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TEACHING AND LEARNING CHINESE AS A FOREIGN LANGUAGE
IN THE UNITED STATES:
TO DELAY OR NOT TO DELAY THE CHARACTER INTRODUCTION

by

LIJUAN YE

Under the Direction of Dr. John Murphy and Dr. Sara Weigle

ABSTRACT

The study explored whether or not to delay introducing Chinese characters as part of first year Chinese as a Foreign Language (CFL) courses in post-secondary institutions in the U.S. Topics investigated: a) timing structures of current CFL programs in the U.S.; b) CFL teachers' and students' beliefs and rationales of an appropriate timing to introduce characters; c) CFL teachers' and students' beliefs about the importance and difficulty of different Chinese language skills; and d) CFL teachers' and students' beliefs about the requirement of handwriting in beginning-level CFL courses. Data were collected through a large-scale online student survey with 914 students and a large-scale online teacher survey with 192 teachers. At the same time, a total of 21 students and five teachers from a delayed character introduction (DCI) program and an immediate character introduction (ICI) program were interviewed. Both quantitative and qualitative methods were used to analyze the data. Results indicate that the majority of CFL programs did not delay teaching characters; most of teachers and students believed that speaking and listening were the most *important* skills and reading and especially writing characters were the most *difficult* skills; and most of teachers and students did not favor alternative methods to

replace the handwriting of characters even though they considered handwriting to be the most difficult skill. With few studies carried out to investigate the timing issue of character teaching, results from the study provided foundational knowledge for CFL educators to better understand CFL teaching and learning in general, along with the teaching and learning of written Chinese characters, in particular.

INDEX WORDS: Chinese, Chinese characters, Character teaching, Chinese as a foreign language (CFL), Teacher beliefs, Student beliefs, Delayed Character Introduction (DCI), Immediate Character Introduction (ICI)

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LIJUAN YE

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy
in the College of Arts and Sciences
Georgia State University

2011

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December 2011

To my mother, father, and brother
for their love, encouragement, and trust

ACKNOWLEDGEMENTS

This dissertation would never have been possible without the guidance of my advisor, support from my committee members, encouragement from my friends and colleagues, and help from Chinese as a foreign language teachers and students in the U.S.

I owe my deepest gratitude to my advisor, Dr. John Murphy, for his excellent guidance, constant patience, caring, and encouragement. He has made available his support in a number of ways to inspire my initial dissertation proposal and walk me through the entire journey. It is an honor for me to thank Dr. Sara Weigle. Without her wisdom, knowledge, and commitment, I would not have been able to fulfill this mission. She made me believe that I could start and even complete research on a topic that had hardly been explored. Many thanks go to Dr. Stephanie Lindemann for her encouragement and support despite her busy schedule. My gratitude also goes to Dr. Diane Belcher for her patience in discussing the dissertation topic with me by sharing her own experiences in China. I am also heartily thankful to Dr. Xiaoliang Li, who constantly gave me insightful feedback during the entire process of dissertation work.

I would like to thank my colleagues in the Applied Linguistics department, especially Joseph Lee, Amanda Baker, Megan Montee, Kate Moran, Yanbin Lu, Guiling Hu, Weimin Zhang, Cheongmin Yook, Man Li, Liang Guo, Weiwei Yang, Pam Pearson, Jack Hardy, Amanda Lanier Temples, Eliana Hirano, Sarah Jean Goodwin, Merideth Hoagland, and many others. A very special thank you goes to Megan Montee for her fundamental contribution to my online survey instrument design, Joseph Lee for his kind patience in answering my endless questions, Amanda Baker for her willingness to share the detailed process of dissertation work, and Man Li for her unconditional help on revising the online surveys.

I would also like to show my gratitude to numerous Chinese language teachers for their

considerable volunteer help during my data collection. Through various avenues of survey collection, I was very fortunate because CFL teachers across the U.S. were kind and patient in helping me with the survey. Some teachers took the initiative to forward my message to additional colleagues and friends; some teachers explained my research purpose to their students and encouraged them to complete the student survey¹; and some teachers with similar research interests emailed me related references and provided additional suggestions. Without their genuine help, I wouldn't have been able to collect such a large number of responses within such a short period of time². I wish to particularly thank Chunsheng Yang, Rongwen Liu, Liuxi Meng, Jeffrey J. Hayden, Meng Yeh, Claudia Ross, Yu Li, Hong Li, Eric Shepherd, Douglas Wile, Jasmine Tang, John Jing-hua Yin, Chengzhi Chu, James Hargett, Tianwei Xie, Mark Hansell, Jiangang Liu, Wenhua Jin, Zhaohui Cheng, Jenny Wang, Justin Rudelson, Lan Yu, Wenwen Zhu, Shuai Li, Chih-jen Lee, Loyee Ling, Hana Kang, Polly Wan, Daliang Wang, Svetlana Xu, Yumin Liu, Hong Ma, Man Li, Qi Wang, Louis Liu, Nian Liu, Fei Wang, Lily Du, Qing Wang, Yahui Huang, Lin Yang, Pinju Yang, Li Qing Kinnison, Yongfang Zhang, Gavub Regnaert, Anna Marshall, Wenjia Liu, Yunjuan He, Weihua Zhu, Zijun Ning, Guangyan Chen, Hong Zhao, Wenchao He, Michael Hill, Jiechun Li, Yi-Tzu Huang, Matthew Wells, Andrew Miller, Ryan Robbins, Yu Feng, Xiwen Lu, Yuanxia Liu, Carolyn Lee, Shengrong Cai, Ran Zhao, Jing Shen, Linian Liu, Cornelius C. Kubler, Eric Pelzl, Leeann Chen, Faye Merritt, Su Liu, Shi Haoyuan R. Simmons, Xiang Zhang, and many others.

Last but not least, I would like to thank Xiaoyang Zhang, Cindi Tomes, Diane Hunsinger, and Seleena Lindsey for their help on editing the format of the draft.

¹ A Chinese teacher from California with whom I did not have any previous acquaintance helped collect almost sixty student surveys from the college where this teacher was teaching.

² Within the month of April 2011, I already collected a thousand student responses and about three hundred teacher responses.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	v
LIST OF TABLES	ix
LIST OF FIGURES	xi
CHAPTER	
1. INTRODUCTION	1
1.1. Background.....	1
1.2. Significance of the Study.....	3
1.3. Research Questions.....	8
2. REVIEW OF LITERATURE.....	9
2.1. Introduction.....	9
2.2. Nature of Written Characters	9
2.3. Difficulties of Character Learning.....	13
2.4. Timing Structures in Character Introduction	16
2.5. The Role of Characters in CFL Teaching	25
2.6. Beliefs and Motivations of Character Teaching and Learning	28
3. METHODOLOGY	36
3.1. Introduction.....	36
3.2. A General Description of the Research Design	36
3.3. Participants and Settings.....	37
3.3.1. Survey Participants and Settings.....	37
3.3.2. Interview Participants and Settings.....	42
3.4. Quantitative Data Collection Procedures.....	47
3.4.1. Survey Instruments	47

3.4.2. Survey Data Collection Procedure.....	51
3.5. Qualitative Data Collection Procedures.....	51
3.6. Data Analysis Methods	54
3.6.1. Quantitative Analysis	54
3.6.2. Qualitative Analysis	54
4. RESULTS.....	56
4.1. Quantitative Results	57
4.1.1. Current Timing Structures in the U.S.	57
4.1.2. Beliefs and Rationales of the Timing Structures.....	60
4.1.3. Beliefs about the Importance and Difficulty of Different Skills.....	87
4.1.4. Beliefs about the Role of Characters in CFL Teaching.....	96
4.2. Qualitative Results	102
4.2.1. Results from the DCI Program	102
4.2.2. Results from the ICI Program	111
4.3. Summary.....	116
4.3.1. Summary of Quantitative Results	116
4.3.2. Summary of Qualitative Results	118
5. DISCUSSION, IMPLICATIONS, AND CONCLUSION	120
5.1. Summary of the Findings and Discussion	120
5.2. Implications	129
5.3. Suggestions for Future Research	132
5.4. Concluding Remarks	137
6. REFERENCES	138

LIST OF TABLES

Table 2.1 Example of words in Japanese	13
Table 3.1 Percent of Teacher and Student Survey Participants by Region	38
Table 3.2 Demographic Information for Student Survey Participants.....	39
Table 3.3 Demographic Information for Teacher Survey Participants	42
Table 3.4 Basic Information of the Two Programs	44
Table 3.5 Background Information of the Twenty-One Student Interview Participants	45
Table 3.6 Background Information of the Five Teacher Interview Participants	46
Table 4.1 Distribution of Teachers and Students by Three Actual Timing Structures	59
Table 4.2 Distribution of Teachers in Each Report by Ideal Timing Structure.....	61
Table 4.3 Distribution of Teachers by Occasion by Type of Timing Structure.....	62
Table 4.4 Distribution of Students in Each Ideal Timing Structure by Report	63
Table 4.5 Distribution of Students by Occasion by Type of Timing Structure	64
Table 4.6 Ratings of DCI and ICI Reasons by All Teacher Survey Participants	72
Table 4.7 Ratings of DCI and ICI Reasons by Teachers in Different Groups	74
Table 4.8 Mean Differences of All Reasons Among Three Teacher Groups	75
Table 4.9 Ratings of Delay and Non-delay Reasons by All Student Survey Participants	76
Table 4.10 Ratings of DCI and ICI Reasons by Students in Different Groups.....	78
Table 4.11 Mean Differences of DCI and ICI Reasons Among Three Student Groups	79
Table 4.12 Ratings of DCI and ICI Reasons by All Teacher Survey Participants	81
Table 4.13 Frequency Count of the Important Reasons by Teachers in Different Timing Structure Groups.....	83
Table 4.14 Frequency Count of the Important Reasons by Students in Different Timing Structure	

Groups.....	85
Table 4.15 Importance of Different Skills by Teachers in Three Ideal Timing Structure Groups	88
Table 4.16 Difficulty of Different Skills by Teachers in Three Ideal Timing Structure Groups ..	90
Table 4.17 Importance of Different Skills by Students in Three Ideal Timing Structure Groups	92
Table 4.18 Mean Differences of the Importance of Different Skills Among Three Student Groups	92
Table 4.19 Difficulty of Different Skills by Students in Three Ideal Timing Structure Groups...	93
Table 4.20 Mean Differences of the Difficulty of Different Skills Among Three Student Groups	93
Table 4.21 Importance of Six Skills by Teachers and Students	95
Table 4.22 Difficulty of Six Skills by Teachers and Students.....	96
Table 4.23 Requirement of Characters by Teachers in Three Ideal Timing Structure Groups	97
Table 4.24 Mean Differences of the Requirement of Characters Among Three Teacher Groups	98
Table 4.25 Requirement of Characters by Students in Three Ideal Timing Structure Groups	99
Table 4.26 Mean Differences of the Requirement of Characters Among Three Student Groups	100
Table 4.27 Requirement of Characters by Teachers and Students	101

LIST OF FIGURES

Figure 4.1 Changes in Distribution of Teachers in Each Timing Structure by Occasion	62
Figure 4.2 Changes in Distribution of Students in Each Timing Structure by Occasion.....	64
Figure 4.3 Importance and Difficulty of Reading and Writing Characters by Teachers in Three Ideal Timing Structure Groups.....	91
Figure 4.4 Importance and Difficulty of Reading and Writing Characters by Students in Three Ideal Timing Structure Groups.....	94
Figure 5.1 Association Map among Sound, Meaning, Pinyin, and Characters	125

CHAPTER 1

INTRODUCTION

Background

The beginning of the 21st century has seen an explosion of interest in learning Modern Standard Chinese at both college levels and secondary-school levels of education in the U.S. A comprehensive survey study conducted by the Modern Language Association (MLA) demonstrates that Chinese language enrollments in U.S. institutions of higher education increased dramatically by 51% from 2002 to 2006 (Furman et al., 2007). During this period, Chinese became the seventh most commonly studied language in American colleges and universities (Furman et al., 2007). According to the 2008 U.S. Census Report, the population of Chinese Americans has reached 3.62 million, becoming the largest Asian group in the U.S. In response to growing cultural diversity in America's schools, the College Board also launched an Advance Placement program course and examination in Chinese Language and Culture in December 2003 in order to promote cultural understanding, foster friendship, and expand bilateral relations (College Board, 2009).

On behalf of the Chinese government, the Office of Chinese Language Council International (or *Hanban*) in Beijing has participated actively in this increased attention by creating Confucius Institutes worldwide. These institutes aim to promote Chinese language and culture and to support CFL teaching internationally. The office estimated that by the year 2010 there would be approximately 500 Confucius Institutes and over 100 million CFL learners worldwide (Wikipedia, 2009).

This flourish of interest is motivated by two important factors. First, China's rapid economic growth has coincided with its expanding influence in international business. The

appeal of the Chinese market has helped to enhance the importance of Chinese as a language of international communication. Second, for purposes of national security, the U.S. government has sought to develop the National Security Language Initiative to broaden foreign language education throughout various U.S. cabinet-level departments (Lee-Thompson, 2008). Along with this plan is a renewed recognition of the importance of the Less Commonly Taught Languages (LCTLs) in the U.S., especially Chinese, Japanese, and Russian.

Despite the fact that CFL study has enjoyed increasing popularity in the U.S., existing programs seem inadequately prepared to meet this high demand. Twenty years ago, Walton (1989) lamented that “Chinese language instruction to date has been, for all practical purposes, a struggling cottage industry scattered in nooks and crannies across the American ‘languagescape,’ though its mission seems to be increasingly important as we move toward the Pacific Century” (p. 9). At the beginning of the 21st century, the Asia Society reported that “the current infrastructure [of existing CFL programs] to support recruitment of students and teachers as well as the growth of high quality programs is woefully inadequate” (Asia Society, 2005). As part of their report, the Asia Society featured a thought-provoking question: *What would it take to have 5 percent of high school students [in the U.S. to be] learning Chinese by 2015?*

The relatively slow development in the field of CFL teaching is influenced by various factors, such as a lack of appropriate textbooks, a lack of qualified and experienced Chinese teachers, and a lack of teacher training programs (Zhang & Li, 2010). Among them, two important reasons are worth mentioning. First, there is a lack of “a commonly recognized syllabus or standard means” among CFL programs concerning overall curriculum requirements (Zhang & Li, 2010, p. 92). For example, some CFL programs teach Chinese characters while others do not. Differences like this reflect “a huge discrepancy between many universities in

terms of their objectives and results” (Zhang & Li, 2009, cited in Zhang & Li, 2010, p. 92).

Second, relatively little research has been conducted to address various issues of CFL teaching and learning. Most existing CFL programs adopt the “Common European Framework” (Zhang & Li, 2010, p.88), without paying due attention to the particular linguistic characteristics of Chinese and how English speakers in particular may engage with the process of CFL learning (Duff & Li, 2004; Zhang & Li, 2009).

Significance of the Study

Chinese is one of the more challenging languages for English speakers to learn due in large part to the nature of its written orthography. Specifically, its standard orthographic form does not readily indicate how Chinese characters are to be pronounced. According to data of the Defense Language Institute (DLI) and the Foreign Service Institute (FSI), it takes L1 English speakers at least three times longer to learn Chinese than to learn French or Spanish. According to FSI’s list of languages, Chinese is ranked as the most difficult language for L1 English speakers to master (Stevens, 2006).

Bearing in mind that the written system distinguishes Chinese from other languages (e.g., French, Spanish, Italian), Zhao (2008) emphasizes that the success of the CFL instruction depends to a large extent on the effectiveness of Chinese character teaching. Due to the challenging nature of Chinese characters for non-native Chinese language learners (NNCLLs), especially learners whose L1 corresponds with an alphabetic orthographic form, when and how to introduce Chinese characters to CFL learners have become essential issues within CFL educational research.

With respect to the issue of when to introduce Chinese characters into beginning-level CFL curricula, two common program structures have been advanced. One structure is to delay

the learning of Chinese characters by substituting the use of Pinyin instead (Everson, 1988, 1994; McGinnis, 1999; Packard, 1990; Unger et al., 1993; Walker, 1984, 1989). Pinyin is a Romanized transcription of Chinese. The other structure proposes that Chinese characters should be introduced and taught from the beginning of CFL instruction (Liu, 1983). Educators who support the first structure seem influenced by speech primacy theory, which states that students must have developed substantial oral and aural skills prior to the start to literacy instruction (Dew, 2005; Jorden & Walton, 1989; Swihart, 2004; Unger et al. 1993; Zhang, 2005). This position reflects ways in which children learn their L1. Those who accept a speech primacy theory believe that the DCI can help CFL students first establish a solid foundation in the spoken language. It allows learners to avoid spending excessive time and energy on the complex orthography of Chinese while initially acquiring speaking and listening skills. Two experimental studies, Everson (1988) and Packard (1990), examined the issue of learning characters in the beginning-level CFL courses. Packard found that “providing students with a grace period before characters are introduced into the elementary Chinese curriculum is beneficial to the second language acquisition of Chinese” (Packard, 1990, p. 174).

Supporters of the alternative program structure argue that characters should be taught concurrently with the regular CFL curriculum (and most of the current CFL programs actually do teach reading, writing, speaking, and listening skills concurrently) (Liu, 1983). So far there have been no studies that have documented advantages for the introduction of Chinese characters at the beginning of CFL courses. However, there are a few related studies about the Japanese writing system in the field of Japanese as a foreign language (JFL) teaching. Because the Japanese writing system uses *kanji*, which is based on and uses Chinese characters, JFL studies are referred to and will be referenced in the following section (Dewey, 2004; Hayashi, 2009;

Koda 1992; Okita, 1997). These studies, directly or indirectly, point out some disadvantages in the DCI from different perspectives. For example, Hayashi (2009) observed that when learners were not taught *kanji* from the beginning of a JFL course, learners might show resistance towards *kanji* learning when they moved to higher-level courses. Koda (1992) argued that an earlier introduction of the language's traditional script³ could save JFL students' time by establishing the sound-visual decoding system. Okita (1997) surveyed JFL learners' beliefs and found that around 70% of the students wanted to learn standard Japanese orthography from the beginning of instruction.

Not only do researchers and educators hold different opinions toward the timing of introducing characters to beginning-level learners, teachers and learners are also reported to hold different beliefs about when to teach and learn characters. Dewey (2004), in his study of connections between teacher and student attitudes regarding script choice in first-year JFL classrooms, reported the following opposite beliefs by two JFL teacher interviewees:

Students ought to learn to speak first, as the Japanese do, and later learn to read ... and romaji is the best tool for facilitating this way of learning. (p. 573)

[The students] have so many kanjis to memorize. I think they need lots of experience with the kanjis from the first day of class. It takes them too much time to learn kanjis, so they can't use romaji at all when they really want to learn to read Japanese. (p. 573)

By the same token, a pilot study I conducted in preparation for my dissertation project revealed similarly contrastive beliefs by CFL learners. Expressions of two opposite beliefs are listed below:

³ Throughout the dissertation, the term "traditional script" is intended to signal traditional (and conventional) uses of characters to represent the orthographic written form of either Chinese or Japanese in contrast to the use of Pinyin (Chinese) or romaji (Japanese).

I think it's better to learn the words first, like how to say it, speak it, Pinyin first. Coz I tried to take um Japanese a while back here. And like we learned um...I started to learn kanji, like, and reading in um hiragana katanga, like write it ... like after the first chapter, and it was really difficult so...to like ... keep progressing. But now I have an understanding of some basic...Chinese, like it'll be easier to learn the writing...I think it's better to have a foundation in the language before you learn to, write all the...coz I think that'll get more difficult. (Pilot interview study, December 1, 2009)

If you could take them...the same semester, maybe have like Monday Wednesday you do the listening and speaking, Tuesday and Thursday you do the uh...reading and writing, that will be good... [coz they would build on each other]. (Pilot interview study, December 1, 2010)

The lack of consensus concerning the proper time to introduce characters to beginners may result in at least two consequences. First, different groups of CFL teaching professionals might emerge, holding diverse beliefs regarding pedagogical methods and teaching philosophy in CFL instruction. These professionals, whether CFL program directors or teachers, would further implement considerably different program policies, teaching methods, and Chinese language requirements. Such a lack of conformity in the field would make it less likely to fulfill Chinese scholars' call for "a commonly recognized syllabus or standard means" of an overall curriculum requirements in the CFL field (Zhang & Li, 2010, p. 92). Second, research studies of teachers' and students' beliefs about second language (L2) acquisition demonstrate that teachers' and students' beliefs about language learning strongly influence their motivation and behaviors throughout teaching and learning processes. In particular, students' beliefs about language learning may eventually have a direct impact on their learning outcomes. Thus, it has to be kept

in mind that CFL beginners might be challenged by the more difficult nature of Chinese characters and thus, their motivation to continue to learn the language might be dampened. Therefore, it can be seen that the issue of when to introduce Chinese characters is essential to clarify our understanding of the development of CFL programs in the U.S.

Up to now, little research has been conducted to investigate the issue of when to introduce Chinese characters to beginning CFL learners (two notable, though dated, exceptions are Everson, 1988 and Packard, 1990). The area of teaching characters to alphabetic learners has been documented as an overall recent focus in the CFL field. For instance, the method of teaching characters to learners who come from an alphabetic literacy background was first proposed at a conference on teaching the Chinese writing system in 1997 in Yichang, China. By then and continuing today, specific methods used in CFL instruction have been quite consistent in following traditional methods initially designed and used for teaching Chinese to L1 Chinese learners in Chinese primary schools (Wan, 2005). This approach was first questioned at the 1997 conference because teachers and researchers found that it was indeed a lot more difficult to teach characters to learners who come from an alphabetic literacy background than to native speakers of Chinese. Moreover, it was pointed out at the conference that at the time in China, there were far fewer learners of Chinese from Western countries than from East Asia. At that time, therefore, very little was known about the character teaching to Westerners living in China and even less was known about CFL character teaching to Westerners living in Western countries. In addition, there are few research publications on the teaching of characters in the CFL context. The *Journal of the Chinese Language Teachers Association* (JCLTA), for an example, was launched in 1966 after the founding of the Chinese Language Teachers Association in 1962. This is a major organization for the CFL profession which organizes an annual conference on CFL teaching and

research as a sub-section under the American Council on Teaching Foreign Languages (ACTFL). Ling (2005) characterizes the JCLTA as “the primary repository of research and scholarship of the CFL field in America ever since” (p. 3). However, a summary report by the Editor, Vivian Ling, revealed that there have only been 58 character-related articles published since 1966 (Ling, 2005). Considering that this journal publishes three issues each year and every issue includes about five articles, only about 3% of the publications appearing in the past forty years have been character-related. Therefore, the study aims to investigate the timing of Chinese character teaching and learning within the context of post-secondary CFL programs in the U.S.

Research Questions

The study is aimed at investigating the timing structure of Chinese character teaching and learning in CFL programs in the U.S. The following questions guide this study:

1. What are current timing structures for introducing Chinese characters in post-secondary CFL programs in the U.S.?
2. What are CFL teachers’ and students’ beliefs and rationales about the timing structures?
3. What are CFL teachers’ and students’ beliefs concerning the importance and difficulty of different skills (speaking, listening, reading characters, reading Pinyin, writing characters, and writing Pinyin) in a beginning-level CFL course?
4. What are CFL teachers’ and students’ beliefs concerning the requirement of characters in a beginning-level CFL course?

CHAPTER 2

REVIEW OF LITERATURE

Introduction

This section reviews literature relating to the timing issue of introducing characters to beginning-level learners. In total, there are four sections: a) nature of written characters; b) difficulties of character learning; c) timing structures of teaching characters; d) the role of characters in a beginning-level CFL class; and e) teachers' and students' beliefs, perceptions, and motivations of teaching and learning characters.

The first section *nature of written characters* introduces the basic information of the writing system in Chinese and Japanese. It includes the structure of characters, categories of characters, and the current use of characters in both Chinese and Japanese. The second section covers studies that reveal difficulties of character learning due to the complex nature of characters. In order to make the learning task less challenging, educators have suggested alternatives in timing structures of introducing characters. One of them is to delay the introduction of characters to beginners. Literature regarding these different timing structures is explored in section three. The fourth section introduces literature relating to requirements of characters in beginning-level CFL courses. In section five, the study reviews literature regarding teachers' and students' beliefs about character teaching and learning. In addition, this section will also explore studies of students' motivations in the learning process.

Nature of Written Characters

The written form of Chinese is non-phonetic and character-based. A character signifies three things: (1) the sound, the acoustic reality of the meaning; (2) the meaning, concrete or

abstract experience with the world; and (3) the symbol, the character which carries both the sound and the meaning. Therefore, the task of learning a Chinese character includes learning the graphic character, its meaning, and its pronunciation in the form of Pinyin, both spelling and tone (see example 1). Pinyin, as a Romanized phonetic writing system, was first used by the Chinese government in 1958 in order to assist speakers of other dialects in learning the standard pronunciation of Mandarin Chinese. It can also help CFL learners accurately pronounce any Chinese character (Swihart, 2004a).

Example 1.

Graphic character:	人
Pinyin pronunciation:	rén
Meaning:	man, people, mankind

In written Chinese, characters are seen as the smallest perceptual units of Chinese orthography (Hoosain, 1991). There are two basic orthographic structures that make up a character: its stroke and its component. Strokes are the basic building materials for components. There are a total of 28 different types of strokes. The number of strokes in an individual character can vary from 1 to 30. For example, there are two strokes in the radical 人 (person), eight strokes in the radical 鱼 (fish); and 14 strokes in the radical 鼻 (nose). The animated demonstration of strokes in each of these characters can be viewed on the Internet at the following URLs:

http://us.mdbg.net/chindict/popup_animation_strokes.php?uvd=20154 for 人 (person)
http://us.mdbg.net/chindict/popup_animation_strokes.php?uvd=40060 for 鱼 (fish)
http://us.mdbg.net/chindict/popup_animation_strokes.php?uvd=40763 for 鼻 (nose)

Components are the basic orthographic units in characters. Like the letters of an alphabet, one or more components are combined to create characters. There are two kinds of components according to their functions in a character. One kind is called the semantic component, which

signifies the meaning of a character. The other kind is the phonetic component, which signifies the sound of a character. Compared to phonetic components, the number of semantic components is small and this small number of components is also referred to as a radical or *Bu Shou* because they are used as the index system in Chinese dictionaries (Xin Hua, 1979). That is why each character must have one and only one radical. A few radicals are not only recurrent in forming characters but also can stand on their own as characters.

Chinese characters have been classified under six categories: (1) pictographs, (2) indicatives, (3) ideographs, (4) semantic-phonetic compounds, (5) derivative characters, and (6) loan characters. Since the first four types represent the basic principles of the Chinese character formation, in this section I will focus on these four types. Chinese characters are said to originate from pictures. The first two types of characters, pictographs and indicatives are pictorial representations of an actual object or an abstract indication of an idea. In detail, pictographs depict a material object. For example, the character 马 mǎ (horse) was originally a pictograph depicting an animal with specific characteristics of a horse such as long face and hairy tail. Similarly, indicatives are signs indicating abstract concept, such as 上 shàng (up). These first two types of characters are referred to as simple characters because they only contain a radical. Such characters can be put together with other components to form new compound characters known as ideographs and semantic-phonetic compounds. Ideographs are composed of two or more pictographic components and use the meaning of its components to represent a new meaning. For instance, in the character 休 (rest), the left component 亻 depicts a person and the component on the right 木 depicts a tree. The whole character shows a person resting beside a tree, meaning to have a rest. The last type of characters, semantic-phonetic compounds, as indicated in the name, has a pictographic component that represents a meaning category and another component

indicating the sound of the whole character. To cite an example, in the semantic-phonetic compound 沐 (wash), the left component 氵 indicates ‘water’ whereas the right component 木 signals the sound. It is estimated that about 81% of the 7,000 most frequently used characters in Chinese belong to the semantic-phonetic category (Li & Kang, 1993).

Although there exist tens of thousands of unique characters (approaching 50,000), the number of characters commonly used in daily life is only about one tenth of all existing characters. A highly educated L1 Chinese speaker is estimated to know how to recognize and produce only about 6,000 Chinese characters (Taylor & Taylor, 1995, p. 117). A chart of *Frequently Used Modern Chinese Characters* includes a total of 3,500 Chinese characters, in which 2500 are most-commonly-used Chinese characters and 1,000 are less-commonly-used Chinese characters (国家语言文字工作委员会 & 国家教育委员会 [China’s National Linguistics Work Committee & China Educational Commission], 1988). The chart description indicates that the 2500 most-commonly-used Chinese characters cover 97.97% and the 1,000 less-commonly-used Chinese characters cover 1.51% of the common daily readings. It means that the total 3,500 Chinese characters cover 99.48% of the common daily readings. The Office of Chinese Language Council International (or *Hanban*) recommends that in teaching Chinese to non-native Chinese learners, beginning- to intermediate-level learners should master 2,000-2,200 most-commonly-used Chinese characters and advanced-level learners should master 700-900 less-commonly-used Chinese characters (Li, 1998).

In this paragraph I will briefly introduce some aspects of the Japanese writing system because Chinese characters are used extensively in written Japanese. In addition, results from many studies of the teaching and learning of the Japanese writing system can shed light on the current study. Written Japanese uses three different scripts: hiragana, katagana, and Chinese

characters called *kanji*. Hiragana is used for native Japanese words and Katagana is used for words borrowed from foreign countries other than China. Romanized Japanese called romaji is used to teach non-native Japanese learners (Wikipedia, 2010, May 18). Examples of words displayed in these three main scripts are shown in Table 2.1.

Table 2.1 Example of words in Japanese

Kanji	Hiragana	Katakana	Rōmaji	English
私	わたし	ワタシ	<i>watashi</i>	I, me
金魚	きんぎょ	キンギョ	<i>kingyo</i>	goldfish
煙草 or 蓆	たばこ	タバコ	<i>tabako</i>	tobacco, cigarette
東京	とうきょう	トウキョウ	<i>tōkyō</i>	Tokyo, literally meaning “eastern capital”

Difficulties of Character Learning

The above introduction of the character system demonstrates that in order to learn a character, learners need to learn three aspects simultaneously: pronunciation (as Pinyin form is intended to represent), form (the writing of characters), and meaning. Such a level of complexity makes the learning of the Chinese language challenging, especially for learners whose first language is more closely alphabetic. In fact, difficulties of learning Chinese have been expressed from various perspectives by CFL learners, teachers and other educators.

Two decades ago, one of the earliest scholars DeFrancis (1984) wrote in his book *The Chinese Language: Fact and Fantasy* the following conclusion:

Overall, for a native speaker of English, learning to speak Chinese is not much more difficult than learning to speak French. It is in the traditional writing system that the greatest difficulty is encountered. The blanket designation of “Chinese” as a hard language is a myth generated by the failure to distinguish between speech and writing.

Learning to speak Chinese is about 5 percent more difficult than learning to speak French, whereas learning to read Chinese is about five times as hard as learning to read French.

(DeFrancis, 1984, p. 52)

In discussing the relationship between script and speech, Everson (1988) also commented as follows:

One of the more challenging aspects of learning to read in a foreign language is the adjustment the learner must make in dealing with a different orthography. ... A significant aspect of orthography is that different writing systems have different script-speech relationships, and thus the acquisition of reading skills may in fact be hindered by how the spoken language is represented in print. ... Languages such as French and German do not present significant problems for American learners of these languages. For American learners of Chinese, however, the dissimilarity of the character set from English is so striking as to suggest potential problems for both the learning and teaching of this language. (p. 1)

From the perspective of linguistic distances between English and 51 other languages, West and Graham (2004) used the 7-point scale and listed the linguistic distances of Chinese from English as 6, Spanish and French from English as 3 and German from English as 1. According to the Defense Language Institute (DLI) and the Foreign Service Institute (FSI), which offer the widest range of foreign language courses in the U.S., non-Indo European languages such as Chinese and Japanese have been categorized as “Group IV” languages. Cognate languages such as Spanish and French have been categorized as “Group I” languages. Regarding the time needed to achieve a specific level of language proficiency, the FSI estimates that it takes L1 English-speaking American students approximately 480 contact hours of classroom instruction to reach Level 2

(“limited working proficiency”) for Group I languages. In contrast, the same type of instruction takes students approximately 1,320 hours to reach a comparable level of proficiency in Group IV languages (Everson, 1994). What has made Chinese such a distance language is its rather complex writing system, which has added a third dimension to the teaching and learning of Chinese (Dew, 2005; Guder, 2005). Therefore, it is easy to imagine that “the return to the learner for the hundreds of hours spent writing characters has a smaller payoff in terms of functioning as a participant in a Chinese society than the work he/she puts into any other of the skill areas” (Walker, 1989, p. 65).

In a first person narrative study, Bell (1995) reflected on her own learning experience and described her hardship in learning Chinese as this:

It is hard to describe how stressful this early part of the study was for me. I had gone into the study with certain expectations of myself as a learner based on fairly successful school experiences. I believed I knew how to study and what kind of work teachers would require of me. I was confident that with effort I could achieve success in this academic endeavor. And yet, here I was, devoting all my waking hours (and considerable amounts of my dream time) to the task and yet failing to achieve any measure of success that I could recognize. The result was a major shock to my image of self, which manifested itself in various bodily ways consistent with severe stress. (p. 694)

Just as the learning of characters is the most difficult part in learning Chinese; the learning of *kanji* is also considered to be the most challenging part of learning Japanese (Gamage, 2003; Mori, 1999; Mori & Shimizu, 2007; Mori et al. 2007; Okita, 1997). Mori (1999) conducted a questionnaire study of beliefs held by JFL learners. The author found no significant correlations between two constructs “*Kanji is difficult*” and “*Japanese is easy*.” Based on this

result, the author speculated that JFL learners recognized the difficulty of learning *kanji* but they did not perceive other aspects of Japanese, e.g., word order, as particularly difficult.

The difficult nature of learning to deal with written characters experienced by CFL or JFL learners can result in two consequences. First, just as Wen (1997) suggested, “the high difficulty level of the learning task may be one factor that decreases motivation for learning the Chinese language” (p. 236). The difficulty of learning characters may create such an affective and motivational barrier that students become frustrated at the beginning of their learning experience and as a result, student motivation lessens. Second, when negative feelings towards the language are increasing, it may cause higher attrition rates among students enrolled in CFL courses. Tian (2009) found that “45% of Chinese as a foreign or second language learners give up learning Chinese due to the difficulty in learning Chinese characters” (p. 273). Not only do enrollment rates seem to drop among beginning-level CFL learners, course enrollment rates for higher CFL courses seem to be very low. Using an analogy in relation to this pattern of enrollments in schools and universities in the U.S., Lambert (2001) described it as “broad at the base” but narrowing quickly “as [students] progress toward upper-level courses” (p. 350, cited in Graham, 2004, p. 171).

Timing Structures in Character Introduction

Given the demanding nature of learning characters, it is not surprising that the issue of when to introduce characters in CFL courses has undergone considerable debate⁴ (Allen, 2008;

⁴ This topic was widely discussed in two professional events. The first one was a forum of *Chinese Language Teachers Association of Greater New York*. The forum was called *Shall we delay teaching characters* and was participated by a number of Chinese teachers and researchers in November 2003. Access web link is: <http://www.clta-gny.org/forum/delaycharacters.htm>. Another event was the 2005 International and Interdisciplinary Conference at the University of Mainz in Gernersheim, Germany. The theme of the conference was *How Western Learners Discover the World of Written Chinese*. Access web link is:

Everson, 1988, 1994; McGinnis, 1999; Packard, 1990; Walker, 1984, 1989). At the same time, the issue of when to introduce characters in JFL teaching has received relatively more attention (Dewey, 2004; Koda, 2001; Okita, 1997; Hayashi, 2009). Basically, there are two camps arguing for different timing structures concerning when to teach characters in either CFL or JFL instructional settings. One camp of educators argues that characters should be delayed when teaching either Chinese or Japanese to beginning-level CFL or JFL learners. These specialists promote the position that Pinyin for Chinese or romaji for Japanese should be used to better assist beginning-level learners while they gain confidence in learning Chinese or Japanese by first establishing a firm foundation in aural and oral skills. On the other hand, the other camp supports the early introduction of characters in both CFL and JFL teaching in order to help learners establish an association between traditional scripts and meaning (Koda 1992; Okita, 1997).

There are some descriptive words that have been used to illustrate these two approaches in previous studies. Packard (1990) defined the delay of the Chinese character introduction as “a time lag between the time the course starts and the time the characters are introduced” and thus, he referred to the two groups of student participants as “a ‘lag’ (experimental) group” and “a ‘no-lag’ (control) group” (p. 73). In a similar study of teaching Japanese scripts, Hatasa (2002) used the phrasing “delayed introduction and early introduction” (p. 350) and she also referred to her participants as belonging to either “the experimental (lag) group [or the] control (non-lag) group” (p. 355). In order to keep the description of the two structures consistent and transparent throughout the paper, I will refer to these two structures as DCI (Delayed Character Introduction)

and ICI (Immediate Character Introduction).

Although the two camps support very different program structures (i.e., DCI and ICI) for character introduction, research studies that have been conducted in this area are scarce. Therefore, the following review includes not only research studies that directly or indirectly shed light on the issue of an appropriate time of when to teach characters, but also some of the relevant arguments put forward by CFL and JFL specialists.

Educators who support DCI mainly argue from the perspective of speech primacy theory (Dew, 2005; Jorden & Walton, 1989; Swihart, 2004; Unger et al. 1993; Zhang, 2005). The essential view of the primacy of speech in reading states that “fluent and natural reading for comprehension occurs only when the learner has sufficiently mastered spoken Japanese [or Chinese] through oral and aural practice” (Hatasa, 2002, p. 351). Similarly, Unger et al. (1993) from the field of JFL teaching further commented that The fact that children normally learn to understand and produce speech before acquiring the skills of literacy shows that literacy is not necessary for normal language acquisition” and that “a solid foundation in speaking is the best insurance that they will make steady progress in reading (p. 12). This comment claims that, in any language acquisition, the writing system is acquired subsequent to the speaking skill. Swihart (2004) mentioned that “very often, English speakers learn to speak and understand Chinese faster than they learn to read and write it. Most students need time to learn to connect the pronunciation of Chinese characters with their shapes, and only then can they read” (p. xii). Thus, Swihart (2004a) recommended that Chinese pedagogy concentrate on speaking and listening first while advocating the learning of characters at a considerably slower pace. This way, CFL learners would gain more confidence. Eventually, once they reach stages of instruction when they would be asked to write characters, they would already have a relatively firmer

foundation in the spoken language.

Likewise, Dew (2005) expressed the same point of view through his paper presented at the 2005 International and Interdisciplinary Conference at the University of Mainz in Germersheim, Germany. The title was “Language Is Primary, Script Is Secondary: The Importance of Gaining a Strong Foundation in the Language Before Devoting Major Efforts to Character Recognition.” As a specialist who has taught Chinese and administered CFL programs for more than four decades, Dew called for an important recognition that CFL programs should teach westerners to read and write Chinese after they lay a solid foundation in students’ mastery of the sound system, vocabulary and grammar. There were four major considerations: first, he pointed out that L1 Chinese children have already spent five or six years acquiring speaking and listening skills before they began to learn characters in school; second, mastering literacy is not as basic as gaining proficiency; third, CFL learners could learn the sound system, grammar, and vocabulary better if these tasks are separated from the task of reading and writing characters; and lastly, “Students who had gained firm control of spoken language patterns were able to move ahead in vocabulary expansion and reading competence more rapidly and [more] easily than those who did not have a good foundation in the patterns of the language” (p. 2).

At the same conference, a Chinese scholar Zhang (2005) also pointed out that CFL learners whose L1 is alphabetic have a particular type of difficulty, that is, they do not have a basic foundation of speaking. He said, “不会说中国话，当然不好学汉字，学文字要以学语言为基础” (If you cannot speak Chinese, of course you cannot learn characters well. Learning characters is based upon a background of speaking). Therefore, he proposed that for CFL learners whose L1 is alphabetic, speaking and listening should be learned at a faster pace than reading and writing, until they are able to participate in simple daily life communications. He

further added that it is ok to add characters at the early stage but there should not be any requirement for reading and writing characters.

In addition, two experimental studies, Everson (1988) and Packard (1990), also provided evidence indicating that CFL students could benefit from DCI, although only Packard (1990) directly tested the efficiency of DCI versus ICI. In order to compare first-year CFL learners' reading performance in characters and Pinyin Romanization, Everson (1988) measured reading speed and comprehension of a paragraph written in either Chinese characters or Pinyin Romanization. A total of 60 first-year CFL students were arranged into three groups with 20 students placed into each group according their reading proficiency. Ten students of each group read a passage based on characters while the other ten read the same passage based on Pinyin. A 2 x 3 MANOVA analysis showed that all participants who read a paragraph in Pinyin Romanization, regardless of their reading proficiency level, were found to read faster and gain higher comprehension scores than those who read in characters. The author thus proposed the following two hypotheses:

At this very early stage in their Chinese reading development, it may be hypothesized that the first-year students represented by this sample, regardless of their proficiency, are still dependent upon the alphabetic system they have brought with them from their native language. (p. 10)

...it may be hypothesized that the phonetic and semantic cues given to the readers via Romanization were helpful not only in facilitating their reading speed, but also their comprehension. (p. 10)

The purpose of Packard's (1990) study was to investigate the impact of a time-lag mode of instruction in the introduction of characters into the CFL curriculum. The author recruited two

groups of students, a DCI group and an ICI group. The CFL course for both groups lasted for 13 weeks and characters were introduced on the fourth week for the DCI group. The purpose was to determine whether DCI would cause any differences in these students' performance measured through a series of achievement tests. These tests included listening comprehension, transcribing unfamiliar Chinese characters using Pinyin, grammar and oral proficiency. Results from ANOVA analyses revealed that the DCI group significantly outperformed the ICI group in Pinyin when asked to transcribe unfamiliar Chinese characters and spoken Chinese. This further supported DCI that "providing students with a grace period before characters are introduced into the elementary Chinese curriculum is beneficial to the second language acquisition of Chinese" (p. 174).

In a nutshell, results from Everson (1988) and Packard (1990) seem to suggest some advantages of DCI in teaching characters to CFL learners. The conceptual position of the DCI camp is perhaps best summarized by Everson (1994):

While we want students to begin reading in characters at the earliest possible time, it is important to remember that, unlike native speakers, our students do not have [sufficient] command of the spoken language when begin to read. Consequently, they need to receive a firm grounding in the spoken language via Romanization before they attempt to read in characters. Having the students practice reading in Romanization during the early stages of their language learning experience also provides benefits. When reading in Romanization, students can more immediately attend to comprehending the message of the text because they do not have to expend so much processing energy on character recognition. (p. 6-7)

On the other hand, educators from the ICI camp argue for an early introduction of

characters either in CFL or in JFL instruction (Koda 1992; Liu, 1983; Okita, 1997). Two decades ago, Liu (1983) made the following comment:

I wish to argue that characters should be taught at the very beginning because the sounds, the syntax, and the characters are interrelated in a higher-level structure and they should be integrated from the first lesson. (p. 66)

Perhaps not surprisingly, Liu's (1983) point of view has carried considerable weight over recent years since the most popular Chinese textbooks used in CFL courses introduce characters to beginning-level students from the very first stages of instruction (Allen, 2008). In addition, McGinnis (1999) observed that most CFL programs introduce characters early. Thus the author wrote:

It is important to preface any investigation of student attitudes regarding the importance of learning written Chinese by admitting to the institutional barriers already in place, which at least tacitly place a priority on the written language as the principal goal of one's language study. (p. 156)

Curiously, I have not been able to locate any studies that found benefits to introducing characters at the beginning of CFL courses. That is, ICI seems to represent a weak pedagogical position lacking any sort of principled research base. The only support I find in the literature for the ICI position is a couple of opinions reported in a very small number of studies in JFL instruction (Hayashi, 2009; Koda, 1992). Hayashi (2009) did not focus on the issue of whether characters should be introduced at the beginning of Japanese language courses, but the author reported her observation of student reactions to two different structures, DCI and ICI, that were adopted in the JFL program as offered by the author herself. In 1989, Romanization was used for everything in textbooks for the first quarter or semester and *kanji* was introduced gradually

afterwards. With this mode, the author noticed that when students moved up to the third-year level, a number of them “seemed to be negatively inclined toward learning *kanji*” (p. 676). In contrast, in 2004 when students were introduced *kanji* from the beginning-level, they “did not seem to have a resistance to the Japanese writing system and thus read better” (p. 676). The author’s observation suggests a possible consequence of adopting DCI with beginning-level learners, that is, learners might not want to learn characters when they move to higher-level courses. However, Hayashi (2009) did not further investigate students’ beliefs about DCI and ICI and to what extent these two approaches influence students’ learning experiences.

While Hayashi (2009) cautioned that a possible consequence of DCI is that students might show resistance to character learning, Koda (1992) expressed another possible consequence concerning DCI. That is, with DCI, learners have to spend extra time to make adjustments regarding the sound-visual decoding system in higher level courses. Koda (1992) studied the influence of lower-level processing skills on foreign language reading performance. His results demonstrated that when students were taught in non-traditional script, the sound-visual decoding system they learned reflected the non-traditional script. Later, when the students were taught the traditional script, they would have to re-construct their sound-visual decoding system in order to connect it to the traditional script. Therefore, “early exposure to non-traditional print might make learning traditional writing systems complex, difficult, and might hinder the development of a student’s reading proficiency, even though non-traditional print may facilitate initial learning” (Okita, 1997, p. 62). In addition, Koda (1992) claimed that increasing the students’ exposure to print would be the best way to improve lower-level processing skills. Thus, the author highly recommended early introduction of the writing system in order to increase learners’ exposure to print. However, Koda (1992) commented as follows on character

learning and teaching at the outset of his article:

In a script which requires a vast number of symbols, such as Chinese, it may not be very practical to conduct reading instruction using only the traditional system. If a non-traditional system has to be used, the traditional script should always be presented along with the non-traditional system. Increased exposure will facilitate foreign language learners to build a strong linkage between the sound and visual image of the words. (p. 509)

On the one hand, Koda (1992) argues that it is beneficial for JFL learners to be exposed to traditional script early and more frequently; on the other hand, along with Hatasa (2002), Koda also cautions that results from studies about the Japanese writing system might not be applicable to the field of CFL instruction.

In summary, the approaches of both DCI and ICI have been shown to be supported by different educators. Specialists within the DCI camp base their ideas on speech primacy theory, though only one empirical study (Packard, 1990) seems to have found an advantage of DCI in CFL teaching. Comparatively speaking, studies that support the ICI model are even less common. Only Koda (1992) and Hayashi (2009) indirectly support an ICI instructional model by demonstrating two disadvantages of DCI. First, learners will have to spend extra time re-adjusting the sound-visual connection when they switch from non-traditional script to traditional script. Second, learners may not be willing to learn characters when they move up to higher-level courses if they are not exposed to them at the beginning of their learning experience. It is surprising that in spite of the very few studies supporting ICI (especially since there is no study that has established clear benefits of ICI in CFL instruction) there seems to be widespread consensus for the teaching of characters from the outset of instruction, perhaps due to a cultural

value that favors literacy acquisition. Allen (2008) and McGinnis (1999) mentioned that ICI is mostly adopted in actual teaching practices. Addressing this paradox, part of the present study will investigate what approaches various CFL programs in the U.S. adopt and will explore what rationales these CFL programs draw from as support for their curricular choices (i.e., either DCI or ICI).

The Role of Characters in CFL Teaching

The above review shows that the main reasons for the DCI timing structure are (1) characters are too difficult and time-consuming for learners whose L1 is alphabetic in its orthographic form and (2) to lay a solid background in speaking and listening better supports CFL students in learning characters more effectively. Recently, based on the similar rationales, a number of teachers and researchers also proposed alternatives to ease the difficulty of character learning.

First, some scholars argued for lowering the expectations about how many characters should be learned, and whether students should be able to recognize them only or recognize and produce them from memory (Ding 2005; Jiang, 2005, 2007; Ke & Shen, 2003; Luo, 2005). A group of scholars from China presented at the International and Interdisciplinary Conference with a theme of “How Western Learners Discover the World of Written Chinese” in Germany and introduced character teaching in China. Luo (2005) surveyed the teaching and learning of characters in the Chinese program at Beijing Language and Culture University. Noticing that the number of characters required for CSL learners was excessive, the author argued for a smaller number of characters to be required. In the context of CFL teaching in the U.S., Ding (2005) emphasized that most western CFL learners are not Chinese majors, so they are unlikely to devote large amounts of time to study Chinese. Thus, he lamented that it is not practical and can

only be an unrealizable dream to require these learners to master all four skills (i.e. speaking, listening, reading and writing).

A well-established scholar in the CSL field in China, Jiang (2005, 2007), strongly proposed that beginners should be asked to recognize more than to write characters. In particular, Jiang (2007) conducted an experimental study to compare the effects of two methods, recognition-only condition and recognize-and-write condition, on students' learning effects. That is, one class was required to be able to recognize and write all characters taught in class while the other class was required to only be able to recognize but not write all characters taught in class. After three months, a character recognition and writing test showed that students in the recognition-only condition significantly outperformed students in the recognize-and-write condition on both character recognition and writing. This finding demonstrates that writing is not a necessity for character recognition and to require less writing did not lower students' abilities to read and write characters.

Second, some scholars have questioned the necessity of writing characters at all and argued for replacing writing characters by hand with typing them on a computer keyboard (Allen, 2008; He, 2005; Jen and Xu, 2007; Zhang, 2005). The title of Allen's (2008) article "Why Learning to Write Chinese Is a Waste of Time: A Modest Proposal," serves as a reliable synopsis of this position. The author arrived at this conclusion from CFL student surveys, interviews with native speakers, and his own observations. Results demonstrate that native speakers of Chinese estimated that nearly 50% to 100% of their writing was produced electronically. Results also show that first-year CFL students believed they spent an average of a third of their study time on writing characters and in the first year of CFL learning, "this 'writing' is primarily not in composition, but rather in the memorization and reproduction of individual character

construction” (p. 240). The author argued that the time spent on “hours and hours of memorization and writing of character structure and sequencing” could be allocated to developing other skills. Allen lamented that most popular Chinese textbooks used in CFL instruction also contributed to the instructional model of introducing characters to beginning-level CFL students. In response to the widespread cultural value on the primacy of characters, the author argued for a reconsideration of the practical issue of how we best could accommodate learners’ difficulties. Accordingly, the author suggests the integration of electronic word processing into the curriculum of initial stages of CFL instruction. Other proponents of using word processing to replace handwriting also include Jen and Xu (2000), Wu (2005), and Zhang (2005). Jen and Xu (2000) found through their survey that 91% of the students who did not continue to study Chinese complained about the difficulty of writing characters, so they proposed “penless Chinese character reproduction.” Zhang (2005) also proposed that when beginners started to recognize characters, they could just learn to word process characters by computer keyboard, which could greatly reduce the burden. Furthermore, Wu (2005) even provided a detailed introduction of all kinds of computer software and their usage to promote typing characters from the first year.

It is in recent years that CFL teachers and researchers have started to propose alternatives to require less handwriting or even replace handwriting with typing characters via computer keyboard for beginning-level CFL learners. The purpose of doing this is similar to DCI, that is, to ease the difficulty of learning characters. To examine the issue of whether to require less handwriting or replace handwriting with computer typing will help gain a deeper understanding of whether or not to delay teaching characters.

Beliefs and Motivations of Character Teaching and Learning

It has been shown in preceding sections that both DCI and ICI approaches are adopted for CFL teaching in the U.S. The current study investigated the popularity of both approaches among a large number of CFL programs and rationales for either choice. In addition, this study also examined the issue from the perspectives of teachers' and students' beliefs about the timing of introducing characters.

Research has demonstrated that teachers' beliefs about L2 acquisition constitute essential components to understand what motivates teachers' actions in the classroom. (Bell, 2005; Richardson, 1996; William & Burden, 1997) As Bell (2005) commented, "the more that is known about teacher beliefs, the more likely the profession will be to create models for foreign language teacher preparation ..." (p. 259).

By the same token, a substantial body of teacher cognition research has also shown that learner beliefs play vital roles in foreign language learning (Amuzie & Winke, 2009; Banya & Cheng, 1997; Elbaum et al., 1993; Horwitz, 1985, 1988; Kalaja, 1995; Kern, 1995; Morri, 1999; Mori & Shimizu, 2007; Mori et al., 2007; Shimizu & Green, 2002; Zhang & Cui, 2010). For example, Tse (2000) commented as follows:

From a theoretical perspective, certain attitudes and beliefs derived from student perceptions can have a profound impact on the learner's affective state. This affective disposition has been hypothesized to play a central role in the processes of language acquisition. (p. 70)

Although there have been numerous studies of teachers' and learners' beliefs about language learning in the literature, the majority of existing publications focus on English or very commonly taught languages (CTLs) in the U.S. (e.g., Spanish, French, and German; see Duff &

Li, 2004). Far fewer studies have examined the belief system of teachers and learners of less commonly taught languages (LCTLs) (e.g., Chinese, Japanese, and Russian). To date, there have only been two articles (McGinnis, 1999; Samimy & Lee, 1997) published more than decade ago that examined CFL teachers' and learners' beliefs about learning Chinese. Samimy and Lee (1997) employed a modified version of the Beliefs about Language Learning Inventory (BALLI) (originally designed by Horwitz, 1988) to investigate 34 first-year students' and 10 instructors' beliefs about CFL learning and teaching. Results revealed that 81% of the students rated Chinese as either a 'very difficult' or 'difficult' language to learn whereas only 4% mentioned it as easy. In addition, 46% of the students and 67% of the instructors selected writing as the most difficult aspect in learning CFL. In order to know students' perception of the importance of different proficiency skills in learning Chinese, McGinnis (1999) surveyed a total of 303 CFL learners enrolled at four different levels about what they considered to be more important in their language learning plans: speaking and listening or reading and writing. The results revealed that CFL students of the first three years placed the greatest emphasis on developing speaking and listening skills.

Although the challenging nature of learning Chinese characters has been shown to be a major hurdle for CFL learners, no studies have been carried out to investigate CFL learners' beliefs about learning Chinese characters in particular. Studies related to this topic can only be found in two articles published in what I consider to be the tangential field of JFL teaching (Dewey, 2004; Okita, 1997).

Okita (1997) directly asked JFL students' beliefs about when *kanji* should be introduced. The study was carried out in a special context of JFL courses at the University of Hawai'i at Mānoa. According to Okita's (1997) introduction, before 1995, the beginning-level JFL courses

were based on the speech primacy premise and all Japanese texts were written in Romanization. Handouts of the Japanese writing system were also provided separately as supplementary materials. However, the author reported on his observation that most of these supporting handouts were ignored by students. Starting in 1995 the Japanese program adopted another textbook that used traditional Japanese orthography for not only reading and writing but also for grammar and conversations from the first lesson. Due to the textbook change as well as the change in the program's structure of the introduction of the Japanese orthography, the author conducted the study to examine whether there was any notable change in students' beliefs about learning *kanji*. A short questionnaire was used to ask 208 student participants in 1994 and 129 student participants in 1995 and 1996 who were enrolled in basic-level JFL courses. Participants were asked to respond to a Likert response scale for the following five belief statements (p. 63):

1. Instructors should provide information on how to learn *kanji*.
2. I know how to learn *kanji*.
3. The Japanese orthography should be introduced from the beginning of the instruction of Japanese.
4. The Japanese orthography should be introduced after substantial spoken Japanese has been acquired.
5. Knowledge of radicals will enhance *kanji* learning.

Belief statements 3 and 4 directly asked JFL students' opinions about when they prefer to learn Japanese orthography. Statistical analyses of the responses to these two statements revealed that regardless of the textbook change, around 70% of the JFL students wanted to learn Japanese traditional orthography from the beginning of instruction.

The author pointed out two interpretations for the results. First, the author claimed that it

might be possible that “students’ beliefs about learning *kanji* are independent of the type of textbook or teachers’ beliefs about learning *kanji* that underlie the textbooks” (p. 72-73). It means that the textbook change did not influence students’ beliefs about learning *kanji*. Second, the author also cautioned that the results might reflect the program’s teaching methodology. In other words, it might be possible that instructors did not change the ways in which they introduced characters. Even though the new textbooks used traditional orthography (including *kanji*), instructors might have continued to follow their original teaching behaviors. If such were the case, it means that the actual teaching was in Romanization and handouts of *kanji* were given to students for reference. If so, students might not truly understand the task of reading and writing all texts in the traditional orthography. Thus, it is hard to know whether the 70% of the students who reported that they wanted to learn Japanese orthography from the beginning of instruction is a reliable finding (e.g., the participants might have misunderstood the researchers’ questions). Due to the context of researching only in one program, the author called for more studies in other institutional settings to further explore the question of students’ beliefs about learning *kanji* with different textbooks.

Unlike Okita (1997), Dewey (2004) examined the beliefs of both JFL teachers and their students concerning an optimum time for introducing Japanese script and the use of Romanization in JFL classrooms. Participants were L1 English speakers enrolled in first-year JFL courses at two universities. The Japanese programs at these two universities adopt DCI and ICI respectively. Five sections, totaling 60 DCI JFL learners and five sections, totaling 62 ICI JFL learners as well as instructors for all sections participated in the study. Both learners and instructors were asked to complete questionnaires concerning attitudes toward DCI and ICI as well as the use of Romanization. The questionnaire included six major areas: script difficulty,

comfort reading, script satisfaction, text satisfaction, literacy eagerness, and alternative script use. In addition, instructors were asked to write a brief essay expressing their beliefs about teaching written Japanese.

Results demonstrated that instructors and students held different beliefs about the timing of character teaching and learning in both the DCI and the ICI JFL programs. One of the instructors who supported the ICI structure argued as follows:

[The students] have so many *kanjis* to memorize. I think they need lots of experience with the *kanjis* from the first day of class. It takes them too much time to learn *kanjis*, so they can't use romaji at all when they really want to learn to read Japanese. (p. 573)

On the other hand, an instructor who did not support ICI argued that:

Students ought to learn to speak first, as the Japanese do, and later learn to read ... and romaji is the best tool for facilitating this way of learning. (p. 573)

By the same token, some students' beliefs were also found to deviate from the program structure. For example, in a class of DCI JFL program where the instructor still taught *kanji* from the beginning, the author found students who liked it and students who did not like it. One of the students who liked it said:

I know the program doesn't encourage *kanji* use much in the first year, so I guess it just seems like he's doing something he shouldn't be when it's really a good thing. It's actually my favorite part of the class. (p. 572)

In contrast, a classmate seemed to support DCI and as a result, he strongly complained about the *kanji* teaching in the class. He said, "We have enough to work on already, and now [our teacher] adds more *kanji*. We don't get graded on it, but I think we should spend that class time learning how to speak better" (p. 572).

The above results demonstrated that both instructors and students held a range of beliefs about the timing of introducing Chinese characters. First, despite the structure set by JFL programs, either DCI or ICI, some instructors did not seem to follow accordingly. Rather, these instructors seemed to teach according to their own judgments of whether or not to introduce characters in their classes. For example, the instructor from section 5 of DCI JFL program rather supported ICI. Thus, the instructor still taught some *kanji* even though the program did not encourage him to do so. It indicated a strong influence of teacher beliefs on instructional behaviors. Second, students also had different beliefs about the timing of character introduction in either DCI or ICI programs.

It is also commonly believed that learners' beliefs about language learning may influence their attitudes, motivation, and behaviors throughout the learning process and may have direct impacts on learning outcomes (Breen, 2001; Dörnyei, 1994; Gardner, 1985; Kuntz, 1996; Masgoret & Gardner, 2003; Tse, 2000; White, 1999; Williams & Burden, 1997). In order to assess learners' beliefs about language learning and teaching, Horwitz (1988) developed the BALLI to assess "student opinions on a variety of issues and controversies related to language learning" (p. 284). Results from Horwitz's study indicated that students might have unrealistic goals about their language mastery and students are mostly concerned with their spoken language. Thus, Horwitz pointed out that the mismatch between students' beliefs about their language learning experiences and their actual experiences in language classrooms might lead them to discontinue language studies.

Regarding CFL learning and teaching, Wen (1997) pointed out that

... mainly because the Chinese orthographic system is difficult, learning it may create a major affective and motivational barrier. If students are not psychologically prepared for

the demands of the language, they may become frustrated at the beginning of their learning. ... Consequently, students may develop negative reactions to the language, and their motivation may greatly decrease. (Wen, 1997, p. 236)

In addition, learners' decisions to continue their participation in higher-level courses will further have an impact on the development of language programs because:

Programmatic decisions are also linked to student perceptions, in that attributions of success and failure and the level of success students want to attain may determine the popularity of intermediate and upper division FL courses. (Du-puy & Krashen, 1998, cited in Tse, 2000, p. 70)

Consequently, Duff and Li (2004) argued for the importance of research on beginning learners as follows:

There needs to be greater attention paid to FL instruction and students' experiences in first-year university courses specifically. At this level, language courses are often mandatory and students' experiences in the first year often determine whether they will continue to study that language or any other; moreover, it is in this critical year when Mandarin tones and new orthographies are normally introduced. (p. 694)

Zhang and Li (2010) commented that "a major problem with Chinese is that no adequate syllabus has been set up which meets the needs and objectives of overall curriculum requirements as well as reflecting how L1 English speakers learn Chinese" (p. 92). In addition, other researchers call for more research studies to examine such issues as when Chinese characters should be taught and the order of Romanized Pinyin and simplified characters (Duff & Li, 2004, p. 453; Bell, 1995, 1997; de Courcy, 1997, 2002; Everson, 1988, 1994).

In summary, I have reviewed five areas of literature in relation to the timing issue of CFL

character teaching and learning. The first area established a foundational understanding of the challenging nature of characters themselves. Difficulties of teaching and learning characters were reported in the second area of literature. In the third area, the study explored studies of DCI and ICI approaches in CFL teaching. Fourth, I listed some viewpoints about the role of characters in first-semester CFL courses. These viewpoints can help us better understand the issue of whether or not to delay teaching characters. The last area focused on beliefs held by teachers and learners about the timing of Chinese character instruction.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this mixed methods study was to explore current timing structures of introducing characters in CFL teaching as well as beliefs and experiences by CFL teachers and students under different timing structures in the U.S. This chapter discusses the following: a) a general description of the research design, b) participants and settings, c) quantitative data collection procedures, d) qualitative data collection procedures, and e) data analysis methods.

A General Description of the Research Design

To collect research data from both local and national perspectives, the study utilized a mixed research method design. The research methods featured include surveys and semi-structured interviews. Participants include both survey respondents and interview participants. Interview participants were CFL teachers and students from two specific local CFL programs. Survey participants were CFL teachers and students from different post-secondary CFL programs in the U.S. Details are introduced in the section of “Participants and Settings.” Quantitative data were collected using an online teacher survey and an online student survey. The main stages of instrumental development are introduced in the section titled “Quantitative Data Collection Procedures.” Later, the section of “Qualitative Data Collection Procedures” introduces qualitative data collected from semi-structured interviews with CFL teachers and students in the two local CFL programs. Finally, the last section specifies methods used to analyze both quantitative and qualitative data.

Participants and Settings

The population for this study consists of two samples: survey participants and interview participants. Survey participants were recruited for the purpose of exploring a broad picture of timing structure issues along with teachers' and students' beliefs in the U.S. Interview participants were recruited from two local CFL programs.

Survey Participants and Settings

The survey participants included students and teachers of CFL at different post-secondary institutions primarily from the U.S. Both student and teacher surveys were distributed via Survey Monkey to as many participants as could be reached between late March and early May 2011. A total of 1,019 student surveys were collected; of these, 914 (89.7%) of the surveys came back complete. A total of 316 teacher surveys were collected and 192 (60.8%) of the teacher surveys came back complete. These teachers and students were involved with at least 132 CFL programs in the U.S.

A large number of survey responses completed in the U.S. were returned within a month of the survey release. I also paid attention to obtain a reasonable distribution of survey participants from four main regions in the U.S., namely, West, Midwest, Northeast, and South. Table 3.1 shows the percentage of student and teacher survey participants across different U.S. regions: West, Midwest, Northeast, and South. According to the demographic data from the most recent U.S. census, it can be seen that the percentage of both student and teacher survey participants demonstrates a balanced distribution. While the South region takes up the largest percentage (37%) in the U.S. census report, the number of student participants (41.6%) and teacher participants (34.4%) from the South region also contributed the most to the student group and the teacher group data collected. The difference between the percentage of survey

participants and the U.S. census lies in the second largest number of participants. The second largest number of students and teachers are from the Northeast region, but the percentage of the Northeast is ranked last in the U.S. census list. A likely reason is that CFL courses are more popular in the Northeast region than in the West or Midwest regions of the U.S. It is also possible a higher percentage of students from the Northeast region than from the West or Midwest region volunteered to participate in the survey. Overall, both the student group and the teacher group represent a similar pattern in terms of the percentage of participants from four regions in the U.S. This general pattern is South, Northeast, West, and Midwest in a descending rank of the percentages represented.

Table 3.1 Percent of Teacher and Student Survey Participants by Region

Region	Student (n = 914)	Teacher (n = 192)	U.S. Census ^a
West	160 (17.5)	31 (16.1)	23
Midwest	129 (14.1)	31 (16.1)	22
Northeast	222 (24.3)	47 (24.5)	18
South	380 (41.6)	66 (34.4)	37
Missing/Other ⁵	23 (2.5)	17 (8.8)	

^a Source: U.S. Census Bureau, 2008 *American Community Survey*, B04006, "People Reporting Ancestry," accessed November 2009.

Student Survey Participants

The student survey participants were comprised of 914 college students enrolled in CFL courses at more than 75 post-secondary institutions in the U.S. Table 3.2 presents the demographic information for these student survey participants. There were more female students (56.7%) than males (43.3%). The majority of students (69.3%) were between the ages of 18 and 21 and very few students were aged under 18 years of age. With respect to who they were, the two largest groups were freshman (25.7%) and sophomore (30.6%) year college students. The

⁵ Among this category, two teacher surveys and one student survey were collected from Canada; one teacher survey and five student surveys were collected from Puerto Rico.

largest proportion of them (42.7%) was enrolled in a second-semester CFL course during the period of the survey. The second largest (20.9%) group were students enrolled in a first-semester CFL course and the third group (16.8%) were those enrolled in a CFL course at the level of the second semester of the second year. As far as students' first languages (L1s) is concerned, a considerable number (71.6%) were L1 English speakers and only a small number of students declared their L1s as Chinese (5%), Japanese (0.5%), Korean (3.3%), Spanish (1.6%), or Vietnamese (1.3%). In addition, there were some multilingual speakers. Seventy-eight student respondents were multilingual speakers with at least one Asian language and fifty were multilingual speakers with no Asian language(s). The remaining two categories reveal information on students' major area of study. Half of the students were majoring in humanities and social sciences, 31.3% of the students were majoring in science and technology, 18.6% of the students were majoring in business, and 8.5% were others or missing. In terms of whether the major is related to language studies or not, 70.1% of the students were pursuing majors unrelated to the study of foreign or second languages, 15.1% of the students were majoring or minoring in the study of Asian language(s) and 6.2% of the students were non-Asian language(s) major.

Table 3.2 Demographic Information for Student Survey Participants

Category	Number	Percent
Gender		
Male	396	43.3%
Female	518	56.7%
Age		
Under 18	8	0.9%
18-21	633	69.3%
22-25	160	17.5%
26 or older	113	12.4%
Missing	3	1.6%
Status		
Freshman	235	25.7%
Sophomore	280	30.6%
Junior	177	19.4%
Senior	151	16.5%

Graduate	34	3.7%
Continuing Education	37	4.0%
Course Level		
First semester of first year	191	20.9%
Second semester of first year	390	42.7%
First semester of second year	42	4.6%
Second semester of second year	154	16.8%
Third year	85	9.3%
Fourth year	52	5.7%
Native Language		
English	654	71.6%
Chinese	46	5.0%
Japanese	5	0.5%
Korean	30	3.3%
Spanish	15	1.6%
Vietnamese	12	1.3%
Multi with Asian language(s) ^a	78	8.5%
Multi without Asian language(s)	50	5.5%
Missing/Other	24	2.6%
General Major		
Business	170	18.6%
Humanities and Social Sciences	458	50.0%
Education	13	1.4%
Humanities	260	28.4%
Social Sciences	185	20.2%
Science and Technology	286	31.3%
Applied Sciences	11	1.2%
Computer Science	33	3.6%
Engineering	39	4.3%
Health Sciences	40	4.4%
Mathematics	10	1.1%
Natural Sciences	75	8.2%
Missing/Other	78	8.5%
Language Major		
Non-language major/minor	641	70.1%
Language major/minor in non-Asian language(s)	57	6.2%
Language major/minor in Asian language(s)	138	15.1%
Missing/Other	78	8.5%

Note. n = 914

^a Asian language(s) refer to Chinese, Japanese, and/or Korean. A student whose native language is multi signals s/he has at least two L1s. If one of those L1s is Chinese, Japanese or Korean, the student is grouped under “Multi with Asian language(s).” Otherwise, the student is grouped under “Multi without Asian language(s).”

Teacher Survey Participants

There was a total of 192 CFL teachers from more than 124 post-secondary institutions in the U.S. Table 3.3 presents the demographic information for these teacher survey participants. There were more than twice as many female teachers (70.8%) as male teachers (29.2%). Teachers' ages were moderately balanced among different groups: 16.7% were from 20 to 30 years old, 35.9% were from 31 to 40 years old, 22.9% were from 41 to 50 years old, and 22.9% were from 51 years old or older. With respect to teaching experience, the majority of teachers had taught CFL for more than five years, 16.7% of the teachers had taught CFL for less than two years, 6.3% of the teachers had taught CFL between two to three years, and 12.5% of the respondents had been serving as CFL teachers for three to five years. Out of 192 teachers, only 34 were NNCS and 158 were L1 Chinese speakers. Most of the teachers had an MA or PhD degree. Moreover, most of the teachers had majored in areas related to linguistics and language (41.6%), pedagogy (18.3%), education (12.0%), Asian studies (3.6%), or literature (12.5%).

Table 3.3 Demographic Information for Teacher Survey Participants

Category	Number	Percent
Gender		
Male	56	29.2%
Female	136	70.8%
Age		
20-30	32	16.7%
31-40	69	35.9%
41-50	44	22.9%
51 or older	44	22.9%
Years of teaching CFL		
Less than 2 years	32	16.7%
2-3 years	12	6.3%
3-5 years	24	12.5%
5 years or more	124	64.6%
Native Language		
Native Chinese speaker	158	82.3%
Non-native Chinese speaker	34	17.7%
Highest Degree		
BA	11	5.7%
MA	91	47.4%
PHD	90	46.9%
General Major		
Linguistics and Language	80	41.6%
Pedagogy ^a	35	18.3%
Education	23	12.0%
Asian Studies	7	3.6%
Literature	24	12.5%
Missing/Other	23	12.0%

Note. n = 192

^a Seventeen of 35 teachers who major in pedagogy specify that their major is teaching CFL.

Interview Participants and Settings

Settings

The interview study was conducted in two CFL programs at two universities in the southeastern U.S. The universities housing these two programs are located in the same general metropolitan area and both state universities are within the same university system. Fortunately, I have had opportunities to teach credit bearing introductory-level CFL courses in both programs.

Although the two programs are housed within similar academic settings, they introduce Chinese characters to CFL learners at different times and under different conditions. One program teaches characters from the very beginning of the first semester CFL course (i.e., it is an ICI program) and the other (a DCI program) introduces characters at the beginning of the second semester CFL course.

As Table 3.4 shows, in the DCI program, Chinese characters are not introduced in the first-semester CFL course. Rather, all reading and writing tasks are conducted in Pinyin. The textbook used in the first-semester CFL class is Swihart (2004a: *Success with Chinese: A Communicative Approach for Beginners: Listening & Speaking Level 1*). The second-semester CFL course introduces Chinese characters from the start and course related reading and writing tasks are conducted with reference to Chinese characters. The textbook is Swihart (2004b: *Success with Chinese: A Communicative Approach for Beginners: Reading & Writing Level 1*). The two textbooks were written by the same author. In addition, the two textbooks are structured around parallel topics such as money, time, numbers, direction, foods, etc. and thus, most of the vocabulary sets introduced in the two textbooks parallel each other.

In contrast, in the ICI program, Chinese characters are introduced from the very beginning of the course. In the first-semester course, learners are introduced to Pinyin during the first week, but they do so solely for the purpose of being able to pronounce Chinese characters. Subsequently, students are then required to read and write in characters and all lessons are conducted with copious reference to Chinese characters. The textbook used for the ICI program is different from that used in the DCI program. The ICI textbook for the first two semester courses is by Liu, Yao, Bi, Ge, and Shi (2009: *Integrated Chinese Level 1 Part 1*). This textbook is one of the most popular CFL textbooks currently in use in the U.S. The Level 1 Part I textbook

has a total of ten lessons. In this ICI program, the first five lessons are taught in the first-semester course and the second five lessons are taught in the second-semester course.

Table 3.4 Basic Information of the Two Programs

Program	Course Level ^a	Timing Structure	Textbook
DCI	First semester	No characters	<i>Success with Chinese: A Communicative Approach for Beginners: Listening & Speaking Level 1</i>
	Second semester	Characters	<i>Success with Chinese: A Communicative Approach for Beginners: Reading & Writing Level 1</i>
ICI	First semester	Characters	<i>Integrated Chinese Level 1 Part 1</i> (First five lessons)
	Second semester	Characters	<i>Integrated Chinese Level 1 Part 1</i> (Second five lessons)

^a All course levels refer to courses in the first semester and the second semester in the first year. Here course numbers are not used because the two programs use different numbering systems.

Student Interview Participants

Taken together, there were twelve students from the DCI program and nine students from the ICI program who participated in the study's interview component. Student participants' background information including gender, age, native language, status, and major are all recorded in Table 3.5. Out of the twelve DCI students, six were participating in the first-semester course and six were members of the second-semester course. All nine ICI students were participating in the first-semester course. There were almost equal numbers of male and female students. Students' ages were 18-21 or 26 or older. All participants' L1s were English except two students whose native language was Korean. Two of the native-English-speaking students had a second native language, Chinese and Indonesian. Most of the participants were college undergraduates, although a couple of them were in graduate school or continuing education. Majors were various, although international affairs or international studies majors were common.

Table 3.5 Background Information of the Twenty-One Student Interview Participants

Program	Participant	Course Level	Gender & Age	Native Language	Status	Major
DCI	Ran	First semester	Male, 26 or older	English	Freshman	International Affairs
	Ming ^b	First semester	Female, 26 or older	Korean	Junior	Health and Human Sciences
	Alex	First semester	Male, 22-25	English	Junior	Business
	Jason	First semester	Male, 18-21	English	Junior	Modern Language & Culture
	Kate ^b	First semester	Female, 26 or older	English	Senior	Criminal Justice
	Jim	First semester	Male, 22-25	English	Senior	History
	Chris	Second semester	Female, 18-21	English	Sophomore	International Affairs
	Joe ^b	Second semester	Male, Missing	English	Sophomore	International Affairs
	Elizabeth	Second semester	Female, 22-25	English	Junior	French major & Chinese minor
	Amy	Second semester	Female, 18-21	English	Sophomore	Business
	Ben	Second semester	Male, 26 or older	English	Sophomore	Policy Studies
	Tiffany ^b	Second semester	Female, 26 or older	English	Sophomore	International Studies
ICI	Aileen ^{ab}	First semester	Female, 26 or older	English	Graduate	Applied Linguistics
	Shannon ^b	First semester	Male, 18-21	English	Sophomore	Computer information systems
	Stephanie ^b	First semester	Female, 26 or older	English	Graduate	Arts and Sciences
	Jack ^b	First semester	Male, 18-21	English	Sophomore	Finance
	David	First semester	Male, 26 or older	English	Continuing education	Other
	Jenny ^c	First semester	Female, 18-21	English	Junior	Political science
	Tylor ^b	First semester	Male, 18-21	Chinese English	Sophomore	Physics

Jeff	First semester	Male, 18-21	English Indonesian	Freshman	Undeclared
Li ^b	First semester	Female, Missing	Korean	Missing	Missing

Note. All names are pseudonym.

^a While all other students in the ICI program were enrolled in their CFL courses in December 2010, this student participated in a course I taught in the spring of 2008. During the interview, she was a colleague PhD student who studies in the same department with me. I interviewed her in October 2010 as a pilot to test interview questions.

^b These students did not take the last updated student survey.

^c She claims to be good at listening but not in speaking Chinese.

Teacher Interview Participants

There were two teachers from the DCI program and three teachers from the ICI program who participated in the interview. Table 3.6 shows background information for these five teachers. Most of the teachers were female with the exception of one male teacher. Regarding their academic background, two held PhDs in linguistics and literature. The other three held an MA in linguistics. This background indicates that most teachers interviewed had professional training in linguistics. In addition, three of the five were very experienced teachers (e.g., they had been serving as CFL teachers for more than three years). The other two teachers were somewhat less experienced.

Table 3.6 Background Information of the Five Teacher Interview Participants

Program	Participant pseudonym	Native language	Gender & age	Major & degree	Teaching experience
DCI	Zhang	Chinese	Male, 51 or older	Chinese literature, PhD	Five years or more
	Mei	Chinese	Female, 41-50	Linguistics, PhD	Three years or more but less than five years
ICI	Deng	Chinese	Female, 20-30	Applied linguistics, MA	Less than two years
	Wang	Chinese	Female, 20-30	Applied Linguistics, MA	Two years or more but less than three years
	Gao	Chinese	Female, 20-30	Applied Linguistics, MA	Five years or more

Quantitative Data Collection Procedures

This study used two large-scale online surveys to collect quantitative research data. One was a teacher survey and the other was a student survey. In order to generate as broad a picture as possible of current program structures along with teachers' and students' beliefs with respect to the timing of introducing Chinese characters, I recruited participants across the U.S. in order to obtain a large number of teacher and student survey responses.

Survey Instruments

The development of survey instruments took place in three stages. First, I developed a list of major themes through reading previous studies and informal interviews with CFL program teachers I had acquaintance with. These themes were: (a) whether or not a CFL program delays the teaching of characters along with any related rationales; (b) a CFL program's curricular background information, including teaching pace, enrollment, textbook, and so on; (c) whether CFL teachers and students believe Chinese characters should be delayed along with any related rationales; (d) importance and difficulty of different skills when learning/teaching CFL; (e) requirements of character learning in different programs, such as handwriting, typing, character recognition, character production, and typing characters on a computer keyboard; and (f) teachers' and students' background information.

Second, using these major themes, I drafted an online teacher survey (Ye, 2011 March1a) and an online student survey (Ye, 2011 March1b) on SurveyMonkey. Then I piloted the first draft of the CFL teacher survey with eight CFL teachers. Most of these teachers already had established careers in the field of teaching CFL in the U.S. I did not ask these eight teachers to fill out the online survey at the same time; rather, I emailed one teacher and waited for his or her

feedback first, then I revised the survey according to the initial respondent's feedback and sent the revised survey to the second teacher. I continued with this pilot procedure until I finished revising and collecting all eight pilot responses. If I couldn't decide how to revise the draft according to one respondent's feedback, I noted the issue for further consideration at a later time. While I asked these initial respondents to help fill out the first draft of the pilot survey, I also told them the purpose of my dissertation study and sent them some guiding questions as parameters for their written feedback. The guiding questions included: (a) how long it took to finish the survey; (b) any item or section they felt was unclear; (c) any item or section they felt was unnecessary. Most of the communications between me and the initial eight respondents were through email, but some were through phone calls. After I revised the first draft of CFL teacher survey, I made similar changes to the first draft of CFL student survey because most of the sections in both surveys were parallel except for some of the background information questions. Later, I piloted the first revised draft of CFL student survey with 12 students from the DCI program and 29 students from the ICI program. After students finished the survey, they were asked to provide feedback about anything they wanted to comment on. I then made corresponding changes according to the students' feedback. In general, students found the survey to be fine; they did not provide much in the way of feedback.

Third, I sought suggestions from advisors and colleagues about the second drafts of both the teacher and the student surveys. When I had the second drafts of both teacher and student surveys, I sought further advice from my advisors and other PhD classmates, some of whom were experienced with designing online surveys. I revised the survey based on this feedback. Then, I did a second pilot study with five students and six teachers. This time, I made appointments with each of these eleven informants and sat down with them while they completed

the online survey. I also asked them to talk aloud and tell me anything they considered to be unclear. If I couldn't sit with participants, I called them and waited to hear feedback on the phone while they took the survey. In addition to the content of the surveys, I also made sure questions and sections were adequately formatted and were smooth logistically. By early March 2011, I was satisfied with all aspects of both surveys and felt ready to release surveys.

The final draft of CFL teacher survey (See Appendix A) was divided into five sections. They are:

- Section 1: General Pace
- Section 2: About the Program
- Section 3: Importance and Difficulty
- Section 4: Beliefs
- Section 5: Demographic Information

Section 1 of the instrument asked respondents to provide information about the general pace of CFL instruction. Section 2 solicited information related to the general background of the CFL programs, such as the total number of students in each program and the approximate retention rate of beginners who decide to continue their formal study of CFL through enrollment in higher level courses. Not all teachers were required to complete these first two sections. I screened out teachers who did not need to fill out these two sections in order to maximize the participants' time. Three questions used to screen teacher participants for first two sections are:

Are you currently teaching a first-semester Chinese course?

- Yes (Go to Section1)
- No (Go to a)
- a. If you are not currently teaching a first-semester Chinese course, would you consider yourself familiar with a typical first-semester Chinese course in your program?
 - Yes (Go to Section1)
 - No (Go to b)

- Not sure (Go to Section1)
- b. Are you the person primarily responsible for your Chinese program? (For example, you would click “yes” if you are the program director or if you are responsible for curriculum decision.)
 - Yes (Go to section 2)
 - No (Go to section 3)
 - Not sure (Go to section 2)

Section 3 invited teachers to rank the importance and difficulty of various course foci for beginning-level CFL learners based on a five-point likert scale. The foci presented were speaking, listening, reading (in characters), reading (in Pinyin), writing (in characters), and writing (in Pinyin). The fourth section was specific to participants’ beliefs about the timing structure of introducing Chinese characters and the role characters play in a first-semester CFL course. Finally, the fifth section invited teachers to provide demographic information (e.g., institution name, gender, age, L1, degree, CFL teaching experience).

The final draft of CFL student survey (See Appendix B) had four sections, which are listed below:

- Section 1: CFL Learning Experience
- Section 2: Importance and Difficulty
- Section 3: Beliefs
- Section 4: Demographic Information

The first section asked about students’ CFL learning experiences, such as when they started to study CFL, why they studied CFL, and how long they had been studying CFL. The reason these questions were located at the beginning of the survey was to lead students gradually to the context of answering questions about CFL learning in general and then learning Chinese characters in particular. Sections 2 and 3 were the same with those of the CFL teacher survey.

The last section asked students to provide demographic information (e.g., institution, gender, age, L1, language spoken at home, heritage speaker status, major, school status).

Survey Data Collection Procedure

The final drafts of CFL teacher survey and CFL student survey were made available to informants through the electronic medium of SurveyMonkey. As primary investigator, I forwarded the link to locations (e.g., Modern foreign language departments and CFL programs at the university level; professional associations) where potential participants and specifically targeted contact personnel could be reached. All survey data were collected between late March and early May 2011. I followed three procedures to reach potential participants. First, I identified as many existing CFL programs as possible by exploring institutions' websites. I located a primary contact person for each CFL program and contacted her or him before I sent out the survey link. From the primary person, I continued to search for more faculty members working in the same program and asked them whether they lend assistance in completing the survey. Second, I contacted as many existing association webmasters as possible in order to reach as many U.S. based CFL educators as possible. For example, one of the largest and most influential CFL associations in the U.S. is the Chinese Language Teachers Association (CLTA). I contacted its webmaster and later forwarded the survey to the CLTA listserv. Finally, I sent the survey links to all CFL teachers and educators with whom I was acquainted.

Qualitative Data Collection Procedures

This study employed semi-structured interviews for both teachers and students concerning their beliefs about the teaching and learning of Chinese characters. Most of the interviews with CFL teachers were conducted in Chinese and interviews with students were

conducted in English. I audio-recorded all the interviews using an Olympus VN-240PC Digital Voice Recorder and transcribed the interview data using Express Scribe, a professional software designed to assist the transcription of audio recordings.

Chinese Teacher Interviews

Two Chinese teachers from the DCI program and three teachers from the ICI program were recruited for the interview. I sent an email to recruit them for the interview. Before I contacted them for the interview, all the five teacher participants had already finished filling out the teacher survey. In addition, since I worked in both programs, I knew all teachers very well. I had also discussed the topic informally with most of them at the pilot stage of survey development. Therefore, I already had good background knowledge of their program, the teaching environment, and personal beliefs about the topic upon the time I interviewed them. Interviews with CFL teachers were face-to-face and were conducted one-on-one. However, I interviewed two of the three Chinese teachers from the ICI program at the same time due to time constraints. There was not much difference between one-on-one interview and group interview because I closely followed the structure of the teacher interview question list. I first made an appointment with each teacher and arranged a convenient place to meet. For some teachers, I met them in their offices, for others, we found a quiet place. I usually began the interview with small talk about their CFL teaching experiences. My purpose was to establish a relaxed mood for the interview. All the interview participants were my acquaintances. I had often discussed various topics about CFL teaching with them. Some of the interviews lasted a lot longer, particularly if the director had a lot to say about some questions or if I needed to extend the period of small talk to help them answer a question in full. The longest interview lasted about 34 minutes and the shortest one lasted about eight minutes. The average was about 15 minutes. At the beginning of

the interviews, I also re-emphasized that any information pointing to their programs and their names would be kept in confidence. Following is a list of the categories of interview questions designed for the CFL teachers (See Appendix C):

- Questions 1-3: general background of the teaching experience
- Questions 4-6: timing of introducing characters and specific aspects of character teaching
- Question 7: teachers' satisfaction with the student performance

Chinese Student Interviews

I interviewed students from the two programs at the end of fall 2010. I first visited CFL classes on two campuses to recruit students. Students who were interested in the interview study were asked to write down their names and contact information. Then I emailed every student to make an appointment. The student interviews happened either in an office provided by the program or in a classroom where students had just finished their classes. Most of the students were interviewed one-on-one, but there were a few students who were interviewed in a group of two or three due to time constraints. The group interview did not differ from the one-on-one interview because during the group interview students were asked questions individually. The length of the student interviews was similar among most of the students. The average length was about 15 minutes for each student. I closely followed the student interview question list.

Following is a list of the categories of CFL student interview questions:

- Question 1: reason for studying Chinese
- Questions 2-3: importance and difficulty of different skills
- Question 4: timing of introducing characters and specific aspects of character teaching

- Question 5: handwriting and typing Chinese characters
- Questions 6: textbook
- Questions 7-8: future study

Data Analysis Methods

Quantitative Analysis

The quantitative analysis of the study used the SPSS (Statistical Package for Social Sciences) version 16.0. Descriptive statistics, including frequencies of response, means and standard deviation, were calculated to summarize the responses to the surveys and background demographic information of all participants involved. For the CFL teacher survey, the analysis aimed to identify overall patterns of beliefs about the timing of introducing Chinese characters to beginners, the current program structure of Chinese character instruction, and rationales. For the CFL student survey, the purpose of the analysis was to uncover overall patterns of students' beliefs about the timing of introducing Chinese characters and their rationales. Inferential statistics, including chi-square, t-test and ANOVA, were conducted to examine whether there were any significant differences of beliefs between different groups.

Qualitative Analysis

The study's qualitative analysis component employed a content analysis technique using the qualitative data analysis software ATLAS version 6.0. According to Berg (2006, p. 303-304), content analysis is "a careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, biases, and meanings" (Leedy & Ormrod, 2005; Neuendorf, 2002). Widely used in various disciplines, this technique involves a "coding operation and data interpreting process" (Berg, 2006, p. 304). The body of materials

included transcripts of audio-recorded interview data and field notes. The coding process followed the procedure below (Berg, 2006, p. 306):

- Data are collected and made into text (e.g., field notes, transcript).
- Codes are analytically developed or inductively identified in the data and affixed to sets of notes or transcript pages.
- Codes are transformed into categorical labels or themes.
- Materials are sorted by these categories, identifying similar phrases, patterns, relationships, and commonalities or disparities.
- Sorted materials are examined to isolate meaningful patterns and processes.
- Identified patterns are considered in light of previous research and theories, and a small set of generalization is established.

CHAPTER 4

RESULTS

The purpose of the study was to explore current timing structures for introducing Chinese characters among CFL programs as well as teachers' and students' beliefs and rationales concerning what might be the most appropriate timing structure for introducing Chinese characters to CFL learners in the U.S. In addition, I investigated teachers' and students' beliefs about the importance and difficulty of different language skills along with the requirement to learn Chinese characters in beginning-level CFL courses. Specifically, I sought to investigate the following four research questions:

1. What are current timing structures for introducing Chinese characters in post-secondary CFL programs in the U.S.?
2. What are CFL teachers' and students' beliefs and rationales about the timing structures?
3. What are CFL teachers' and students' beliefs concerning the importance and difficulty of different skills (speaking, listening, reading characters, reading Pinyin, writing characters, and writing Pinyin) in a beginning-level CFL course?
4. What are CFL teachers' and students' beliefs concerning the requirement of characters in a beginning-level CFL course?

Analysis of quantitative and qualitative data is presented here in two sections. The first section reports results from the analysis of quantitative data. Since major sections of both the teacher and the student surveys were parallel, I presented results from the teacher survey and the student survey regarding the same research question at the same time. Most of the results in this section are presented using descriptive statistics and simple referential statistical tests, e.g. *t*-test, chi-square test and ANOVA. The second section presents results obtained from the analysis of

qualitative data including interviews with CFL program teachers and students from two local CFL programs. The intent of this part of the study was to compare beliefs and rationales between teachers and students from two different CFL programs that adopted DCI and ICI timing structures respectively. These results are presented with respect to the DCI and ICI programs.

Quantitative Results

Current Timing Structures in the U.S.

This section answers the first research question about current timing structures for introducing Chinese characters in the U.S. In the surveys, both teachers and students were asked to indicate the actual timing structures in their programs. Specifically, teachers were asked at what point they started to teach characters in their CFL programs and students were asked at what point they were taught characters when they first studied CFL. Participants were asked to select one of the following five types of timing structures or to specify if they had a different answer.

- At or near the beginning of the first semester
- In the middle of the first semester
- Toward the end of the first semester
- At or near the beginning of the second semester
- At or near the beginning of the second year
- Other (please specify)

Because both teacher and student surveys had a comparatively small number of participants in the third, fourth and fifth types of timing structures, i.e., *Toward the end of the first semester*, *At or near the beginning of the second semester*, and *At or near the beginning of*

the second year (see Appendix G), I collapsed these three timing structures and named the resulting structure *Toward or after the end of the first semester* for analysis in this section and thereafter. Answers in the *Other* category were difficult to classify. For example, some participants said “I don’t know” while others said “It depends.” As a result, I was not able to include these responses as data for analysis. After the modification described above, there were three types of timing structures: *At or near the beginning of the first semester*, *In the middle of the first semester*, and *Toward or after the end of the first semester*.

Table 4.1 displays the distribution of teachers and students by three actual timing structures. The table shows that most CFL teacher participants indicated that their programs actually taught characters at or near the beginning of the first semester. The number of teachers in the other two types of timing structures is comparatively low. Likewise, student responses also demonstrate that over three quarters of participants (77.3%) are found in the first type of timing structure, *At or near the beginning of the first semester*. Unlike the teacher responses, student responses have the second largest grouping (12.8%) in the third type of actual timing structure, *Toward or after the end of the first semester*, and the second type of timing structure has the least number of students. All in all, responses from both the teacher and the student groups indicate that most CFL programs in the U.S. introduce characters at or near the beginning of the first semester.

Table 4.1 Distribution of Teachers and Students by Three Actual Timing Structures

	At or near the beginning of the first semester	In the middle of the first semester	Toward or after the end of the first semester
Teacher (n = 184)	156 (84.8)	17 (9.2)	11 (6.0)
Student (n = 907)	701 (77.3)	90 (9.9)	116 (12.8)

Note. The number in the parenthesis refers to the percentage of teachers or students by each type of timing structure on the total number of teachers or students.

It is important to take the following two points into consideration while reviewing the results presented above. First, because some teachers or students might come from the same CFL program, the results should ideally be reported by each CFL program. However, I found that some teachers from the same program reported different timing structures. It is possible that these teachers taught characters according to their own timing structures, resulting in a lack of common timing structure across the program as a whole. Furthermore, students were asked at what time they were taught characters when they first studied CFL. If they did not first study CFL in the program where they were enrolled during the survey collection⁶, their responses to the survey might have been tied to a different (i.e., previous) CFL program. So students' answers could be about any program, depending on where those students first studied CFL. Therefore, I did not choose to report the actual timing structures according to each CFL program; rather, I reported them according to each teacher and student report. Second, teacher responses were more likely than student responses to reflect the most current actual timing structures in the U.S., because teachers were asked about the program in which they were teaching at the time of the survey collection (in contrast, students were asked about the program where they first studied CFL).

⁶ Both the teacher and the student surveys were collected between late March and early May, 2011.

Beliefs and Rationales of the Timing Structures

This section answers the second research question regarding teachers' and students' beliefs and rationales about the timing structures. First, teachers' and students' beliefs are reported first; second, teachers' and students' rationales are reported.

Teachers' and Students' Beliefs

Both surveys asked teachers and students twice about their beliefs about timing structures. Both questions asked participants what they believed to be an appropriate timing structure for optimal learning of Chinese characters. The timing structure choices were the same as the choices for actual timing structures. Although both questions asked the same information, participants were asked to fill out several items regarding arguments for DCI and ICI before they were asked the second question. The purpose was to give participants some time to think about the issue through reading more arguments about whether or not to delay teaching characters. These two times when participants were asked about ideal timing structures were labeled as *First reported ideal timing structures* and *Second reported ideal timing structures*.

The distribution of teachers in each report by each type of ideal timing structure is demonstrated in Table 4.2. It shows that the first type of timing structure, *At or near the beginning of the first semester*, is most popular among teachers, including 139 out of 185 teachers in the first report and 130 out of 180 teachers in the second report. The second favorite type of timing structure given in both reports is the second type of timing structure, *In the middle of the first semester*.

Table 4.2 Distribution of Teachers in Each Report by Ideal Timing Structure

	At or near the beginning of the first semester	In the middle of the first semester	Toward or after the end of the first semester
First reported ideal timing structures (n = 185)	139 (75.1)	27 (14.6)	19 (10.3)
Second reported ideal timing structures (n = 180)	130 (72.2)	31 (17.2)	19 (10.6)

Both native and non-native speaking Chinese teachers preferred the non-delay model. For example, in the first report of ideal timing structure, 26 out of 32 non-native Chinese speaking teachers indicated that they preferred to teach characters from the beginning.

The next question focuses on the relationship between the actual timing structures in the U.S. and teachers' ideal timing structures expressed in both reports. In another words, I was interested in knowing whether and how the distribution of teachers in each type of timing structure changed in three reports. A grouped distribution is depicted in Figure 4.1. This identifies the number of teachers in each type of timing structure by three different reports. It displays a clear pattern that the number of teachers in the first type of timing structure, *At or near the beginning of the first semester*, decreases not only from the actual report to the first ideal report, but also from the first ideal report to the second ideal report. Contrastively, the trajectory of the number of teachers in the second type of timing structure, *In the middle of the first semester*, increases across the three reports. A similar increasing pattern is also found in the third type of timing structure, *Toward or after the end of the first semester*, although the number of teachers for both ideal timing structure reports remained the same.

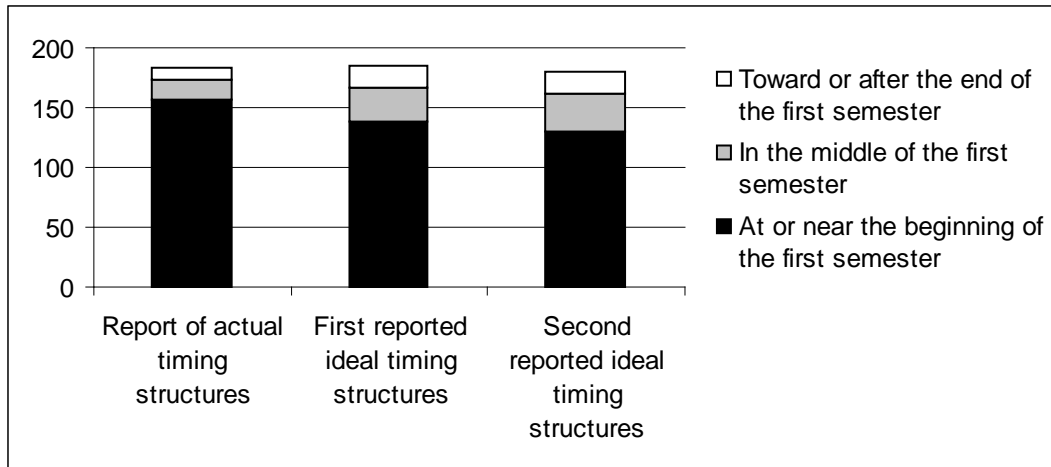


Figure 4.1 Changes in Distribution of Teachers in Each Timing Structure by Occasion

A two-way group-independence chi-square was performed to assess the relationship between the type of timing structures and the type of report. A contingency table for these data is shown below:

Table 4.3 Distribution of Teachers by Occasion by Type of Timing Structure

	Type of Timing Structures			Total
	At or near the beginning of the first semester	In the middle of the first semester	Toward or after the end of the first semester	
Report				
Report of Actual Timing Structure	156	17	11	184
First Reported Ideal Timing Structure	139	27	19	185
Second Reported Ideal Timing Structure	130	31	19	180
Total	425	75	49	549

The results were statistically significant (likelihood ratio $\chi^2 = 9.54$, $df = 4$, $p = .049$), with an effect size of Cramer's $V = .09$, which is a very small size effect (Cohen, 1992). It shows a

tendency that teachers who were given an opportunity to read both DCI and ICI options and rationales had a slightly increased tendency to choose to delay teaching characters.

The distribution of students in each type of ideal timing structure in both reports is presented in Table 4.4. It demonstrates that two thirds or more of the students selected the first type of timing structure, *At or near the beginning of the first semester*, as their ideal timing structure. The second largest group lies in the second type of timing structure, *In the middle of the first semester*, in both reports.

Table 4.4 Distribution of Students in Each Ideal Timing Structure by Report

Report	At or near the beginning of the first semester	In the middle of the first semester	Toward or after the end of the first semester
First reported ideal timing structures (n = 908)	650 (71.6)	134 (14.8)	124 (13.7)
Second reported ideal timing structures (n = 906)	603 (66.6)	170 (18.8)	133 (14.7)

The next question examines whether and how the number of students in each type of timing structure changes in three different reports. A similar trend with the teacher survey was found in the changes of the number of students along three occasions. As shown in Figure 4.2, the trajectory of the number of students in the first type of timing structure (“At or near the beginning of the first semester”) decreases from the actual timing structure report to the first report of ideal timing structures and to the second report of ideal timing structures. On the other hand, the number of students in both the delayed types of timing structures increases from the actual timing structure report to the second report of ideal timing structures, although the increase is only mild for the option to delay until near or after the end of the first semester.

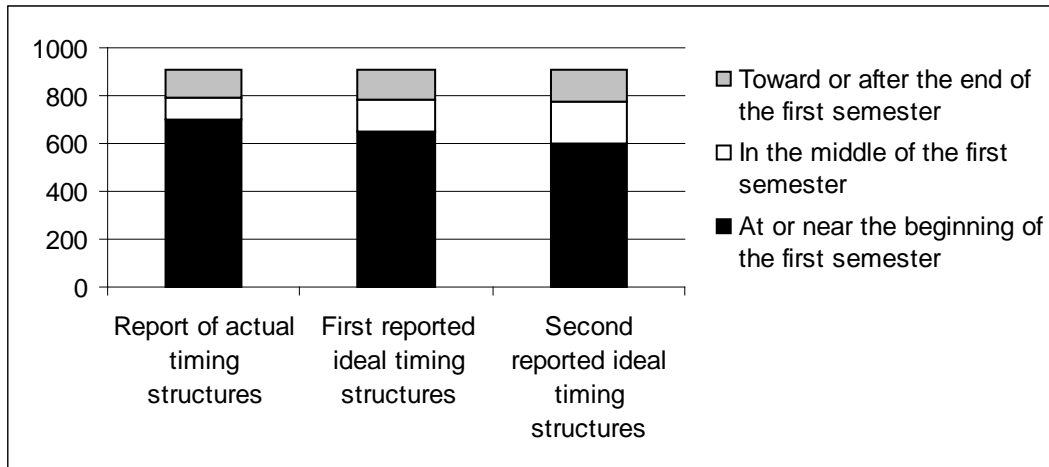


Figure 4.2 Changes in Distribution of Students in Each Timing Structure by Occasion

A two-way group-independence chi-square was performed to assess the relationship between the type of timing structures and the occasion of report. A contingency table for these data is shown below:

Table 4.5 Distribution of Students by Occasion by Type of Timing Structure

Occasion	Types of Timing Structures			Total
	At or near the beginning of the first semester	In the middle of the first semester	Toward or after the end of the first semester	
Report of Actual Timing Structure	701	90	116	907
First Reported Ideal Timing Structure	650	134	124	908
Second Reported Ideal Timing Structure	603	170	133	906
Total	1954	394	373	2721

The results were statistically significant (likelihood ratio $\chi^2 = 33.00$, $df = 4$, $p = .000$), with an effect size of Cramer's $V = .08$, which is a small size effect. Therefore, it only shows a mild relationship between the type of timing structure and the occasion. That is, students who were given an opportunity to read both the DCI and ICI options were somewhat more likely to

prefer to delay teaching characters, even though the majority of students preferred to learn characters from the beginning.

Teachers' and Students' Rationales

In addition to teachers' and students' ideal timing structures, both surveys asked about teachers' and students' rationales concerning their beliefs in three ways (see Section Four of Appendix A for teachers and Section Three of Appendix B for students). First, the surveys used an open-ended question to ask participants to explain their first reported ideal timing structure. Second, the surveys listed six common reasons for DCI and six common reasons for ICI. Participants were invited to rate these reasons based on a five-point Likert Scale of how convincing they considered each reason to be. Third, the surveys asked participants to select up to three most important reasons for their second-reported ideal timing structures.

Since the first report of teachers' and students' rationales was collected from an open-ended question, the data were analyzed following the qualitative analysis method as explained in Chapter Three (methodology). I first read all teachers' and students' comments repeatedly, then assigned related codes to comments, and finally categorized codes into different themes. Most of the participants gave reasons for their ideal timing structures. One comment could be assigned one or more codes, depending on how much information a comment revealed. In addition, codes of ten percent of teachers' and students' comments (19 teacher comments and 91 student comments) were checked by a second reviewer. The reviewer was an experienced CFL teacher and researcher. The inter-rater reliability was 92.31% for teacher comments and 93.02% for student comments. Afterwards, the reviewer and I had a discussion about these inter-rater reliabilities. We discussed three important points. First, he considered both inter-rated reliabilities to be fairly high. Second, he emphasized that the existing codes were sound. Third, we both

agreed that the source of most of the disagreements was the coding of comments which I categorized in the “other” group. While I thought that comments in this group either did not reveal a clear rationale or were hard to categorize, he commented that some could be interpreted using the existing codes (e.g., a typical teacher comment such as: “Students need exposure to the Chinese characters from the very beginning” [Teacher ID: 1018]). The second reviewer made a note that he believed this comment implied one of the existing codes (i.e., characters are important). However, my focus tended to be to pay close attention to what comments directly meant and I tended to avoid interpreting a deeper implication possibly revealed through comments. After I explained this thinking process, the second reviewer agreed that he had tried to interpret deep inference from such comments. Thus, he further commented that it was also advisable to interpret comments based on surface meaning only.

First Report of Teachers’ and Students’ Rationales

Since the majority of teachers selected the ICI timing structure; most of the comments were about not delaying teaching characters. Specifically, there were four main reasons, listed below, along with the number of responses. Specific examples for each reason are illustrated in Table H.1 (See Appendix H).

- 1) Learning characters from the beginning makes it less difficult in the long run. (31)
- 2) Characters are an essential aspect of the Chinese language. (27)
- 3) Students are interested in learning characters. (14)
- 4) If characters are delayed, students are likely to rely on Pinyin. (8)

Interestingly, a total of 44 teachers who chose the ICI timing structure did not give a specific reason. Rather, they seemed to claim that the necessity for the ICI was self-evident. For example, some participants simply put responses like “Why wait?” “The sooner the better,” or “I think

writing, reading, and listening should be taught together from the beginning.”

For teachers who preferred to delay teaching characters, their responses were categorized into three major reasons, listed below. Examples for each reason are illustrated in Table H.2 (See Appendix H).

1) Speaking and listening are more important than reading and writing. (12)

2) To teach all aspects of speaking, listening, reading, and writing constitutes a heavy cognitive load for students and makes it hard to keep students’ interest in learning Chinese. (9)

3) It is easier for students to learn reading and writing after they lay a solid background in speaking and listening. (8)

In addition to the above clear-cut categories for either DCI or ICI, two other themes were mentioned by a few teachers. First, they argued that the primary issue is not about the timing of when to introduce characters; rather, how (i.e., the manner in which) teachers teach characters plays an important role in students’ learning of characters. For instance, one teacher stated that “What matters most IS HOW to present/teach characters in a meaningful/interesting way, NOT WHEN to teach them” (Teacher ID: 1008). Other similar explanations are as follows:

BTW, the bad pedagogy of characters (such as stroke-based methods and heavy relying on etymology analysis etc) utilized by many teachers, not just the complexity of characters, shall be partially responsible for the students' learning difficulty and frustration. (Teacher ID: 1123).

A good teacher will aim to make acquisition of reading and writing skills an enjoyable and entertaining experience rather than just a burden. (Teacher ID: 1133)

Most of the teachers who commented on the importance of how characters are taught selected to

teach characters at or near the beginning of the first semester. This result indicates that these teachers believe that even if characters are taught from the beginning, students will have limited learning difficulty as long as teachers utilize effective methods for teaching characters.

Second, some teachers suggested that there is no need for students to handwrite characters; rather, it is enough to type characters through the support of a computer keyboard. Some of them also added that it might be beneficial to practice writing some characters by hand, but since people do most of their writing with computers nowadays, students should learn how to type characters on a computer keyboard. For example, a teacher (ID: 1034) who preferred to teach characters from the beginning stated as follows.

At the beginning of the first semester, students have to learn to write characters so that they will understand the Chinese character system. Right after they have learned the basic concepts, such as stroke orders, radicals, etc., students need to learn how to type characters with computer.

Similarly, most students' comments supported ICI, since most students prefer it. There were seven main reasons for this position. The frequency count and examples for each reason are illustrated in Table H.3 (See Appendix H). Below is a list of seven main reasons, grouped in a descending order, based on a frequency count:

- 1) It is important to get students used to characters as early as possible. (150)
- 2) Characters are an essential aspect of the Chinese language. (145)
- 3) Learning characters from the beginning makes it less difficult in the long-run. (86)
- 4) It is important to connect characters with sound and meaning early. (76)
- 5) Learning characters helps learn other skills. (43)
- 6) If characters are delayed, students are likely to rely on Pinyin. (26)

7) Chinese characters convey culture. (7)

Similar to teachers, a large number of students (134) chose to prefer the ICI timing structure but were not able to elaborate a sufficient rationale. Most of them said it was earlier the better, while some of them asked why characters should be delayed. For example, a student said, “I think Chinese study should begin with writing characters”

Student comments that supported the delay timing structure were grouped into the same three reasons as the teachers’ but in a different order. More examples for each reason are illustrated in Table H.4 (See Appendix H). In Table H.4, they are presented according to a descending order of frequency count:

1) It is easier for students to learn reading and writing after a solid background for speaking and listening have been established. (137)

2) To teach all aspects of speaking, listening, reading, and writing constitutes a heavy cognitive load for students and makes it difficult to maintain students’ interest in learning Chinese. (42)

3) Speaking and listening are more important than reading and writing. (23)

As did the teachers, about four students pointed out the importance of typing characters in a computer. Below are two typical comments:

I think writing the Chinese characters are extremely difficult and mostly unnecessary. The way to type Chinese (at least for someone with no Chinese background) is by typing the Pinyin on the computer. As someone who went to China, practically speaking, you really only need to be able to recognize Chinese characters. Learning the strokes and all the unnecessary characters is EXTREMELY time consuming, difficult, and mostly useless. (Student ID: 2075).

Handwriting characters is not very important today, even for Chinese. Most Chinese write by computer and/or look up characters on their cell phones. (Student ID: 2581)

Finally, a number of students commented that character recognition is more important than character writing. They were recommending that writing should be taught at a slower pace or even in a separate class. Some of these students preferred to start learning characters at the beginning while some of them preferred a delay in learning characters. Students who still wanted to start learning characters from the beginning suggested ways to ease their learning difficulties, that is, reading rather than writing characters at the beginning.

I think that the characters are daunting to write initially. Students would benefit from learning to recognize and read characters before they attempted the total memorization writing characters demands. (Student ID: 2706)

The above results indicate that teachers and students overall were in agreement about why they would prefer the DCI or the ICI. In arguing for the DCI, both teachers and students pointed out the importance of learning characters. The teachers observed that students are interested in learning characters and the students confirmed that they considered that characters conveyed Chinese culture. Both of the two groups also considered that it would be less difficult in the long run if characters are taught from beginning. In addition, both teachers and students who supported ICI expressed their concern that if characters are delayed, students might rely on Pinyin, which might result in an association problem at a later stage. More importantly, a large number of teachers and students chose ICI without a sufficient reason, indicating that it is self-evident that characters should be taught from beginning. On the other hand, teachers and students who argued for DCI emphasized the importance of speaking and listening skills. To delay learning characters enables students to focus on speaking and listening. Moreover, both teachers

and students claim that it is easier for students to learn reading and writing after they have a solid background in speaking and listening.

Second Report of Teachers' and Students' Rationales

In the next section of the survey, teachers and students were presented with six reasons for DCI and six reasons for ICI. They were then asked to indicate how convincing they considered each reason to be based on a five-point Likert scale, with a 1 indicating that the reason was 'not good at all', a 3 indicating that teachers were 'not sure or neutral', and a 5 indicating that the reason was 'excellent.'

Responses to these items from teachers are summarized in Table 4.6. The table indicates that all mean scores for the six reasons for DCI are below 3, indicating that teachers generally did not consider these reasons to be all that convincing. Among all six DCI reasons, the three reasons that received highest scores are DCIR5, DCIR3, and DCIR6, all of which seem to suggest benefits of establishing a solid foundation in speaking and listening with the DCI timing structure. In contrast, all means for the six reasons for ICI are above 3 except #4: "Children in China learn characters from the first grade" ($M = 2.71$). Moreover, four of the ICI reasons received a mean of higher than 3.50, indicating teachers agreed that these three reasons were somewhat convincing. The four reasons are: *Characters are an important part of Chinese language* ($M = 4.02$); *Everything in China is written in characters* ($M = 3.90$); *Learning characters right away makes it less difficult to learn Chinese in the long run* ($M = 3.62$); and *There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings)* ($M = 3.59$).

Table 4.6 Ratings of DCI and ICI Reasons by All Teacher Survey Participants

Reason ^a	M	SD
DCI Reasons		
DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing.	2.81	1.39
DCIR3: When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.	2.75	1.38
DCIR6: It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.	2.56	1.33
DCIR4: Some students may not need to learn how to read and write in Chinese.	2.55	1.29
DCIR1: It is too much for students to learn all four skills (speaking, listening, reading and writing) from the very beginning.	2.45	1.33
DCIR2: Characters are too difficult for native English speakers to learn from the beginning of instruction.	2.19	1.13
ICI Reasons		
ICIR1: Characters are an important part of the Chinese language	4.02	1.02
ICIR2: Everything in China is written in characters.	3.90	1.10
ICIR3: Learning characters right away makes it less difficult to learn Chinese in the long run.	3.62	1.22
ICIR6: There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).	3.59	1.30
ICIR5: Students eventually have to learn characters anyway.	3.28	1.26
ICIR4: Children in China learn characters from the first grade.	2.71	1.27

Note. N = 192. Mean values are ranked in a descending order.

^a 1=Not a good reason at all, 2=Not a very good reason, 3=Neutral/Not sure, 4=Good reason, and 5=Excellent reason.

The next sub-question to be asked was whether there was a difference between mean values of different reasons by teachers of different types of timing structures. Since teachers were asked to rank different reasons after their first report of ideal timing structures, I used the variable of the first reported ideal timing structure as the grouping variable.

Table 4.7 presents results of ratings of the DCI and ICI reasons by teachers of three different timing structure groups. The means that are 3.50 or higher were bolded so that it is easy for readers to interpret the data. It demonstrates teachers who preferred DCI found the DCI reasons more convincing overall and those who preferred ICI found the ICI reasons more convincing. That is, mean values for all of the DCI reasons in the third timing structure group of

Toward the end or after the first semester are the highest and those in the first group of *At or near the beginning of the first semester* are the lowest. On the opposite, means for the degree of convincing of the six ICI reasons decreases from the first group to the third group. That is to say, means are the highest in the first group, medium in the second group, and lowest in the third group. Teachers in Group 3 gave a higher score for each of the four reasons: DCIR1, DCIR3, DCIR5, and DCIR6. It means that teachers in Group 3 considered these four reasons to be more convincing than teachers in the other two groups did. However, the table shows that teachers in Groups 1 and 2 rated the two ICI reasons, ICIR1 and ICIR2, higher than teachers in Group 3, indicating that teachers in the first two groups considered Chinese characters to be more important than the other teachers did.

Table 4.7 Ratings of DCI and ICI Reasons by Teachers in Different Groups

	Group 1: At or near the beginning of the first semester (n = 139)		Group 2: In the middle of the first semester (n = 27)		Group 3: Toward or after the end of the first semester (n = 19)	
DCI Reasons	M	SD	M	SD	M	SD
DCIR1: It is too much for students to learn all four skills (speaking, listening, reading and writing) from the very beginning.	2.13	1.18	2.85	1.23	4.00	1.29
DCIR2: Characters are too difficult for native English speakers to learn from the beginning of instruction.	1.85	.92	3.22	1.01	3.05	1.39
DCIR3: When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.	2.40	1.24	3.30	1.35	4.42	.61
DCIR4: Some students may not need to learn how to read and write in Chinese.	2.41	1.24	2.74	1.29	3.26	1.45
DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing.	2.38	1.26	3.59	.97	4.21	1.03
DCIR6: It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.	2.13	1.09	3.41	.97	4.11	1.41
ICI Reasons						
ICIR1: Characters are an important part of the Chinese language.	4.24	.77	3.89	1.01	2.89	1.33
ICIR2: Everything in China is written in characters.	4.10	.90	3.63	1.08	3.16	1.61
ICIR3: Learning characters right away makes it less difficult to learn Chinese in the long run.	3.96	1.04	3.22	.97	2.00	1.20
ICIR4: Children in China learn characters from the first grade.	2.94	1.20	2.48	1.22	1.74	1.10
ICIR5: Students eventually have to learn characters anyway.	3.58	1.12	3.00	1.14	2.05	1.13
ICIR6: There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).	3.82	1.16	3.48	1.31	2.47	1.47

Note. Means that are higher than 3.50 are bolded. There are significant mean differences among two of the three groups in all reasons.

Table 4.8 Mean Differences of All Reasons Among Three Teacher Groups

Reason	Two Groups	Mean Difference	95% CI		p value
			<i>LL</i>	<i>UL</i>	
DCIR1	Group 1 - Group 2	-.72*	-1.32	-.13	.013
	Group 1 - Group 3	-1.87*	-2.56	-1.18	.000
	Group 2 - Group 3	-1.15*	-2.00	-.30	.005
DCIR2	Group 1 - Group 2	-1.37*	-1.86	-.88	.000
	Group 1 - Group 3	-1.20*	-1.77	-.63	.000
	Group 2 - Group 3	.17	-.53	.87	.834
DCIR3	Group 1 - Group 2	-.90*	-1.50	-.30	.001
	Group 1 - Group 3	-2.03*	-2.72	-1.33	.000
	Group 2 - Group 3	-1.12*	-1.98	-.27	.006
DCIR4	Group 1 - Group 2	-.33	-.96	.30	.434
	Group 1 - Group 3	-.85*	-1.59	-.12	.018
	Group 2 - Group 3	-.52	-1.42	.38	.358
DCIR5	Group 1 - Group 2	-1.21*	-1.81	-.61	.000
	Group 1 - Group 3	-1.83*	-2.52	-1.14	.000
	Group 2 - Group 3	-.62	-1.47	.23	.201
DCIR6	Group 1 - Group 2	-1.28*	-1.83	-.73	.000
	Group 1 - Group 3	-1.98*	-2.62	-1.33	.000
	Group 2 - Group 3	-.70	-1.48	.09	.092
ICI1	Group 1 - Group 2	.36	-.08	.79	.134
	Group 1 - Group 3	1.35*	.84	1.86	.000
	Group 2 - Group 3	.99*	.37	1.62	.001
ICI2	Group 1 - Group 2	.47	-.04	.98	.075
	Group 1 - Group 3	.94*	.35	1.53	.001
	Group 2 - Group 3	.47	-.25	1.19	.273
ICI3	Group 1 - Group 2	.74*	.22	1.26	.003
	Group 1 - Group 3	1.96*	1.36	2.57	.000
	Group 2 - Group 3	1.22*	.48	1.96	.000
ICI4	Group 1 - Group 2	.46	-.13	1.05	.161
	Group 1 - Group 3	1.21*	.51	1.90	.000
	Group 2 - Group 3	.74	-.10	1.59	.097
ICI5	Group 1 - Group 2	.58*	.02	1.14	.042
	Group 1 - Group 3	1.52*	.87	2.17	.000
	Group 2 - Group 3	.95*	.15	1.74	.015
ICI6	Group 1 - Group 2	.34	-.27	.95	.387
	Group 1 - Group 3	1.35*	.64	2.05	.000
	Group 2 - Group 3	1.01*	.14	1.87	.018

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

To test whether there were differences in mean scores among the groups, a MANOVA was conducted. Significance differences were found on all reasons and further comparisons

using Tukey's contrasts among three groups are displayed in Table 4.8. Most of the mean differences were significant, indicating that teachers who wanted to delay teaching characters give significantly higher scores for the DCI reasons and significantly lower scores for the ICI reasons than teachers who did not want to delay teaching characters.

Table 4.9 Ratings of Delay and Non-delay Reasons by All Student Survey Participants

Reason ^a	M	SD
DCI Reasons		
DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing.	3.19	1.29
DCIR6: It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.	2.79	1.30
DCIR3: When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.	2.77	1.28
DCIR1: It is too much for students to learn all four skills (speaking, listening, reading and writing) from the very beginning.	2.58	1.32
DCIR2: Characters are too difficult for native English speakers to learn from the beginning of instruction.	2.30	1.25
DCIR4: Some students may not need to learn how to read and write in Chinese.	2.07	1.18
ICI Reasons		
ICIR1: Characters are an important part of the Chinese language	4.25	.86
ICIR2: Everything in China is written in characters.	4.20	.94
ICIR6: There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).	4.05	1.05
ICIR3: Learning characters right away makes it less difficult to learn Chinese in the long run.	3.94	1.06
ICIR5: Students eventually have to learn characters anyway.	3.69	1.17
ICIR4: Children in China learn characters from the first grade.	3.19	1.22

Note. n = 914. Mean values are ranked in descending order.

^a 1=Not a good reason at all, 2=Not a very good reason, 3=Neutral/Not sure, 4=Good reason, and 5=Excellent reason.

The mean and standard deviation of students' ratings of the delay and non-delay reasons are presented in Table 4.9. For the delay reasons, all reasons received a mean that is lower than 3, except #5: *A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing* (M = 3.19). Because the mean score is only slightly higher than 3, it indicates that students considered the reason to be barely convincing. On the other hand, all means for the non-delay reasons are higher than 3 and five of them are even higher than 3.50.

The lowest mean score is 3.19 for the non-delay reason #4: *Children in China learn characters from the first grade.*

The next question is whether there is a difference in the mean values among students grouped in different types of ideal timing structures. The mean and standard deviation for each reason and each ideal timing structure group are shown in Table 4.10. As expected, the means of the delay reasons increase from the first group of timing structure to the third group of timing structure. In contrast, the means of the non-delay reasons decrease from the first group to the third group. What it tells us is that students who wanted to delay the teaching of characters tended to consider the delay reasons to be more convincing and the non-delay reasons to be less convincing than students who did not want to delay teaching characters. Like teachers, students also emphasized the importance to lay a solid foundation in speaking and listening among DCI reasons. Meanwhile, they also gave higher ratings to the ICI reasons which highlighted the importance of Chinese characters.

Table 4.10 Ratings of DCI and ICI Reasons by Students in Different Groups

	Group 1: At or near the beginning of the first semester (n = 650)		Group 2: In the middle of the first semester (n = 134)		Group 3: Toward or after the end of the first semester (n = 124)	
DCI Reasons	M	SD	M	SD	M	SD
DCIR1: It is too much for students to learn all four skills (speaking, listening, reading and writing) from the very beginning.	2.20	1.17	3.28	1.14	3.86	1.12
DCIR2: Characters are too difficult for native English speakers to learn from the beginning of instruction.	1.96	1.07	3.03	1.18	3.32	1.29
DCIR3: When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.	2.53	1.25	3.21	1.15	3.60	1.08
DCIR4: Some students may not need to learn how to read and write in Chinese.	1.94	1.14	2.10	1.10	2.65	1.25
DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing.	2.88	1.25	3.70	1.00	4.28	.94
DCIR6: It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.	2.42	1.20	3.37	.98	4.14	.89
ICI Reasons						
ICIR1: Characters are an important part of the Chinese language.	4.44	.72	4.00	.81	3.55	1.09
ICIR2: Everything in China is written in characters.	4.36	.84	3.95	.95	3.63	1.10
ICIR3: Learning characters right away makes it less difficult to learn Chinese in the long run.	4.29	.83	3.35	.98	2.81	1.06
ICIR4: Children in China learn characters from the first grade.	3.37	1.20	2.95	1.12	2.49	1.14
ICIR5: Students eventually have to learn characters anyway.	3.94	1.05	3.34	1.12	2.79	1.23
ICIR6: There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).	4.27	.91	3.68	1.08	3.33	1.22

Note. Means that are higher than 3.50 are bolded. There are significant mean differences among two of the three groups in all reasons.

Table 4.11 Mean Differences of DCI and ICI Reasons Among Three Student Groups

Reason	Two Groups	Mean Difference	95% CI		<i>p</i>
			<i>LL</i>	<i>UL</i>	
DCIR1	Group 1 - Group 2	-1.08*	-1.34	-.82	.000
	Group 1 - Group 3	-1.67*	-1.93	-1.40	.000
	Group 2 - Group 3	-.59*	-.93	-.25	.000
DCIR2	Group 1 - Group 2	-1.07*	-1.32	-.83	.000
	Group 1 - Group 3	-.1.37*	-1.62	-1.11	.000
	Group 2 - Group 3	-.29	-.62	.03	.089
DCIR3	Group 1 - Group 2	-.68*	-.95	-.41	.000
	Group 1 - Group 3	-1.08*	-1.36	-.80	.000
	Group 2 - Group 3	-.40*	-.75	-.04	.025
DCIR4	Group 1 - Group 2	-.16	-.41	.10	.326
	Group 1 - Group 3	-.70*	-.97	-.44	.000
	Group 2 - Group 3	-.55*	-.88	-.21	.000
DCIR5	Group 1 - Group 2	-.82*	-1.08	-.55	.000
	Group 1 - Group 3	-1.40*	-1.67	-1.13	.000
	Group 2 - Group 3	-.58*	-.93	-.24	.000
DCIR6	Group 1 - Group 2	-.95*	-1.21	-.70	.000
	Group 1 - Group 3	-1.72*	-1.98	-1.46	.000
	Group 2 - Group 3	-.76*	-1.10	-.43	.000
ICI1	Group 1 - Group 3	.44*	.26	.61	.000
	Group 1 - Group 3	.89*	.71	1.07	.000
	Group 2 - Group 3	.45*	.22	.68	.000
ICI2	Group 1 - Group 3	.42*	.22	.62	.000
	Group 1 - Group 3	.74*	.53	.94	.000
	Group 2 - Group 3	.32*	.06	.58	.012
ICI3	Group 1 - Group 2	.94*	.74	1.14	.000
	Group 1 - Group 3	1.47*	1.27	1.68	.000
	Group 2 - Group 3	.54*	.28	.80	.000
ICI4	Group 1 - Group 3	.42*	.16	.69	.000
	Group 1 - Group 3	.88*	.61	1.15	.000
	Group 2 - Group 3	.46*	.11	.80	.006
ICI5	Group 1 - Group 2	.60*	.36	.84	.000
	Group 1 - Group 3	1.15*	.90	1.40	.000
	Group 2 - Group 3	.55*	.23	.86	.000
ICI6	Group 1 - Group 2	.59*	.38	.81	.000
	Group 1 - Group 3	.94*	.72	1.17	.000
	Group 2 - Group 3	.35*	.06	.63	.012

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

To test whether there were differences in mean scores among the groups, a MANOVA was conducted. Significant mean differences were found for all reasons. Further comparisons

using Tukey's contrasts found statistical differences between most of the pairs of groups as displayed in Table 4.11. These results indicate that students who wanted to delay teaching characters give significantly higher scores to the DCI reasons and significantly lower scores to the ICI reasons when compared with students who did not want to delay teaching characters.

Comparisons of the teachers' and students' rationales indicate that both teachers and students considered the delay reasons to be less convincing and the non-delay reasons to be more convincing. They also agreed that the most convincing non-delay reason was item #1:

Characters are an important part of Chinese language and the least convincing non-delay reason to be item #4: *Children in China learn characters from the first grade.*

An independent t-test was conducted to examine mean differences between teachers and students. Table 4.12 shows that mean differences are significant on three delay reasons and all six non-delay reasons. For reasons to delay characters instruction, teachers signaled significant agreement with item #4: *Some students may not need to learn how to read and write in Chinese*, but less agreement with item #5 *A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing* and item #6 *It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing*. The significant difference on item #4 is especially interesting because it indicates that teachers were more likely to believe that students might not need writing than students did. For reasons to not delay teaching characters, students rated all ICI reasons to be significantly more convincing than teachers did.

Table 4.12 Ratings of DCI and ICI Reasons by All Teacher Survey Participants

Reason ^a	Teacher		Student		<i>t</i>	<i>p</i>	Cohen's <i>d</i>
	M	SD	M	SD			
DCI Reasons							
DCIR1: It is too much for students to learn all four skills (speaking, listening, reading and writing) from the very beginning.	2.45	1.33	2.58	1.32	-1.25	.212	.10
DCIR2: Characters are too difficult for native English speakers to learn from the beginning of instruction.	2.19	1.13	2.30	1.25	-1.21	.228	.09
DCIR3: When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.	2.75	1.38	2.77	1.28	-.22	.828	.02
DCIR4: Some students may not need to learn how to read and write in Chinese.	2.55	1.29	2.07	1.18	4.77*	.000	.39
DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing.	2.81	1.39	3.19	1.29	-3.51*	.001	.28
DCIR6: It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing	2.56	1.33	2.79	1.30	-2.21*	.027	.17
ICI Reasons							
ICIR1: Characters are an important part of the Chinese language	4.02	1.02	4.25	.86	-3.26*	.001	.24
ICIR2: Everything in China is written in characters.	3.90	1.10	4.20	.94	-3.90*	.000	.29
ICIR3: Learning characters right away makes it less difficult to learn Chinese in the long run.	3.62	1.22	3.94	1.06	-3.40*	.001	.28
ICIR4: Children in China learn characters from the first grade.	2.71	1.27	3.19	1.22	-4.84*	.000	.39
ICIR5: Students eventually have to learn characters anyway.	3.28	1.26	3.69	1.16	-4.34*	.000	.34
ICIR6: There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).	3.59	1.30	4.05	1.05	-4.57*	.000	.39

Note. N = 192. Mean values are ranked in a descending order.

^a 1=Not a good reason at all, 2=Not a very good reason, 3=Neutral/Not sure, 4=Good reason, and 5=Excellent reason.

Third Report of Teachers' and Students' Rationales

After rating the reasons for delaying and not delaying character instructions, teachers and students were again asked to choose their ideal timing structure, and were asked to choose up to three reasons that best matched their choices.

Table 4.13 presents the number of teachers by each specific reason according to each timing structure group. The top three reasons in each group were bolded for reviewing convenience. Table 4.13 indicates that most of the teachers in the first group selected the ICI reasons. The most frequently identified reason is *ICIR1: Characters are an important part of the Chinese language*. The second group of teachers favored both DCI and ICI reasons. The most frequently selected reasons are *ICIR1: Characters are an important part of Chinese language* and *DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing*. The fact that this group of teachers selected both DCI and ICI reasons signals some uncertainty when asked to select between the DCI and ICI pedagogical structures. On the one hand, they agreed that to lay a solid background in speaking and listening would help students learn reading and writing better; on the other hand, they also agreed that characters are an important part of Chinese language. This result is consistent with the mean values of the second report. For the last group of teachers who preferred to start teaching characters toward or after the end of the first semester, the most frequently selected reason item is the one labeled *DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing*.

Table 4.13 Frequency Count of the Important Reasons by Teachers in Different Timing Structure Groups

	Group 1: At or near the beginning of the first semester (n = 130)	Group 2: In the middle of the first semester (n = 31)	Group 3: Toward or after the end of the first semester (n = 19)
DCI Reasons			
DCIR1: It is too much for students to learn all four skills (speaking, listening, reading and writing) from the very beginning.	4 (3.1)	9 (29.0)	10 (52.6)
DCIR2: Characters are too difficult for native English speakers to learn from the beginning of instruction.	1 (.8)	9 (29.0)	4 (21.1)
DCIR3: When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.	0	2 (6.5)	4 (21.1)
DCIR4: Some students may not need to learn how to read and write in Chinese.	2 (1.5)	2 (6.5)	5 (26.3)
DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing.	21 (16.2)	13 (41.9)	15 (78.9)
DelayR6: It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.	2 (1.5)	10 (32.3)	13 (68.4)
ICI Reasons			
ICIR1: Characters are an important part of the Chinese language.	91 (70.0)	13 (41.9)	8 (42.1)
ICIR2: Everything in China is written in characters.	51 (39.2)	11 (35.5)	1 (5.3)
ICIR3: Learning characters right away makes it less difficult to learn Chinese in the long run.	78 (60.0)	5 (16.1)	3 (15.8)
ICIR4: Children in China learn characters from the first grade.	7 (5.4)	2 (6.5)	0
ICIR5: Students eventually have to learn characters anyway.	24 (18.5)	2 (6.5)	1 (5.3)
ICIR6: There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).	46 (35.4)	5 (16.1)	2 (10.5)

Table 4.14 presents the three most important reasons by students. It shows that students in the first group predominantly selected the ICI reasons. Among them, the two most frequently selected ICI reasons are factual ones. They are *ICIR1: Characters are an important part of Chinese language* and *ICIR2: Everything in China is written in characters*. At the same time, students also favored the pedagogical non-delay reason *ICIR3: Learning characters right away makes it less difficult to learn Chinese in the long run*. In comparison, students in the second group favored both DCI reasons and ICI reasons. In contrast, students agreed with *DCIR5* that *A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing*. On the other hand, they also found the factual ICI reasons of *ICIR1* (*Characters are an important part of Chinese language*) and *ICIR2* (*Everything in China is written in characters*) to be convincing. The fact that students in the second group (the DCI group) acknowledged that two of the ICI reasons were convincing seems to indicate that even though students are aware that characters are important, they still prefer to delay learning them. Lastly, students in the third group predominantly chose the ICI reasons. The two most frequently selected reasons are *DCIR5* (*A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing*) and *DCIR6* (*It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing*). Both reasons are pedagogical and emphasized the effectiveness of delaying learning characters.

Table 4.14 Frequency Count of the Important Reasons by Students in Different Timing Structure Groups

	Group 1: At or near the beginning of the first semester (n = 603)	Group 2: In the middle of the first semester (n = 170)	Group 3: Toward or after the end of the first semester (n = 133)
DCI Reasons			
DCIR1: It is too much for students to learn all four skills (speaking, listening, reading and writing) from the very beginning.	10 (1.7)	40 (23.5)	63 (47.4)
DCIR2: Characters are too difficult for native English speakers to learn from the beginning of instruction.	5 (.8)	31 (18.2)	33 (24.8)
DCIR3: When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.	9 (1.5)	23 (13.5)	30 (22.6)
DCIR4: Some students may not need to learn how to read and write in Chinese.	4 (.7)	8 (4.7)	8 (6.0)
DCIR5: A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing.	105 (17.4)	84 (49.4)	103 (77.4)
DCIR6: It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.	9 (1.5)	52 (30.6)	68 (51.1)
ICI Reasons			
ICIR1: Characters are an important part of the Chinese language.	423 (70.1)	81 (47.6)	18 (13.5)
ICIR2: Everything in China is written in characters.	310 (51.4)	53 (31.2)	18 (13.5)
ICIR3: Learning characters right away makes it less difficult to learn Chinese in the long run.	382 (63.3)	43 (25.3)	12 (9.0)
ICIR4: Children in China learn characters from the first grade.	46 (7.6)	9 (5.3)	3 (2.3)
ICIR5: Students eventually have to learn characters anyway.	169 (28.0)	31 (18.2)	9 (6.8)
ICIR6: There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).	263 (43.6)	44 (25.9)	15 (11.3)

Overall, teachers and students expressed similar rationales for their ideal timing structures reported under the third condition. Both teachers and students in who preferred ICI emphasized the fact that characters are important and everything is written in characters in China. They also agreed that learning characters from the beginning is pedagogically beneficial because it can ease their overall learning difficulties. Teachers and students in the second group revealed mixed feelings because they selected both DCI and ICI rationales. Finally, teachers and students in the third group were determined about their position because they overwhelmingly selected the fifth DCI reason that *A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing.*

To summarize, reports of teachers' and students' rationales under three conditions reveal four important results. First, teachers and students who preferred not to delay character instruction not only pointed out the fact that characters are important because characters are an essential dimension of the Chinese language or because characters reflected the primary orthographic form in China, but also emphasized the pedagogical reason that getting students used to writing characters early on leads to less difficulty in the long run. These rationales for not delaying teaching characters were not only actively expressed by participants in open-ended questions, but more importantly, they were also confirmed through the rationales ratings in Likert-scale items later on. Second, teachers and students who preferred to delay the character instruction were further grouped into two: those who preferred to teach characters in the middle of the first semester and those who preferred to teach characters toward the end of or after the first semester. Those supporting the introduction of characters in the middle of the first semester seemed to be somewhat less decisive since they agreed with reasons for both delaying and not delaying character introduction. On one hand, they emphasized that establishing a solid

background in speaking and listening helps students learn CFL better. On the other hand, they also agreed that characters are important, everything in China is written in characters, and Chinese has many homophones. Comparatively speaking, the group of teachers and students who preferred to introduce characters toward the end of or after the first semester provided more decisive rationales. They indicated that reasons to delay are overwhelmingly more convincing than ICI reasons. One reason they cited in support of DCI is that it is too much to learn all aspects of Chinese from the beginning. Another is the qualitative difference between teaching Chinese to native speakers and non-native speakers since children in China already have a sound foundation in speaking and listening skills before they learn characters. Thus, they argued for a grace period of time to learn speaking and listening before characters are taught. They also agreed that it is more effective to focus on speaking and listening before starting to learn characters. Last but not least, although teachers and students agreed upon most of the reasons, an independent t-test still showed several significant means differences. In particular, students considered all reasons for not delaying teaching characters to be significantly more convincing than teachers did.

Beliefs about the Importance and Difficulty of Different Skills

This section focuses on the third question: teachers' and students' beliefs about the importance and difficulty of different skills in the beginning-level CFL class. These skills are speaking, listening, reading characters, reading Pinyin, writing characters, and writing Pinyin. A five-point scale was used for both importance and difficulty, with a 1 indicating that participants consider a skill to be 'not important at all' or 'not difficult at all' and a 5 indicating that participants consider a skill to be 'extremely important' or 'extremely difficult'. The purpose of this section was to see whether there was any difference in beliefs by teachers and students who

were grouped according to their ideal timing structures. Since it was at the second report that teachers were given some additional time to further consider what might be an ideal timing structure, I used the second reported ideal timing structure as the grouping variable. The following paragraphs first present results from teachers, then illustrate results from students, and finally compare beliefs between teachers and students.

Teachers' Beliefs about the Importance and Difficulty of Different skills

The mean and standard deviations of the ratings of the importance of different skills by teachers in different timing structure groups are presented in Tables 4.15. Across all three groups, the means of speaking and listening skills are higher than the means of the other four skills, indicating that teachers consistently considered speaking and listening skills to be the most important among the six skills. In addition, the comparatively small standard deviations of speaking and listening skills demonstrate that the means of speaking and listening skills are less spread than those of the other four skills. This signals closer agreement among teachers for the importance of speaking and listening skills than for the other four skills.

Table 4.15 Importance of Different Skills by Teachers in Three Ideal Timing Structure Groups

Skill	Group					
	Group 1:		Group 2:		Group 3:	
	At or near the beginning of the first semester (n = 130)		In the middle of the first semester (n = 31)		Toward or after the end of the first semester (n = 19)	
	M	SD	M	SD	M	SD
Speaking	4.53	.63	4.48	.68	4.68	.58
Listening	4.50	.67	4.45	.81	4.68	.58
Reading characters ^a	3.95	.84	3.35	1.17	3.05	1.13
Writing characters ^a	3.52	1.04	2.68	1.19	2.47	1.12
Reading Pinyin	3.34	1.17	3.52	1.18	3.89	1.20
Writing Pinyin	2.96	1.21	3.13	1.31	3.26	1.37

^a This skill has significant mean differences between Groups 1 and 2, Groups 1 and 3.

A MANOVA was used to compare the means of the importance of different skills produced by teachers in differing types of ideal timing structure groups. Among the six skills, significant main effects for groupings were only found on the skill of reading characters, $F(2, 177) = 11.07, p = .000$ and on the skill of writing characters, $F(2, 177) = 13.21, p = .000$. Regarding the skill of reading characters, comparisons using Tukey's contrasts found a statistical difference between Group1 and Group 2 (mean difference = .60, 95% CI = .16, 1.04, $p = .005$) and between Group 1 and Group 3 (mean difference = .90, 95% CI = .36, 1.45, $p = .000$), but not between Group 2 and Group 3 (mean difference = .30, 95% CI = -.34, .95, $p = .512$). Regarding the skill of writing characters, comparisons using Tukey's contrasts found a statistical difference between Group1 and Group 2 (mean difference = .84, 95% CI = .33, 1.35, $p = .000$) and between Group 1 and Group 3 (mean difference = 1.04, 95% CI = .42, 1.67, $p = .000$), but not between Group 2 and Group 3 (mean difference = .20, 95% CI = -.54, .95, $p = .794$).

Table 4.16 presents the mean and standard deviations of the difficulty of the six skills given by teachers in different ideal timing structure groups. The mean of the skill of writing characters is the largest in all three groups, indicating that all teachers considered writing characters to be the most difficult skill of all. A MANOVA was used to compare the means of the difficulty of different skills produced by teachers in differing types of ideal timing structure groups. Among the six skills, significant main effects for groupings were only found on the skill of reading characters, $F(2, 177) = 4.98, p = .008$ and on the skill of writing characters, $F(2, 177) = 6.45, p = .002$. Regarding the skill of reading characters, comparisons using Tukey's contrasts found a statistical difference between Group1 and Group 2 (mean difference = -.44, 95% CI = -.88, .00, $p = .049$) and between Group 1 and Group 3 (mean difference = -.55, 95% CI = -1.09, -.01, $p = .043$), but not between Group 2 and Group 3 (mean difference = -.11, 95% CI = -.75, .53,

$p = .909$). Regarding the skill of writing characters, comparisons using Tukey's contrasts found a statistical difference between Group 1 and Group 2 (mean difference = $-.57$, 95% CI = $-1.01, -.14$, $p = .005$), but not and between Group 1 and Group 3 (mean difference = $-.50$, 95% CI = $-1.03, .04$, $p = .073$) and between Group 2 and Group 3 (mean difference = $.08$, 95% CI = $-.55, .71$, $p = .952$). This result showed that teachers who preferred ICI rated reading and writing characters significantly lower in difficulty than did teachers who preferred DCI.

Table 4.16 Difficulty of Different Skills by Teachers in Three Ideal Timing Structure Groups

	Group 1: At or near the beginning of the first semester (n = 130)		Group 2: In the middle of the first semester (n = 31)		Group 3: Toward or after the end of the first semester (n = 19)	
	M	SD	M	SD	M	SD
Speaking	3.05	.94	3.00	1.07	2.95	.91
Listening	3.22	1.01	3.10	.79	3.16	.69
Reading characters ^a	3.24	.93	3.68	.91	3.79	.92
Writing characters ^b	3.72	.94	4.29	.86	4.21	.79
Reading Pinyin	1.89	.82	2.16	.97	2.37	.83
Writing Pinyin	2.07	.84	2.13	.96	2.21	.86

^a This skill has statistical mean differences between Groups 1 and 2, Groups 1 and 3.

^b This skill has statistical mean differences between Groups 1 and 2.

The above results indicate that it is in the skills of reading and writing characters that teachers of different ideal timing structure groups significantly differed. The importance and difficulty of reading and writing skills are depicted in Figure 4.3. It manifests a clear pattern that teachers who preferred DCI, i.e. Group 2 and Group 3, considered reading and writing characters to be significantly less important and more difficult than teachers who preferred the ICI timing structure (i.e. Group 1). It is also possible to interpret the result the other way around. That is, teachers who thought reading and writing characters were difficult and/or not important would choose to delay teaching them from the beginning if they were given opportunity to do so.

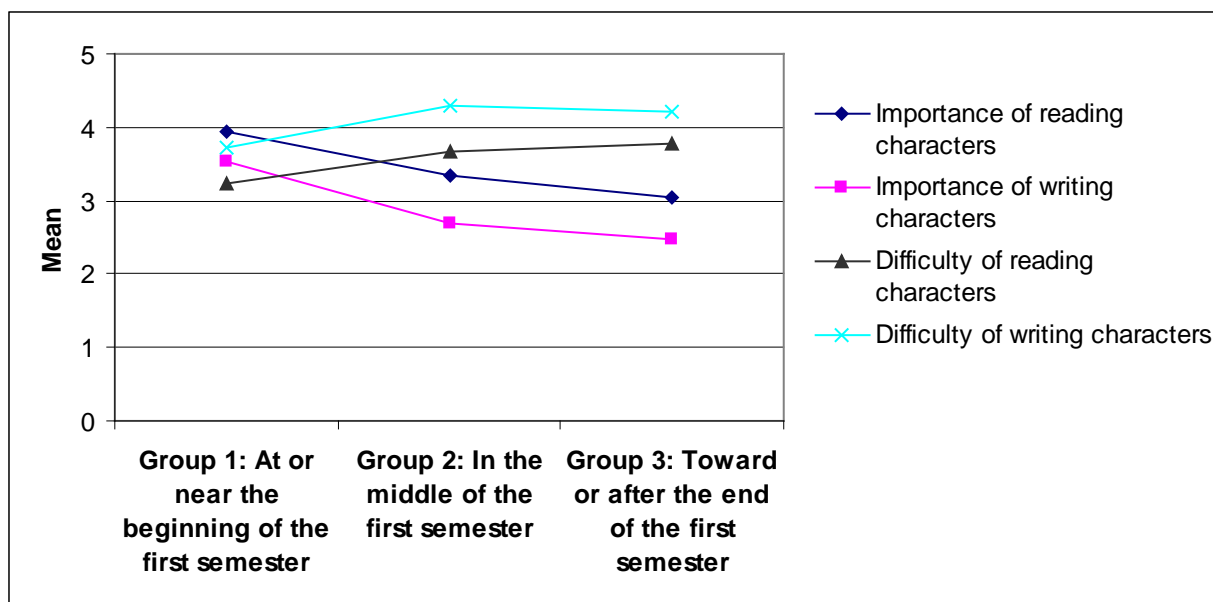


Figure 4.3 Importance and Difficulty of Reading and Writing Characters by Teachers in Three Ideal Timing Structure Groups

Students' Beliefs about the Importance and Difficulty of Different Skills

The mean and standard deviations of the importance and difficulty of different skills given by students of different timing structure groups are presented in Table 4.17. Students in all groups consistently see speaking and listening as the most important skills. A MANOVA was used to compare the means of the importance of different skills produced by students in differing types of ideal timing structure groups. Among the six skills, significant main effects for groupings were found on all skills except the two skills of reading and writing Pinyin. Further comparisons using Tukey's contrasts found statistical differences between most of the pairs of groups as displayed in Table 4.18. It demonstrates that reading and writing characters were more important to the ICI group, as with the teachers. While teachers of different groups did not differ significantly on speaking and listening, these two skills were more important to the DCI group of students than to the ICI group of students.

Table 4.17 Importance of Different Skills by Students in Three Ideal Timing Structure Groups

Skills	Group 1: At or near the beginning of the first semester (n = 603)		Group 2: In the middle of the first semester (n = 170)		Group 3: Toward or after the end of the first semester (n = 133)	
	M	SD	M	SD	M	SD
Speaking ^a	4.41	.83	4.18	.91	4.53	.72
Listening ^b	4.41	.81	4.26	.84	4.57	.67
Reading characters ^c	4.12	.88	3.55	1.02	2.86	1.12
Writing characters ^c	3.95	.99	3.30	1.08	2.45	1.13
Reading Pinyin	3.44	1.16	3.58	1.05	3.66	1.12
Writing Pinyin	3.05	1.25	3.30	1.19	3.32	1.31

^a This skill has statistical mean differences between Groups 1 and 2, Groups 2 and 3.

^b This skill has statistical mean differences between Groups 2 and 3.

^c This skill has statistical mean differences between all three groups.

Table 4.18 Mean Differences of the Importance of Different Skills Among Three Student Groups

Reason	Two Groups	Mean Difference	95% CI		
			<i>LL</i>	<i>UL</i>	<i>p</i>
Speaking	Group 1 - Group 2	-.23*	.07	.40	.003
	Group 1 - Group 3	-.12	-.30	.07	.316
	Group 2 - Group 3	-.35*	-.58	-.12	.001
Listening	Group 1 - Group 2	.15	-.01	-.31	.076
	Group 1 - Group 3	-.16	-.34	.02	.087
	Group 2 - Group 3	-.31*	-.53	-.10	.002
Reading characters	Group 1 - Group 2	.58*	.38	.77	.000
	Group 1 - Group 3	1.27*	1.05	1.48	.000
	Group 2 - Group 3	.69*	.43	.95	.000
Writing characters	Group 1 - Group 2	.65*	-.86	-.44	.326
	Group 1 - Group 3	1.50*	1.27	1.73	.000
	Group 2 - Group 3	.85*	.57	1.13	.000

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Table 4.19 presents means of the difficulty of different skills given by students in different ideal timing structure groups. All students, regardless of groups, considered writing characters to be the most difficult skill. A MANOVA was used to compare the means of the importance of different skills produced by students in differing types of ideal timing structure

groups. Among the six skills, significant main effects for groupings were found on all skills except the two skills of speaking and writing Pinyin. Further comparisons using Tukey's contrasts found statistical differences between most of the pairs of groups as displayed in Table 4.20.

Table 4.19 Difficulty of Different Skills by Students in Three Ideal Timing Structure Groups

	Difficulty					
	Group 1: At or near the beginning of the first semester (n = 603)		Group 2: In the middle of the first semester (n = 170)		Group 3: Toward or after the end of the first semester (n = 133)	
	M	SD	M	SD	M	SD
Speaking	2.89	1.12	2.98	1.20	2.88	1.02
Listening ^a	3.05	1.23	3.01	1.22	3.36	1.14
Reading characters ^b	2.77	1.14	3.11	1.16	3.89	1.08
Writing characters ^b	3.08	1.19	3.44	1.26	4.04	1.12
Reading Pinyin ^c	1.78	.93	1.98	.98	2.17	1.05
Writing Pinyin	2.07	1.06	2.19	1.06	2.27	.96

^a This skill has statistical mean differences between Groups 1 and 3, Groups 2 and 3.

^b This skill has statistical mean differences between all three groups.

^c This skill has statistical mean differences between Groups 1 and 2, Groups 1 and 3.

Table 4.20 Mean Differences of the Difficulty of Different Skills Among Three Student Groups

Reason	Two Groups	Mean Difference	95% CI		
			<i>LL</i>	<i>UL</i>	<i>p</i>
Listening	Group 1 - Group 2	.04	-.20	.29	.909
	Group 1 - Group 3	-.31*	-.58	-.04	.021
	Group 2 - Group 3	-.36*	-.68	-.03	.031
Reading characters	Group 1 - Group 2	-.33*	-.57	-.10	.002
	Group 1 - Group 3	-1.12*	-1.38	-.87	.000
	Group 2 - Group 3	-.79*	-1.10	-.48	.000
Writing characters	Group 1 - Group 2	-.36*	-.61	-.12	.001
	Group 1 - Group 3	-.96*	-1.23	-.69	.000
	Group 2 - Group 3	-.60*	-.92	-.27	.000
Reading Pinyin	Group 1 - Group 2	-.20*	-.40	.00	.044
	Group 1 - Group 3	-.38*	-.60	-.17	.000
	Group 2 - Group 3	.18	-.08	.44	.226

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

The above results indicate that students in Group 3 considered listening to be significantly more difficult than students in the other two groups; students in Group1 rated the skill of reading Pinyin as a significantly less difficult skill than students in the other two groups; and all groups differed significantly from each other on the difficulty of reading and writing skills. The difficulty of reading and writing skills are further depicted in Figure 4.4. It reveals a clear pattern that reading and writing characters were considered the most important but the least difficult by the first group of students. In contrast, students in Group 3 considered reading and writing characters to be the most difficult but the least important. At the same time, the distance between importance and difficulty of reading and writing characters was the smallest in the second group of students when compared with the other two groups of students.

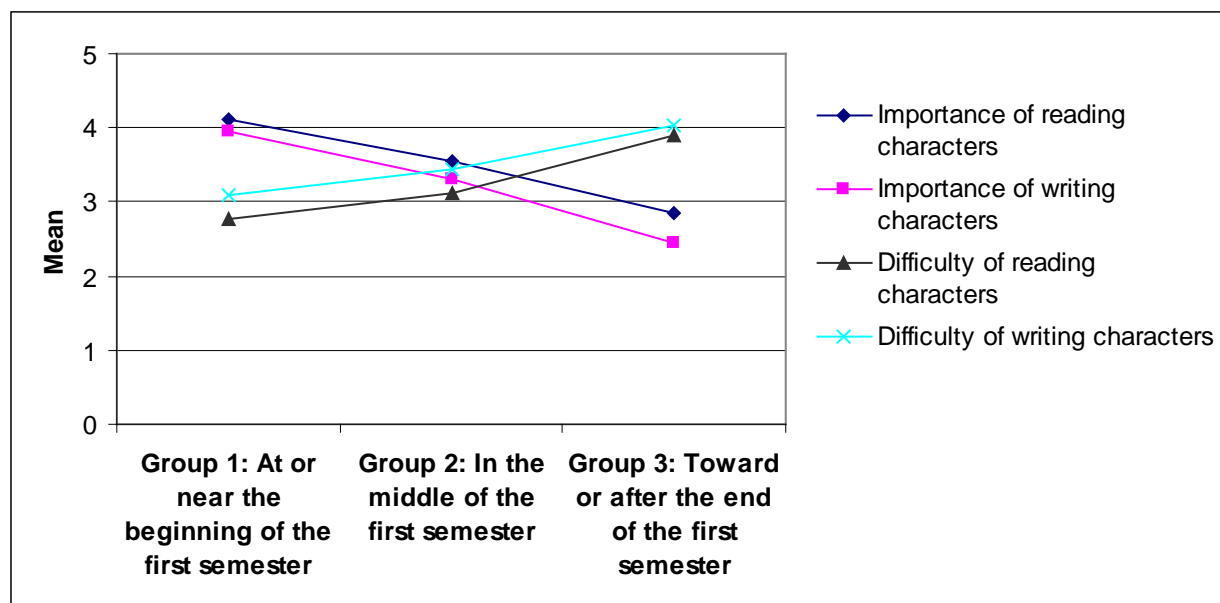


Figure 4.4 Importance and Difficulty of Reading and Writing Characters by Students in Three Ideal Timing Structure Groups

Regarding the difficulty of reading and writing characters, an ANOVA test was conducted to examine the mean difference among students of different course levels. The independent variable of level includes six levels: first semester of first year, second semester of

first year, first semester second year, second semester of second year, third year, and fourth year.

No significance was found in the main effect for students' level on perceived difficulty of reading characters, $F(5, 900) = 1.14, p = .337$ or on writing characters, $F(5, 900) = 1.31, p = .259$.

Difference of the Importance and Difficulty Between Teachers and Students

The mean, standard deviation, t , p value, and Cohen's d of the importance and difficulty of the six skills by teachers and students are presented in Tables 4.21 and 4.22. Comparison of mean values of the importance presents that, overall, teachers considered speaking and listening to be more important and writing in characters to be less important than students did. In particular, the independent t -test further indicates that teachers considered speaking and listening to be significantly more important than students, but students considered writing characters to be significantly more important than teachers. Comparison of mean values of the difficulty shows that students rated reading and writing characters as significantly more difficult than teachers.

Table 4.21 Importance of Six Skills by Teachers and Students

Skill	Teacher (n = 192)		Student (n = 914)		t	p	Cohen's d
	M	SD	M	SD			
Speaking	4.56	.62	4.39	.84	3.38*	.001	.23
Listening	4.53	.68	4.41	.80	2.17*	.030	.16
Reading characters	3.76	.99	3.82	1.05	-.79	.429	.06
Writing characters	3.26	1.14	3.60	1.17	-3.64*	.00	.29
Reading Pinyin	3.40	1.19	3.50	1.13	-1.11	.266	.09
Writing Pinyin	3.01	1.25	3.13	1.25	-1.25	.211	.10

* $p < .05$.

Table 4.22 Difficulty of Six Skills by Teachers and Students

Skill	Teacher (n = 192)		Student (n = 914)		<i>t</i>	<i>p</i>	Cohen's <i>d</i>
	M	SD	M	SD			
Speaking	2.91	1.12	3.04	.97	1.59	.113	.12
Listening	3.09	1.22	3.18	.96	1.18	.238	.08
Reading characters	3.01	1.20	3.40	.95	4.93*	.000	.36
Writing characters	3.30	1.25	3.89	.96	7.31*	.000	.53
Reading Pinyin	1.88	.97	2.01	.87	1.70	.089	.14
Writing Pinyin	2.12	1.05	2.13	.87	.12	.903	.01

* $p < .05$.

Beliefs about the Role of Characters in CFL Teaching

This section focuses on the fourth research question concerning teachers' and students' beliefs of the requirement of characters in the first-semester CFL class. The role of characters refers to how and to what extent characters should be required for students. Specifically, this role was illustrated in the following six statements:

Students should ...in a beginning-level Chinese course.

- handwrite all characters taught in class
- handwrite only some of the characters taught in class
- type characters in a computer instead of handwriting them
- read characters but not handwrite them
- write words only in Pinyin instead of in characters
- communicate orally only, without any writing tasks (characters or Pinyin)

Teachers and students were asked to what extent they agreed with each statement through a five-point Likert scale, with a 1 indicating that teachers strongly disagree, a 3 indicating that teachers remained neutral or were not sure about the requirement and a 5 indicating that teachers strongly agree with the requirement.

Teachers' Beliefs about the Requirement of Characters

Table 4.23 displays the mean and standard deviations of the ratings according to three ideal timing structure groups. It presents that all means of the first two statements are over 3, except the mean for the first statement by the third group ($M = 2.37$). This result indicates that teachers seemed to agree more with the first two statements: *handwrite all characters taught in class* and *handwrite only some of the characters taught in class*. These two statements were the only ones that involved handwriting characters.

Table 4.23 Requirement of Characters by Teachers in Three Ideal Timing Structure Groups

	Group 1: At or near the beginning of the first semester (n = 130)		Group 2: In the middle of the first semester (n = 31)		Group 3: Toward or after the end of the first semester (n = 19)	
Role of Characters	M	SD	M	SD	M	SD
handwrite all characters taught in class ^a	3.27	1.31	3.16	1.32	2.37	1.50
handwrite only some of the characters taught in class	3.61	1.25	3.74	1.03	3.63	1.30
type characters in a computer instead of handwriting them	2.42	1.09	2.84	1.29	2.84	1.30
read characters but not handwrite them ^a	2.22	1.05	2.81	1.05	2.74	1.28
write words only in Pinyin instead of in characters ^a	1.61	.89	1.77	.81	3.00	1.37
communicate orally only, without any writing tasks (characters or Pinyin) ^a	1.46	.78	1.65	.71	2.16	1.34

^a This item has significant mean difference among groups.

A MANOVA was used to compare the means of the six statements given by teachers in three ideal timing structure groups. Significant main effects for groupings were found for four statements: *handwrite all characters taught in class*, $F(1, 177) = 3.81$, $p = .024$; *read characters but not handwrite them*, $F(1, 177) = 4.86$, $p = .009$; *write words only in Pinyin instead of in*

characters, $F(1, 177) = 18.18, p = .000$; and *communicate orally only, without any writing tasks (characters or Pinyin)*, $F(1, 177) = 5.81, p = .004$. Further comparisons using Tukey's contrasts found statistical differences between some of the pairs of groups for each statement as displayed in Table 4.24. It can be seen that teachers in Group 2 and Group 3 disagreed significantly more with the first statement, but agreed significantly more with the last three statements (items that did not involve handwriting).

Table 4.24 Mean Differences of the Requirement of Characters Among Three Teacher Groups

Reason	Two Groups	Mean Difference	95% CI		<i>p</i>
			<i>LL</i>	<i>UL</i>	
handwrite all characters taught in class	Group 1 -Group 2	.11	-.52	.74	.913
	Group 1 - Group 3	.90*	.13	1.67	.017
	Group 2 - Group 3	.79	-.12	1.71	.104
read characters but not handwrite them	Group 1 - Group 2	-.58*	-1.09	-.07	.020
	Group 1 - Group 3	-1.12*	-1.38	-.87	.000
	Group 2 - Group 3	-.51	-1.14	.11	.130
write words only in Pinyin instead of in characters	Group 1 - Group 2	-.17	-.61	.28	.650
	Group 1 - Group 3	-1.39*	-1.94	-.85	.000
	Group 2 - Group 3	-1.23*	-1.87	-.58	.000
communicate orally only, without any writing tasks (characters or Pinyin)	Group 1 - Group 2	-.18	-.58	.21	.522
	Group 1 - Group 3	-.70*	-1.19	-.21	.003
	Group 2 - Group 3	-.51	-1.09	.07	.096

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Students' Beliefs about the Requirement of Characters

Mean and standard deviations of the students' ratings of the role of characters are presented in Tables 4.25. Mean comparisons show that the means of the first two statements that involve handwriting characters decrease from the ICI group to the two DCI groups. In contrast, the means of the other four statements that do not involve handwriting characters increase from the ICI group to the two DCI groups. A MANOVA was conducted and significant main effects for groupings were found on all six statements. Further comparisons using Tukey's contrasts found statistical differences between some of the pairs of groups for each statement as displayed

in Table 4.26. This result shows that students who preferred ICI agreed more with handwriting all characters taught in class than students who preferred DCI did. The second group of students who preferred DCI agreed the most with the requirements of handwriting only some of the characters taught in class and typing characters in a computer instead of handwriting them. For the rest of the three requirements that do not involve writing characters, the students who preferred to learn characters toward or after the end of the first semester extended the strongest support for these requirements.

Table 4.25 Requirement of Characters by Students in Three Ideal Timing Structure Groups

Role of Characters	Group 1: At or near the beginning of the first semester (n = 603)		Group 2: In the middle of the first semester (n = 170)		Group 3: Toward or after the end of the first semester (n = 133)	
	M	SD	M	SD	M	SD
handwrite all characters taught in class	3.79	1.07	3.30	1.13	2.12	1.07
handwrite only some of the characters taught in class	3.19	1.17	3.36	1.08	2.92	1.11
type characters in a computer instead of handwriting them	2.27	1.06	2.56	1.13	2.53	1.22
read characters but not handwrite them	2.24	1.05	2.77	1.15	3.14	1.17
write words only in Pinyin instead of in characters	1.67	.86	2.22	.99	3.50	1.17
communicate orally only, without any writing tasks (characters or Pinyin)	1.70	.96	2.14	1.12	2.71	1.32

Note. All six items have significant mean difference between groups.

Table 4.26 Mean Differences of the Requirement of Characters Among Three Student Groups

Reason	Two Groups	Mean Difference	95% CI		<i>p</i>
			<i>LL</i>	<i>UL</i>	
handwrite all characters taught in class	Group 1 - Group 2	.49*	.27	.71	.000
	Group 1 - Group 3	1.67*	1.43	1.91	.000
	Group 2 - Group 3	1.18	.89	1.47	.000
handwrite only some of the characters taught in class	Group 1 - Group 2	-.17	-.41	.06	.187
	Group 1 - Group 3	.27*	.01	.52	.041
	Group 2 - Group 3	.44*	.13	.75	.003
type characters in a computer instead of handwriting them	Group 1 - Group 2	-.29*	-.51	-.07	.006
	Group 1 - Group 3	-.25*	-.50	-.01	.043
	Group 2 - Group 3	.04	-.26	.34	.951
read characters but not handwrite them	Group 1 - Group 2	-.53*	-.75	-.31	.000
	Group 1 - Group 3	-.91*	-1.15	-.66	.000
	Group 2 - Group 3	-.37*	-.67	-.08	.009
write words only in Pinyin instead of in characters	Group 1 - Group 2	-.55*	-.74	-.36	.000
	Group 1 - Group 3	-1.83*	-2.04	-1.62	.000
	Group 2 - Group 3	-1.28*	-1.53	-1.02	.000
communicate orally only, without any writing tasks (characters or Pinyin)	Group 1 - Group 2	-.44*	-.66	-.23	.000
	Group 1 - Group 3	-1.01*	-1.25	-.77	.000
	Group 2 - Group 3	-.57*	-.85	-.28	.000

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Difference Between Teachers' and Students' Beliefs about the Requirement of Characters

Table 4.27 presents the mean and standard deviations by teachers and students for all six requirements of characters in the first-semester CFL class. An independent *t*-test was conducted to see if teachers and students differ on any mean. As shown in the table, statistical mean differences are found on all statements except the fourth one, *read characters but not handwrite them*. Significant differences of the other means show that students agreed more with the first requirement of *handwrite all characters taught in class*, whereas teachers agreed more with the second requirement of *handwrite only some of the characters taught in class*. For the other three statements where teachers and students statistically differed, all means are below 3, indicating that basically both teachers and students did not agree with them.

Table 4.27 Requirement of Characters by Teachers and Students

Role of Characters	Teacher (n = 192)		Student (n = 914)		<i>t</i>	<i>p</i>	Cohen's <i>d</i>
	M	SD	M	SD			
handwrite all characters taught in class	3.11	1.35	3.44	1.23	-3.32*	.001	.26
handwrite only some of the characters taught in class	3.60	1.22	3.18	1.15	4.55*	.000	.35
type characters in a computer instead of handwriting them	2.56	1.17	2.37	1.11	2.09*	.037	.17
read characters but not handwrite them	2.42	1.12	2.48	1.14	-.64	.526	.05
write words only in Pinyin instead of in characters	1.81	1.04	2.05	1.14	-2.64*	.008	.22
communicate orally only, without any writing tasks (characters or Pinyin)	1.64	.95	1.93	1.12	-3.81*	.000	.28

* $p < .05$.

Qualitative Results

This section reports results from the analysis of interviews with Chinese teachers and students in the DCI and ICI program. Interview results from both teachers and students in the DCI program are presented first and the second section introduces results from the ICI program.

Results from the DCI Program

As introduced in Chapter Three (methodology), two Chinese teachers (Dr. Zhang and Dr. Mei) and twelve students from the DCI program participated in the interview. Among the twelve students, six were from the first-semester course and the other six were from the second-semester course. All six second-semester students were from Dr. Mei's class. Three first-semester students were taught by Dr. Zhang and the other three first-semester students were taught by another Chinese teacher who did not participate in the interview. Below I first report results from the interviews with the two teachers and then report results from the interviews with the twelve students. Unlike the format of the quantitative results which were reported according to four main research questions, results of qualitative data are not structured according to each research question. Rather, since participants revealed more information on some aspects but less or even no information for other aspects, this section focuses on major themes only.

Results from Teachers in the DCI Program

Results from the two teachers in the DCI program address the second research question that focuses on the rationales of adopting the DCI timing structure. Regarding the belief about the timing structure and the rationale, Dr. Zhang expressed more opinions than Dr. Mei, perhaps because Dr. Zhang was the program director and Dr. Mei had only recently joined the program. As expected, Dr. Zhang fully supported the DCI instructional model since he, as the program

director, designed and developed the curriculum that centered on the DCI approach. However, it is rather important to pay attention to how and why Dr. Zhang came up with DCI. Dr. Zhang joined the current CFL program in fall 2006. Before then, he had taught Chinese at three other institutions in the northern U.S. and he was the first to build a CFL program at two of them. He revealed in the interview that he did not adopt or even think about the DCI timing structure while he was teaching at those three institutions. Even in the first year of teaching in the current program from fall 2006 to spring 2007, he did not use the DCI approach. That means, he continued to teach all four skills, speaking, listening, reading, and writing plus culture just as he had done before in the previous three programs.

When asked about why he made a change in the second year, he provided three major reasons. First, he observed that students performed poorly when they had to learn both Pinyin and characters. Following are his words:

发现的问题是，学生觉得顾此失彼，因为学拼音又学汉字，这样的话，你必然要求学生又要掌握汉字，又要掌握拼音，那么，头一天是拼音quiz, 第二天是character quiz, 学生被弄得乱七八糟，顾此失彼。 [The problem I found was, students could not grasp all aspects of learning at the same time, because when both Pinyin and characters were taught, students definitely needed to master characters, and at the same time, they were also required to learn Pinyin, as a result, one day the quiz is in Pinyin and the next day the quiz is in characters, students get messy and lost in one aspect or the other.] (Interview, December 23, 2010)

It can be seen that Dr. Zhang concluded from his first-year teaching experience in the current program that it is too much to require students to learn speaking and listening in Pinyin and reading and writing in characters plus culture at the same time in the first semester. Thus, Dr.

Zhang suggested a trade-off by asking students to focus on using Pinyin to practice speaking and listening first. He further revealed in the interview that he found it more effective to focus on speaking and listening and then to transition to reading and writing later. One piece of evidence he pointed out was that at the end of the first-semester class, he usually asked students to perform a short comedy. According to his observation, his current students performed better than his former students in the same program.

The second reason was related to the frequency and the total hours of CFL courses taught per week. In the DCI program, each CFL course was taught only twice a week for 1.25 hours a day. Dr. Zhang commented that, when classes were taught so infrequently, students could easily forget what they had learned the previous day. Although it seemed like students had many days in between, he sadly emphasized that he could not give students too much homework due to the reality that students had other classes to take care and most of them also had to work. In comparison, the three institutions where he had taught before offered more credit hours (either four or five credits) for CFL courses which means that CFL courses were taught four or five days a week. This way, students could learn Pinyin one day and characters the next day and repeatedly enhance the learning of both. That is why Dr. Zhang did not think of DCI before. It was this particular feature of his current program (i.e., the number of days CFL courses meet per week) that pushed him to seek an alternative instructional model.

Last but not least, he pointed out that drop-out rates previously had been very high. He said that he used to have about six students who dropped out in the middle of the first-semester class, but since he adopted the new timing structure, fewer students dropped out of class. Furthermore, he also had an overall more stable enrollment because students were more willing to continue to study at the next level when they had a better grasp of speaking and listening skills

and, thus, more confidence to learn Chinese. He emphasized that he did notice great improvements in the enrollment of the second-semester CFL course, which could also be seen from the fast growth of his program since the time he adopted the DCI timing structure.

The second CFL professor, Dr. Mei, joined the DCI program in fall 2010. Before that semester, Dr. Mei taught in a private university in the northern U.S. for two years. Since she had recently joined the DCI program, she was still in the process of adapting to the current structure. Therefore, she did not comment much about the current DCI timing structure, rather, she talked more about her teaching in the previous program. In her previous CFL program, she said characters were taught from the beginning of the first semester. However, before the middle of the first semester students were only required to read but not write characters. When asked about an ideal structure for teaching characters in the current program, she did not give a specific timing structure but just emphasized that it mostly depended on students.

Regarding the factor of student body, Dr. Mei noted that students in the current program were quite different from her previous students. Specifically, her previous students were much more motivated and studied harder because, she assumed, it was a private university and students paid high tuition fees. According to Dr. Mei, this group of students did not need to find employment to support their studies and could more fully focus on their academic subjects. In contrast, she reported that her current students seemed less motivated and most of them did not have much time to study because they had to be employed. Thus, she admitted that she constantly lowered the standards of requirements for her current students. Therefore, like Dr. Zhang, Dr. Mei also slowly came to realize and face the reality of the current program and study body.

Results from Students in the DCI Program

Results from students in the DCI program address all four research questions. Students varied in their beliefs and rationales of the timing structure to introduce characters. Six students who were in the first-semester CFL course did not have an opportunity to learn characters in the class. It is reasonable they might not have a clear idea of when they preferred to learn characters. Therefore, I was careful to situate the questions within the context of how important and difficult different skills were for them and asked *what if* question about the timing structure. For example, I asked “What would you think if characters were also taught in this class?”

In general, most students said they considered speaking and listening to be the most important skills. At the same time, they also thought speaking and listening were difficult. Only one student mentioned the importance of reading characters for the purpose of being able to recognize certain characters when he has an opportunity to visit China at some point in the future. Though he considered the ability to read characters to be important, he still immediately added that writing characters would be unnecessary. This result suggested that even though most of the first-semester class time was spent on speaking and listening, students still found these two skills to be difficult to learn. The major difficulty of speaking and listening, according to students, were tones and the speech speed of L1 Chinese speakers.

In terms of the timing structure and rationale, results showed that five of the six first-semester students wanted to delay teaching characters and one of them said maybe. The sixth student was undecided on this point. The five students who preferred the DCI timing structure mentioned that characters were difficult and it was important to establish a solid foundation in speaking and listening. For example, Kate and Jason from Dr. Zhang’s first-semester class said,

... The class was already difficult enough, many of us struggled with learning the tones,

trying to listen, if we had to learn characters too, no, I would probably [have] dropped it.
(Kate, interview, December 9, 2010)

... Yes, should delay. First of all, westerners usually have no clue what to do when they see that [character], we are just lost. Also, when we are learning the spoken language, we kind of have to figure out how the word order goes. (Jason, interview, December 9, 2010)

Kate's statement is consistent with Dr. Zhang's past observation that students tended to discontinue CFL study if all aspects of learning plus culture were required in the first-semester class. In addition, both Kate and Jason pointed out existing difficulties in addition to character learning. Kate mentioned that she already struggled with tones, whereas Jason added that he also struggled with learning word order. In fact, the two aspects of tones and word order were also considered to be difficult for many other students.

The student who was not sure about the timing structure, Jim, was also in Dr. Zhang's first-semester class. Interestingly, Jim pointed out another thought-provoking point in the following quotation:

Maybe, I know some people [he confirmed that there were three students] who I think said they decided they weren't gonna continue on coz they thought learning characters will be too difficult for them. They decided Chinese was too difficult, characters would be even worse, so...I am thinking maybe learning a few characters would be helpful, so you can kinda get an idea. (Jim, interview, December 9, 2010)

Surprisingly, the other six second-semester students indicated that they all wanted to learn characters earlier. There were two major reasons: first, they had a hard time associating what they learned in Pinyin to characters; and second, they felt it was a waste of time to learn the vocabulary in Pinyin and then have to re-learn it in characters. Moreover, these students

obviously gave much thought to this issue because they usually talked more about this aspect than others. For example, Elizabeth gave a long and detailed comment as follows:

No, we discussed this in class too. I think most of us thought that it was better to learn them all together. Then you kinda have an image to go with a word, phonetic image, and visual image of the actual character. We discussed it a couple of times with Dr. Mei. I think it was because a student said: why didn't we learn this before? and then just brought up the topic and we just all start to talk about it and how we would have preferred to have had, at least have been told to start recognizing the characters. At least when I took it 2 years ago, they never really asked you to look at the characters, even though they are right under the Pinyin or above the Pinyin. I think everybody said they would have preferred to have learned it from the start, or at least to have a little more emphasis on recognizing them at least.

The comment presented above not only revealed Elizabeth's point of view but also reflected most of the other opinions expressed by Dr. Mei's students interviewed. The commonly shared viewpoint was a reference for learning characters in the first-semester class. Elizabeth mentioned that, without characters in mind, she could not associate a word, Pinyin, and characters together. Like Elizabeth, Amy and Joe also gave similar comments:

They should teach us along with teaching the Pinyin and how to say it, because I didn't really associate with the characters as much as I should have in the first semester. I think if we had learned at least a little bit, kind of the basic understanding of how to use characters, it would have maybe [been] a little bit easier. (Amy, December 9, 2010)

I learned character from day one, used Pinyin as supplementary things, but most like character and sound association, we didn't rely on Pinyin, like they do here, I thought it's

weird. 1001 students told me they only did Pinyin, once you get to 1002, we have to learn characters, it's harder, because you have to almost erase what you learned in 1001 and...

(Joe, December 9, 2010)

Comments from Mei's students demonstrate that the association is quite strong.

Following is an interview dialogue between me and Tiffany (Interview, December 9, 2010):

Lijuan: In 1002, when you see a character, which do you think first when you see a sentence in characters?

Tiffany: Oh always, like in a test we took yesterday, when I looked at the sentence in Chinese, I had to go back and write it in Pinyin and then I had to go back and say this is what it means in English. That's horrible; I processed it twice in my head.

Lijuan: Why did you go to Pinyin?

Tiffany: Because that was the first thing I learned, so it's kinda ingrained in my head.

Lijuan: So in 1001, you were trained to think from Pinyin to meaning, is that what you mean?

Tiffany: yes

Lijuan: So now, in 1002, you have to go through that route, from Pinyin to meaning, not from characters to meaning?

Tiffany: Nope, only, you know what's funny? The characters that I don't have to do that for are the characters I didn't learn the first semester. There are quite a few characters in the red book [the textbook used in the second-semester class] we didn't cover in the blue book [the textbook used in the first-semester class], so professor Mei would not even write those in Pinyin at all, she would just say that means...whatever...So those are the

ones that stick in my head that I just go directly to the sound and meaning without thinking of the Pinyin.

Her comments indicate that students seemed to have become dependent upon Pinyin in the first-semester class. The associations they developed with Pinyin are too strong to allow space for attention to characters. Tiffany was a motivated and top rated student. The dialogue illustrates that it was difficult for even this capable CFL learner to build associations between sound and character as well as between meaning and character. On the other hand, she also said that when she learned words along with characters, she did not need to think through Pinyin. Her report of her experiences seems to indicate that to learn words directly in characters might be a way to circumvent the association problem.

The second reason Dr. Mei's students would like to learn characters early was that students thought it was harder and a waste of time to re-learn what they had learned in the first-semester class. For example, Joe gave the following comment on the DCI timing structure:

I think it's dumb. I think [it] makes hard for the students to have to go back and learn the characters for the word they already learned. (Joe, December 9, 2010)

This is a very interesting finding because while some scholars argued for a solid background in speaking and listening before learning characters, these students did not seem to see it this way. As Joe put it, he found it harder to have to go back to re-learn words he had already learned.

Regarding the choice of typing characters in a computer, the two teachers did not shed much light on this issue. Dr. Zhang simply mentioned that every semester he usually brought students to the computer lab and showed them how to do so once. The students did not show much enthusiasm for typing characters by computer keyboard. In contrast, they seemed more interested in writing out characters by hand for themselves. Some students indicated that

handwriting would help them memorize characters, as shown in Ben's comment

I have always done handwriting, in the learning process, I would rather just hand write it.

It would be too easy, I will forget them easily. (Interview, December 9, 2010)

Results from the ICI Program

The ICI program was in a different situation when compared with the DCI program because there were neither full-time nor part-time CFL teachers in the ICI program. Rather, all CFL teachers were graduate teaching assistants from other departments, such as education and applied linguistics. Thus, teachers in the ICI program overall were less experienced in CFL teaching than those in the DCI program. Both universities housing these two programs belonged to the same university system in the same state. Furthermore, Chinese courses in both programs were three-credit courses and were taught twice a week. The class size was similar. Each class had about 20-30 students. The following paragraphs illustrate results from the teachers and report student results.

Results from Teachers in the ICI Program

Results from the three teachers in the ICI program address the second research question regarding the rationales to adopt the ICI timing structure. All three teachers, Ms. Deng, Ms. Wang, and Ms. Gao, agreed that writing characters was the most difficult task for students while Ms. Wang pointed out that speaking was difficult for her students as well. Notwithstanding the difficulty of characters, all three teachers argued for the ICI timing structure. Among the three teachers, Ms. Deng seemed to have the highest expectations of character learning for beginning-level students. She had only taught one beginning-level CFL in the ICI program for a single semester. She actually took over that class a few weeks into the semester because the original teacher had had an accident and was forced to give up the class. It was at the end of the semester

when I interviewed Ms. Deng. While admitting the difficulty of learning characters, Ms. Deng emphasized another fact in the following comment.

虽然难，但是这个一个system, 虽然和英文不一样. 中文尽管不同，但是应该听说的时候应该学汉字，这样就不会造成learner system. 开始的时候学汉字就把它联系起来，不要等到第二个学期， 学生可能会很抗拒写字这件事情。[Although characters are difficult, characters are an integral part of the Chinese language. Characters should be learned along with the learning of speaking and listening. By doing this, students can connect characters to speaking and listening from the beginning, rather than wait until the second semester. Otherwise, students may resist writing characters.] (Interview, December 9, 2010)

Like Ms. Deng, Ms. Wang and Ms. Gao also agreed that characters should be taught from the beginning, but unlike Ms. Deng, they suggested that it was not necessary to handwrite characters. Instead, their position was that it is enough to require students to recognize characters. Following are detailed comments from Ms. Gao and Ms. Wang.

汉字还是应该教的，很多人学中文觉得就是要学汉字，我觉得应该一起教，只不过一开始重点可以放在拼音上，不要把汉字教得太难。不一定要能背出来怎么写，但是要会认。[Characters should be taught. Many people learn Chinese because they want to learn characters. I think we should teach characters and Pinyin simultaneously, but we should first focus on Pinyin and try to make the learning of characters easier. They do not have to be able to write characters from memory, but they do have to be able to read them.] (Ms. Gao, Interview, December 9, 2010)

如果写的话会帮助你记忆。但我觉得只要会认就好了。我真的觉得没有必要一定要写出来。[Writing may help memorize characters, but I think it is enough to be able to

read characters. I truly think there is no need to ask students to write them out.] (Ms. Wang, Interview, December 9, 2010)

The comments cited above illustrate that both Ms. Wang and Ms. Gao believe it is a good idea to require students to be able to read but not write characters. In addition, Ms. Wang even suggested that learning characters could be separated from learning other skills of Chinese. Because the main purpose of teaching characters was to maintain students' interest in learning CFL in general, teaching characters could be seen as a separate task.

Although Ms. Wang and Ms. Gao agreed that it was enough to require students to be able to read characters, they also mentioned that it was beneficial for students to reinforce character learning through handwriting. They emphasized that handwriting could help students memorize characters more efficiently. Without practicing writing by hand, Ms. Gao explained, it would be hard for students to recognize characters. That's why none of the three teachers in the ICI program encouraged their students to type characters on a computer keyboard. The overall result indicated that these teachers recognized the importance of handwriting characters.

While asked whether they had any other suggestions, both Ms. Gao and Ms. Wang gave a similar suggestion, that is, to increase the frequency of class meetings per week. Ms. Gao said,

我觉得可以每天上课，作业应该频繁一些，最好多一点课外的，和中国人交流的机会。我觉得环境不是很好，他们就上三天课，来上一下就回去了，也没有作业什么的。 [I think we can teach Chinese everyday and assign homework more frequently. It's better to have some outside of class activities for students to practice speaking with native Chinese speakers. I feel like there is no good environment for them. Now, they only take class three days a week and there is not much homework.] (Interview, December 9, 2010)

It can be seen that Ms. Gao wished to teach Chinese class on a daily basis (5 days/week) and

increase more opportunities for students to practice Chinese beyond the classroom. Regarding homework, I asked her why there was not much homework and why she did not give students more homework. Ms. Gao said she gave students homework, however, most of the time, only half or two thirds of the students actually complete their homework. What's more, some of the students who submitted homework only submitted incomplete homework. She added that the problem of incomplete homework submission might indicate that students are lazy or that they have other things to do. Ms. Wang supported Ms. Gao's comments by saying that few students took the trouble to go to a Chinese tutor for help.

Results from Students in the ICI Program

Results from students in the ICI program address the second research question regarding the rationales of students' preferred timing structure and the fourth question regarding the requirement of handwriting in a beginning-level CFL course. A total of nine students from the ICI program were interviewed. With the exception of one student who was a previous beginning-level student of mine, all other eight students were from Ms. Deng's first-semester class. Regarding their beliefs about the timing structure to learn characters, four of them preferred to delay and the other five preferred not to delay learning characters. Students who preferred to delay teaching characters thought it would be beneficial for students to have established a solid background in speaking and listening. For example, two of Ms. Deng's students, Jeff and Taylor, expressed their opinions as the following,

I agree that introducing both new words as well as new characters at the same time can be a little overwhelming for a lot of students. It'll be helpful first to use Pinyin to understand the grammatical rules, then later maybe associating with characters, kind of learning characters and word order. (Jeff, Interview, December 9, 2010)

I think that'll be a good idea, start with Pinyin and speaking, it's a totally new alphabet, so

I think it'll be easier to first master the Pinyin, speaking and listening as best as you can.

(Taylor, Interview, December 9, 2010)

At the same time, Jeff and Taylor were also concerned about the association between characters and other aspects of learning Chinese because after they expressed these beliefs, they immediately emphasized that characters shouldn't be delayed too long. For instance, Jeff said that "I don't think we should delay learning characters until 1002. If you take it in Pinyin in the entire beginning-level course, you wouldn't like to associate with characters later on. So maybe just half through the semester" (Interview, December 9, 2010).

The other student who preferred to delay learning characters was a Korean native speaker. She actually did not think characters were difficult to learn. Rather, she recommended delaying learning characters because she observed and understood how difficult it was for American students. Specifically, she commented that "writing is not hard for Korean, for American people, I think yes, coz they are like drawing" (Interview, December 9, 2010). It is interesting to notice that the Korean native speaking student from the DCI program expressed a similar comment regarding whether or not to delay teaching characters.

The other five students indicated that they preferred not to delay learning characters, but they could not articulate their rationales in full details. Their responses can be categorized into two major reasons. First, three students felt it would be a waste of time to go back to learn the word in characters. For example, Shannon suggested, "leave it how it is [the ICI timing structure], because when you go to learn characters, you have to go back, like re-learn it" (Interview, December 9, 2010). Second, two students felt that it would create more problems later on if

characters were delayed. In other words, although characters were difficult to learn, there would be more of a pay off when students continued to the higher-level class.

Like teachers in the ICI program, all students agreed that it was not necessary to type characters in the first semester although most of them considered writing characters to be the most difficult task. Stephanie recommended, for example, that “it [typing characters] would be a second-semester skill, we need base knowledge” (Interview, December 9, 2010).

At the end of interviews with students in the ICI program, I also asked them if they would like to see any change in the CFL class. Interestingly, similar to the ICI teachers, a number of students also suggested that there should be more class time per week for CFL classes. Stephanie, for example, stated that,

Should be more credit hours, certainly four, maybe five credits, so you can get a lot of drills, meet more often and have more memorization dialogues, so you can have those questions in hand, being able to move conversations forward without being stumbled.
(December 9, 2010).

Summary

Summary of Quantitative Results

The analysis of the quantitative survey data shows the following four main results. First, the majority of the surveyed CFL programs introduce characters at or near the very beginning of the first semester (i.e. the ICI timing structure). Second, most of the teachers and students believed that the best time to introduce characters is at or near the beginning of the first semester. However, after being presented with reasons for and against delay, both teachers and students showed a slight increase in support of delaying the character introduction.

Third, both teachers and students provided similar rationales for their ideal timing

structures. Those who preferred not to delay teaching characters agreed the most with the following three reasons: *Characters are an important part of Chinese language*, *Everything in China is written in characters*, and *Learning characters right away makes it less difficult to learn Chinese in the long run*. Those who preferred to delay teaching characters agreed the most with *A solid foundation in speaking and listening skills can better ensure that students progress to reading and writing* and *It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing* although at the same time they also agreed with *Characters are an important part of Chinese language* and *Everything in China is written in characters*. In addition, a large number of teachers and students who preferred ICI did not provide a clear reason for their beliefs, suggesting that to teach characters from the beginning of instruction was self-evident.

Fourth, both teachers and students consistently considered speaking and listening to be the most important skills and reading and writing characters to be the most difficult skills. Furthermore, teachers and students who preferred to delay teaching characters considered reading and writing characters to be significantly more difficult and less important than those who preferred not to delay did. Students and teachers differed in their ratings of importance and difficulty of skills: compared to teachers, students thought that writing characters was significantly more important and that reading characters and writing characters were significantly more difficult. On the other hand, teachers considered speaking to be significantly more important than did students.

Last but not least, teachers of all types of timing structure groups (the DCI or ICI groups) supported the practice of learning to handwrite all or some of the characters that are taught in the class. In contrast, students of different ideal timing structure groups had different opinions about

learning to write characters. Specifically, students who expressed a preference for learning characters at or near the beginning or in the middle of the first semester supported handwriting all or some of the characters taught in the class. In contrast, students who expressed a preference for learning characters at the end or after the first semester supported reading but not writing characters or even just writing in Pinyin. Comparing teacher and student responses, the survey results reveal that the two groups differed significantly on all character requirements with the exception of the one item: *read characters but not handwrite them*, which neither group supported. Students showed significantly stronger support for handwriting all of the characters but teachers were more supportive of handwriting only some of the characters taught in class.

Summary of Qualitative Results

Analysis of the interviews with teachers and students of the DCI and ICI programs produced the following results. These results were generally consistent with those from surveys. In addition, results from the interviews revealed results in more details. First, the program director from the DCI, Dr. Zhang, preferred the DCI timing structure because he considered it more effective to help establish a solid background in students' speaking and listening abilities before requiring CFL students to read and write Chinese characters. Three factors that strongly influenced the teachers were the high dropout rate, the nature of the student body, and the frequency of the number of CFL class meetings per week. Students of different levels in the DCI program expressed different opinions. Those from the first-semester class, in which characters were not taught, generally agreed with their teachers that speaking and listening should be emphasized first. However, students from the second-semester class argued for an early introduction of characters, primarily because they felt that it is hard to associate characters with Pinyin when characters are taught only after a semester's delay.

Second, teachers from the ICI program supported not delaying teaching characters because characters are an important part of Chinese. However, two of the three teachers argued for a lower expectation for characters (i.e., the teaching of fewer characters) in a beginning-level CFL class. Emphasizing the difficulty of writing characters from memory, they pointed out that it was enough to require students to read characters. Although they did not require writing characters, they still valued the practice of teaching students to write characters because it benefited the ability to read characters. Students from the ICI program varied in their attitudes towards the ideal timing structure. About half of them preferred the DCI structure and half of them did not like to delay learning characters. The former group of students stressed that it was overwhelming to learn all aspects at the same time, but on the other hand, they did not want to delay learning characters for too long. Specifically, they believed it was too long to delay until the second semester. The rationales expressed by the latter group reveal students' concern that it could cause more problems when characters were taught at a later stage.

Third, consistent with the survey results for the fourth research question, most teachers and students from both DCI and ICI programs rejected the idea of learning to type characters by computer keyboard instead of handwriting them; rather, teachers considered it useful to practice writing characters by hand. Students preferred to handwrite characters as well.

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND CONCLUSION

Summary of the Findings and Discussion

The central purpose of the study is to explore whether or not to delay introducing Chinese characters by researching CFL programs' actual instructional practices as well as teachers' and students' underlying beliefs in the U.S. The four main research questions are: a) What are current timing structures of introducing Chinese characters in post-secondary CFL programs in the U.S.?; b) What are CFL teachers' and students' beliefs and rationales about the timing structures?; c) What are CFL teachers' and students' beliefs concerning the importance and difficulty of different skills (speaking, listening, reading characters, reading Pinyin, writing characters, and writing Pinyin) in a beginning-level CFL course?; and d) What are CFL teachers' and students' beliefs concerning the requirement of characters in a beginning-level CFL course? In the following paragraphs, results from the large-scale CFL teacher and student surveys are summarized and discussed according to the four research questions. In comparison to the survey results, results from the interviews do not answer all four research questions. Thus, the interview results are summarized in a supplementary manner to expand upon the survey results.

Regarding the first question, the large-scale teacher and student surveys found that most post-secondary CFL programs in the U.S. introduce characters from the very beginning of instruction. This finding is important because whether or not to delay teaching characters is a generally unexamined pedagogical practice, which affects the vast majority of CFL students. At the same time, it is also essential to pay attention to the fact that so many programs do not delay teaching characters without having really thought about why they do it. In addition, this finding may not be generalizable to other settings, such as K-12 schools. Because the present study was

situated in post-secondary contexts, it did not examine practices in K-12 schools and Sunday language schools. However, it is worth mentioning that during the survey collection stage⁷, I received interesting feedback from some K-12 CFL teachers. They suggest that the issue of whether or not to delay character instruction might be more pertinent to K-12 settings than to post-secondary institutions. This feedback points out the importance of examining the timing of character teaching within K-12 contexts.

In terms of the second research question, the survey results found that a majority of teachers and students preferred to introduce characters from the beginning. In addition, in both surveys, arguments for both delaying and not delaying character instruction fall in between the first and the second belief reports. Participants were asked to read those arguments and indicate to what extent they thought each reason was convincing. During this reading process, they had a chance to spend more time thinking about the issue. The survey revealed that after being presented with reasons for and against delay, both teachers and students showed a significant increase in support of delaying character introduction. This is an interesting finding because the survey only provided teacher and student participants with a very short period of time. However, even such a short period of time resulted in an increasing tendency for participants to select a DCI timing structure.

Similar results were obtained from the teacher interviews from the two local Chinese programs. The two Chinese teachers in the DCI program have much more teaching experiences than the three teachers in the ICI program. The director of the DCI program has more than 30 years of Chinese language teaching and has taught in several ICI programs before. However, he

⁷ The CLTA listserv includes Chinese language teachers of all backgrounds, so when my survey links were released, I also received feedback from a few K-12 Chinese language teachers. However, I didn't analyze their data for the sake of current study.

changed his mind and started to adopt ICI after he came to work in this program because he believed that his program could benefit more from the DCI timing structure. The other teacher in the DCI program who had also taught in an ICI program before did not favor one way or the other; rather, she indicated that it might depend a lot on the student body and she expressed an interest to learn more from the results of the study. Unlike these two teachers from the DCI program, the three comparatively inexperienced teachers from the ICI program seemed to be more certain of their preferences. Moreover, their rationales also indicated that their own literacy education in China influenced their beliefs. Therefore, the difference between experienced and inexperienced teachers' beliefs suggests that beliefs might change with more teaching experiences.

There could be a number of reasons for the change in participants' beliefs. It is possible that because most CFL programs actually introduce characters from the beginning, teachers and students involved in those programs are used to how they teach and learn characters. It is also possible that the majority of teachers and students assume that characters should be taught from the beginning. They may not have been reflective enough until they were asked to complete the survey. When little is known about CFL teaching, the instructional mode of CFL teaching has tended to follow that of teaching Chinese to L1 speakers. Thus, since characters are taught to L1 Chinese speakers from the beginning, the ICI timing structure has been mostly adopted in CFL teaching.

Regardless of any possible reason, the study suggests that most Chinese teachers have not really thought about the issue. It is thus important to raise awareness among Chinese language teachers, researchers, and educators regarding the issue of whether or not to delay teaching characters. More and more teachers and students may choose the DCI timing structure, if the

timing structure issue is discussed more widely and/or if more research studies are available in the field of CFL instruction. In order to test these conjectures, more research is needed to examine whether the study's finding that most CFL teachers and students preferred the ICI timing structure is because of the new status of the DCI timing structure in CFL instruction. In particular, the two available studies already found that the DCI timing structure benefited CFL learners better than the ICI timing structure did (Everson, 1988; Packard, 1990). It is, therefore, important to further investigate the underlying reason why the ICI timing structure is widely adopted and preferred by teachers and students even though the research doesn't support the ICI timing structure.

While the result from the student survey showed that the majority of students preferred to learn characters from the beginning, the result from the student interviews seemed to suggest it is half and half. Students from the DCI program differed in their preference by the semester of their study. The first-semester students who had not had an opportunity to learn any characters preferred the DCI timing structure, but the second-semester students preferred the ICI timing structure. Students from the ICI program were divided in half in their support for the DCI and the ICI timing structures. Therefore, we can see that the survey result is consistent with the finding from Okita's (1997) belief study that most of the students prefer to learn *kanji* from the beginning of the instruction of JFL instruction.

Regarding rationales, the survey results indicate that both teachers and students most in favor of the ICI timing structure believe that characters are important and learning characters earlier will make it less difficult in the future. Those least in favor of the ICI timing structure underscore that it is too much to learn speaking, listening, reading, writing, plus culture at the same time and recommend that it is more effective to learn characters after they have a solid

foundation in speaking and listening. It is interesting that both DCI and ICI groups chose pedagogical reasons for their point of view in terms of what they think is most effective. The question of which timing structure is more effective is by nature an empirical one, which merits the focus of future research. Moreover, a large number of teachers and students who preferred ICI did not express a clear rationale, suggesting that it is self-evident that characters should be taught from the beginning. This result further indicated that both teachers and students had not seriously thought about the issues of whether or not to delay teaching characters and why. Without sufficient consideration, most of teachers and students chose ICI, which suggests a bias towards the ICI timing structure in the field of CFL education.

In addition to the above rationales revealed from the survey results, the interview results pointed out an additional rationale from the second-semester students in the DCI program. When the students started to learn characters in the second semester, they experienced difficulty in associating sound, meaning, Pinyin, and characters. A map of association is depicted in Figure 5.1. It depicts a strong association between sound, Pinyin, and meaning, but a weak association between sound, characters, and meaning. When characters are delayed, vocabularies, dialogues, and short passages are all conducted with reference to Pinyin (only). When students carry out reading tasks, such as vocabulary lists, sentences, dialogues, and short texts in Pinyin, they constantly associate sound and meaning via Pinyin. Thus, the association between sound and meaning via Pinyin grows ever stronger with the increasing amount of time using Pinyin as the written script. At the same time, because characters are not taught, students cannot map sound and meaning to characters and establish corresponding associations. Likewise, students cannot establish a corresponding relationship between Pinyin and characters. Even when the associations are established when characters are taught at a later time, they are weaker in

comparison with the associations among sound, Pinyin, and meaning. It is, therefore, hard for learners to recognize a center stage role for characters.

Therefore, while L1 Chinese speakers carry out reading tasks in characters and figure out meaning from characters, CFL learners studying under a DCI instructional model carry out reading tasks through a different route, in which Pinyin is located at a center stage. For this reason, second-semester students in the DCI program always wanted to write out Pinyin when they were asked to translate a sentence in characters. These students relied on Pinyin to both decode and encode meanings. As a result, these students reported that when they started to learn characters in the second semester, it was particularly difficult for them to associate sound and meaning with characters, which made them feel like they were being asked to learn everything they thought they already knew all over again.

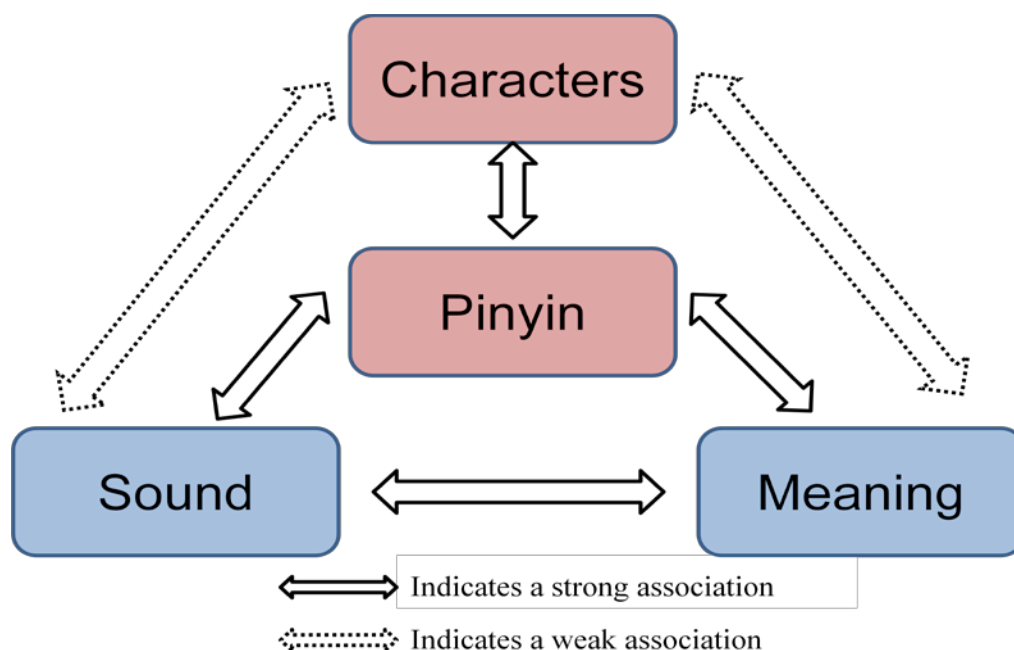


Figure 5.1 Association Map among Sound, Meaning, Pinyin, and Characters

This association issue also suggests that Pinyin acts as a double-edged sword. On the one hand, Pinyin could serve as important scaffolding to assist beginning CFL learners in pronunciation and the acquisition of early levels of speaking and listening proficiency in Chinese; on the other hand, when it is used to replace characters as the main written script, learners tend to establish a connection between meaning and Pinyin (only). When the connection becomes too strong, learners may find it hard to move beyond the use of Pinyin in their study of CFL. This situation may cause Pinyin to begin to serve less like a necessary, well-intentioned scaffold and more like a poorly-conceived crutch in CFL learners' experiences. In fact, this finding is not new; rather, Koda (1992) previously expressed a concern about not using L1 traditional script. The author pointed it out that even though non-traditional script (e.g., Pinyin) could facilitate initial learning experience, it might get in the way of the reading proficiency development in traditional script (e.g., characters), because learners have to re-construct the decoding system when the traditional script is taught. The finding that DCI students felt like they had to re-learn everything in characters seems to reflect this possible consequence.

While it seems that the association problem tends to occur when characters are delayed, it is also important to pay attention to the fact that Pinyin is the phonemic system and characters are a logographic system. With English as the first language, CFL learners take the phonetic approach to carry out reading and writing tasks. That means, while reading in English, CFL learners read alphabetic letters, derive sounds from the letters, and finally derive meaning from the sounds. While writing in English, CFL learners convert meaning in their mind to sounds, convert sounds to letters, and write down words using letters. Therefore, it is not difficult to imagine that these learners have a stronger connection between sound and Pinyin. That might be why Everson (1988) found that CFL learners performed better in terms of speed and

comprehension while they read a passage in Pinyin than in characters. There are two explanations for the association problem revealed from this study. First, the association problem might occur due to some curriculum arrangements in the DCI program interviewed. For example, the DCI program did not introduce characters until the second semester. The winter or summer holiday between the two semesters of Chinese study might make it hard even for students to remember the vocabulary and dialogues in Pinyin in the first semester. Therefore, when students started the second semester's study, they felt like they started all over again. At the same time, they were taught to read and write in characters, which made the learning even harder. Second, it is probable that the association issue also exists among CFL learners who study in ICI programs. Since CFL learners already have a connection between sound and the writing system in the phonemic system, the stronger connection between sound and Pinyin would occur regardless of what kind of programs they study in. Therefore, future studies are needed to further investigate the association issue. Related questions can be: 1) Does any particular or do all DCI timing structures have the association problem?; 2) Does the association problem hinder reading proficiency development?; and 3) How can it be addressed in CFL instruction?

The third research question focuses on teachers' and students' beliefs about the importance and difficulty of different skills. From the survey results, speaking and listening were considered as the most important skills, character reading and especially character writing were considered as the most difficult skills. Moreover, it is in the areas of reading and writing characters that teachers and students of three different ideal timing structures all differed to significant degrees. Those who preferred the ICI timing structure thought reading and writing characters were significantly more important and less difficult than those who preferred the DCI timing structure. This result can also be interpreted in another way. That is, teachers and students

who thought reading and writing characters were difficult but not important tended to prefer the DCI timing structure. Those who thought reading and writing characters were important but not so difficult preferred the ICI timing structure. This result is not only consistent with those from previous studies (Bell, 1995; DeFrancis, 1984; Everson, 1988; Tian, 2009), but even more importantly, it documents statistically that teachers and students found writing characters to be the most difficult skill. Moreover, results from the interviews with teachers and students also support survey results. That is, both teachers and students mentioned the difficulty of learning characters. Meanwhile, they also pointed out the importance of speaking and listening skills.

The last question focuses on teachers' and students' ratings of different character requirements in beginning-level CFL courses. Survey results demonstrated that most teachers and students, regardless of their ideal timing structures, disagreed with instructional alternatives that involve no handwriting (e.g., to read but not handwrite characters; to replace handwriting with typing characters in a computer; to write in Pinyin rather than in characters). The result of not favoring typing characters remains consistent from both the teacher- and student- surveys. Both teachers and students gave means that were lower than 3 to the item of whether to replace handwriting with typing characters by computer keyboard in the first-semester CFL class. This finding showed that both teachers and students disagreed with the method indicated in the item. This result was further confirmed through interviews, which revealed that most teachers thought handwriting helps with character recognition and most students said they enjoyed handwriting characters. Students' interest in writing characters is also consistent with Luo (2005), who found through a character learning survey that 89% of the 45 Western learners expressed positively that they were interested in learning characters.

The finding that neither teachers nor students preferred the option of replacing handwriting with computer typing does not support arguments proposed by Jen and Xu (2000), He (2005), and Allen (2008) to use computer typing to replace the arduous and time-consuming task of writing characters by hand for beginners. Since we are in the computer age, it is tempting to remove the obstacle of handwriting to make CFL less difficult to learn. However, I found that teachers and students did not buy into this seemingly more convenient electronic path. Rather, they valued the role played by handwriting in CFL learning, and so, they seemed to insist on handwriting characters. As pointed out by teachers in the interviews, to handwrite characters enhances students' ability to recognize characters. This ability is formed and enhanced at an early stage of character learning when students are learning basic elements of characters, such as stroke order and structures of different components in a character. Results from the study indicate that both teachers and students considered that writing characters by hand is beneficial for students to cultivate the reading ability.

Implications

This section discusses implications the study's findings have for the CFL field in the U.S. First, the study revealed that students seemed to enjoy learning and handwriting Chinese characters. This can be concluded from the results that the majority of students did not want to delay learning characters and they disliked other options that involved less handwriting, such as reading characters only and typing characters by computer keyboard. While all these options might potentially ease students' difficulties in handwriting characters at the beginning, most of the students did not favor them. Therefore, the study revealed an important and somewhat surprising finding: CFL students enjoy the process of learning and learning to handwrite Chinese characters.

However, the study also found that both teachers and students saw writing characters as the most difficult skill, which is consistent with Xu and Jen's (2005) observation that "the fundamental problem, again, lies in the requirement to learn to hand-write Chinese characters" (p. 29). I would recommend revising this statement to be that the fundamental problem lies in the requirement to learn to hand-write characters from memory. According to this study, it is the condition of having to write characters from memory that challenges students most. In order to be able to produce characters from memory, students have to spend many hours just practicing writing characters in order to memorize them. What is worse is that some students still cannot memorize characters even after hours and hours of writing practice. Some students pointed out in the interview that they enjoyed writing characters because this was new and interesting to them, but at the same time, they felt it was too much for them to write characters from memory (e.g., on daily class quizzes). As Wan (2005) pointed out that the central aim is to cultivate CFL learners' interests in learning the language and culture rather than to require them to memorize a certain number of characters, these findings suggest that teachers adjust specific requirements concerning character writing. For example, if we don't require students to write characters from memory in quizzes, tests, and exams, it may be less burdensome for students. Instead, we may ask students to practice writing characters outside of class as homework assignments and/or ask them to memorize a small and manageable number of characters. As a result, students' interest in learning Chinese may be maintained because they are able to enjoy the process of handwriting without too much worry about the test. Therefore, teachers should pay attention to the extent to which and how characters should be assessed at the beginning of Chinese instruction.

Second, results from the study also suggest that teachers should pay attention to their students' beliefs about character learning. The study revealed a contradictory phenomenon. On

one hand, teachers and students considered writing characters to be extremely difficult, but on the other hand, they disagreed with alternatives that might lessen the role of handwriting. Rather, most students preferred to handwrite all characters taught in class and teachers preferred to ask students to handwrite some characters taught in class. While teachers tended to think students might not need the writing, students actually wanted to handwrite characters. This contradiction highlights the possibility that students' beliefs themselves constituted a problem. The problem was that while students were so fascinated with character writing, they also found writing characters to be the most difficult skill. However, while students considered writing characters to be the most difficult skill, they did not accept the alternative of avoiding character writing in the beginning-level Chinese class. It is important that teachers address students' belief problems in the classrooms, regardless of whether characters are delayed or not in the program.

Third, students' perceptions of and purposes for completing a learning task are always an important factor in their motivation and learning effectiveness (Ling, 2005). In learning CFL, we do not want a situation in which students come to learn Chinese because they are fascinated by characters, but writing characters becomes such an insurmountable barrier that they are forced to give up. This phenomenon is often reported with learners from an alphabetic literacy background not only in the U.S. but also in China. For instance, Zhou (1999) mentioned a class of nine Asian and nine non-Asian (i.e., Western) students at a southern Chinese university in 1995. Among them, four of the non-Asian learners dropped after a half year and three more dropped after one year. The reason was they had extreme difficulty writing Chinese characters and had a hard time keeping up with the progress with their Asian peers. Similarly, Jiang (2005) also confirmed that non-Asians are often frustrated in learning Chinese characters. For this reason, Ke and Shen (2003) suggest that writing characters should be avoided for beginners, so as not to cause too

much learning time and ultimately impact learners' self-confidence and enthusiasm. According to my observations, most college CFL learners want to learn Chinese because they want to be able to speak Chinese when they go to China someday. Moreover, this study also found that students considered speaking and listening to be the most important skills. Therefore, it is important for CFL teachers to be aware of their CFL learners' purposes and maintain an appropriate balance between students' simultaneous enthusiasm for and difficulties in learning Chinese characters.

Fourth, cautions should still be taken when dealing with Chinese character teaching in different programs. Every program has its own distinctive backgrounds, such as the nature of the student body, how many hours per week CFL courses are offered, and the type of institution. For example, students in some programs are mostly native Korean speakers or heritage Chinese speakers. These students might not be in an urgent need for the DCI model in learning Chinese characters because either they already have general knowledge of such characters, or they have some previous background in Chinese speaking and listening skills. It is also recommended that there is less of a need to delay teaching characters in programs where CFL classes meet more frequently (e.g., four or five days a week), in comparison with programs where CFL classes meet less frequently (e.g., two or three days a week). The type of institution can also have an influence. Teachers from the public institutions revealed through interviews that students seemed not to be able to dedicate as much time as teachers desired. A major reason is that students at public institutions often have a need to assume off-campus employment responsibilities. Under such conditions, the more limited amount of time available may make it harder for such students in beginning-level courses to learn all aspects of Chinese.

Suggestions for Future Research

It is worth pointing out the rationale behind the study's investigative design. The topic

emerged from my own teaching experiences. It is clear that I have experienced a shifting pattern of beliefs for a long time as part of my professional search for answers to some of the questions about CFL teaching and learning that concern me. Part of this effort was to seek advice from other colleagues, including CFL program directors and teachers, about what they think and when they introduce characters. Unexpectedly, I found some discrepancies among professionals in the CFL field of teaching, and undoubtedly, these different beliefs influence the timing structure through which CFL programs choose to introduce characters. Therefore, I believe that a large-scale survey of current practices would enable clearer understanding of the topic. I obtained a more comprehensive picture of when CFL programs start to teach characters and what beliefs CFL teachers and CFL students hold regarding the timing issue.

With scarce research on character teaching in general and the timing of CFL character instruction in particular, the study's results contribute to a clearer understanding of current practices and teachers' and students' underlying beliefs about whether or not to delay the teaching of characters as part of CFL instruction. Since there has been scarce literature on the topic of the timing structure, the study's results are useful for they help in defining a foundation from which later experimental investigations may be conducted. Future studies are encouraged to take the following points into consideration in order to investigate this line of research.

First, the study examined the topic of character instruction timing from the perspective of actual practice and beliefs. The methods used were primarily survey and interview. While the study's results provide a foundational understanding, it is important to acknowledge that such procedures cannot directly tell which timing structure is more effective for students' CFL learning. That is to say, although the study found that most CFL programs in the U.S. teach characters from the beginning and that most teachers and students believe in the ICI timing

structure, I was not able to document directly that the ICI timing structure is more effective than the DCI timing structure. Therefore, experimental studies that compare beginning-level CFL students' performances under the two instructional conditions (ICI and DCI) are needed in the near future. So far, the only experimental study of this kind was conducted over twenty years ago by Packard (1990). Not surprisingly, the author found that students in the DCI group outperformed the ICI group in speaking, but not in reading and writing. However, findings from Packard (1990) do not seem to have had much of an impact on the CFL field because, as the current study reveals, a majority of CFL programs in the U.S. do not delay teaching characters. In addition, Packard's study delayed character instruction for only three weeks. Future empirical studies are encouraged not only to confirm Packard's (1990) findings but also to experiment with a longer initial delay (e.g., five weeks for one third of a semester; eight weeks for half a semester; or even sixteen weeks for an entire semester).

Second, as mentioned in the discussion above, the context of this study is solely post-secondary institutions, but the issue seems relevant to K-12 settings as well. With a growing number of CFL learners in K-12 settings, similar research in K-12 settings is needed. Moreover, SLA research has shown that children and adults differ in how they go about the learning of a new language. It is therefore important to know whether the timing of character instruction matters for K-12 CFL learners. If so, it will be interesting to further examine to what extent and how the timing affects their learning. Future study can use the same (or similar) survey instruments to replicate this study and to compare practices between post-secondary CFL programs and K-12 CFL programs as well as differences between the beliefs of post-secondary teachers and students and K-12 teachers and students.

Third, more studies are needed to clarify whether written production is necessary. Here,

the written production refers to either handwriting or typing using keyboards. In terms of handwriting, the question of whether handwriting is necessary was pointed out earlier by Zhong (1979). The author mentioned that there was considerable controversy among CFL teachers regarding this issue. Some teachers argue that reading is inseparable from handwriting, which is necessary for memorizing characters. Others propose that although reading and handwriting have a certain kind of relationship, handwriting is not a necessity for cultivating reading ability. The study's findings revealed that both teachers and students wanted to include the practice of handwriting in beginning-level CFL courses, indirectly indicating that they think handwriting is necessary. However, this finding was not based on experimental comparison studies. Up to now, few experimental studies have been conducted to examine this topic, although it was proposed and carried out early by Chin (1973). Chin compared the character production and recognition tests between two classes of CFL students. One class was told to be able to recognize characters but not to worry about writing characters either in homework assignments or tests; the other class was required to be able to both recognize and write characters. Results indicated that students who were required to be able to recognize and write characters outperformed those who were required to be able to read characters only. However, the author emphasized that the research was simple and casual, and so future studies on an experimental or non-experimental base are encouraged to shed more light on the issue.

In addition to handwriting, whether typing by computer keyboard should be taught in beginning-level CFL courses is another issue worth future investigation. Results from the study present that both teachers and students disfavored the option of learning to type characters by computer keyboard; rather, students preferred to handwrite characters taught in class. In addition, teachers pointed out that handwriting could help students become more sensitive to the character

structures and recognize characters better. Therefore, we can see that at present the CFL field does not seem to favor the choice to use computer typing even though a few scholars have strongly argued in its favor. Therefore, future studies are recommended to further explore whether it is beneficial to ask students to type characters in elementary CFL courses and to what extent the computer typing can be utilized.

Fourth, the findings also revealed an important question regarding the assessment of character production. Since the assessment of character production seems to be the real barrier in beginning learners' experiences, it becomes a natural inquiry whether to require less assessment of character production would bring any advantages and disadvantages in Chinese language curriculum. Some interesting questions are: Would less character assessment affect students' learning outcomes? Would it bring more interests in continuing the higher-level Chinese study? Would it solve students' contradictory beliefs? Future endeavors may involve experimental paradigms, classroom action research, or longitudinal studies.

Last but not least, future studies are also recommended to investigate major textbooks used in CFL classes and how these textbooks relate to the teaching of characters. It is common for teachers to follow their textbooks' rationales to teach speaking, listening, reading, and writing. Thus, in terms of character teaching, whether or not a textbook delays the introduction of characters probably would influence teachers' practices. In addition, it is also important to pay attention to the order of characters that are introduced in a textbook. For example, it might be easier for students to follow if less complicated characters are introduced first. It might also be practically more useful if characters are taught according to the corpus of character use (Da, 2004). Overall, the relationship between textbooks and character teaching should be examined more widely in the near future.

Concluding Remarks

This is the first time a large-scale survey has been conducted in the U.S. to investigate the timing of introducing Chinese characters and CFL teachers' and students' beliefs and rationales regarding whether or not to delay teaching characters. Results revealed from the study contribute to the CFL field in three significant ways. First, the study provides a broad picture of current practices regarding the timing of introducing characters in this part of the world. This dimension of the study's results enables current CFL curriculum designers to have a better understanding of when Chinese characters are normally introduced to beginning-level learners as well as the rationales of why teachers and students prefer the DCI or the ICI in introducing characters. Second, the study investigated several other issues related to the timing of character introduction, such as the importance and difficulty of speaking, listening, reading, and writing skills in CFL learning as well as to what extent handwriting characters should be required in beginning-level CFL courses. It is an interesting finding that while CFL teachers and students considered handwriting characters to be the most difficult skill, both groups disfavored any other options that did not involve handwriting. These results further challenge CFL teachers to explore a balance between students' enthusiasm for learning Chinese characters along with the difficulty students face while learning them. Last but not least, since there has been little research on teaching characters in general and the timing of teaching characters in particular, results from the study may set a foundational background for CFL researchers to conduct additional investigations on similar and related themes in the near future.

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APPENDICES

Appendix A

Chinese Teacher Survey

(It is presented as the online survey format.)

Thank you for agreeing to take this survey about whether to delay or not to delay teaching characters in Chinese as a foreign language. It should take you about 15 minutes.

Before you begin, please read over the Informed Consent information on the following page. Click "Next" to continue.

Georgia State University
Department of Applied Linguistics & ESL
Informed Consent

Title: The Teaching and Learning of Chinese as a Foreign Language (CFL) in the U.S.:
To Delay or Not to Delay the Character Introduction

Principal Investigator: PI: Dr. John Murphy
Student PI: Lijuan Ye
Sponsor:

I. Purpose:

The purpose of the study is to investigate current Chinese program structures along with Chinese teachers' and students' beliefs about when to introduce Chinese characters as part of first-semester courses in the U.S. Participation will require about 15 minutes of your time.

II. Procedures:

If you decide to participate, you will fill out a questionnaire.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Results from the investigation will benefit the teaching and learning of Chinese as a foreign language in the U.S.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time.

VI. Confidentiality:

1 Consent Form Approved by Georgia State University IRB December 02, 2010 - December 01, 2011. We will keep your records private to the extent allowed by law. Dr. John Murphy and Lijuan Ye will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use a study number rather than your name on study records. The information you provide will be stored password- and firewall-protected computer. Any facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

You can print a copy of the form for your records.

IF YOU AGREE TO PARTICIPATE IN THIS RESEARCH, PLEASE CLICK THE "Next" BUTTON.

Are you currently teaching a first-semester Chinese course?

- Yes (Go to Section1)
- No (Go to a)

- c. If you are not currently teaching a first-semester Chinese course, would you consider yourself familiar with a typical first-semester Chinese course in your program?
- Yes (Go to Section1)
- No (Go to b)
- Not sure (Go to Section1)

Section 1: General Pace

1. How many weeks, including holidays, per quarter/semester does your program have?
(Round up to the nearest week)

- 10
- 11
- 12
- 13
- 14
- 15
- 16
- Other (please specify)

2. How many class hours per week are assigned to the first-semester Chinese course? (Round up to the nearest hour)

- 1
- 2
- 3
- 4
- 5
- 6
- Other (please specify)

3. What textbook do you use for the first-semester Chinese course?

- Integrated Chinese
- Chinese Primer
- Chinese: Communicating in the Culture
- New Practical Chinese Reader
- Routledge Course in Modern Mandarin
- Success with Chinese: Speaking & Listening
- Other (please specify)

4. How many chapters/units from the textbook do you cover in the course?

- 5
- 6
- 7
- 8
- 9
- 10
- Other (please specify)

5. To the best of your knowledge, how many characters do you expect students to be able to RECOGNIZE by the end of the first-semester Chinese course?

- Zero
- Less than 50
- 50 or more but less than 100
- 100 or more but less than 200
- 200 or more but less than 300
- 300 or more
- Other (please specify)

6. To the best of your knowledge, how many characters do you expect students to be able to HANDWRITE by the end of the first-semester Chinese course?

- Zero
- Less than 50
- 50 or more but less than 100

- 100 or more but less than 200
 - 200 or more but less than 300
 - 300 or more
 - Other (please specify)
-

b. Are you the person primarily responsible for your Chinese program? (For example, you would click “yes” if you are the program director or if you are responsible for curriculum decision.)

- Yes (Go to section 2)
 - No (Go to section 3)
 - Not sure (Go to section 2)
-

Section 2: About the Program

1. Across all course levels, how many students are currently enrolled in your program? (Include both heritage and non-heritage students.)

- Less than 100
- 100 or more but less than 200
- 200 or more but less than 300
- 300 or more
- Other (please specify)

2. What is your best estimate of the percentage of students who continue from the FIRST to the SECOND year in your program?

- Less than 25%
- 25% or more but less than 50%
- 50% or more but less than 75%
- 75% or more
- Other (please specify)

3. What is your best estimate of the percentage of students who continue from the SECOND to the THIRD year in your program?

- Less than 25%
 - 25% or more but less than 50%
 - 50% or more but less than 75%
 - 75% or more
 - Other (please specify)
-

Section 3: Importance and Difficulty

Think about different skills in the first-semester Chinese course.

1. In your opinion, how IMPORTANT are the following skills in a first-semester Chinese course?

	Unimportant	Slightly important	Important	Very important	Extremely important
Speaking					
Listening					
Reading (in characters)					
Reading (in Pinyin)					
Writing (in characters)					
Writing (in Pinyin)					

2. In your opinion, how DIFFICULT are the following skills for students in a first-semester Chinese course?

	Not difficult at all	Slightly difficult	Difficult	Very difficult	Extremely difficult
Speaking					
Listening					
Reading (in characters)					
Reading (in Pinyin)					
Writing (in characters)					
Writing (in Pinyin)					

Section 4: Beliefs

1. When does your program start teaching students to write in characters?

- At or near the beginning of the first semester
- In the middle of the first semester
- Toward the end of the first semester
- At or near the beginning of the second semester
- At or near the beginning of the second year
- Other (please specify)

2. For optimal learning, when do you think is the ideal time to teach students to write in

characters?

- At or near the beginning of the first semester
- In the middle of the first semester
- Toward the end of the first semester
- At or near the beginning of the second semester
- At or near the beginning of the second year
- Other (please specify)

3. Please explain your choice in the previous question:

4. The following statements are sometimes used to justify why learning characters should be delayed. Whether or not you believe learning characters should be delayed, please indicate whether you think these statements are good reasons or not.

<i>Learning characters should be delayed because ...</i>	Not a good reason at all	Not a very good reason	Neutral/Not sure	Good reason	Excellent reason
1. ... it is too much for students to learn all four skills (speaking, listening, reading, and writing) from the very beginning.					
2. ... characters are too difficult for native English speakers to learn from the beginning of instruction.					
3. ... when children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.					
4. ... some students may not need to learn how to read and write in Chinese.					
5. ... a solid foundation in speaking and listening skills can better ensure that students can later progress to reading and writing.					
6. ... it is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.					

Other (please specify): _____

5. The following statements are sometimes used to justify why learning characters should NOT be delayed. Whether or not you believe learning characters should not be delayed, please indicate whether you think these statements are good reasons or not.

Students should learn characters from the beginning because ...	Not a good reason at all	Not a very good reason	Neutral/Not sure	Good reason	Excellent reason
1. ... characters are an important part of Chinese language.					
2. ... everything in China is written in characters.					
3. ... learning characters right away makes it less difficult to learn Chinese in the long run.					
4. ... children in China learn characters from the first grade.					
5. ... students eventually have to learn characters anyway.					
6. ... there are many homophones (i.e. the same Pinyin can have many different meanings) in Chinese.					

Other (please specify): _____

6. Now that you have read all these arguments, imagine a scenario in which you are going to build a new Chinese program. At which of the following times would you choose to start teaching students to write characters?

- At or near the beginning of the first semester
- In the middle of the first semester
- Toward the end of the first semester
- At or near the beginning of the second semester
- At or near the beginning of the second year
- Other (please specify)

7. Which of the following are the most persuasive reasons for your choice in question number 1 above? (Check up to THREE reasons)

- Characters are an important part of Chinese language.
- Everything in China is written in characters.
- Learning characters right away makes it less difficult to learn Chinese in the long run.
- Children in China learn characters from the first grade.
- Students eventually have to learn characters anyway.
- There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).
- It is too much for students to learn all four skills (speaking, listening, reading, and writing) from the very beginning.
- Characters are too difficult for native English speakers to learn from the beginning of instruction.
- When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.
- Some students may not need to learn how to read and write in Chinese.
- A solid foundation in speaking and listening skills can better ensure that students can later progress to reading and writing.
- It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.
- Other (please specify)

8. What are your opinions about the requirement of learning characters in the first-semester Chinese course? Please indicate the extent to which you agree or disagree with each statement.

In the first-semester Chinese course, students should be required to...	Strongly disagree	Disagree	Neutral/Not sure	Agree	Strongly agree
... handwrite all characters taught in class.					
... handwrite only some of the characters taught in class.					
... type characters in a computer instead of handwriting them.					
... read characters but not handwrite them.					
... write words only in Pinyin instead of in characters.					

... communicate orally only, without any writing tasks (characters or Pinyin).					

Other (please specify): _____

Section 5: Demographic Information

Finally, please tell us more about you and your language teaching background. The information you provide is ONLY for categorizing and analyzing survey data. Any facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

1. What is the name of the institution where you currently teach Chinese?

2. What is your gender?

- Male
- Female

3. What is your age?

- under 20
- 20-30
- 31-40
- 41-50
- 51 or older

4. Are you a native speaker of Chinese?

- Yes
 - No
-

5. What is the highest educational degree you have completed?

- BA
- MA
- PhD

6. What was your major or field in the highest degree completed? _____

7. How long have you been teaching Chinese, including full-time, part-time, and teaching assistant jobs, in a non-Chinese-speaking country (for example, the United States or Canada)?

- Less than two years

- Two years or more but less than three years
 - Three years or more but less than five years
 - Five years or more
-

8. In order to categorize survey data, I would like to ask you for your name and email address:

Name: _____

Email: _____

9. As a thank you for taking the survey, I would like to send you a copy of the survey results. Are you interested in receiving a report of this study? (Optional)

- Yes
- No

10. In order to better understand your survey responses, I might need to contact you to ask some additional questions. May I contact you for further information? (Optional)

- Yes
 - No
-

Thank you for completing our survey!

Appendix B

Chinese Student Survey

(It is presented as the online survey format.)

Thank you for agreeing to take this survey about whether to delay or not to delay teaching characters in Chinese as a foreign language. It should take you about 15 minutes.

Before you begin, please read over the Informed Consent information on the following page. Click "Next" to continue.

Georgia State University
Department of Applied Linguistics & ESL
Informed Consent

Title: The Teaching and Learning of Chinese as a Foreign Language (CFL) in the U.S.:
To Delay or Not to Delay the Character Introduction

Principal Investigator: PI: Dr. John Murphy
Student PI: Lijuan Ye
Sponsor:

I. Purpose:

The purpose of the study is to investigate current Chinese program structures along with Chinese teachers' and students' beliefs about when to introduce Chinese characters as part of first-semester courses in the U.S. Participation will require about 15 minutes of your time.

II . Procedures:

If you decide to participate, you will fill out a questionnaire.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Results from the investigation will benefit the teaching and learning of Chinese as a foreign language in the U.S.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time.

VI. Confidentiality:

1 Consent Form Approved by Georgia State University IRB December 02, 2010 - December 01,

2011. We will keep your records private to the extent allowed by law. Dr. John Murphy and Lijuan Ye will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use a study number rather than your name on study records. The information you provide will be stored password- and firewall-protected computer. Any facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

You can print a copy of the form for your records.

IF YOU AGREE TO PARTICIPATE IN THIS RESEARCH, PLEASE CLICK THE "Next" BUTTON.

Section 1: Chinese Language Learning Experience

In this section, please tell us about your experiences learning Chinese.

1. When did you start studying Chinese?

- Chinese Saturday school
- Elementary school
- Middle school
- High school
- College
- Other (please specify)

2. What is the most important reason you take Chinese?

- Required for my major
- For career goals
- Interested in Chinese language, literature and culture
- To communicate with relatives and friends
- Other (please specify)

3. Altogether, how long have you studied Chinese in school?

- Less than six months
- Six months or more but less than one year
- One year or more but less than two years
- Two years or more but less than three years

- Three years or more but less than four years
- Four years or more

Section 2: Importance and Difficulty

Think about different skills in the first-semester Chinese course.

1. How IMPORTANT are the following skills in a first-semester Chinese course?

	Unimportant	Slightly important	Important	Very important	Extremely important
Speaking					
Listening					
Reading (in characters)					
Reading (in Pinyin)					
Writing (in characters)					
Writing (in Pinyin)					

2. How DIFFICULT are the following skills for you in the first-semester Chinese course?

	Not difficult at all	Slightly difficult	Difficult	Very difficult	Extremely difficult
Speaking					
Listening					
Reading (in characters)					
Reading (in Pinyin)					
Writing (in characters)					
Writing (in Pinyin)					

Section 3: Beliefs

1. When you first studied Chinese, when did your teacher start teaching you to write in characters?

- At or near the beginning of the first semester
- In the middle of the first semester
- Toward the end of the first semester
- At or near the beginning of the second semester
- At or near the beginning of the second year
- Other (please specify)

2. For optimal learning, when do you think is the ideal time for you to start writing characters?

- At or near the beginning of the first semester
- In the middle of the first semester
- Toward the end of the first semester
- At or near the beginning of the second semester
- At or near the beginning of the second year
- Other (please specify)

3. Please explain your decision in the previous question:

4. The following statements are sometimes used to justify why learning characters should be delayed. Whether or not you believe learning characters should be delayed, please indicate whether you think these statements are good reasons or not.

<i>Learning characters should be delayed because ...</i>	Not a good reason at all	Not a very good reason	Neutral/Not sure	Good reason	Excellent reason
1. ... it is too much for students to learn all four skills (speaking, listening, reading, and writing) from the very beginning.					
2. ... characters are too difficult for native English speakers to learn from the beginning of instruction.					
3. ... when children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.					
4. ... some students may not need to learn how to read and write					

in Chinese.					
5. ... a solid foundation in speaking and listening skills can better ensure that students can later progress to reading and writing.					
6. ... it is more effective to focus on speaking and listening using pinyin and later to shift the focus to reading and writing.					

Other (please specify): _____

5. The following statements are sometimes used to justify why learning characters should NOT be delayed. Whether or not you believe learning characters should not be delayed, please indicate whether you think these statements are good reasons or not.

Students should learn characters from the beginning because ...	Not a good reason at all	Not a very good reason	Neutral/Not sure	Good reason	Excellent reason
1. ... characters are an important part of Chinese language.					
2. ... everything in China is written in characters.					
3. ... learning characters right away makes it less difficult to learn Chinese in the long run.					
4. ... children in China learn characters from the first grade.					
5. ... students eventually have to learn characters anyway.					
6. ... there are many homophones (i.e., the same Pinyin can have many different meanings) in Chinese.					

Other (please specify): _____

6. Now that you have read all these arguments, imagine a scenario in which you are going to freshly start to study Chinese. At which of the following times would you like your teachers to

start teaching you to write in characters?

- At or near the beginning of the first semester
- In the middle of the first semester
- Toward the end of the first semester
- At or near the beginning of the second semester
- At or near the beginning of the second year
- Other (please specify)

7. Which of the following are the most persuasive reasons for your choice in question number 1 above? (Check up to THREE reasons)

- Characters are an important part of Chinese language.
- Everything in China is written in characters.
- Learning characters right away makes it less difficult to learn Chinese in the long run.
- Children in China learn characters from the first grade.
- Students eventually have to learn characters anyway.
- There are many homophones in Chinese (i.e., the same Pinyin can have many different meanings).
- It is too much for students to learn all four skills (speaking, listening, reading, and writing) from the very beginning.
- Characters are too difficult for native English speakers to learn from the beginning of instruction.
- When children in China begin to learn how to read and write in Chinese, they already know how to speak Chinese.
- Some students may not need to learn how to read and write in Chinese.
- A solid foundation in speaking and listening skills can better ensure that students can later progress to reading and writing.
- It is more effective to focus on speaking and listening using Pinyin and later to shift the focus to reading and writing.
- Other (please specify)

8. What are your opinions about the requirement of learning characters in the first-semester Chinese course? Please indicate the extent to which you agree or disagree with each statement.

In the first-semester Chinese course, students should be required to...	Strongly disagree	Disagree	Neutral/Not sure	Agree	Strongly agree
... handwritten all characters taught in class.					

... handwrite only some of the characters taught in class.					
... type characters in a computer instead of handwriting them.					
... read characters but not handwrite them.					
... write words only in Pinyin instead of in characters.					
... communicate orally only, without any writing tasks (characters or pinyin).					

Other (please specify): _____

Section 4: Demographic Information

Finally, please tell us more about you and your language learning background. The information you provide is ONLY for categorizing and analyzing survey data. Any facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

1. What is the institution name where you currently take Chinese?

2. What is the course level of your current Chinese course?

- First semester of first year
- Second semester of first year
- First semester of second year
- Second semester of second year
- Third year
- Fourth year

3. What is your Chinese professor's name? _____

4. What is your gender?

- Male
- Female

5. What is your age?

- under 18
- 18-21
- 22-25

- 26 or older

6. What is your native language? (Check all that apply)

- Chinese
- English
- Japanese
- Korean
- Spanish
- Vietnamese
- Other (please specify)

7. Which languages are spoken in your home? (Check all that apply)

- Chinese
- English
- Japanese
- Korean
- Spanish
- Vietnamese
- Other (please specify)

8. A heritage speaker of Chinese is someone who is to some degree bilingual in English and Chinese and/or who has been raised with a strong cultural connection to Chinese through family interaction. According to this definition, are you a heritage speaker of Chinese?

- Yes
- No
- Not sure

9. What is your major? _____

10. What year are you in school?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate
- Continuing Education

11. Have you ever studied abroad in China?

- Yes
- No

12. Are you currently enrolled in a Chinese course?

- Yes
- No

- Not sure yet

13. Please explain your decision in the previous question:

14. In order to categorize survey data, I would like to ask you for your name and email address:

Name: _____

Email: _____

15. In order to better understand your survey responses, I might need to contact you to ask some additional questions. May I contact you for further information? (Optional)

- Yes
- No

Thank you for completing our survey!

Appendix C

Interview Questions for Chinese Teachers

1. How long have you been teaching Chinese in the U.S.?
(在美国, 你教了几年中文?)
2. What instructional challenges have you had in teaching first-semester course(s)?
(初级课程的教学中, 你有哪些教学挑战?)
3. What challenges do your students have in learning first-semester Chinese?
(初级课程的教学中, 你的学生有哪些学习上的挑战?)
4. (不推迟) Is the learning of characters difficult for your students?
(学习汉字对你的学生来说难吗?)
 - If so, why do you think characters are difficult for them?
(如果是, 你觉得为什么难?)
 - If so, in what ways have you tried to address learners' difficulties?
(如果是, 你是如何帮助学生克服困难的?)
- 5A (不推迟) Is it useful to introduce characters to first-semester learners? Why?
(不推迟教初级学生汉字有用吗? 。。。为什么?)
- 5B (推迟) Is it useful to delay the introduction of characters to first-semester learners? Why?
(推迟教初级学生汉字有用吗? 。。。为什么?)
6. Can you discuss some requirements of learning characters first-semester course(s)?
(你能不能谈一下关于汉字教学的几个方面?)
 - (推迟) When do teachers start to introduce characters?
(你们什么时候开始教汉字?)
 - For example, do you differentiate between character recognition and production? Why?
(比如说, 你区分汉字认和读吗?)
 - Do you teach learners how to type characters?
(你教学生如何电脑输入汉字吗?)
 - Do you differentiate the requirements of handwriting and typing characters? Why?
(你区分汉字手写和电脑输入的要求吗?)
 - How many characters are introduced?
(你大概教多少个汉字?)
 - What kind of scripts do you use in daily teaching and student homework?
(课堂教学和学生作业, 用的文字是什么? 汉字, 拼音, 还是英文?)
7. Please discuss whether or not you are satisfied with your students' performance in the first-semester course(s)?
(你能不能谈一下, 你对初级班学生的表现满意度?)

- Are there any changes that could be made to help ensure that students learn better?
(你觉得还有什么地方可以改进, 以便更好地帮助学生学地更好?)
 - If so, what changes?
(如果有, 什么样的改变?)
 - If not, why not?
(如果没有, 为什么?)

Appendix D

Interview Questions for Chinese Students

1. Why are you studying Chinese?
 - How long have you been studying Chinese?
 - What level would you eventually like to achieve?
 - How do you plan to use the knowledge of Chinese in the future?
2. Which skills do you consider to be more important: speaking, listening, reading, and writing? Why?
3. Which skills do you consider to be more difficult: speaking, listening, reading, and writing?
 - Why?
 - What are you doing to address those difficulties?
 - What are some of the ways your teachers were able to help you?
4. Do you think teachers should delay teaching characters in the first-year classes? For example, in such classes, you will start learning to read/write characters in the middle of the first-semester, beginning of the second semester or beginning of the second-year.
 - Yes, please explain why and how long do you think teachers should delay teaching characters?
 - No, please explain why.
5. Do you learn how to type Chinese with computer technologies?
 - Yes, do you prefer handwriting characters or typing them in the computer?
 - No, do you want to learn it?
6. How do you like your textbook?
7. Are there any changes that could be made to help you learn better?
 - Yes, what changes?
 - No, why not?
8. Do you plan to continue to study Chinese next semester?
 - Yes, why?
 - No, why not?

Appendix E

Consent Form approved by the Institutional Review Board (For Teachers)

1

Georgia State University
Department of Applied Linguistics & ESL
Informed Consent

Title: The Teaching and Learning of Chinese as a Foreign Language (CFL) in the U.S.:
To Delay or Not to Delay the Character Introduction

Principal Investigator: PI: Dr. John Murphy
Student PI: Lijuan Ye

Sponsor:

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate current Chinese program structures along with Chinese teachers' and students' beliefs about when to introduce Chinese characters as part of 1st year courses in North America. You are invited to participate because you are a Chinese program director or a Chinese teacher in postsecondary institutions in North America. A total of 200 participants will be recruited for this study. Participation will require 10 minutes of your time.

II. Procedures:

If you decide to participate, you will fill out a questionnaire.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about current Chinese program structures along with Chinese teachers' and students' beliefs about when to introduce Chinese characters as part of 1st year courses in North America. Results from the investigation will benefit the teaching and learning of Chinese as a foreign language in North America.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

APPROVED

Consent Form Approved by Georgia State University IRB December 02, 2010 - December 01, 2011

We will keep your records private to the extent allowed by law. Dr. John Murphy and Lijuan Ye will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use a study number rather than your name on study records. The information you provide will be stored password- and firewall-protected computer. Any facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Contact Dr. John Murphy and Lijuan Ye at 404-917-3856 or esliya@langate.gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

You can print a copy of the form for your records.

If you agree to participate in this research, please click the continue button.

APPROVED

Consent Form Approved by Georgia State University IRB December 02, 2010 - December 01, 2011

Consent Form approved by the Institutional Review Board (For Students)

1

Georgia State University
Department of Applied Linguistics & ESL
Informed Consent

Title: The Teaching and Learning of Chinese as a Foreign Language (CFL) in the U.S.:
To Delay or Not to Delay the Character Introduction

Principal Investigator: PI: Dr. John Murphy
Student PI: Lijuan Ye

Sponsor:

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate current Chinese program structures along with Chinese teachers' and students' beliefs about when to introduce Chinese characters as part of 1st year courses in North America. You are invited to participate because you are a student of Chinese in North America. A total of 40 participants will be recruited for this study. Participation will require 30 minutes of your time.

II. Procedures:

If you decide to participate, you will first fill out a questionnaire and then be interviewed. The questionnaire will take about 10 minutes and the interview will take about 20 minutes.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about current Chinese program structures along with Chinese teachers' and students' beliefs about when to introduce Chinese characters as part of 1st year courses in North America. Results from the investigation will benefit the teaching and learning of Chinese as a foreign language in North America.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

APPROVED

Consent Form Approved by Georgia State University IRB December 02, 2010 - December 01, 2011

We will keep your records private to the extent allowed by law. Dr. John Murphy and Lijuan Ye will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use a study number rather than your name on study records. The information you provide will be stored password- and firewall-protected computer. Any facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Contact Dr. John Murphy and Lijuan Ye at 404-917-3856 or esliyya@lagate.gsuedu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be audio recorded, please sign below:

Participant	Date

Principal Investigator or Researcher Obtaining Consent	Date

APPROVED

Consent Form Approved by Georgia State University IRB December 02, 2010 - December 01, 2011

Appendix G

Table G.1. Frequency Count and Percent of Teacher and Student Survey Participants for Each Timing Structure

Group	At or near the beginning of the first semester	In the middle of the first semester	Toward the end of the first semester	At or near the beginning of the second semester	At or near the beginning of the second year	Other
Teacher (n = 192)	156 (81.3)	17 (8.9)	5 (2.6)	6 (3.1)	0	8 (4.2)
Student (n = 914)	701 (74.7)	90 (9.8)	18 (2.0)	85 (9.3)	13 (1.4)	7 (.8)

Note. Percent value is included in the parenthesis.

Appendix H

Table H.1. Teachers' Rationales and Examples for Not Delaying Teaching Characters

Reason	Example
Learning characters from the beginning makes it less difficult in the long-run. (31)	<p>"We find that to help students develop their proficiency in both Pinyin and characters at the same time actually makes it easier for them to continue to the higher level" (Teacher ID: 1017).</p> <p>"Writing characters helps students retain vocabulary better and learn more about the Chinese culture" (Teacher ID: 1051).</p>
Characters are an essential aspect of the Chinese language. (27)	<p>"Character is an important part of the Chinese language. I don't see any reasons why it should not be introduced from the beginning" (Teacher ID: 1097).</p> <p>"It's important to let students understand that characters is an essential part of the Chinese language" (Teacher ID: 1157).</p>
Students are interested in learning characters. (14)	<p>"Character recognition and writing are fun to most of my students" (Teacher ID: 1093).</p> <p>"Most (college) students want to learn to write characters as part of the Chinese learning experience. Ironically, for many it seems to be a significant motivating factor, and for some it seems to be one of the primary sources of frustration" (Teacher ID: 1150).</p> <p>"From my experiences the students enjoy character writing as much as speaking Chinese. They found that Chinese characters are fascinating" (Teacher ID: 1167).</p> <p>"We also found that learning the characters is one thing that attracts American students to learn Chinese instead of other languages" (Teacher ID: 1079).</p>
If characters are delayed, students are likely to rely on Pinyin. (8)	<p>"If you don't teach at the beginning, it is hard to teach the character later because students are used to writing and reading Pinyin" (Teacher ID: 1073).</p> <p>"I think once the Pinyin symbols entered their mind as written Chinese, it would be very hard to replace with characters. I want the students be able to go from characters to English and vice versa without going through Pinyin" (Teacher ID: 1131).</p>

Table H.2. Teachers' Rationales and Examples for Delaying Teaching Characters

Reason	Example
Speaking and listening are more important than reading and writing. (12)	<p>"For students whose first language does not utilize a tonal system, one of the biggest challenges is for them to acquire the ability to recognize the different tones in Chinese. The earlier, the better. So in the program at my university, we devote a big portion of time in the first semester for students to work on the tones and pronunciation (using the Pinyin system). Thus, character writing is not the top priority for first-semester students. I believe this allows them to focus their attention/time on the phonological aspect of Chinese at the beginning of the Chinese study. After all, they will have more time to work on character writing at a later stage. So there is no need to push it at the very beginning" (Teacher ID: 1164).</p>
To teach all aspects of speaking, listening, reading, and writing constitutes a heavy cognitive load for students and makes it hard to keep students' interest in learning Chinese. (9)	<p>"If students are asked to write Chinese characters at the very beginning, they will probably be intimidated by the difficulty of Chinese" (Teacher ID: 1130).</p> <p>"We should give students more confidence when they start to learn Chinese" (Teacher ID: 1122).</p> <p>"After the students become interested in Chinese by speaking and listening, they may want to continue to learn Chinese. Then it is a good time to introduce characters. If they are introduced characters at the beginning and required to write them, they may be scared and give up" (Teacher ID: 1029).</p>
It is easier for students to learn reading and writing after they lay a solid background in speaking and listening. (8)	<p>"Students will have an easier time to learn characters and learn them in a more systematic manner (independent of speaking text) if they have one year to build up their speaking and listening skills" (Teacher ID: 1156).</p> <p>"Research has shown that there is no difference in student performance in terms of speaking and listening depending on when characters are introduced. However, reading and writing performance increases when they are introduced after a solid foundation in speaking and listening has been achieved. Research on reading in Chinese has also shown that there is an aural component to even native speaker silent reading so an understanding of the Chinese phonological system is necessary to become a successful reader of Chinese. Many years of experimentation with my own classes has shown these two findings to be true. I have started groups off with all skills at the same time and have staggered skills. The results are striking in that the groups of students in which I have staggered skills all have reached higher proficiency levels more quickly than the groups that I taught all four skills simultaneously" (Teacher ID: 1163).</p>

Table H.3. Students Rationales and Examples for Not Delaying Teaching Characters

Reason	Example
It is important to get students used to characters as early as possible. (150)	<p>“Since it’s the most difficult part of the language to learn, it should be started as soon as possible” (Student ID: 2483).</p> <p>“More time to learn the characters and more practice” (Student ID: 2299).</p> <p>“There are so countless Chinese characters to cover. It is ideal to learn characters from the very beginning” (Student ID: 2607).</p> <p>“If both Pinyin and characters are introduced at the same time, it is easier and you will not have to “re-learn” the words” (Student ID: 2400).</p> <p>“You need to start right away so you get used to them... ” (Student ID: 2846).</p> <p>“Allows students to quickly adjust to Chinese characters instead of relying on Pinyin” (Student ID: 2054).</p>
Characters are an essential aspect of the Chinese language. (145)	<p>“Characters are a crucial aspect of the Chinese language” (Student ID: 2127).</p> <p>“You should learn the characters as you learn the Pinyin because real Chinese is written in characters and thus it is important to learn characters.” (Student ID: 2738).</p> <p>“I think the ability to recognize and write characters is nearly as important as the ability to speak and understand oral Chinese because many interactions with the Chinese culture are done through written form: reading a menu in Chinese, directions on a map or in the airport, ability to get the gist out of a newspaper article forwarded by a Chinese friend, during my time in China I often found that writing out what I was trying to say was a better way of communication given the difficulty of speaking with local accents...” (Student ID: 2465).</p>
Learning characters from the beginning makes it less difficult in the long-run.(86)	<p>“I think that if I would have started my Chinese learning in Pinyin instead of characters it would have been a lot harder for me to transition to learning to use characters instead of Pinyin, so although it is more difficult initially to start using characters early on, it pays off in the long run in my opinion” (Student ID: 2820).</p> <p>“I think that starting to learn characters right away helps the mind</p>

	<p>process the information better” (Student ID: 2001).</p> <p>“So many words have the same Pinyin, so I think it’s important to distinguish words from early on” (Student ID: 2850).</p>
It is important to connect characters with sound and meaning early. (76)	<p>“If a student does not write characters from the beginning, they will think of the Pinyin instead, which is useless for written Chinese. They need to be able to associate characters with their pronunciations” (Student ID: 2913).</p> <p>“It’s more work to learn the characters from the start, but I think it makes learning them easier if you can associate the character to the word you’re learning to speak” (Student ID: 2910).</p>
Learning characters helps learn other skills. (43)	<p>“Reading and writing characters helps me to remember the words and their meaning much more easily than only remembering the Pinyin” (Student ID: 2120).</p> <p>“Learning to write characters early will help speaking and listening skills and strengthen vocabulary” (Student ID: 2276).</p>
If characters are delayed, students are likely to rely on Pinyin. (26)	<p>“If you wait too long to start writing characters then you might get too dependent on Pinyin” (Student ID: 2853).</p> <p>“The earlier a student is exposed to characters, the easier the transition to thinking, reading, and writing them will be. I think that students have a tendency to rely heavily on Pinyin (due to familiarity to English) but as ultimately they need to use characters, the reliance is detrimental to their learning” (Student ID: 2149).</p>
Chinese characters convey culture. (7)	<p>“I think that the writing of characters is also a big part of Chinese culture and the Chinese mentality, which is important to know when learning the language” (Student ID: 2543).</p>

Table H.4. Students' Rationales and Examples for Delaying Learning Characters

Reason	Example
It is easier for students to learn reading and writing after they lay a solid background in speaking and listening. (137)	<p>"I feel that if a student has an initial base of vocabulary and has acquired minimal listening skills it will be easier to identify the characters with what is heard and what is seen on paper, the white-board, or in a textbook" (Student ID: 2030).</p> <p>"You need a good base of a few words with which you can communicate first. Also you don't want to scare students away by bombarding them with too much to memorize" (Student ID: 2152).</p> <p>"Lets you get into the swing of things before hitting you with seemingly complicated characters" (Student ID: 2162).</p>
To teach all aspects of speaking, listening, reading, and writing constitutes a heavy cognitive load for students and makes it hard to keep students' interest in learning Chinese. (42)	<p>"Because I speak Chinese at home, speaking is quite easy for me, but many of my fellow students have never spoken the language before. Sometimes I think, although the teacher isn't going too fast for me, for a lot of non-native speakers, this might be too fast paced. I speak the language so its easy for me to make sentences, but for them, even pronouncing the words may be extremely difficult so I feel teachers should focus more on speaking and listening first then move on to writing" (Student ID: 2199).</p> <p>"As a student with absolutely no Chinese background, it is really tough for me to get the hang of speaking, writing in Pinyin and writing with characters at the same time. Many of the students in my class are of Chinese heritage and have background with speaking and hearing Chinese so they are at an advantage over me which makes learning everything at once extremely discouraging and overwhelming" (Student ID: 2751).</p> <p>"Because you do not want to overwhelm students with too much material in the beginning when they are still struggling with pronouncing the tones correctly and with listening" (Student ID: 2435).</p> <p>"It is important to write characters, but the ideal time is in the middle of the first semester so as not to scare prospective Chinese learners away" (Student ID: 2121).</p>
Speaking and listening are more important than reading and writing. (23)	<p>"Characters in my opinion are less useful to most people taking only a few Chinese courses. While I feel reading them is quite important, writing them is much less so. The most important thing should be speaking and listening" (Student ID: 2289).</p>