 C.想 D.肯

8、我想我得坦率地告诉你,我不( )做菜,我也不( )做菜。【2】

A.能,愿意 B.能,会 C.会,愿意 D.会,要

9、那些日子里她每次上街都要有国庆走在身边,这样她就( )不必提心吊胆【3.5】

A.能 B.可以 C.想 D.应该

10、如果你( )把车给我留一个礼拜,我( )给你五千块钱。【2.5】

A.会,愿意 B.能,可以 C.会,敢 D.能,应该

11、( )说,这是我吃过的最丰盛的晚餐。【2.5】

A.能 B.不得 C.可能 D.可以

12、人世间的酸甜苦辣不能忘,你一定( )去好好体验。【2.5】

A.应该 B.得 C.该 D.会

13、他要还在这儿,我( )有多开心啊!【3】

A.应该 B.要 C.该 D.能

14、那有电话吗?请给我留个电话,特别( )再跟你联系。【2】

A.要 B.会 C.能 D.想

15、我没跑远，本来（ ）去姨妈家的，走了一段，心里害怕又回来了。

【 2 】

A.愿意 B.会 C.肯 D.想

16、相信所长吧，他既（ ）找到咱们，也就一定会帮咱们找到妈妈。

【 3 】

A.会 B.能 C.想 D.该

17、她怎么（ ）明白我此时此刻的窘迫和孤独无助？ 【 2.5 】

A.能 B.可以 C.应该 D.可

18、圣诞节（ ）到了。 【 2 】

A.会 B.一定 C.要 D.得

19、你不注意，就（ ）感冒。 【 2 】

A.能 B.可能 C.可以 D.不能不

20、她早就预料到我（ ）落到这种地步。 【 3 】

A.得 B.能 C.该 D.可能

21、有时候他真（ ）责骂自己，为什么这样命苦？ 【 3 】

A.要 B.想 C.肯 D.敢

22、甭叫她，她光（ ）给我添乱。 【 3 】

A.能 B.会 C.要 D.该

23、她本有一肚子话要说，可是一句也说不出来，只（ ）跪在他面前哭。

【 2.5 】

A.能 B.会 C.要 D.可以

24、你们别逗了，我肚子都（ ）笑疼了。 【 2.5 】

A.会 B.想 C.要 D.可能

25、只有品行端正才能受人尊敬，否则就（ ）遭到所有人的唾弃。 【 3 】

A.能 B.会 C.能够 D.可

26、碰坏了车自然（ ）赔钱，但是，这次就原谅你了。 【 3 】

A.要 B.得 C.肯 D.应该

27、你还年轻，有朝一日，你将（ ）找到个比我胜强十倍的好姑娘的。

【 2.5 】

A.能 B.会 C.想 D.要

28、你是这样的平淡无奇，以至不管你说了什么，谁也（ ）往心里去。

【 2.5 】

A.不能 B.不会 C.没能 D.不可以

29、我（ ）学中文，可是我却按照父亲的意志考进了法律系。 【 2 】

A.要 B.想 C.愿意 D.该

30、从乘客们丢魂落魄的样子来看，人家（ ）以为船上着了火，而不是船靠了岸。【 3 】

A.能 B.会 C.可以 D.应该

31、如果你再不回去，老王又（ ）说你了。【 2.5 】

A.应该 B.应当 C.该 D.可

32、为了孩子我随时（ ）献出我的生命。 【 2.5 】

A.想 B.愿意 C.敢 D.得

33、孟先生为什么不能解答她的问题？他（ ）什么都教给她呀。 【 2.5 】

A.该 B.应该 C.要 D.会

34、这本书写得不错，你（ ）看看。【 3 】

A.可以 B.能 C.想 D.能够

35、真是风度不减当年哪！他实在（ ）得意。 【 3.5 】

A.该 B.得 C.要 D.应该

36、人们形成了这样一种错误认识，送礼送东西，是对的，是（ ）的，是合情合理的。 【 2.5 】

A.要 B.得 C.应该 D.能

37、你们俩是（ ）走路呢？还是（ ）坐车？ 【 2.5 】

A.肯，肯 B.愿意，肯 C.愿意，愿意 D.肯，愿意

38、早就分居 ( ) 早就提离婚嘛，怎么现在才提？ 【 3 】

A.得 B.能 C.应该 D.会

39、“ ( ) 给您上甜品？” 服务员问。 【 2.5 】

A.该不该 B.得不得 C.要不要 D.会不会

二、多项选择，请从四个选项中选出所有正确选项，正确选项多于一个。

2. Please choose the appropriate modal auxiliaries for each sentence.

(Notes: Please **choose more than one** proper answers.)

例：芳芳写完作业就 ( ABC ) 看电视了。 【 4 】

A.能 B.可以 C.要 D.应该

1、芳芳 ( ) 吃中国菜吗？ 【 2 】

A.愿意 B.肯 C.能 D.可以

2、他的腿伤好多了， ( ) 慢慢儿走几步了。 【 2.5 】

A.能 B.能够 C.可以 D.可能

3、假如他想到这三匹骆驼 ( ) 买到一百亩地，或是可以换几颗珍珠，他也不会这样高兴。 【 3 】

A.能 B.可以 C.会 D.应该

4、一次不见，再去第二次，面子都给他，他也就 ( ) 回心转意了。 【 3.5 】

A.不能不 B.可以不 C.能不 D.不得不

三、判断以下句子的正误，错误句子打☒，正确句子打☑，并且**改正**错误的句子，可以直接在原句上改正。

3. Please find out the sentences below are right or wrong and **correct** the improper ones.

例：兰兰的爸爸会汉字写。 【 1 】 ☒

会写汉字

1、我非常喜欢大自然，很想念回到家乡那片原野里。 【 2.5 】

- 2、我们刚好上的时候，你就肯一天到晚和我在一起，哪怕什么都不干，光呆在一起就特别开心。 【 3.5 】
  
- 3、你用汉语讲，我不能听懂。 【 2 】
  
- 4、他给你会不会回信？ 【 2 】
  
- 5、——我不应该对你的朋友热情点儿吗？  
——该该。阿梅笑吟吟地说。 【 3 】
  
- 6、不要闹钟，早上四点我不能起来。 【 2.5 】
  
- 7、我会以后有出息的，因为我敢于挑战，善于挑战。 【 3 】
  
- 8、每次都想这次一定想好好跟他谈谈，让他改邪归正。 【 3.5 】
  
- 9、考大学的时候，爸爸妈妈都希望我要考英语专业。 【 2.5 】
  
- 10、我肯跟你结婚，但是，我不能违背父母的意志。 【 2.5 】
  
- 11、这个医生不能治好他的病。 【 2 】
  
- 12、麦克生气地会把书扔在桌子上。 【 2.5 】
  
- 13、暑假我愿意去上海玩儿，那儿怎么样？ 【 2 】
  
- 14、他很喜欢说汉语，但是只说一点儿。 【 2.5 】

- 15、下午的会议我得去参加，可是太忙去不了。 【 3 】
- 16、于是，愤怒的农场主们叫着嚷着想去惩治搞破坏的人。 【 4 】
- 17、我得坦率地告诉你，我不会做菜，我也没愿意做菜。 【 2 】
- 18、唐爷爷后悔得要命。要真是一开口就能有车有钱，本得要两辆卡车的，钱也得加倍。 【 4.5 】
- 19、我很肯学中文。 【 2.5 】
- 20、林峰能够可以来。 【 3 】
- 21、爸爸的工资不太高，所以妈妈一定去外边工作。 【 2.5 】
- 22、我明天回国，回国以后很想念这里的生活。 【 2 】

四、请用每题所给出的情态动词填空，每个情态动词**只能使用一次**。

4. Please fill in the blanks with the modal auxiliaries provided for each sentence. Each modal auxiliary **can be used only once**.

例：愿意、能

闹到了法庭，段莉娜这种人什么绝情的话、丑恶的话都说得出来，我不（能）让我女儿看到和听到这一切，我也绝对不（愿意）把女儿输给她。

【 3 】

1、可以、能、会、肯

阿兰做饭特别好吃，又（ ）下工夫研究菜谱，（ ）说很（ ）吃。她的儿子南南饭量特别大，特别（ ）吃。 【 3 】

2、要、能、会、可能

我们今天( )做的,不要留到明天才做。明天( )( )有明天必须( )做的事。【2.5】

3、想、要、肯、会、应该

——晚上你爸妈回来,( )会在这儿吃饭。

——你( )不在,两人就肯定抓着我啰嗦,嫌咱俩不( )过日子,屋里乱。钱到手就( )花,也不( )在人民银行存点。【3】

4、会、能、可以、敢

既然你( )摆下场子赌博,就( )有输赢。( )说全凭计算和运气,不( )逃避。【3】

5、肯、要、愿意、能、想、可以

史密斯夫妇( )预定豪华蜜月套房入住,但是这家五星级酒店豪华双人间已经满员,他们不( )预订房间。于是,他们( )与我们夫妇交换房间。我们不( )交换。然而他们( )出两倍房价,所以我们最后还是( )了。【4.5】

6、应该、该

毛毛虽然调皮捣蛋,但他是个好孩子。他乖巧懂事的时候( )好好表扬他,调皮捣蛋的时候也( )狠狠挨批评。【4】

7、能、要、得、应该

飞机九点起飞,赶到机场( )至少需要四十分钟,现在已经八点了,我们不( )再等了,他( )再不来,我们就( )马上出发。【3】

五、填空。请将所给情态动词按照合适的顺序依次填入括号中,每个词只能用一次。

5. Please fill in the blanks with the modal auxiliaries provided for each sentence in proper order. Each modal auxiliary can be used only once.

例:会、应该

杰克明天(应该)(会)准时来。【2】

1、想、会、要

阿军( )( )( )把照相机还给我吗?【2.5】

2、可能、应该

香香 ( ) ( ) 已经知道这件事了。【 3 】

3、能、可以、应该

我 ( ) ( ) ( ) 做好这几份卷子。【 3.5 】

4、愿意、会、可能

周凯 ( ) ( ) ( ) 和我一起去毕业舞会。【 2.5 】

5、可以、可能

张帆 ( ) ( ) 参加会议。【 2 】

六、请**使用情态动词**，将下列句子翻译成中文。

6. Please translate the following sentences into Chinese, **using proper modal auxiliaries**.

例：Lily can speak five languages. 【 2 】

莉莉能说五种语言。

1、Meimei will be sure to come tomorrow. 【 2 】

2、With this amount of blood loss, he is going to die in a moment. 【2.5  
】

3、Soldiers dare not disobey orders. 【 2 】

4、Jack need not attend the meeting. 【 2.5 】

5、Nobody is willing to shoulder the responsibility. 【 2.5 】

6、You must keep your promise, and never break it. 【 3 】

7、She cannot but tell him the truth. 【 2.5 】

8、 Nancy mustn't leave the hospital. 【 3 】

9、 Today I often wonder whether I should have insisted on resigning the post of general secretary. 【 3.5 】

10、 I never knew if you would show up next time. But I was ready for the airy Waltz in the breezes in spring. 【 4 】

11、 Does a game like Super Columbine, or a movie like The Texas Chainsaw Massacre, supply that final push to those people already on the edge? 【 4 】

---

*Thank you very much!*

## Appendix C Nomality Test Results

