

LITERACY INSTRUCTION OF CHINESE AS A SECOND LANGUAGE FOR  
HERITAGE LANGUAGE LEARNERS

by

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George Mason University  
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## **DEDICATION**

This dissertation is dedicated to my parents, my parents-in-law, my loving husband Steve and my precious daughter, Olivia.

獻給我的父母及家人。

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## LIST OF ABBREVIATIONS

Chinese as a Heritage Language .....	CHL
Heritage Language .....	HL
Chinese as a Second Language .....	CSL
Chinese as a Foreign Language .....	CFL
First Language .....	L1
Second Language .....	L2
Foreign Language .....	FL
Task-Based Language Teaching .....	TBLT
Communicative Language Teaching .....	CLT
Zone of Proximal Development .....	ZPD

## **ABSTRACT**

### **LITERACY INSTRUCTION OF CHINESE AS A SECOND LANGUAGE FOR HERITAGE LANGUAGE LEARNERS**

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China's rapid economic development and growing political influence has resulted in increased emphasis on Chinese as a Second Language (CSL) and Chinese Foreign Language (CFL) teaching. Learning to read and write Chinese is a great challenge for most learners of Chinese; however, classroom-based research, including studies that explore literacy approaches when Chinese is the target or second language are rare. This study explored instructional approaches employed by Chinese language teachers and highlighted literacy challenges faced by students in college-level Chinese heritage language (CHL) classes. Both quantitative and qualitative methods were used to explore literacy instruction in Chinese as a second language classes for heritage language learners in Taiwan. A variety of data sources were utilized to explore the complex nature of literacy instruction for three Chinese language teachers and six CHL learners. The results here indicate that literacy instruction included both traditional and non-traditional approaches. Instructors used approaches that often blended traditional with less -

traditional practices. CHL learners articulated a positive attitude toward the literacy instruction and expressed that the majority of literacy activities were helpful. However, CHL learners stressed that other practices were less helpful. Noteworthy was that CHL learners faced specific challenges, regardless of the instructional approach undertaken at the character level as well as word and sentence levels. Recommendations are made for research and language education. Findings have implications for both CHL and CFL classrooms.

## CHAPTER ONE

The number of learners of Chinese as a Second (CSL) or Foreign Language (CFL) has increased dramatically this decade and Chinese has become an important global or world language. Chinese is the world's most widely used language with 1.4 billion native speakers communicating in Chinese (Chmelynski, 2006). Approximately 40 million non-native speakers are learning Chinese at present and it is estimated that there will soon be 100 million by the year 2010 (Wang & Higgins, 2008). This dramatic increase of interest in learning Chinese is due to the increasing importance of China in the world's economy and politics (Li, 2004; Wang & Higgins, 2008) and the Chinese government's promotion of the Chinese language worldwide (Duff, 2008; Li, 2004; Wang & Higgins, 2008). For example, Hanban, a governmental institution of the Peoples Republic of China affiliated with the Chinese Ministry of Education is devoted to promoting the study of Chinese language and culture, including "initiating policies and sponsoring activities of Chinese language studies, cultural exhibitions and exchanges" (Zhao & Huang, 2010, p. 129). According to China Daily USA, as of 2014 there are 440 Confucius Language Institutes in 120 countries, including the United States, South Korea, and Japan. In the U.S. more than 100 Confucius Language Institutes have been established, including one at George Mason University.

There are two types of Chinese learners (besides native speakers of Chinese): Chinese as a Foreign Language (CFL) and Chinese as a Second Language (CSL). CFL refers to those learning Chinese in countries where Chinese is not a primary or official language but is considered a foreign language, such as the United States, the United Kingdom, Japan, South Korea, and so forth. For instance, English is a native language in the United States while Chinese is a foreign language. CSL refers to those learning Chinese in places such as Taiwan, Mainland China, Hong Kong and Singapore where people use Chinese to communicate. CSL learners in Taiwan are exposed to the Chinese language since Chinese is an official language for communication. According to Zhao and Huang (2010), the enrollment of learners of Chinese as a second/foreign language in mainland China has dramatically increased from “36,000” to “110,000” over the past decade (p. 128). In Taiwan, each year there are nearly 6,000 adult learners of Chinese from 60 countries studying at the largest Chinese language center. CSL learners in Taiwan include those who have prior exposure to Chinese language and culture due to their Chinese ethnic background and those who have no Chinese ethnic background and have had little previous exposure to Chinese language and culture. In this study, I focus on the former group. They are called learners of Chinese as a heritage language (CHL). For the purpose of this study, CHL refers to Chinese Americans whose parents are originally from Taiwan (although CHL could refer to any persons of Chinese descent from the Chinese diaspora). They were either born in Taiwan but later moved to the U.S., or they were born in the U.S. or another country where English was their dominant language. Mandarin Chinese was spoken in home and community settings to various degrees but

Chinese was seldom used for reading or writing . In order to teach this unique learner group, native Chinese language teachers may need to rethink instructional methods and literacy activities to better support literacy competency for their students.

### **Statement of Problem**

Unlike spoken language, literacy can only be acquired through instruction . Hung (2000) claimed that “speech is innate and writing is acquired” (p. 41). Everson (2009) also pointed out that “reading is a skill that must be learned through instruction” (p. 98). Thus, he highlighted the importance of literacy instruction in the language learning process.

Learning to read and write Chinese is a great challenge for most learners of Chinese (Everson, 1998; Li & Duff, 2008; Li, 2004; Xiao, 2009; Shen & Jiang, 2013). Everson (2008) claimed, “no area is more challenging than teaching learners of Chinese to read and write” (p. 70). A number of challenges are presented in learning Chinese writing as L2 or FL. First, one factor is the great difference between Chinese and English scripts (Everson, 2009). In this study, students’ dominant language is English. Anderson & Chen (2013) indicated that “Chinese offers the maximum contrast with alphabetic writing systems used in the West” (p. 1). Chinese has been categorized as one of the Category IV languages by the U.S. Department of Defense. Category IV languages include Japanese, Korean and Arabic. According to Everson (1994), Americans require an average of 1320 contact hours to attain proficiency in category IV languages. This compares to 480 contact hours required for Americans to attain proficiency in Category I languages, such as Spanish and French. Chinese as a logographic language is very

different from English, which is an alphabetic language. The differences between the two writing systems complicate the learning process of reading and writing in Chinese. There are three major writing systems in the world: alphabetic, syllabic, and logographic (Hung, 2000). English, an alphabetic language, represents spoken language through its written scripts. In other words, English has grapheme-phoneme correspondence. Japanese is a syllabic language. In Hiragana and Katakana sound is represented at the syllable level instead of phoneme level. There is rough correspondence to a spoken syllable. Chinese is a logographic language. A logograph is a grapheme which represents a word. However, “logo”, meaning “word” in Greek does not infer that a Chinese character represents a word (Hung, 2000). Rather, Chinese characters represent lexical morphemes, the smallest unit of meaning. Therefore, logographic language provides more direct meaning when compared to alphabetic and syllabic languages. However, Chinese and English are non-cognate language groups. Alphabetic readers cannot take advantage of using their alphabetic knowledge to pronounce written characters (Hayden, 2004).

Second, unlike native L1 readers and writers, the imperfect knowledge of speaking and listening skills before learning to read and write (Everson, 2009; Li, 1998) is one major factor making the task of reading and writing in Chinese challenging. For CHL learners, support of listening and speaking to reading and writing cannot be completely expected because they have seldom communicated in spoken Chinese in their life.

Third, different grammatical systems are the last obstacle for learners to reading and writing in Chinese. Comprehending Chinese sentences relies on contextual analysis due to the absence of syntactic cues present in languages, such as English. For example,

Everson (2009) indicated that printed Chinese has “few or no inflectional morphemes to signal tense, gender, case or number or half of Chinese sentences do not have clear subjects”( p. 103) for speakers of languages that require a clear subject . Due to these obstacles, reading and writing in Chinese can become insurmountably challenging.

It is obvious that the perceived challenge of the written Chinese language and the characteristics of CHL learners make CSL/CFL literacy instruction more challenging. This is because, in order to support literacy development of CHL learners, Chinese language teachers need to identify instructional methods and activities to better develop literacy competence. Thus, understanding how teachers of Chinese, who are native speakers of Chinese can better inform their literacy instruction is a major priority. Particularly, attention is required in literacy instruction targeting how to prepare CHL learners for reading and writing Chinese. In addition, it is important to identify what challenges CHL learners encounter when they are learning to read and write.

Once CHL learners complete their beginning Chinese language classes, they will reach intermediate-level and there are increasing numbers reaching the intermediate level Chinese language proficiency . According to the steering committee of Test of Proficiency-Huayu, (TOP), a testing center under the direction of the Ministry of Education of the Republic of China in Taiwan, there were 5213 test takers taking the intermediate-level TOP test from 2003-2011. This compares to 2262 test takers at the beginning level, and 2430 at the advanced level. TOP is charged with administering the assessment of learners of Chinese worldwide. In the past, more studies have investigated or explored issues of beginning -level Chinese (Li, 1998; Packard, Chen, Li, Wu, Gaffney

& Li, 2006; Shen, 2005; Shen & Jiang, 2013; Wang, Perfetti & Liu, 2003), characterizing the development of oral and aural ability while research on development of reading and writing competence has largely been neglected. Thus, there is a greater need for research on intermediate-level Chinese language teaching that emphasizes the development of reading and writing.

Comparatively fewer studies specifically explore young adult learners learning Chinese as L2 in language centers. A large body of research is concerned with Chinese as a foreign language (CFL) context, with many studies of undergraduates in English-speaking countries, such as the United States, Canada, and the United Kingdom (Hayes, 1998; Shen & Ke, 2007; Wang, Perfetti & Liu, 2003). The former learners take Chinese language as a credit course in a formal university setting while the target participants of my study were learners taking Chinese language as a non-credit course in a Chinese language center.

Instead of focusing on instructional methods in reading and writing or literacy, a number of previous studies were concerned with second/foreign language teaching methods in the four language skills- listening, speaking, reading and writing. These studies also involved various ages of the learner population and various educational institutions, including immersion schools, university CFL classrooms, CSL language centers and CSL high-school American schools and so on. In addition, most of the studies were concerned with beginning learners of Chinese because increasing numbers of learners of Chinese were beginning their studies as when Chinese was first becoming a

popular foreign language all over the world. With the increase of intermediate learners, research is needed to explore this relatively unknown area.

This study aims to identify the instructional methods and challenges of reading and writing Chinese in order to inform literacy instruction of Chinese as a heritage language in Taiwan. The purpose of this study is to provide an in-depth interpretive analysis of intermediate-level Chinese literacy taking place at a Chinese language center in a university in Taiwan. The research questions that inform this study are:

### **Research Questions**

1. What is the nature of literacy instruction (reading and writing) in intermediate Chinese language class?
2. How do CHL learners perceive and react to intermediate CHL language courses?
3. Does this literacy instruction support CHL learners' literacy competence?
4. What reading and writing challenges do adult CHL learners in intermediate-Chinese language classrooms encounter?

### **Definition of Terms**

In this section, terms used in this study are presented.

**Learners of Chinese as a heritage language (CHL)** : Learners who are raised in a home where a non-English language is spoken, who speak or at least understand the heritage language (HL), and are to some degree bilingual in English and the HL. (Valdes, 2001, p. 38).

**Pinyin:** a system of “romanization (phonetic notation and transliteration to roman script) for Mandarin Chinese” developed in the People’s Republic of China (Han & Chen, 2010, p. 248).

**Zhuyin or Mandarin phonetic symbols:** a system of phonetic notation used to represent pronunciation of Chinese characters in Taiwan. For example, 美國 (America) Mei/3/guo/2/ in pinyin equally represents ㄇㄟˊ/ㄍㄨㄛˊ/ in zhuyin, in which ㄇ would equal /m/, ㄟ=/ei/, ㄍ=/g/, ㄨ=/w/, ㄛ=/o/.

**Orthography:** Orthography is the structure of a writing system which refers to the graphic features of the scripts. There are three levels of Chinese orthography: Strokes, radicals and characters.

**Chinese characters:** Characters are the building blocks of written Chinese. In Chinese orthography, characters are the largest unit. Each character is comprised of subcomponents, known as radicals.

**Radicals:** Radicals are the basic “functional components of complex Chinese characters” (Xiuli, 2008, p. 9). For instance, the radical ”口” (mouth) is used to form a number of characters, i.e., 吃 (eat) or 唱 (sing). A radical itself can be an independent character or it can occur as a subcomponent of a character. The character “木” (wood) is an example of the former and the character “江” (River) is an example of the latter. The radical ”氵” cannot stand independently as a character.

**Strokes:** Strokes are the smallest building materials for Chinese characters. They are meaningless and unpronounceable.

**Chinese word:** A Chinese word can be a character, two characters or multiple characters to render what in English would be a single word without word boundaries.

**Semantic-phonetic compound characters:** A semantic-phonetic compound character is composed of semantic and phonetic components. The semantic component, or radical gives a clue to predict the meaning of the whole character. The phonetic component, provides a clue to the pronunciation of the whole character. For example, in the character 晴 /qing2/ (sunny), the left part 日 is the radical, meaning sun whereas the right part, 青, pronounced /qing1/ is the phonetic component

**Literacy:** Ability to read and write. It involves decoding and encoding of a linguistically based symbol system and is driven by social processes relying on communication and meaning. A literate person should not only be capable of reading and writing the symbols, but also be capable of reading and writing in a socially proper context (Chevalier, 2004). Literacy in this study takes a broader view taking both linguistic and social aspects into account to provide a fuller view of looking at Chinese literacy in a classroom setting.

**Grapheme:** A grapheme is the smallest recognizable unit in the Chinese writing system. It can be a stroke, a radical or a single character.

**Morpheme:** A morpheme is the smallest meaningful linguistic component in Chinese, corresponding to one syllable in spoken form. A morpheme can also be defined as “an independent representation of a linguistic unit which has its own sound, meaning

and orthography”(Xiuli, 2008, p. 26). Each morpheme has its own precise meaning, unlike unpronounceable radicals.

**Compound Awareness:** “Knowledge about the meaning and structure of compound words as a combination of constituent morphemes” (Chen, Hao, Geva and Zhu, 2009, p. 618).

## CHAPTER TWO

This study focuses on identifying instructional methods of Chinese as a second language (L2) for heritage language learners and identifying reading and writing challenges of these learners in order to inform intermediate-level literacy instruction in a Chinese language center in Taiwan. Due to the dearth of classroom-based research on CSL and CFL literacy instruction, this literature review looks at relevant studies of reading and writing in Chinese. The findings from these studies can inform reading and writing pedagogy in L2/FL.

This literature review aimed at two major research bases on reading and writing of Chinese: reading and writing in Chinese as first language (L1) and reading and writing in Chinese as second language (L2) or foreign language (FL).

First, it covers the areas of research in Chinese reading and writing for native speakers of Chinese as L1 as well literacy instruction of Chinese as L1 aiming at instructional methods and classroom activities. Second, research on reading and writing of Chinese as L2/FL contexts will be discussed. Research on reading and writing of Chinese as FL is included in the literature review because of the greater paucity of research in reading and writing of Chinese as L2.

### **Research of Chinese as a First Language (L1)**

This section covers two major research bases on Chinese as L1. The first focuses on research of reading and writing in Chinese as L1 and the later discusses research on literacy instruction in Chinese as L1.

### **Reading and Writing in Chinese as a First Language (L1)**

Most studies of Chinese literacy as L1 looked at Chinese reading and writing from linguistic and cognitive perspectives. These studies, which are predominantly quantitative, investigated the role of radical awareness, morphological awareness, phonological awareness, and the character recognition process. Participants in literacy of Chinese as L1 include university undergraduates, who are skilled Chinese readers and writers, and elementary school pupils, who are novice readers and writers, in Mainland China and Taiwan. In terms of these two major populations, the goal of research on Chinese literacy is to better understand how written Chinese is acquired and how teaching and learning Chinese literacy takes place.

**Radical knowledge.** From the acquisition of Chinese as L1 during elementary school, retention, recognition, and production of Chinese characters and words are still the main focus of literacy learning. Because acquisition of these skills is laborious and taxing a number of studies were designed to determine what can facilitate moving beginning readers and writers of Chinese to fluency. Many studies focused on the effect of radical knowledge on Chinese reading. As defined above, radicals are the basic “functional components of complex Chinese characters” ( Xiuli, 2008, p. 9). For instance, the semantic radical “口” (mouth) is used to form a number of characters, for example, “吃” (eat). Three aspects are examined in the research of radicals: their functions, their

positions, and the sequencing of acquisition. These studies investigated the effect of radical knowledge on the ability to read Chinese characters and, in particular, on the overall ability to read.

Research studies on beginning Chinese literacy as L1 (Ho & Bryant, 1997; Ho & Ng, 2003; Shu & Anderson, 1997) discussed radical acquisition, the functions and positions of radicals, and time phases for acquisition. There are two types of radicals: (a) phonetic radicals, which provide a pronunciation cue, and (b) semantic radicals, which provide a meaning cue for the whole character. The conclusion of these studies confirmed the positive effect of radical knowledge on reading Chinese. The studies also demonstrated that children are aware of radicals and cognizant that radical analysis is helpful in reading characters. Radical knowledge increases with grade levels. Some studies indicated that children who speak Chinese as their L1 rely on phonological cues when reading characters. When processing a sentence, however, they rely on semantic radicals. Knowledge of the positions and forms of radicals is not yet well developed in first grade. Functions of semantic radicals are not identified until the third and fifth grades. Third and fifth graders can use radical analysis to infer the meaning of unfamiliar characters and to remember characters. Some researchers suggested Chinese pupils should receive explicit instruction on positional and functional regularities of radicals (Packard et al.)

Other researchers (Anderson et al., 2003; Feldman & Siok, 1999; Taft & Zhu, 1999) investigated semantic and phonetic radicals involving college undergraduates who were skilled readers and writers of Chinese as L1. Findings revealed that semantic

radicals did help students in processing written Chinese, and participants were able to respond faster when processing high combinability radicals (i.e., radicals that appear in a large set of characters). Shared semantic radicals influence the ease of character recognition. In other words, when the prime and target characters shared the same radical and its meaning was consistent with the whole character, target characters were easier to identify. However, some shared semantic radicals do not represent the same meaning as the whole character.

**Character processing.** A number of studies contributed to the knowledge construction of Chinese character processing. For example, Perfetti and Tan (1998) quantitatively investigated the sequencing of the activation process of Chinese character identification among Chinese undergraduates in south China. Their findings revealed that asynchronous phases occur in graphemic, phonological, and semantic information in the course of Chinese character identification. The activation of graphemic information occurs within 43 milliseconds (ms), followed by phonological information within 57 ms, and by semantic information within 85 ms. While phonological and semantic knowledge can be accessed at the same time, access to graphic information was found to be phrase - incompatible with phonological or semantic information. Phonological activation precedes semantic activation because of its one -to-one mapping, whereas one character has multiple meanings. Unlike English, in which word identification occurs with its graphic input, Chinese character identification requires semantic and phonological information to follow a complete specification of its graphic input.

**Morphological awareness.** Morphological awareness refers to the process of accessing the meaning of a morpheme. In Chinese, a morpheme can be a single character or a word. Thus, morphological awareness can be the investigation of character analysis or of the morphological structure of a word, which can be formed from multiple characters. Research studies concentrating on the effect of morphological awareness on vocabulary and reading acquisition did not begin until the late 1990s. Numerous studies (Chen et al., 2009; Chung & Hu, 2007; Ku & Anderson, 2003; Packard et al., 2006) have all reached the conclusion that there is an association between morphological awareness and vocabulary and reading acquisition and that morphological awareness develops with age and with increasing language experiences. The studies conducted by Chen et al. (2009) and Packard et al. (2006) focused on determining what types of morphology instruction were helpful in word and reading acquisition. Helpful morphological instruction includes: (a) identification of the meaning of a given character or morpheme in a multi-morpheme word and (b) identification of a head morpheme and later combination of morphemes. Additionally, studies by Ku and Anderson (2003) and Packard et al. (2006) indicated that morphological awareness was more crucial in Chinese than in English with respect to word acquisition and acquisition of writing in Chinese.

**Role of phonological awareness.** A large body of research has examined the association between phonological awareness and Chinese reading acquisition. A number of studies have investigated whether phonological awareness is a strong predictor of reading in English. These studies examined whether visual-orthographical skills were a

strong predictor of reading in Chinese (Ho & Bryant, 1997; Huang & Hanley, 1994; Siok & Fletcher, 2001; Tan et al., 2005). Others (Ho & Bryant, 1997; Perfetti & Tan, 1998) sought to identify the sequence of the needed information of processing Chinese characters. The general consensus was that phonological awareness was related to reading in Chinese but was not as closely related to this skill as to the ability to learn English. Siok and Fletcher (2001) indicated that letter knowledge and phonemic awareness had a strong correlation with reading development in English due to the inseparable functions between graphemes and phonemes. In addition, visual orthographical awareness was strongly related to reading ability. The Siok and Fletcher study (2001) was particularly valuable in (a) ascertaining that onset-rime awareness rather than phonemic awareness of phonological units best predicted reading in Chinese and (b) identifying the developmental pattern of Chinese reading acquisition. Onset-rime awareness refers to the awareness of grouping subsyllabic units while reading. For example, just as pinyin and zhuyin have specific rules, learners of Chinese need to know which subsyllabic units come together. Visual orthographical awareness predicts reading acquisition in the lower grades while phonological skill, homophone discrimination and pinyin knowledge, and orthographical skills predict reading success in the higher grades. The target students in Siok and Fletcher's study (2001) were first, second, third, and fifth graders.

Researchers have argued that Chinese character recognition involves asynchronous phases of graphemic, phonological, and semantic information. Some believe that visual-orthographical skills are required prior to phonological cues. Others

think phonological information is accessible before the activation of semantic information because one character can have multiple meanings. For example, 好 /hao3/ can mean “good,” “accomplishment,” or “agreement” and “confirmation,” just to name a few. However, one character usually has only one pronunciation, for example, 電 /dian4/ (electronic).

In summary, several findings reported in the literature on Chinese reading and writing are invaluable to Chinese literacy pedagogy. First, visual-orthographical awareness plays a central role in reading and writing in Chinese. Second, the importance of radical awareness, particularly functional and positional regularities of semantic and phonetic radicals cannot be ignored when learning to read and write Chinese. Third, it is compound awareness placing greater importance on Chinese reading and writing than phonological awareness. Morphological and compound awareness develop with increasing experience and are closely related to vocabulary and reading acquisition.

### **Literacy Instruction of Chinese as a First Language (L1)**

As mentioned above, little research on literacy instruction of Chinese as L1 for intermediate level was evidenced. Most studies examined literacy instruction in elementary schools in native Chinese-speaking regions to provide insight into how native Chinese readers and writers have become literate in Chinese.

**Literacy instruction in elementary school.** This section covers how Chinese literacy instruction is delivered in elementary schools in both mainland China and Taiwan. Mainland China and Taiwan are the two major geographical areas for L1 Chinese literacy instruction. Although two distinct curriculums are used for literacy instruction of Chinese

as L1 in mainland China and Taiwan, the instruction is basically similar in the elementary years because both regions use a nation-wide curriculum and textbooks. The following section depicts literacy instruction in mainland China first and Taiwan later.

*Mainland China.* The literacy goal for Chinese pupils in Mainland China is learning 3000 characters from Grade 1 through Grade 6 (Wu, Li & Anderson, 1999). Whole-class teacher-fronted lecture predominates during elementary school years. Children learn pinyin during the first 10 weeks of first grade in China (Wu et al., 1999). By the beginning of third grade in Mainland China, pinyin is only used for unfamiliar characters. Later on during the first year, the study of characters becomes the major focus, including the correct order of strokes, character recognition and production, as well as the use of radicals to infer meaning and pronunciation of a given character. According to Wang (1998), first graders in China focus on learning pinyin and they need to acquire approximately 440 Chinese characters.

During elementary school, Wu et al. (1999) indicated that character acquisition is emphasized in Grades 1 to 3, and later grades focus on reading comprehension at the paragraph and text levels. The sequence of teaching characters is from simple to compound and from high-frequency to low-frequency. The method for teaching a character is for the student to “pronounce it, discriminate it from other characters, write it in the air, rehearse the order of strokes, analyze the structure and explain the meaning” (Wu, Li & Anderson, 1999, p. 578). Classroom activities include either the teacher or the students reading aloud, individual silent reading, copying characters from book or on board, oral and written responses to the teacher’s questions, and checking students’

answers (Wu et al., 1999). Development of reading comprehension is emphasized. Students are expected to understand the frequently used words, grasp the meaning of sentences, articulate the main point of each paragraph and summarize the main idea for the whole text. Using questioning and explanation, teacher ensures students' understanding on new characters, sentence patterns, content of the passage. In primary school, pupils need to do homework on daily basis, including copying characters and words, making up sentences, previewing new lessons and characters, and composing or writing on a weekly basis.

*Taiwan.* In Taiwan, according to Cheng (1993), the requirement for literacy is mastery of 2200–2700 characters from Grade 1 through Grade 6. Taiwanese pupils need to acquire 1000–1200 characters from Grades 1 to 3. During the remainder of the elementary school years, from Grades 4 to 6, native Chinese-speaking pupils need to acquire 1200–1500 additional characters. According to Wang, Hong, Chang & Chen (2008), during Grades 1 to 5, character acquisition increases significantly. Pupils “from grades 1 to 5 are, on average, able to acquire about 600 characters every year” (p. 561). A typical Chinese undergraduate has acquired 4000–5000 characters by the end of his/her college career, which comprise around 40,000 to 60,000 words (characters combined to form words) (DeFrancis, 1986). To enable Chinese pupils to achieve this demanding goal, native Chinese language instructors have adopted a bottom-up learning model. In other words, instruction aims at preparing Chinese pupils to master zhuyin, characters, words, sentences, paragraphs, and essays. As Wang (1998) claimed novice Chinese literacy instruction primarily adopts bottom-up learning. A Chinese language teacher in Zhao's

(2008) dissertation study reflected on her L1 learning experiences, noting that major classroom tasks in a Chinese language classroom are “reading and reciting. Exercises and take –home assignment were also very limited, such as practice of pronunciation, writing of Chinese characters, using vocabulary in sentences” (p. 51 ).

Prior to the acquisition of Chinese characters, first graders in Taiwan need to learn the Chinese pronunciation system, zhuyin. Zhuyin phonetic symbols represent pronunciation of characters. At the very beginning of first year schooling, all texts are rewritten in zhuyin. Literacy activities in first grade include choral reading; reciting and copying characters along with their sound symbols; routinely practicing the correct stroke order by both teacher and pupils writing the characters in the air; pointing out the radical and analyzing subcharacter components, radicals, of a given character; and introducing a new character containing a previously learned radical (Chen g, 1993). In grade 2, classroom literacy activities include distinguishing characters that are similar in orthography, recognizing a character’s multiple readings, talking about synonyms and antonyms of a given word, and making up a simple sentence based on a given character or word. In Grade 3, the principal goal is to prepare students for summarizing the main idea of a paragraph. Students are expected to identify the meaning of each sentence in a paragraph and, later, the relationship between sentences and their place in the paragraph. Initially, the Chinese language teacher asks leading questions to point students to the main idea of a paragraph; as the year progresses, the teacher provides fewer hints, expecting students to come up with the main idea on their own. Students continue to learn and study new words. In Grades 4 and 5, understanding the organization of a reading text

and identifying the main idea become the major focus. Students are required to identify which paragraphs go together when an outline is given. In Grade 5, students learn that writing can have three parts: a beginning, a middle, and an end.

In both Mainland China and Taiwan in L1 settings, bottom-up teaching is dominant. Learning moves from the smallest elements to the whole. Whole class lectures with drill practice is widely practiced.

However, the type of instruction employed in L1 readers and writers may not be appropriate for CSL/CFL readers and writers. The nature of Chinese reading and writing and literacy instruction in CSL/CFL settings and the most effective instructional methods are the focus of the next section.

## **Research of Chinese as L2 or FL**

### **Reading and Writing in Chinese as a Second (L2) or Foreign Language (FL)**

Prior to review of literacy instruction in CSL/CFL context, a number of research lines contributed to the knowledge of teaching nonnative speakers of Chinese. They are research on radical knowledge, character and word or vocabulary.

**Radical knowledge.** The orthographical structure of written Chinese is comprised of radicals and characters. CSL/CFL researchers spent more effort on studies of radicals and character reading than other areas in Chinese reading. Similar to research in Chinese literacy as L1, CSL/CFL researchers investigated the effect of acquiring radical knowledge on character reading and time sequence of acquiring different aspects of radical knowledge (Perfetti & Tan, 1998; Shen, 2005; Shen & Ke, 2007; Wang et al., 2003; Wang et al., 2004). These studies provided insight from two perspectives:

theoretical and practical/empirical perspectives. From a theoretical perspective, CFL/CSL learners first develop visual orthographical awareness at the initial stage of Chinese literacy learning and orthographical knowledge increases as learning levels advance. It is proper to provide explicit and systematic instruction on identification of the internal structure of Chinese characters. Everson (2008) pointed out that the “structural makeup of Chinese characters is not just nice to know, but is crucial knowledge that may be necessary for students to know for reading success (p. 75).” Second, CSL/CFL learners use radical knowledge, including semantic and phonetic radicals to encode characters. Third, awareness of correct radical forms is developed earlier than that of the correct radical positions of CFL learners.

From a practical or empirical perspective, there are some consistent findings (Packard et al., 2006; Shen, 2005; Shen & Ke, 2007; Wang et al., 2003; Xiao, 2009) on successful radical instruction. First, systematic instruction on decomposition of a Chinese character to familiarize the structure of a character is helpful (Packard et al., 2006; Shen, 2005; Shen & Ke, 2007; Wang et al., 2003; Xiao, 2009). This can be done through a question model when the teacher asks students questions on form and position of a semantic or phonetic radical. Second, application of radical knowledge is the key. This can be done by having students identify previously learned radicals with a new given character containing the same learned semantic radical. Teachers also can provide explicit instruction on radicals with high lexical frequency (Shen, 2005) or low-frequency semantic radicals (Wang et al., 2004).

In terms of radical instruction, little research on effective and successful instruction on semantic and phonetic radicals is a serious problem particularly when most of the research studies have indicated the significance of radical knowledge on reading and writing characters specifically or, in general, reading acquisition. As Shu and Anderson (1997) indicated that “we are unaware of any schools that provide systematic instruction in using the information in radicals” (p. 82). In addition, compared to studies of instruction on semantic radicals, instruction on phonetic radicals is very limited. Research on the relationship between orthographical awareness, particular radical knowledge, and character reading have been quantitatively investigated and drew on novice and more skilled learners of Chinese from both native speaking countries and FL/L2 settings. These research studies provided CFL/CSL education with great insight about how to take these research findings into consideration when preparing Chinese literacy instruction.

**Characters.** Printed Chinese is represented in Chinese characters. Characters are not equal to words. One Chinese word can be composed of one single character or multiple characters to represent one English word. Studies on character recognition are the most researched area in Chinese reading (Everson, 1998; Hung, 2000). As Hung (2000) indicated the character is a stronger concept than a morpheme or word among Chinese-speaking people; thus, character recognition is the basis of reading in Chinese. Good (1998) investigated use of strategies when writing Chinese characters. The target participants were intermediate and advanced CFL learners. The findings demonstrated that CFL learners employ more than one strategy, including phonological, graphic and

semantic strategies when writing Chinese characters. More advanced learners use more graphic strategies than the less advanced learners while phonological strategies remain constant at all levels investigated. Learners of higher levels can retain and retrieve complex visual configuration. Learners who typed characters produced longer essays than those who handwrote characters. Writing errors decrease as writing ability increases. Good's dissertation study provides a number of pedagogical implications for preparing CFL learners to write Chinese characters. First, practice in writing characters through writing exercises at the beginning of the semester is vital. Second, Chinese language teachers should be aware of students' errors, whether they are transitory errors or knowledge errors. Transitory errors are those errors of "slip of the pen", which these errors will disappear in very short time while knowledge errors show mis-knowledge and require instruction. Third, teachers need to provide detailed instruction of how to write a character. Teachers need to enable student to equally allocate different subcomponents within a square configuration. For instance, if the character is left-right structure, such as "的," students need to equally place the left part "白" and right part "勺" of the character.

Fourth, introducing the nature of Chinese characters and their historical development will enable CFL learners to take advantage of the internal structure of the characters. Internal structure here refers to subcomponents of characters, such as semantic and phonetic radicals to infer meaning and pronunciation. Fifth, contrastive analysis on graphically similar characters, such as 干/gan1/, 千/qian1/ and 于/you2/ or semantically confusing characters, such as 的/de1/and 得/de1/. Sixth, repeated writing is good for producing correct stroke order and good for automaticity and retention of

Chinese characters. Finally, providing opportunities to transcribe Romanized texts into characters is helpful to develop the ability to handwrite Chinese characters.

In terms of character instruction, CSL/CFL researchers have attempted to identify instructional methods to help their learners to be able to read and write characters (Everson, 2009; Li, 2004; Xiao, 2009). Xiao (2009) employed a 3-step presentation of new characters and provide methods to prevent orthographic errors and corrective measures to treat orthographic errors. Li's (2004) dissertation is invaluable in claiming that traditional teaching method of Chinese characters, rote learning of Chinese characters, still dominates in modern times. Li (2004) argued the need to identify methods of teaching Chinese characters that are effective to nonnative adult learners having cognitive maturity. Her study investigated the Grapheme Combination Method (GCM), which teach characters through associative links. The results demonstrated that adult CFL learners scored higher on Chinese reading proficiency than those taught with traditional teaching methods. Those in GCM treatment group showed higher satisfaction, higher motivation and interest. They also found learning through GCM is easier. Everson (1994, 2008, 2009) also provided invaluable pedagogical recommendations for character instruction. For example, Everson (1994) suggested that teachers need to enable their adult CFL learners to attain automaticity character recognition through providing short character and sentence level exercises. Second, it is beneficial to learn a substantial amount of Chinese via Romanization before learning a large amount of characters (Everson, 1994; 2009). By so doing, learners allocate their resources on other aspects of written Chinese language, such as grammar and morphology instead of focusing their

resources on the connection of pronunciation and a printed character. Everson's studies provided great insight about Chinese literacy pedagogy though the later claim requires more classroom-based research to investigate. LaBerge and Samuels' (1974) reading theory, decoding process demands lion share of cognitive attention leading to being unable to process of higher level comprehension building. Chung (2002; 2008), based on this cognitive load theory, provided insights on character instruction for CSL learners from a cognitive perspective. Chung indicated that simultaneously placing too much visual information, such as presentation of a character and its prompts to be processed, leads to heavy cognitive load or split-attention effect. Chung (2008) concluded that, for novice learners of Chinese, visual character with English given in auditory mode is better than visual mode alone to recall meaning while recall of pronunciation does not benefit from mixed mode. For more experienced learners of Chinese, mixed mode, visual character with pinyin in auditory mode is better to recall of pronunciation. For the former study conducted in 2002, Chung demonstrates that presenting a character on the left with temporal separation from English translation followed provides time for a character to be associated with its verbal response. He also evidenced that presenting L2 and later L1 is more effective than L1-L2. Chung's research provides great insight about how to teach Chinese characters in an effective way to better facilitate character acquisition.

**Vocabulary strategy.** Vocabulary strategy here refers to strategies of learning Chinese words. As Fu (2005) claimed that research in CSL/CFL has emerged around 1995 and there are few studies in Chinese word acquisition. Some studies (Fu, 2005; Shen, 2008; Winke & Abbuhl, 2007) contributed to the study of Chinese vocabulary

strategy. These qualitative studies focused on beginning level learners of Chinese although Shen's (2008) study centered at both beginning and advanced levels. Both Fu (2005) and Shen's (2008) studies exploring vocabulary strategies of CFL undergraduates while Winke & Abbuhl's (2007) research participants are 9 adult learners of Chinese, including 5 true beginners and 4 different proficiency levels at Chinese language center. Fu's (2005) aimed at strategies that CFL undergraduates utilize to study Chinese words, both written and spoken, based on learners' different learning styles, including audio, visual and kinesthetic learners. The findings revealed that, for example, a visual and auditory learner groups and associates words by radicals, applies images of characters with sounds and repeats writing characters with pinyin and verbalizing characters, places new vocabulary in context, reviews and understands sentence structure rather than memorizing them, and guesses intelligently by using radicals or linguistic cues. Winke & Abbuhl (2007) based on Long's interaction hypothesis, categorized vocabulary strategies into input-based, output-based and cognition-based strategies. Shen's (2008) study explored the segmenting strategies for a Chinese word due to the fact that Chinese words cannot be identified through physical space while English can. The findings revealed that CFL learners utilized strategies, including guess on intuition, match characters to existing mental lexicon, combine semantic information of constitute characters, create new meanings, identify parts of speech, identify sentence components, using existing word knowledge, use word concepts from Asian languages and use contextual cues. Beginners heavily rely on using their native language to infer meanings of Chinese words while advanced learners tend to make use of contextual cues to guess the meanings of words.

The author elucidated that beginners with less knowledge and experience with Chinese reading tend to use knowledge of their native language to interpret the meaning of a Chinese word resulting in wrong word prediction. On contrary, advanced learners knowing the complex rules of Chinese words attempted to identify interrelation of characters and use of combined syntactic and semantic cues to interpret a Chinese novel word leading to correct word decision.

Studies of Fu (2005) and Winke & Abbuhl (2007) grounded on different theoretical frameworks. The former categorized strategies by employing students' learning styles while the latter group strategies into input, output and cognition -based strategies. In other words, each study categorized learners' strategies based on a specific framework. The results of these two studies have shared ideas toward Chinese vocabulary learning as well as shared vocabulary strategies worthy of attention. One of shared ideas by these two groups of target participants is that these CFL learners concerned to produce correct pronunciation and tone when learning vocabulary. Therefore, they utilized strategies to memorize pronunciation and tone. Second, they realize that it takes much time and effort to acquire Chinese vocabulary. Thus, they believe it is pivotal to spend time on reviewing the characters and words to achieve connection among pronunciation, meanings and visual orthography. The shared vocabulary strategies are: repeated verbalization and writing of Chinese characters with pinyin, creation of mental images or pictures of characters to help retention or recall, reviewing of handouts or books, and guess when there is missing knowledge. Authors of the mentioned studies attempted to grasp what vocabulary strategies that adult CFL learners utilize in learning Chinese

characters or words. However, there is desperate need to identify whether these are also the effective strategies which enable learners of Chinese to successfully acquire characters or words.

In summary, several findings are considered helpful in Chinese reading and writing pedagogy. Learners of Chinese lack use of orthographical knowledge in read and write Chinese characters. Little orthographical knowledge can be transferred. However, orthographical sensitivity plays a central role in reading acquisition. Visual orthographical sensitivity has developed at initial stage of literacy learning. It develops with increasing experiences with written Chinese and knowledge on Chinese language. This is different from phonological awareness playing a significant role in English reading acquisition. In order to facilitate learners of Chinese to develop their orthographical ability, research studies have revealed that explicit instruction on decomposition of internal structure of Chinese characters does facilitate reading comprehension. Yet, for learners of Chinese, inferring pronunciation from phonetic radical takes longer time than to infer meaning from prominent semantic radicals. Relying on L1 knowledge and experience, CFL learners use of translation and their knowledge of L1 word formation, to aid their learning of written Chinese. Grouping of Chinese characters into word is one of the major challenges when learning to read Chinese.

### **Instruction of Chinese as Second/Foreign Language (CSL/CFL)**

Major methodologies in L2 or FL include grammar -translation, audiolingualism, communicative language teaching. The evolution of second/foreign language teaching

from traditional grammar translation and then audiolingual approaches to contemporary task-based or sociocultural language teaching implies the paradigm shift, which is from behaviorism to constructivism. In 1960, language was seen as a system of rules and second/foreign languages were learned as habit formation characterizing drills, repetition and rote memory. However, second/foreign language learners being a passive recipient of knowledge has been challenged since second/foreign language learners may know a lot about language knowledge but they have challenges using the language to communicate. In order to facilitate learners to become effective communicators, communicative language teaching (CLT) emphasizing on expression of meanings and communicative competence has become a popular teaching approach. According to Nunan (1999), CLT characterizes learner-centered, negotiated curricula, collaborative small group work, interaction through target language, use of authentic materials, real-world tasks, learners' personal experiences and process-oriented. CLT classroom activities include role-play, interviews, games, and language exchanges. Task-based language teaching (TBLT) has gained popularity followed by CLT. TBLT is an approach focusing on having students doing meaningful tasks using the target language. Nunan (1999) drew Long's definitions of "tasks as hundred and one things people do in everyday life, at work and in-between" (p. 89). Based on Nunan's (1999) definitions, task-based language teaching classrooms has two tasks. They are pedagogical and target tasks. Pedagogical tasks include listening to a weather forecast and deciding what to wear. Target tasks include the rehearsal of making reservations, writing letters, finding street destinations in a directory. TBLT's primary focus is on the completion of the tasks rather than the accuracy of the target

language. TBLT helps second/foreign language learners developin g fluency and confidence. CLT and TBLT are more based on the constructivism theory. Vygotsky's sociocultural theory is significant to provide insight on second and foreign language instruction (Eun & Lin, 2009; Fahim & Haghani, 2012; Kao, 2010; Turuk, 2008 ). It is based on constructivism. Socicocultural theory emphasizes learner's prior knowledge, both linguistic and social knowledge, learner's active role in constructing knowledge via meaningful interaction between teacher and students. Vygotsky's work is influential in reflecting current teaching methods in Chinese language teaching and seeking approaches to best fit learners of Chinese in L2/FL (see literacy instruction of Chinese as L2/FL for more details).

Based on the L2/FL teaching methodologies and theories, several research studies have contributed to the knowledge of Chinese language instruction in both CSL/CFL contexts. These research studies have studied four language skills. They do not focus only on reading and writing. These studies have invol ved varying degree of learners' proficiency levels, institutional contexts, language and ethnic backgrounds, either heritage or non-heritage learners. First, Huang's study (2004) investigated the effects of task-based language teaching (TBLT) at Chinese la nguage center in university in Taiwan where beginning-level adult learners learn CSL. The findings revealed that adult CSL learners preferred TBLT activities, resulting in enhancement of motivation and achievement. Focusing on American high schoolers in Taiwan, Tsao's (2002) case study demonstrates that CSL instruction characterized by authentic interaction, such as community-based experience, language use in context, and use of multimedia is effective.

Tsao (2002) asserted that there is a need to promote cooperative learning, and to provide abundant opportunities for interaction in the real-life context. Second, Wang's (2008) case study on English-speaking pupils in a Chinese immersion school in CFL context explored four Chinese language teachers' perceptions of their roles in classroom, patterns of classroom interaction, and teaching strategies. The four female teacher participants teach 2<sup>nd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 8<sup>th</sup> grade respectively. The findings revealed that, in this case, a successful immersion Chinese classroom adopts communicative-based language teaching. These include providing a naturalistic communicative language community, maximizing comprehensible input and output, providing meaningful interaction between teacher and student and among peers, and employing read aloud and character analysis in vocabulary and text instruction.

Wu (2009) explored peer interaction in CFL contexts using sociocultural theory. A mixed-method design was conducted to explore the role of peers in the intermediate-level CFL context. Wu discovered that peer interaction played an important role in CFL learning and mutual assistance in various forms provided various learning opportunities.

Another qualitative study in a CFL setting on university undergraduates was conducted by Duff and Li (2004). This study portrayed the female Chinese language teacher with ESL experiences who attempted to adopt communicative language teaching (CLT) in her first-year CFL classroom in a U.S. university. Yet, the adult CFL learners' showed a preference for a more form-focused instruction stressing teachers' modeling, repetition, error correction and less peer interaction, while the Chinese language teacher tried to maximize opportunities for peer interaction and to provide less repetition, error

correction and modeling. The authors elucidated that target participants considered their peers having difficulty of speaking Chinese with correct tone and peer pronunciation do little help on their pronunciation. This is the reason these learners avoided group work.

In terms of the above studies, most of the subjects were beginning-level learners of Chinese. The findings of teaching methods utilized in both CSL/CFL settings are inconsistent. Some tend to employ more communicative language teaching or utilized sociocultural perspectives and some tend to utilize more traditional L2/FL teaching methodologies. These studies also imply a greater need on research of instruction on intermediate-level Chinese language classroom with emphasis on adult learners.

### **Literacy Instruction of Chinese as Second/Foreign Language (CSL/CFL)**

Given limited research on Chinese language instruction as L2/FL mentioned above, the greater paucity in Chinese literacy instruction is evident, particularly classroom-based research in exploring instructional methods of Chinese reading and writing. The following two dissertations can shed light on understanding instructional approaches of reading and writing in Chinese language classrooms.

Li's (1998) dissertation, employing both qualitative and quantitative data analysis, found out in beginning CFL reading classroom, more than one instructional method were employed. Both traditional method and more communicative-oriented were present. The former include activities, such as structural analysis, grammar explanation, drills in whole-group or in-pairs, fill-in the blank grammar exercises. Reading aloud exercises are designed to help make meaningful segmentation of Chinese words. The major activity for the latter is role-playing. This activity is designed to provide opportunities for learners to

use language in context or to hone their problem-solving skills. This study also revealed that two major classroom tasks have been conducted. The first one concerns with beginning CFL learners lacking of orthographic sensitivity, their inability to perceive graphic and directional structure of Chinese characters. In order to help these learners, Chinese language teachers used character component analysis, character visualizations, character recognition activities. Character component analysis include raising the awareness of the spatial structure, introducing radicals, analyzing character components and introducing phonetic radicals. Character visualization includes direct presentation of images and cooperative image construction. Direct presentation refers to present the earlier form of the characters or make little story about the character. Character recognition includes practicing context-free word recognition and practicing word recognition via character writing. Activities in practicing context-free word recognition include reading aloud characters on flash cards, rearranging characters to form words using posters, using realias and solving puzzles on internal structure of Chinese characters. Activities having students write characters in order to help them recognizing characters include teachers' demonstration of writing the characters and students frequent writing on the blackboard. The author indicated that Chinese language teachers design various activities when they perceived their beginning students' difficulty in word recognition. The second classroom task is designed to explore semantic construction of Chinese words. Activities focusing on explaining the meaning of each single character, combing the characters into word, filling in information gaps. The study also revealed that Chinese language teachers use visual remedies facilitate semantic clarification and

use various activities to reinforce the meaning, such as asking synonyms and antonyms, contrasting word meaning in context, paraphrasing and defining. The author who observed two-semester beginning Chinese language classes has found that grammar instruction is the major teaching activity. Deductive grammatical teaching and inductive grammatical teaching are the major teaching activities, which deductive teaching is more frequently used than inductive grammar teaching. The former include analyzing sentence structure, proving grammatical maps, explaining functional words and contrasting Chinese and English word order. Inductive teaching includes explanation of particle “ba” and explanation of verb repetition. To provide students with opportunities to internalize grammatical knowledge, various activities have been observed, such as direct grammar exercises, translation and questioning about text content. Multipurpose activities are designed to enhance basic reading ability, including reading aloud, questioning contents and training metalinguistic skills. Reading aloud activity plays a central role in beginning Chinese language classroom. This is the third most frequently observed activity after grammar analysis and word recognition. Three types of reading aloud have been observed: teacher reading, individual reading aloud and choral reading. Individual reading aloud is the most frequent reading aloud activity. Activities for questioning contents include checking comprehension directly and negotiating about meaning. Activities for developing metalinguistic skills include practicing scan and skim reading, practicing guess strategy, providing syntactic clues and discussing and demonstrating reading strategies.

Zhao's (2008) dissertation study aims at exploring beliefs and teaching methods of a CFL teacher who teaches both introductory and intermediate - level non-degree adult learners in a Chinese program in Canada. Teaching of pinyin, characters, vocabulary, grammar and pragmatics are the major classroom tasks. The Chinese language teacher considered teaching pinyin is very crucial step of equipping her adult learners with basic ability to continually learn Chinese by themselves. When it comes to teaching of characters, she felt a need to emphasize on how to write strokes and teach of radicals, which the teacher considered the latter can be acquired by students themselves. Teaching of vocabulary emphasizes on how to pronounce the word and be able to write accurate pinyin, how to write words and how to use words. Classroom activities for using words include, firstly, combining single character word with another words to make compound words. Second, asking students to use new words in sentences and provide more examples to illustrate the appropriateness of using a given word. Proportion of teaching grammar relies on learners' proficiency level. Learners of intermediate level require grammar instruction only when the grammar points introduced are complex or unique. It is also through dialogues and discourses that grammar can be better taught. In addition, teaching vocabulary and grammar simultaneously makes the teaching of grammar more interesting.

Without model(s) for Chinese reading, as Everson (2009) claimed, use of reading models of alphabetic languages may have some concerns. But it can shed light on CSL/CFL reading pedagogy. Three types of reading models are discussed in literacy instruction of Chinese as L2/FL. One type of reading model is Bernhardt's model.

Bernhardt (1991) proposed that both text-based and extratext based elements to better understand intermediate-level FL reading. Text-based elements include word recognition, phonemic/graphemic decoding, syntactic feature recognition. Extratext based factors are intratextual perception, metacognition and prior knowledge. Intratextual perception concerns with how paragraphs are organized. Metacognition deals with how readers reflect on what they are doing. Prior knowledge refers to that readers bring their world, cultural, topic knowledge and their personal experience when they read and how these knowledge bases facilitate or hinder their interpretation of the text read.

The second type of reading models is based on cognitive perspective. They are bottom-up, top-down and interactive model. Bottom-up reading process model depicts a sequential process of decoding a text (Herrera, Perez & Escamill, 2010). “It is only achieving mastery of the first level and later the reader can move to the next level” (Herrera, Perez & Escamill, 2010, p. 9). In other words, readers sequentially go through a reading process from mastery of small elements prior to learning of the larger unit of meaning. Readers of alphabetic languages begin with recognition of letters and later recognize words, sentences, paragraphs and finally the whole texts. In Chinese as L1 settings, Chinese language researchers and practitioners have arrived at the consensus that bottom-up learning is mostly adopted in Chinese language classroom in Mainland China or Taiwan. Chinese readers and writers go through from learning the basic of language, pinyin or zhuyin, to larger language units, characters, words, sentences, paragraphs and texts. Top-down reading process model is opposite to the bottom-up model when the former highlights the role of “schematic connections in the reading

process” (Herrera, Perez & Escamill, 2010, p.11). While reading, readers use their schemas to interact with texts to comprehend or construct meanings of text being read. This reading model related to transfer theory ( McCarthy, Guo & Cummins, 2005), which L1 literacy acquisition can aid L2 literacy acquisition. The language and skills learned in L1 can be transferred to L2 thus to aid L2 acquisition. Literacy instruction via the top - down reading process model characterizes learners’ opportunities to activate their prior knowledge to connect to texts and use of authentic materials to contextualize literacy instruction. Bottom-up and top down models are linear. Thus, a new reading model emphasizing interaction between higher processing and lower processing has been developed. Interactive model defines “readers’ role as a constructor of meaning whereby the reader simultaneously makes schematic connections and decodes letters and words” (Herrera, Perez & Escamill, 2010, p. 13). During the reading process, readers concurrently use of both bottom-up and top-down skills to comprehend or construct the meanings of texts. Readers activate background knowledge to construct meaning and contextually use of decoding skills to comprehend texts. Similar to the evolution of L2 or FL teaching methodologies, L2 or FL reading models have been making a shift in their paradigms from more scientific-based research to constructivism. This paradigm shift therefore enables to represent reading process in a fuller picture to better reflect the complex process of reading in L2 or FL. In summary, bottom -up reading process model is heavily text-based in nature while top-down reading process is more concerned with extra text factors. For example, prior knowledge a reader brings to the interaction of texts. Compared to linear models of bottom-up and top-down, interactive model emphasizes

that readers construct their meanings moving decoding skills as well as extra text skills back and forth while reading. The interactive model is considered as an effective model for reading in L1 or L2.

The third model is based on Vygotsky's sociocultural theory (1978). A stance different from viewing language learning as a cognitive process to acquire linguistic skills and knowledge, sociocultural theory emphasized the social perspectives in language learning process. Instead of viewing language learners as passive recipient of knowledge, learners are regarded as ones who have rich prior knowledge. Language learners are able to construct their knowledge. In other words, a sociocultural stance emphasizes the knowledge base that a language learner brings to the classroom (Kao, 2010; Turuk, 2008). In this study, the significance of valuing heritage students' linguistic and cultural knowledge of home language can be assumed to facilitate language learning process. In addition, interaction was emphasized in sociocultural theory. Language as a powerful symbolic tool to mediate the learning process through meaningful interaction between teacher and student and/or between peers to reach zone of proximal development (ZPD) to further internalize knowledge. ZPD was defined the distance between a child can do without assistance and with assistance from adult or more capable peers (Vygotsky, 1978). Scaffolding plays a significant role in facilitating development of learner's language proficiency, either through teachers as mediators to create supportive context for learning to take place or through collaborative work with peers.

### **Reading and Writing in Chinese as a Heritage Language**

A number of research studies have contributed to understanding of literacy learning of heritage language learners in university settings. Learners of Chinese heritage language learners are believed to have unique characteristics different from CFL learners, such as prior linguistic and cultural knowledge, motivation that makes them a very special group (Comanaru & Noels, 2009; Li & Duff, 2008; Xiao, 2006). CHL learners with prior exposure to Chinese language and culture are considered to some degree have better listening and speaking skills when compared to their reading and writing skills (Han & Chen, 2010; Li & Duff, 2008; Liu, 2009; Xiao, 2006). An important work by Xiao (2006) revealed that “exposure to linguistic input and meaning communication at home and in their community” facilitates development of CHL learners’ listening and speaking skills (p. 54). However, these high-beginning level CHL learners did not show advantages in vocabulary, reading comprehension and character writing compared to non-heritage language learners (Xiao, 2006). Their strengths in spoken language did not necessarily facilitate their literacy development and they often need to connect oral language with written form to better develop their literacy competence. Chevalier (2004) pointed out beginning writers of heritage language presented challenges in converting speech into written forms and heritage language students tend to “write the way they speak” (p.5). She also indicated that heritage language learners with little background in writing do not have spontaneous understanding of complex sentence structures. These learners need strategies to enable them to use syntactically complex sentences to connect ideas. These shed light on, first, understanding the significance of connecting written and spoken form. Second, it may be beneficial to ponder ways to support development of

beginning-level heritage language learners when they tend to use less complex sentences to link ideas. However, further research is needed to better understand whether intermediate-level CHL learners face challenges in making correspondence between verbal and written language. Moreover, there is a need for further research to explore whether intermediate-level CHL learners encounter challenges in limited competence of linking ideas using complex sentences.

Liu (2009) indicated that disorganization of his advanced -level CHL learners in composing an expository essay have shown they are “native -speakers but semi-native writers” (p. 73). Liu (2009) pointed out that advanced CHL learners still treat writing as a way to expand vocabulary and assure grammatical and orthographical accuracy. He utilized a teaching method that poses questions to serve as the basis for students to compose ideas when students wrote an expository essay . In this study, every writing assignment required students to make outlines to organize their topic -area knowledge. Students were given extra extensive reading materials of well -structured essays to read and later they were in need to make outlines of the reading materials and pay close attention to topic sentences and inter -sentence coherence. This included listing main and subordinate points, supporting examples, key words and expressions. Liu also required his student to rewrite based on his feedback on grammar, word use, content, structure and overall impressions. He asserted that this forced his students to pay attention to content and organization instead of vocabulary and grammar. Liu’s (2009) study is invaluable to support writing pedagogy of advanced learners of Chinese as a heritage language .

Han & Chen (2010) proposed that repeated reading facilitates text comprehension and vocabulary acquisition of a beginning-level heritage language learner in a university. Comprehension cannot be achieved if readers cannot chunk of meaningful units. Repeated reading accompanied by listening to the taped model aids the process of word and phrase decoding, thus enhance comprehension. It was repetition that readers were provided with sufficient practice to become automatic in their reading to enhance reading comprehension and fluency. This study provides CHL reading pedagogy with invaluable suggestions on how to improve Chinese reading fluency via repeated reading with phonological practice.

Research on teaching CHL literacy in higher education has not yet received sufficient attention and called for the needs for developing curriculum and instructional approaches that meet unique needs of heritage language learners (Xiao, 2006; Li & Duff, 2008; Liu, 2009).

### **First and Second Language Reading and Writing**

What are the relationship between reading and writing in L1 and reading and writing in L2? Wu (1992) cited Carson et al.'s study (1990), there is a positive correlation between L1 reading and L1 writing as well as reading in L1 and L2. A positive relationship exists between L2 reading and L2 writing. However, the relation between L1 writing and L2 writing is still uncertain. Adult L2 learners draw on two resources to construct their L2: "knowledge of their L1 and input from L2" (p. 3). Wu' (1992) dissertation shows that Chinese undergraduates of English found it challenging to make proper use of sentence structure and idiomatic expressions in English. A big gap exists

between their thinking ability and their L2 writing ability. A number of factors complicated the process of writing in L2, such as L1 literacy level, attitudes toward writing tasks, and educational experiences in L1 and L2, language and linguistic differences between L1 and L2. The following recommendations are made to facilitate intralingual and interlingual transfer in L2 writing: Instructors' awareness of L2 adult learners' cultural and educational backgrounds, awareness of impact of other language skills in L1 and L2, emphasis on linguistic differences between Chinese and English, which instructor's basic understanding of Chinese structure and syntax can make ESL instruction effective, and instructor's address of unique aspect of English, such as idiomatic expressions, adverbial and verbal phrases.

### **Challenges in Reading and Writing**

At character or word level, according to Li (2004), learning of Chinese characters is frustrating due to the sizable characters need to be equipped, around 3500 characters to live and study in Chinese-speaking geographical regions. Complex formation of stroke and stroke order also contributes to the challenges of learning written Chinese.

Traditional teaching methods of learning Chinese characters, requiring only memorization and drills lead to unsuccessful learning of Chinese characters.

Due to the complexity of written Chinese characters, Li (1998) claimed that character recognition is always a challenge "not only to the beginning learners but also to the intermediate learners" (p. 116). Therefore, word recognition is the continuous study of Chinese reading development. Second, readers of Chinese also encounter difficulty of grouping Chinese words. Li (1998) claimed that "word segmentation can be a real

challenge to non-native speakers” (p. 36). The reasons for difficulty include beginning non-native learners’ lack of linguistic and grammatical knowledge, lack ability of automaticity on character recognition and no advantage of utilizing their L1 knowledge to predict the word correctly. At sentence level, absence of syntactic cues and heavy reliance on contextual cues in Chinese sentence makes Chinese reading difficult. Based on the studies explored or investigated, there is a need to understand what challenges presented in the intermediate-level Chinese language classrooms. Do intermediate-level learners of Chinese still demonstrate challenges in mastering basic reading skills, such as word recognition and word segmentation? Do they also demonstrate challenges in handwriting Chinese characters in intermediate-level classroom? What areas of challenges that intermediate-level learners of Chinese encounter? In addition to characters and words, do they encounter difficulty in comprehending and writing sentences as well? What are the possible reasons resulting in this difficulty? Answers to these questions are unknown and need further research.

## **CHAPTER THREE**

Chapter Three addresses the mixed-method research design and data collection procedures used in this study. It provides information about the research context, participants, assessments and other data sources, explaining each in detail. Finally, this chapter presents the data analysis procedure.

### **Research Design**

This study utilizes a mixed-method design to explore the four research questions. Mixed-method design involves “a diversity of methodological traditions, inquiry design, multiple methods (both qualitative and quantitative) for data gathering and analysis and forms of interpretation and reporting” (Greene, 2007, p. 28). The rationale for using a mixed-method model involves three key elements: (1) it reflects the researcher’s mental model (2) it explicates research goals and the nature of research questions and 3) it strengthens a design using multiple methods, both qualitative and quantitative to provide a fuller understanding of the research phenomenon.

First, it is crucial for researchers to reflect on their mental models prior to conducting research. Mental models guide how researchers craft their work and make decisions about what methods to use. Mental model refers to the “set of assumptions, understandings, predispositions, and values and beliefs” (Greene, 2007, p. 12) that social

inquirers bring to their work. It influences how a researcher “perceives and makes sense of the social world” (Greene, 2007, p. 13). When I reflected on my philosophical paradigms, I realized that I am neither a strong supporter of post-positivism nor a strong supporter of constructivism since each paradigm has its strength and weakness. My approach in this project reflects my evolving understanding of along a continuum of infinite possibilities. Implementation of a mix-method design in this study is informed by a belief that both qualitative and quantitative research methods, when used in concert, generate a fuller, richer and deeper understanding about complex social phenomena, such as the study of Chinese heritage language speakers who study Chinese in Taiwan where Chinese as a second language. This study represents complex cross-cultural and linguistic issues best addressed by drawing from multicultural perspectives using multiple forms of data, both qualitative and quantitative. Neither quantitative nor qualitative research methods alone, allow for the most thorough understanding of issues involved in this type of language research.

Second, the research goals and the nature of research questions played a crucial role in the focus for the data analysis. The primary goals for this study are (a) to gain in-depth understanding of how six young adult CHL learners responded to instruction, (b) to shed light on three native Chinese language teachers’ perceptions about the teaching of intermediate-level Chinese language reading and writing instruction, and (c) to gain insights in order to inform CHL reading and writing instruction. Four research questions that informed this study are:

1. What is the nature of literacy instruction (reading and writing) in intermediate Chinese language class?
2. How do CHL learners perceive and react to intermediate CHL language courses?
3. Does this literacy instruction support CHL learner's literacy competence?
4. What reading and writing challenges do CHL learners in intermediate - Chinese language classrooms encounter?

In light of the goals for the study and nature of the research questions both qualitative and quantitative methods were utilized. The overarching research questions in this study, including question 1 and 4, required primarily qualitative data to better answer these two questions due to the qualitative nature of issues underlying the questions. This would allow a closer look at small numbers of teachers and students in intermediate - level CHL classroom, Qualitative data can be utilized to study "a few people purposefully to gain holistic understanding of human behavior in all its contextuality and complexity (Greene, 2007, p. 39) Quantitative data using more traditional statistical analysis was utilized to answer the third question "does literacy instruction support CHL learners' literacy competence?" As this research question was indeed quantitative in nature and examined data including: students exam scores, their self-rating surveys of literacy skill before and after course, researcher ratings on Chinese literacy learning environment. Research question 3 was intended to better grasp CHL learners' perceptions of CHL language course instruction. This required not only qualitative data but quantitative data to provide a more complete picture of learners' perceptions.

Third, the strength of a mixed-method, both triangulation and complementarity validated the use of an approach that supported use of multiple data sources . The most important strength of a mixed-method design is triangulation, which seeks convergence by employing different methods to increase validity (Krathwohl, 1993; Maxwell, 2005). In other words, according to Greene (2007) using multiple methods to offset biases strengthens validity of results. In this study multiple data sources are used that include: teacher interviews, student interviews, student's rating on literacy background and literacy development, researchers' rating on Chinese literacy learning environment and exam scores. Results student performance on pre and post exams related to support of literacy competence and were analyzed using a *t*-test design.

In addition to triangulation, the other strength of using mixed -method was complementarity. Complementarity seeks fuller understandings by employing methods that explore different facets of the same complicated phenomenon (Greene, 2007). The research methods in this study were complementary because support of learner's literacy competence came from qualitative analysis of teacher interviews, student interviews, student's self-rating on literacy development, and from quantitative data, *t*-test for pre-and-post tests, and midterm scores. These data provided insights about student and teacher's perceptions toward the course and provided information about students' actual improvement in Chinese literacy skill at the beginning and conclusion of the course.

The decision to use different types of data collection methods was supported by Maxwell (2005), and will be detailed in the section addressing data collection sources.

Qualitative data collection sources utilized in this study included teacher interviews, student interviews, student literacy challenge questionnaires, think-aloud protocols, classroom observations and curriculum materials. Quantitative data sources include the researcher's rating of the literacy learning environment of 3 observed teachers, student's self-rating surveys on individual literacy skill before and after course, midterm exam and final exam scores. This study intends to answer the following research questions:

1. What is the nature of literacy instruction (reading and writing) in intermediate Chinese language class?
2. How do CHL learners perceive and react to intermediate CHL language courses?
3. Does this literacy instruction support CHL learners' literacy competency?
4. What reading and writing challenges do CHL learners in intermediate -Chinese language classroom encounter?

## **Research Context**

### **Site and People Selection**

**Site.** This study took place at one of the top five Chinese language centers in northern Taiwan and located in Taipei, the capital of Taiwan. Bamboo Chinese Language Center (BCLC hereafter) BCLC center was "selected purposefully" (Patton, 2002, p. 230). Purposeful sampling focuses on selecting information-rich cases. Learners of Chinese at BCLC included Chinese foreign language learners (CFL) without Chinese ethnic backgrounds and Chinese heritage language (CHL) learners with Chinese ethnic

backgrounds. A Chinese ethnic background referred to having at least one parent who was an ethnic Chinese. CFL learners and CHL learners were classified and placed in different Chinese language programs based on their ethnic backgrounds. This study focused only on CHL learners.

Patton (2002) defines “information rich cases” as “those from which one can learn a great deal about issues of central importance to the purpose of the inquiry.” (p. 230). Two reasons made BCLC an optimal site for this study: larger numbers of CHL learners than any other Chinese language center in Taiwan and placement of heritage language learners in the one class. Bamboo Chinese Language Center was selected because the possibility for encountering large numbers of CHL learners who permanent residence was the United States greatest at BCLC than any other Chinese language centers in Taiwan. BCLC is the largest and most prestigious Chinese language center in Taiwan and approximately 90% of the population at BCLC are international students who were not born in Taiwan. Therefore, BCLC includes the largest numbers of CHL learners (from both Chinese backgrounds and other ethnic backgrounds) and Chinese language teachers, approximately 90. Overall enrollment at BCLC is approximately 6000 students. BCLC was also selected due to its special placement of heritage language learners in classes separate from foreign language (FL) learners. Other language centers may mix both heritage and non-heritage language learners in one classroom. Heritage language learners were a special class of learners different from FL learners (Comanaru & Noels, 2009; Xiao, 2006). Placement of heritage language learners in one class meets my intention of studying heritage language learners.

**Population.** The selection of Chinese language teachers and students was based on criterion sampling. Criterion sampling, based on closely matched characteristics, was used to identify a target population. Teachers were selected based on two characteristics: (1) they were native speakers of Chinese majoring in language related fields, and (2) they taught an intermediate-level CHL class. Four Chinese language teachers taught intermediate-level CHL classes, all met the criteria but only three agreed to participate in the study. This study was intended to understand CHL learners in intermediate-level classrooms. The second teacher selection criterion was concerned with the teacher professional background. I believed that teachers with language-related majors would be more aware of teaching practice and more capable of conducting language instruction that focused on developing literacy in reading and writing, as well as oral language development.

Among four language teachers teaching in intermediate-level CHL classes, three teachers agreed to participate. Three teachers, Michelle, Mary and Valerie were responsible for teaching two sections of intermediate-level CHL classes. In other words, Michelle and Mary shared responsibility for teaching one section of intermediate-level CHL and Valerie taught the third section. Three students from each class expressed their willingness to participate. Six CHL learners across the two classes were selected. Selection of students was based on student's willingness to participate, their ethnicity, and resident status in the US. Three Chinese language teachers and six CHL learners agreed to participate.

Data sources and instruments were both qualitative and quantitative, including: classroom observation and observation protocol; researcher's rating on literacy environment, teacher and student interviews; students' rating on literacy background and development; students' open-ended questionnaire on literacy challenges and students' think-aloud protocol; and students' work samples (e.g., worksheets, workbooks ) and curriculum materials (e.g., workbooks, worksheets).

## **Participants**

### **Teacher Participants**

This research study involved 3 Chinese language teachers (Michelle, Valerie and Mary) who taught at the research site. All three teachers were Taiwanese, female, aged from 24-62, and held either a bachelor or master degree in a language related field. Michelle and Valerie were in their 20s, and Mary, a senior teacher was in her 60s. All speak both Chinese (Putonghua) and Taiwanese, which is considered a dialect of Chinese. In Taiwan, Taiwanese is spoken by 70% of the people. Michelle and Valerie also are proficient speakers of English. Michelle was a graduate student majoring in teaching Chinese as a second language (CSL) and had completed a bachelor degree in Chinese language and literature. Valerie held a bachelor's degree in English language and literature and Mary received her master's degree in Taiwanese culture, language and literature. Years of teaching experience varied from one year to 17 years. Michelle was at the onset of her teaching career while Mary was the most experienced teacher in the CSL/CHL field in higher education. Valerie has been teaching CSL/CHL at college level for five years. All of teachers had no experience of teaching Chinese language abroad.

Teachers' received in-service training that focused on: pedagogy, linguistic, literature and others, such as assessment. All three teachers were considered by the director and their peers to be knowledgeable about second language teaching methods and Chinese linguistic, particularly Chinese syntax. Michelle and Valerie also were highly qualified to teach Chinese literature (e.g. Chinese classical poems). Valerie was also quite involved in English literature due to her undergraduate study in English language and literature.

### **Student Participants**

Student participants were selected because they volunteered to participate. Two characteristics of these learner participants: (1) their dominant language was English and they lived in the U.S and (2) they were placed in the intermediate-level classes taught by one of the teacher participants. As shown in Table 1, six undergraduates participated in this study.

Table 1

#### *Target Student Literacy Background*

##### **Mary and Michelle's Class**

<b>Pseudonym</b>	<b>Rina</b>	<b>Mango</b>	<b>Jayge</b>
<b>Age</b>	18	21	18
<b>Gender</b>	F	F	M
<b>Nationality</b>	Chinese American	Chinese American	Chinese American
<b>Occupation Year of Study</b>	Student Freshman	Student Senior	Student Freshman

<b>Major of study</b>	Political Science	Electrical Engineering	Computer Engineering
<b>Yrs of learning Chinese</b>	14 yrs	12 years	9 years
<b>Where they learned Chinese</b>	Sunday School	Chinese School	Sunday School
<b>Dialect spoken at home</b>	Mandarin	Mandarin	Mandarin
<b>% of Chinese spoken between parents and you</b>	20%	70%	50%
<b>Read &amp; write Chinese at home</b>	No	Yes	Yes
<b>% Chinese read &amp; write between parents</b>	0%	25% -50%	75% -100%
<b>% Chinese read &amp; write between children</b>	0%	0-25%	25% -50%
<b>% Chinese read &amp; write between parents &amp; children</b>	0%	0-25%	25% -50%

**Valerie's Class**

<b>Pseudonym</b>	<b>Alexie</b>	<b>Daniel</b>	<b>Katie</b>
<b>Age</b>	18	19	18
<b>Gender</b>	F	M	F
<b>Nationality</b>	Chinese American	Chinese American	Chinese American
<b>Occupation</b>	Freshman	Sophomore	Freshman
<b>Major of study</b>	Chemical Engineering	Elementary Education	Economics

<b>Yrs of learning Chinese</b>	4 yrs	14 yrs	12 yrs
<b>Where to learn Chinese</b>	City high school	Chinese School	Mother tutoring (at home)
<b>Dialect spoken at home</b>	Mandarin Taiwanese	Mandarin Ze Jiang	Mandarin
<b>% of Chinese spoken between parents and you</b>	5-10 %	100%	80%
<b>Do Chinese read &amp; write at home</b>	No	Yes	Yes
<b>% Chinese read &amp; write between parents</b>	0%	75%-100%	25%-50%
<b>% Chinese read &amp; write between children</b>	0%	0-25%	0-25%
<b>% Chinese read &amp; write between parents &amp; children</b>	0%	75%-100%	0-25%

All of the student participants were Chinese Americans with at least one parent originally from Taiwan. They were highly motivated to learn Chinese language and culture in Taiwan. Two males and four females participated. Each class included one male student and two female students. Student participants' majors varied, including education, economic, political science, and engineering. Years of learning Chinese ranged from four years to more than fourteen years; two student participants, one from Mary and Michelle's class and the other from Valerie's class have been learning Chinese for more than 14 years. Students spoke both Chinese and English at home when communicating with parents or grandparents although their knowledge of written Chinese

was limited. Written communication here referred to the ability to write Chinese characters in order to communicate among family members. All student participants shared English as the dominant language.

### **Classes Selected**

Three teacher participants taught two independent class sections. Valerie taught section 1, Michelle and Mary shared responsibility for teaching section 2. However, this was not a co-teaching arrangement where the two teachers engaged in co-planning or cooperative teaching of section two. Michelle and Mary operated independent of the other, this was not a collaborative arrangement. Section one contained students who were slightly lower in terms of Chinese language proficiency as indicated on the placement test, than students in the other section. BLCLC tradition dictates that, intermediate students are grouped for instruction based on their placement test scores; however, all were considered to have an intermediate knowledge of the Chinese language. Students were required to take a placement test prior to enrolling in the course to determine in which section they would be placed. The placement test, administered by CHL teachers, aimed to measure four language skills (listening, speaking, reading and writing). Oral test questions included open-ended questions and reading aloud vocabulary words and sentences. One example of an open-ended question might be: “What’s your favorite Chinese food? Do you think it is convenient to eat using chopsticks and why?” Open-ended questions comprised 80 percent of the oral test, while reading aloud words and sentences comprised the remaining 20 percent. When the student read sentences aloud, the sentences were presented in written characters, with pinyin below. Students were

asked to read aloud sentences and vocabulary words. The listening test used multiple-choice questions and included three parts: monologues, dialogues and small talks.

Monologues require students to infer what an individual meant after he/she said something (e.g. "I should have brought an umbrella today"). Dialogues refer to short conversations between two people. Small talks required the student to answer some questions after a longer talk (e.g. an instructor talks to her class about the development of the Chinese language). Both information and inference questions were asked. 32 percent of the questions are monologues. Dialogues and small talks comprised 28% and 40%, respectively. The literacy (both reading and writing) test was administered. Five parts in the reading test represented: structure (32%), meaning (28%), reading comprehension (20%), inserting words (20%) and fill-in-the blanks with proper words from the word list (40%). Writing competence was measured when students were asked to write a short essay of 80 characters, using at least five given words.

A five-week intensive course began from July 5th to August 5th. A placement test was administered one day after students enrolled in the course. Language classes met Monday through Friday either in the morning from 8:20 -12:10 or 14:10-17:00 in the afternoon. Each teacher taught two days a week alternating afternoon or morning. The morning class session was from 08:20-10:10. The second session was from 10:20-12:10. A ten-minute break was provided for both the morning and afternoon class. Thus the total time for the CHL courses was on average 20 hours per week. In addition to language classes, students were provided the opportunity to participate in field trips, 4 hours a week, in order to enhance their understanding of Taiwanese culture. For example,

students visited cultural and historical sites in northern Taiwan, such as National Palace Museum.

Mary and Valerie had support from a teaching intern assistant. Mary was assisted by Alice and Valerie's assistant was George. Alice and George were master's degree students majoring in Chinese as-a-second language (CSL). In order to meet graduation requirements, an internship position as a teaching assistant was required. Teaching assistants were responsible for teaching only small portions of class period, approximately 40 minutes within a 3.6 hour class session, while teachers were responsible for the majority of class time. Teaching assistants were required to mainly introduce vocabulary via power point presentations and conduct some of the topic-related activities as requested by Mary and Valerie.

## **Data Collection**

### **Data Collection Procedure**

Prior to conducting the study a meeting was held with the coordinator of BCLC at which time I was introduced to the lead teacher. The purpose for the meeting was to explain the study and solicit participation from teachers who taught intermediate level of Chinese heritage language. Four teachers who taught classes to intermediate-level Chinese heritage speakers attended the meeting. I explained the study in Chinese and distributed letters to teachers, soliciting their participation. The CHL teachers read the informed consent written in English and were provided with an oral explanation in Mandarin Chinese. Among four teachers who taught classes to intermediate -level

Chinese heritage language, three teachers agreed to participate the study. They also agreed to participate in audio-taped interviews and were willing to provide curriculum materials (e.g., power point slides, worksheets, copies of test/exam questions).

Shortly after, preliminary observations were conducted in three classrooms and met with students enrolled in classes taught by the teacher/participants. Students were told about the nature of study in English (their dominant language) and received letters also in English seeking their participation. Student participants also signed the informed consent agreement to take part in audio-taped interviews, answer two written questionnaires, and to share their writing samples. Three students from each class (a total of six) agreed to participate.

### **Data Sources and Instruments**

This section describes the data sources provided by both students and teachers and details measurement instruments. Data were collected primarily from teachers and students (Appendix II). In addition, curriculum resources/materials (i.e., textbooks, workbooks, and worksheets) were reviewed. Data sources from teachers included: teacher interviews, classroom observation field notes, observational protocols, and ratings on literacy learning environment. Student data sources were: interview guide, self-rating surveys on literacy background and development, literacy challenge questionnaires, think-aloud protocols, work samples and midterm and final exam scores. For each data source a guideline for analysis was utilized.

**Data collection from teachers.** This section will depict the data sources from teachers in details.

*Class observations.* Qualitative inquiry with “thick” observation and in -depth interviews were utilized (Patton, 2002). “Thick” observation records the individual, event, context, and behaviors in great detail in an effort to capture both obvious and nuanced aspects of the environment under study. Classroom observation provided rich information about what and how CHL teachers conducted literacy activities ; how teachers and students interacted; how and around what type of activity students interacted with one another; and how students respond to literacy instruction. This enabled me to observe the classroom environment in specific ways and describe the rich contextual nature of CHL instruction. Data collected during observations were in two forms: descriptive notes and observation protocol. The descriptive notes aimed to capture the classroom context, literacy activities, instructional method employed and challenges CHL learners encountered in the classrooms. The descriptive notes were written in Chinese since intermediate level teachers use mostly Chinese in their teaching. The total hours of observation were seventy-five. Classroom observation was conducted Monday through Friday. On Tuesdays and Fridays, observation in the classes averaged 7 hours of weekly observation. On Mondays, Wednesdays and Thursdays observations averaged 4 hours. An observation protocol modified from a Singapore pedagogy coding scheme developed by Luke, Freebody, Cazden and Lin (2004) was utilized to support descriptive field notes. Singapore pedagogy coding scheme was used because I believed that Chinese language instruction should be explored using a scheme that is appropriate for Chinese language

instruction instead of using a coding scheme that might be more appropriate for language instruction in English. Six major categories were included in this coding scheme, framing (e.g., whole-class lectures, test taking), social support (e.g., teacher provides explicit support of student's learning), ethos (e.g., teacher encourages student self-expression), knowledge classification (e.g., where does the knowledge come from, what resources do teacher and students use in the classroom, what types of work do students produce in class), weaving (e.g., weaving between new and known) and task framing (e.g., scaffolding). Two categories, framing and knowledge classifications were considered good indicators to support research question one that addressed the nature of literacy instruction in intermediate Chinese language courses. In this study, an observation protocol provided information regarding the (1) major source of authoritative knowledge (e.g., students, teachers, textbook, internet), (2) teacher and student resources utilized in the classroom (e.g., using textbooks, whiteboard or power point slides to guide teaching and learning), (3) student produced work samples (e.g., student oral response, written short answers, written essays), and (4) major classroom activity (e.g., whole-class lecture, oral reading, whole-class discussion, individual seatwork).

***Teacher interviews.*** Teacher interviews aimed to shed light on the reasons for specific instructional methods and literacy activities, what literacy challenges teachers perceived CHL learners encountered, and from teacher's perspectives, whether literacy instruction supported students' literacy competency. Michelle taught class section 1 and Mary taught section 2. Valerie taught section 3. The three teachers were interviewed individually on two occasions: the pre-interview took place on July 19, 2011 two days

prior to midterm exam and the exit interview took place on August 9 when the class was over. Each teacher interview was 100 minutes-long and was audio-taped. The Chinese translation of the original interview questions written in English was provided to the teachers and they received an oral explanation to clarify the questions. Teachers responded to the questions using Mandarin. Interview questions were designed to collect demographic information about the teachers (e.g., educational and professional backgrounds). In addition, teachers discussed their overall instructional methods, provided information about the types of literacy activities they used, and shared their perceptions about challenges faced by their CHL students.

*Curriculum materials.* In addition to classroom observation and teacher interviews, curriculum materials provided the third data source for understanding the literacy activities and instructional approaches used in intermediate-level CHL classroom. Previous observations of CFL classrooms revealed that curriculum materials, particularly textbooks and worksheets, play a crucial role in shaping teachers' instructional methods (Luke et al., 2004). Each teacher surrendered curriculum materials/artifacts before and after each observation. These materials included textbooks, worksheets, electronic copies of power point presentations (PPTs) and sample test papers. Class textbooks were provided before the first observation. It is important to note that textbooks used at BCLC were written by BCLC faculty members who were also CHL teachers. Two types of textbooks were used, one had greater emphasis on reading and writing, the second text focused more on speaking and listening and Chinese culture. The major purpose for

reviewing curriculum materials was to gain insight about the extent to which these resources influenced instructional approaches and literacy activities.

***Ratings on literacy learning environment.*** The purpose of rating the literacy environment of the classrooms was to obtain information about whether the literacy learning environment supported development of students' literacy competence. The 4 - point Likert-type rating scale (3=always present, 2=frequently occurring, 1=seldom present, 0=never demonstrated) evaluated the frequency of specific elements used in the classroom to support Chinese literacy development. Items on the literacy environment identified which strategies/activities/tasks for developing literacy in reading or writing were utilized and the frequency, which those elements of literacy appeared. Means scores for reading and writing were calculated separately for each teacher and a grand mean for each teacher was obtained. This allowed for comparisons of reading and writing means across the three classes.

**Data collection from students.** This section will describe the data sources from students in detail.

***Student interviews.*** The student interviews aimed to gain deep understanding of CHL students' classroom learning experiences related to reading and writing Chinese, particularly what classroom activities they found helpful or unhelpful, and why. Because English was the dominant language for all student-participants, student interviews (pre-interview and exit interview) were conducted in English. The pre-interview for all students was conducted one week after the midterm exam, the exit interview took place one week before final exam in an effort to reduce the influence of exam score and final

grade in the course. This was done because it is common for student-participants to base their feelings about the helpfulness of a course on outcomes, the final exam score or final grade. Six students were interviewed using the interview guide, each interview lasted 40 minutes, and interviews were audio-taped. The student interview questions were organized into three sections. The first section was designed to determine whether they believed instruction in the CHL class supported their learning. Section two aimed to identify the literacy activities they saw as helpful, and the third section asked about ways to improve literacy instruction.

*Self-rating surveys on literacy background and development.* The self-rating survey of students literacy background and development (Appendix I) aimed to (1) obtain information about students' language background, (2) understand how CHL learners viewed their individual literacy skills (e.g., ability to recognize characters, ability to comprehend texts) and (3) how well they believed teachers had prepared them for meeting the reading and writing demands needed for literacy in Chinese. Students provided self-rating information about their individual literacy skills and how well the class prepared them to meet the literacy demands of Chinese at the beginning of the course and near the end of the course. The first type of data provided information about students' Chinese language backgrounds. For instance, students rated the frequency that Chinese is spoken and written between parents at home. This information provided me with detailed information to describe student participants in details. The second type of data was to elicit information about whether literacy instruction supported student's literacy competence. Students self-rated their Chinese literacy skills before and after the

CHL course. Students' self-ratings on Chinese literacy skills were utilized to conduct a pre-and post t-test to investigate whether the relation between the variables was significant. The third type of data elicited information to understand how well students believed the CHL teachers prepared them for improving Chinese literacy skills. Students' self-rating surveys were administered at the same time student exit interviews were conducted.

*Literacy challenge questionnaires.* The literacy challenge questionnaire was also written in the students' dominant language, English. Questions consisted of a series of open-ended items designed to obtain information about reading and writing challenges they encountered in the intermediate level Chinese language classroom. Student participants delineated the challenges encountered when they read and write in Chinese. This questionnaire was administered two weeks after the midterm exam.

*Think-aloud protocols.* The think-aloud protocol required "subjects to report their thinking as they do a task" (Pressley & Afflerbach, 1995, p. 1), such as the task of reading a passage. Think-aloud analysis can provide invaluable information about reading procedures. The purpose of conducting think -alouds was to provide detailed information about literacy challenges students encountered during the reading process. Students' responses to the questionnaire provided insight about their perceived and real literacy challenges. Think alouds allowed participants to verbalize the process of reading Chinese; also, it facilitated a closer look into how intermediate level learners of Chinese process text, how they gain meaning, and the challenges they encountered. Two major steps were taken to perform the think -aloud process. First, I explained the purpose of a

reading think-aloud, gave the steps for engaging in the process, and then provided examples of to clarify what the process looks, feels and sounds like. Students were given time to ask questions to be sure they understood what was required. Students were instructed to read a passage either silently or aloud. Next, they were told to re-read the passage, one sentence at a time or read a group of sentences. Then, they were asked to verbally report in English on what the sentence(s) might mean. Next, they were encouraged to share any difficulties they experienced reading or understanding the information and to indicate why they thought they had trouble understanding. This process was repeated until the entire passage was completed. Reading passages were taken from textbooks used in the CHL course, but consisted of passages not yet read for the course. Teacher did not cover due to time limitation. Think aloud protocols were conducted individually and were audio-recorded. Think-aloud protocols were conducted after target students completed their literacy challenge questionnaires.

*Student work samples.* Student work samples consisted mainly of workbooks, worksheets and writing assignments. The workbooks and worksheets provided information about course content and the type of independent activities students performed. The writing assignments indicated students' efforts to write Chinese and revealed the challenges they encountered. To analyze students' writing an evaluation guideline was used to indicate whether they encountered character, word and sentence level challenges. For example, at character level an error in writing might indicate a student experienced an orthographic challenge such as difficulty distinguishing similar characters. Students' writing responses were also noted by reviewing student's workbook

that contained writing exercises that included: sentence making, sentence revisions, sentence reconstruction, and fill-in-the blanks of a dialogue activity. Sentence making required students to use specific words or sentence patterns to make up a sentence. Sentence revision required students to use specific sentence patterns, written language or four-character Chinese set phrases (Wong, 1992). Sentence reconstruction was used to familiarize students with Chinese word order. Fill-in-the blank of dialogue required students to use specific sentence patterns for extending and or building new dialogue and using it in different contexts. For example, students needed to fill-in the blanks with the words, displayed in parentheses, of a dialogue between speaker A and speaker B. A: Have you ever been to (U.S.)? B: No matter (taking the flight) or (boat) is fine when going to (U.S.). Students were permitted to replace words in parentheses. In other words, students could replace U.S. with other countries or places, and substitute taking the flight or boat with taking trains or other modes of transportation. Another form of dialogue writing required students to co-create a conversation about an assigned topic, such as working from home. Worksheets involved activities such as responding to questions of a hotel reservation, describing the characteristics of national parks in Taiwan, making sentences using mandatory sentence patterns and responding to a Chinese fortune telling slips. Additional work samples included other short-response writing assignments, journal entries as well as essay writings, and dialogue writings. Journal/diary entry was a type of free-writing that students could use to share anything related to school or daily life. Other entries included students sharing their dining or their travel experiences to Hong Kong. Essay writing was limited to providing responses to descriptive topics. Such

topics included describing a favorite leisure activity. Students were required to use words and sentence patterns assigned by teacher.

**Exam scores.** The purpose of collecting CHL course exam scores was to obtain information about whether literacy instruction supported literacy competence exemplified by successful performance on course exams. Course exams assessed student's ability to handwrite characters, to use proper words, to make sentences using mandatory words and sentence patterns, to comprehend passages and to answer open-ended questions. Two statistical procedures using Statistical Package for Social Sciences (SPSS 18.0) were conducted: pre-and-post t test and correlation study. The *t*-test was used to determine if there was a statistically significant difference between midterm and final exam scores. The correlation study was conducted using mean ratings from the literacy learning environment and final exam scores to investigate the strength and direction of this relationship.

### **Data analysis**

As detailed earlier in the data source section, there were twelve data sources for this study. The qualitative data sources used in the analysis were: (1) classroom observations (2) teacher interviews, (3) student interviews, (4) student literacy challenge questionnaires, (5) think-aloud protocols, (6) student work samples, and (7) curriculum materials. The quantitative data sources included: (8) observational protocol, (9) literacy learning environment rating, (10) students' self-rating survey of literacy background and literacy development, (11) midterm exam scores and (12) final exam scores. Detailed procedures for analyzing these data sources are addressed below.

## **Qualitative Data**

This section details tools used in analyzing data gathered from qualitative sources and elucidates major information obtained from each data source. Finally, detailed procedures used to conduct the analyses are presented.

Qualitative data sources include the followings: (1) classroom observations (2) teacher interviews, (3) student interviews, (4) student literacy challenge questionnaires, (5) think-aloud protocols, (6) student work samples, (7) and curriculum materials.

Qualitative data analysis begun at the time of data collection and review of data continued throughout the study. All qualitative data were analyzed based on two major analytic strategies: (1) single-case analysis: coding and thematic analysis and (2) cross-case analysis: matrix. According to Maxwell (2005), “categorizing strategies can be referred to as coding and thematic analysis” (p. 96). First, for each single case, I coded recurring phrases at the margin of the descriptive field notes or interview transcriptions, and later I collected related codes to form themes. Coding is the process used by a researcher to “assign a descriptive word or phrase to each unit of notes” (Krathwohl, 1993, p. 337). It helps researchers learn what is significant as researchers “see aspects that repeat themselves” (Krathwohl, 1993, p. 336). For example, I coded recurring words/phrases in a teacher interview transcription and collected related codes to form themes for each teacher. Codes were made but they were revised as necessary (Krathwohl, 1993). Second, after I collected themes for each teacher, I looked for shared themes among the 3 teachers. A cross-case matrix was utilized to help determine how each

teacher talked about the shared theme. Next, teacher's statements or quotes were noted below the themes.

Classroom observation field notes were used to identify major literacy activities and underlying instructional approaches. Classroom observation field notes were recorded as narrative descriptions. Particularly activity was noted in field notes and later coded. Activity codes were utilized to identify repeatedly occurring literacy activities ( Bogdan & Biklen, 1982). I looked for Recurring or common phrases were noted and labeled. By so doing, I was able to see the important literacy activities and assign provisional codes that might be revised later. After initial coding, related codes were identified to form broader themes, thematic analysis, for each individual teacher. Because three teachers were observed, I conducted a cross-case analysis, which Greene (2007) called "data correlation and comparison" (p. 145), in which researchers identify patterns through making clusters of themes that appear to go together. In other words, I looked for shared themes or patterns among the three teachers in order to identify major literacy activities and their underlying instructional approaches. This information was organized using a matrix that visually showed interrelationships among the three teachers (Krathwohl, 1993). Codes were listed under each shared theme to allow me to see how each teacher conduct the same activity.

Teacher interview transcriptions were intended primarily to elicit three types of information: (a) major literacy activities and underlying instructional approaches used in the classrooms, (b) teacher perceptions of helpful and less helpful activities, and (c) teachers' perceptions of the reading and writing challenges faced by students. Student

interview transcriptions were used to elicit information: (a) to grasp whether literacy instruction supported CHL students' learning and (b) to identify student perceived helpful and less helpful activities. Analysis of teacher and student interviews was conducted utilizing single-case analysis, using coding and thematic analysis, and cross -case analysis using matrixes. Each teacher interview transcription was first analyzed and codes were generated. Later, these codes were combined to see where themes emerged and to identify disparate information (Greene, 2007). Teacher interview matrices were utilized to begin cross-case analysis of three teachers for shared themes or patterns. Direct quotations of teacher's words, emic or insider's perspectives (LeCompte, Millroy & Preissle, 1992; Maxwell, 2005), were listed to depict each theme. The use of direct quotations provided opportunity to see how each teacher described shared themes or patterns and provide richer detail. Analysis of student interview transcriptions was made with one class of 3 students and then performed for students in all other classes. The shared themes were identified using cross -case matrixes. Each student's codes were listed with his/her direct quotations appearing just below. This process delineated how each student participant exemplified a shared theme. Findings from student interviews were triangulated with teacher interview to see if teachers and students share or held different perceptions about preparedness of literacy competence, helpful/unhelpful activities and perceived challenges in reading and writing. Analysis of information from the literacy challenge questionnaires and students' think -aloud transcriptions were conducted using the same procedure, single-case analysis via coding and thematic analysis and then cross -case analysis using matrixes. The former was utilized to identify student perceived

literacy challenges and the latter provided information about the type of literacy challenges students' encountered during reading of a Chinese passage. Information from the literacy challenges questionnaire supplemented student interviews providing a more holistic view of the challenges students faced. Analysis of student work samples was used to identify major challenges to writing Chinese whereas think-aloud protocols provided more information about challenges of reading in Chinese. Based on the prescribed guidelines, the major challenges at different levels (i.e., radical, character, word, or sentence level) data were collected. To clarify this point, different levels here referred to challenges that student participants faced as demonstrated by producing an incomplete character at a character level. Examples of incomplete characters were then listed below the column of incomplete characters. This process allowed for tracking of shared challenges to writing at the character level. The same process was used to identify challenges at other levels of writing. After gathering data for one class, I examined challenges within each class, then looked across each class for commonalities or differences. In addition to classroom observations and teacher interviews, curriculum materials were used to supplement identification about instructional methods and major literacy activities. Coding and thematic analysis were again applied for analyzing curriculum materials (textbooks, workbooks and worksheets).

### **Quantitative Data**

Quantitative data sources included: (a) observation protocols, (b) researcher's ratings on literacy learning environment, (c) student's self-rating surveys on literacy background and development, (d) student's midterm exam scores and (e) final exam

scores. Quantitative data were analyzed in three ways: (1) by determining the frequency of classroom literacy activities (2) looking at descriptive statistics, particularly mean and (3) conducting statistical procedures using SPSS, including correlation study and *t*-test using pre-and-post design. Observation protocols were analyzed to look at duration of specific classroom activity and of resources that teachers and students utilized, and frequency of student produced work. Classroom activities and student and teacher resources were counted by duration, In other words, I counted the period of time an activity was employed and counted the time that the specific resource (e.g. , textbook) was used. Student produced work was counted for the numbers of times a teacher required a specific type of work. For instance, Michelle asked students to produce oral responses five times during the observation period. Information for duration (amount of time devoted to an activity or resource by the teacher and students), and frequency (number of times or occurrences an activity was requested by the teacher supplemented observation field notes. This enhanced understanding of how and when major literacy activities were utilized in the classroom.

Descriptive statistics, mean scores, were obtained for students' self-ratings of their literacy background and development. Descriptive statistics from student's self-rating on literacy background and development also determined how students perceived a teacher's role in preparing students to develop Chinese literacy skill, for example, in recognizing characters. Students rated how well their teacher prepared them for developing these literacy skills on a 0-5 scale. Descriptive statistics, noted as mean scores, provide understanding of how teachers supported development of literacy skills in

Chinese reading and writing. Mean scores were calculated to determine how well teachers prepared student participants to address a particular literacy skill. For instance, students felt they were best prepared in writing sentences,  $M = 4.5$ .

Three statistical procedures were conducted using SPSS: correlation study and pre-and-post *t*-test analysis. Quantitative data utilized correlation study that included mean ratings by the researcher of the literacy learning environment and students' scores on the final exam. Two different *t*-tests were conducted. One *t*-test was performed to investigate changes between students' ratings on Chinese literacy skills before and after taking the course. The other *t*-test was performed to investigate changes between midterm exam scores and final exam scores.

**Correlation study.** Correlations analysis using SPSS statistical procedures were performed to investigate the relation between mean ratings of the literacy learning environment and CHL learners' Chinese competence. Literacy competence here refers to final exam scores. Correlation was used to "measure of relation (or correlation) between two variables" (Creswell, 2008, p. 1). Correlation coefficient, which Person *r* can take values from -1.0 and +1.0, is used to describe a linear relation. Correlation coefficient (*r*) provides information about "the strength and direction of the relation between distributions" (Kubiszyn & Borich, 2000, p. 285). This correlation study was conducted to investigate whether there was a relation, positive, negative or no, between rating on the literacy learning environment and performance on the final exam. In order to identify the relationship, Person *r* was calculated.

**Pre-and-post *t*-test.** Two *t*-tests using pre-and-post design were conducted. A one group pretest and posttest design, which “examines data from within-subjects designs when two observations are made on each subject” (Shavelson, 1988, p. 469). In other words, it is to examine changes in the dependent variables of two observations. Specifically, the pre and post *t*-test design investigates the presence of statistical significance on two variables and the direction of that relationship . The first *t*-test was conducted using students’ rating on their literacy skills before and then after taking the course. The second *t*-test was used to determine the relation between scores on the midterm and final exam.

### **Validity**

It is crucial for researchers to think of validity threats and to use strategies to rule out or reduce these threats (Maxwell, 2005). Validity refers to the “trustworthiness of inferences drawn from data” (LeCompte, Millroy & Preissle, 1992, p. 644). Validity threats in this study involve two issues: long term involvement in the research context and researcher’s bias. First, the class selected was an intensive course, only five -weeks in duration. The lack of long-term involvement was addressed by employing intensive classroom observation, conversations with teachers and students before and after class and by using triangulation. Multiple and varied data sources were utilized to study the same phenomenon, called triangulation (Greene, 2007). For example, students’ challenges in reading and writing were identified via teacher interviews, student interviews, student responses on literacy challenge questionnaires, think-aloud protocols and analysis of student work samples. Intensive observation with equal time allocation in

each class, dialogues with teachers and students were among the steps taken to reduce the validity threat for long-term involvement at the research site. The total observation time for the three teachers was 75 hours, and at least six visits were made to each classroom during the five-week period. Efforts were made to allow equal time for observing each teacher. Prior to and after class, I conversed with teachers about specific classroom activities and spoke informally with students about their experiences, especially the writing of Chinese characters.

The possible second validity threat was due to researcher's bias or subjectivity. This was reduced by my sensitivity and awareness of possible bias during the data collection, data analysis and data interpretation processes. Qualitative research similar to the one conducted here involves subjectivity and "researcher him -or herself is the instrument of data collection" (LeCompte, Millroy & Preissle, 1992, p. 754). In order to reduce subjectivity, researcher's subjective response should be noted, monitored and assessed. I believed that a shared native language and similar cultural background could influence my perception and interpretation of data. As well, my identity as a Taiwanese, educated in the U.S. might influence my judgment about good or bad, appropriate or inappropriate, advanced or superior language teaching methods. For example, it might be possible to assume that CHL learners from U.S. experience more advanced language teaching instruction, such as having been exposed to: communicative language teaching, student-centered instruction, negotiated curricula, authentic classroom tasks and group versus individual activities and more opportunities for interaction. In order to reduce this threat, I was mindful of these possible biases during my interviews with teachers and

students, the observation period, during the data collection process, and as I analyzed and interpreted data. Importantly, I remained open to what all participants (teachers and students) said about literacy activities and instructional methods.

## CHAPTER FOUR

This study explored the nature of literacy instruction of Chinese as a heritage language (CHL) for intermediate level Chinese language classes in Taiwan with emphasis on instructional approaches and challenges of reading and writing in Chinese.

RQ1. What is the nature of literacy instruction in intermediate Chinese language class?

RQ2. How do CHL learners perceive and react to intermediate CHL language courses?

RQ3. Does literacy instruction support CHL learners' literacy competence?

RQ4. What reading and writing challenges do CHL learners in intermediate Chinese language classrooms encounter?

Findings are organized based on each of the four research questions. Both quantitative and qualitative findings are presented.

### **Research Question 1: What is the nature of literacy instruction in intermediate Chinese language class?**

Research question one was intended to answer what major literacy activities teachers included in their instruction for intermediate -level CHL learners in the classroom

and what instructional approaches CHL teachers employed to support reading and writing. Teacher interviews, classroom observations, observation protocols and curriculum materials were used to answer this research question.

### **Major Literacy Activities and Instructional Approaches**

Major literacy activities and instructional approaches in the intermediate -level CHL classroom were explored through interviewing teachers, observing classrooms and collecting curriculum materials. Data collected from observation protocols were utilized to support observation field notes. To begin, findings from teacher interviews are presented; next, I report and discuss findings from classroom observations based on observation protocols. Finally, I discuss findings from curriculum materials (e.g., textbooks, worksheets, workbooks). All data sources mentioned have been utilized to provide a more holistic picture of the nature of literacy instruction in the intermediate - level CHL classroom.

**Teacher interviews findings.** Two face-to-face interviews, based on the interview guide, were conducted for the three teachers. After coding the interviews, four themes emerged highlighting the instructional approaches employed by intermediate- level CHL teachers: (1) component and radical instruction (2) reading aloud and dictation (3) sentence-making using newly learned vocabulary words and sentence patterns (both in oral and written) and (4) comprehension checking

***Component and radical instruction.*** Teachers believed that delivering component and radical instruction achieved the goal of better preparing students for handwriting Chinese characters with accuracy. Thus, teachers depicted that they spent time on

explaining radical forms and positions, and trying to create a story, drawing pictures of objects or introducing pictograms to help students memorize characters as a means to improve students' recall. First, teachers described that they focused on radical forms and positions by explaining semantic-phonetic compound characters. The semantic component, called radicals, provides a clue to meaning and the phonetic component gives a clue to pronunciation. Michelle provided an example to demonstrate how she introduced the semantic-phonetic compound character 贈 /zheng4/ (to give as a present). Michelle explained this concept to her students by saying the left component of the character, the radical 貝/bei4/ (shell) referring to "money." She also explained that in ancient China, a shell was considered precious and was used to exchange things of value, later becoming a form of currency. The right component of the character, the phonetic, was 曾/zeng1/ (last name). 曾/zeng1/ (last name) shared the same pronunciation with 贈 /zheng4/ (to give as a present) although with a different tone. Later, Michelle led her students in learning internal components of a character, which usually begins with recognizing the radical and other components. For example, students learned characters 買 /mai3/ (buy) and 賣 /mai4/ (sell) through being informed that the bottom part of the character 貝/bei4/ (shell) is the radical, referring to "money" and character 買 /mai3/ (buy) with the component 四/si4/ (number four) at the very top and character 賣 /mai4/ (sell) with other component 士/shi4/ (soldier) at the top. Valerie, another teacher, believed decomposing the internal structure of a character may help students better memorize characters saying "students will try to memorize a character by making up of separate

components together instead of memorizing it as an arbitrary picture.” When students can better memorize the characters, the chance of recalling and writing them with accuracy improves. Valerie described that she asked her students to assemble a correct character using separate components.

To help students grasp phonetic components, teachers described that they focused on characters sharing the same radical but placed in different positions, such as in the following two characters. The character component 口/kou3/ (mouth) is placed at the very bottom of character 信/xin4/ (trust) but it is placed at the very top of character 呆/dai1/ (stupid). Another example was the radical 木/mu4/ (wood) is positioned in the right side of the character 休/xiu1/ (rest) but it is positioned at the right side of character 衫/shan1/ (shirt).

In order to help learners of Chinese to better memorize a character containing a number of strokes, teachers created a story, drew the scribbles and introduced pictograph characters by using a short video clip to enhance memory of print characters. For example, Mary described that she created a story for students to memorize. For example, she told her students that the character 聽/ting1/ (listen) looks like “a king with huge ears, fourteen persons only one person listens to his heart.” Michelle explained both characters 源/yuan2/ (source) and 鏡/jing4/ (mirror) by drawings and saying character 源/yuan2/ (source) like water flows from cliffs and character . The left upper part of the character of 鏡/jing4/ (mirror) looks like one’s head and the bottom part looks like a person with two legs. Michelle also believed that it was easier for her students to memorize a character

through drawings. In other words, connecting picture images with the written characters helped learners of Chinese to remember a character. Michelle drew pictures to help her students learn pictograms such as 龍/long 2/ (dragon) and 龜 /gui1/ (turtle). Valerie showed a short video clip on ancient Chinese characters, particularly featuring pictograms and asked her students to write down characters they heard or saw during the video. Valerie believed that it was important for students to know the origin of ancient Chinese characters and how characters were formed through picture images. In terms of teacher interviews, teachers indicated they implemented a number of strategies to help students memorize characters, and believed their efforts would improve students' handwriting and accuracy in recalling characters.

***Reading aloud and dictation.*** The second theme addressed the goal of developing students' competence in character recognition and character handwritings. Teachers perceived that reading aloud and dictation were the two major literacy activities to achieve this goal. During observations of the CHL classrooms, two ways to conduct reading aloud were noted: whole-class reading aloud and paired fronted reading aloud. Whole-class reading aloud was conducted using either teacher-directed or student paired, that is, peer-to-peer reading. Teachers believed that whole-class reading aloud allowed them to check comprehension and later provide additional information about student progress. Teachers also believed that paired-read alouds improves oral fluency. They stressed that students relied on teacher read alouds because they believed that reading out loud enabled them to make better connections between written Chinese and pronunciation, thus increasing comprehension. Paired reading aloud provided students

with opportunities to prove that they themselves were able to recognize characters without the teacher's help and without pinyin or zhuyin aid. This enabled them to better associate written Chinese with pronunciation and thus become more independent of pinyin or zhuyin.

Teachers described that they administered dictation quizzes regularly session to enhance student's character recognition skills and to better prepare them for handwriting characters with accuracy. Mary described that students thought they were able to handwrite characters with accuracy; yet, when students actually did write characters, they were frequently not complete. Dictation quizzes provided opportunities to practice handwriting characters by themselves and provided consistent feedback.

*Sentence making both in oral and written.* All teachers described how sentence making tactics were employed, both orally and in writing, to prepare students for using new words and sentence patterns in proper contexts. Teachers were concerned with whether students are able to apply new words and sentence patterns in different contexts. This revealed that teachers were not just concerned with accuracy, but also considered it important for students to apply knowledge beyond the immediate context. Accuracy here refers to not only correct word usages and sentence patterns in proper contexts, but accuracy of writing Chinese characters. Teachers explained that in order to achieve sentence accuracy, they often conducted whole class sentence making activities, primarily questioning and answering as well as providing verbal statements related to students' lives. First, teachers described that they verbally asked the whole class questions and called on students to verbally answer those question using mandatory

vocabulary words (or sentence patterns). Teachers provided verbal examples related to experiences from students' daily and school life in order to demonstrate how to apply specific vocabulary words in proper contexts. Teachers stressed that making up sentences required students to either work individually or in pairs and later, write sentences on the whiteboard. Teachers believed that inviting students to write on the whiteboard, although time consuming, provided peer modeling opportunities and collaboration. Moreover, teachers felt this process maximized opportunity for students to actually use new words (or sentence patterns) in meaningful ways.

***Comprehension checking.*** In order to achieve the goal of developing student's competence for comprehending Chinese passages in detail, teachers believed that conducting comprehension check activities, especially those that use dialogue, supported comprehension of extended text. Teachers described that they employed two approaches to check students' comprehension, whole-class or paired oral discussion, and paired writing. Teacher-led whole class discussion begun by asking questions, either closed or open-ended, and later students discussed answers together as a whole class. Michelle indicated that she preferred to employ teacher-led whole class discussions while Valerie and Mary said they employed whole-class and paired discussion. However, Michelle acknowledged that a disadvantage of conducting teacher-led whole class was that only a few students, those who are more outgoing, were willing to speak up. Teachers indicated that paired oral discussion was conducted when student pairs were assigned to specific questions and collaborated on their responses. Teachers believed that it was important to

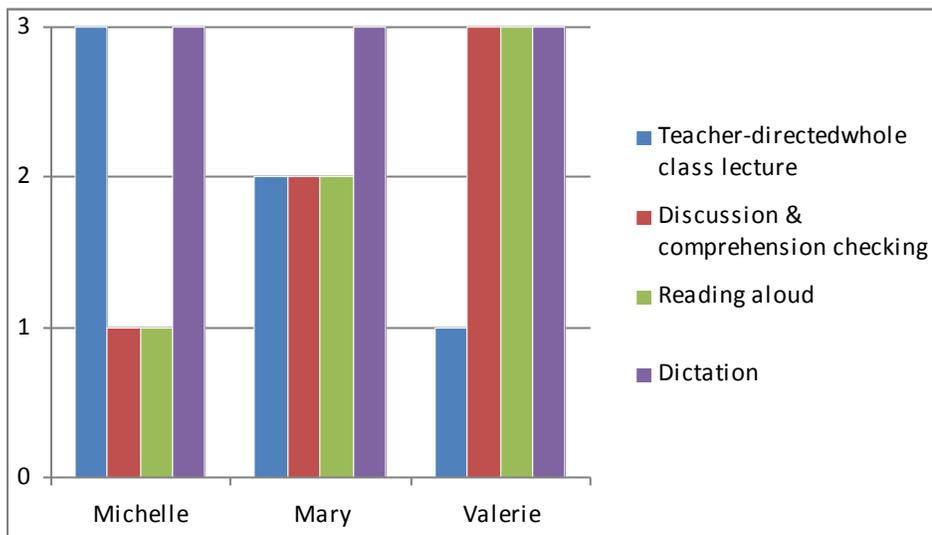
check students' comprehension by asking them open-ended questions requiring students to go beyond the surface level meaning and make inferences.

Teachers described that they employed paired dialogue writings to check comprehension of a new passage, or dialogue. All teachers believed that individual writing may be a challenging task for students; however, cooperative writing supported motivation to write and lowered writing anxiety. For the most part, when writing collaboratively teachers gave students an unfamiliar passage, and then working in pairs they rewrote the passage using a dialogue format. Teachers believed this activity allowed them to determine whether students could use proper wording, use appropriate sentence patterns for a different context, check comprehension. They also stressed that asking students to write dialogues in pairs developed competence for discussing a range of topics, at the same time strengthening connections between written and spoken language. Mary indicated that paired and shared tasks provided peer -to-peer guiding and support for learning, moreover she believed this process encouraged peer scaffolding and played a crucial role in learning. All teachers collected students' errors in grammar, word usage s, and pronunciation when they shared their dialogues and later corrected them with a whole class.

Always mindful of students' needs and their literacy goals, the three teachers attempted to develop students' competence for recognizing characters, writing characters with accuracy, using proper words and sentence patterns, and comprehending passages and dialogues. They asserted that increased competency for recognizing characters and

handwriting characters with accuracy can be achieved by having a variety of activities, including reading aloud, dictation quizzes and radical component instruction.

**Classroom observations findings and discussion.** Three intermediate-level CHL teachers' classes were observed for 75 hours. Observations averaged 3.6 hours in duration and each class was observed a minimum of six times. After coding the observation field notes, the following themes emerged indicating the types of literacy activities used in the three classrooms: teacher-directed whole class lectures, discussion, comprehension checking, reading aloud, and dictation. Teachers employed these four major classroom activities with different frequency as shown in Figure 1.



*Figure 1.* Frequency of Teachers Employed Four Major Classroom Activities

***Teacher-directed whole class lectures.*** Teacher-directed whole class lectures were valued as a means of instruction in the intermediate -level CHL classroom. Lectures typically consisted of two tasks. First, the lectures were delivered to introduce new vocabulary words and were accompanied by explanations of new passages and dialogues. Second, lectures stressed ways for students to make corrections. Teacher-directed lecture, was employed most often by Michelle, who used them approximately 25% of the time. Michelle’s class is detailed later in this chapter. Valerie used a lecture format less than the other teachers, choosing to employ discussion and comprehension checking over other activities. Across the three classes, lectures were predominantly held to introduce new vocabulary words and make corrections.

***Introduction of new vocabulary words.*** As shown in Table 2, all teachers were observed to introduce new vocabulary words in similar ways: (a) using conversational language instead of direct translation (b) interspersing context -based questions to elicit use of new vocabulary words or asking questions using new vocabulary words to provide students with opportunities to demonstrate understanding of new vocabulary in context, (c) providing verbal examples, and (d) using collocations. Teachers appeared to hold similar views about vocabulary teaching, although they did differ in how often direct - lectures were used

Table 2

*Ways of CHL Teachers Introducing Vocabulary*

	<b>Use conversational</b>	<b>Context-based</b>	<b>Provide verbal</b>	<b>Collocations</b>
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	language	verbal questions	examples	
Michelle	<p>1. 陸續(lu4xu4) (consecutively) refers to 不是一次完成 (not complete at one time)</p> <p>2. 生生不息(to sustain forever) refers to 一直不斷地循環 (recycle constantly)</p> <p>3. 向來(xiang4 lai2)(always) refers to 從來都沒有改變過 (has never changed since the beginning)</p> <p>4. 流浪(liu2lang4) (wander) meaning 沒有固定的住所” (without a specific place to live)</p> <p>5. 唸書畫線就是強調 (Underlining while studying is to <b>emphasize</b>)</p>	<p>1. 我們可以訂? (What can we <b>book</b>?) when new vocabulary 訂旅館(book a hotel) was introduced. Students responded to her question saying 旅館(hotel). Michelle continued asking 還有什麼 (what else can we also book?) Students answered saying 機票(Flight ticket) and 車票 (tickets for any kinds).</p> <p>2. 手續(procedure) was introduced. Michelle asked 如果你想要請假，要辦什麼手續? ( If you'd like to take a day off? What <b>procedure</b> do you need to go through?). Michelle continued asking 這裡的請假手續會很複雜嗎? (Is it complex to go through the <b>procedure</b> of taking days off here?).</p>	<p>1:想到老字號的豆干就會想到大溪豆干(Da xi bean curd comes to mind when talking about <b>old-brand</b> bean curd) when introducing the three-character word 老字號 (old-brand).</p> <p>2.在台灣，近視是很普遍的現象。(In Taiwan, near-sighted is <b>commonly seen</b> phenomenon) when the two-character word 普遍 (commonly) was introduced.</p>	<p>1.傑出青年 (<b>excellent</b> young adults) or 傑出人才 (<b>excellent</b> professionals) when introducing the vocabulary word “傑出” (excellent).</p> <p>2.獲得(to gain/get), Michelle made collocations as follows: 獲得機會 (get opportunity), 獲得經驗 (gain experience), 獲得知識(gain knowledge) and 獲得同意(get agreement).</p>
Mary & TA Alice	<p>1. 森林浴 (sen1lin2yu4)</p>	<p>1. 誰可以告訴我什麼是國</p>	<p>1.我們如果有東西要請老師</p>	<p>房屋仲介 (House dealer), 高速公路</p>

	<p>(forest bath),就是進入森林，遊山玩水 (Forest bath means to go to forest and enjoy beautiful views and fresh air)</p> <p>2. 風情(feng lqing 2) (ambiance)就是一種氣氛風俗習慣 (Ambiance is one type of atmosphere, a cultural custom.)</p>	<p>家公園? (Who can tell me what a <b>national park</b> mean?). Alice continued asking 這個公園大還是小 (is national park huge or small?) and 誰知道台灣有幾個國家公園 (Anyone has an idea about how many <b>national parks</b> are in Taiwan?)</p> <p>2. 你們到台灣來，有沒有什麼另你們耳目一新? (What <b>get your ears and eyes new</b> when you come to Taiwan?)</p>	<p>或教授看一下，我們會說麻煩請老師過目一下 that when we would like our professors to take a look at papers, we say please <b>take a look at it</b>, professor. when she introduced the vocabulary word 過目 (take a look).</p>	<p>收費亭 (ticketing booth on highway), and 參考文獻 (references).</p>
Valerie & TA George	<p>1. 素描(su4miao2) (Sketches) by saying 很快的用鉛筆畫下來 (quickly jot down things using a pencil)</p> <p>2. 流螢 was something in conversational language 流動的螢火蟲</p>	<p>1. 我什麼時候喝你的喜酒是什麼意思? (What does it mean when I ask you when to drink your <b>wedding wine</b>?)</p> <p>2. 有沒有人最近生日，要怎麼樣慶生?)</p>	<p>1. 除了看書她還有很多其他的愛好 (In addition to reading books, she has other hobbies.)</p> <p>2. 去綠島旅遊要記得擦防曬乳 (Remember to wear</p>	<p>1. 室內活動 (<b>indoor</b> activity ),</p> <p>2. 聖誕前夕 (Christmas <b>Eve</b>) and 除夕 (Chinese New Year's <b>Eve</b>)</p> <p>3. 花卉展覽 (flower <b>exhibition</b>)</p>

	(moving fireflies)	(Is anyone's birthday around, how one <b>celebrates his/her birthday?</b> ) and 有沒有人有特別特別的慶生會，可以分享( Any special <b>birthday party</b> to share?)	sunscreen when visiting Green Island.)	
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Using conversational language to explain new vocabulary words was observed in all classes. Michelle described new vocabulary words by explaining “陸續”/lu4xu4/ (consecutively) was referred to 不是一次完成 (not complete at one time). In Valerie's class, Valerie and her teaching assistant George used conversational language to explain a word, Valerie explained the two-character word “素描”/su4miao2/(sketches) by saying 很快的用鉛筆畫下來(quickly jot down things using a pencil). Mary's teaching assistant, Alice was responsible for teaching vocabulary via power point. When she introduced the new vocabulary word “森林浴”/sen1lin2yu4/(forest bath), she explained that in conversational language saying 就是進入森林，遊山玩水 (Forest bath means to go to forest and enjoy beautiful views and fresh air) . Teachers were observed to avoid using the students' dominant language, which was English, to explain new words. Instead, they insisted on using conversational Chinese to provide introduce and explain the meaning of

a new word. Research on CHL has shown that CHL learners have better skills in speaking and listening (Li & Duff, 2008; Xiao, 2006). According to Xiao (2006), CHL learners' home environment, although speaking opportunities may vary, still facilitates their speaking and learning competence. All teachers were observed to maximize opportunities to introduce new vocabulary words by using comprehensible language instead of direct translation.

Context-based oral questioning to encourage use of new vocabulary words or asking questions using new vocabulary words were used by teachers to introduce new vocabulary words. Michelle verbally posed a question to encourage students to use new vocabulary. For instance, she asked 如果你想要請假，要辦什麼手續? (If you'd like to take a day off? What **procedure** do you need to go through?) when the new vocabulary 手續(procedure) was introduced. Michelle continued asking 這裡的請假手續會很複雜嗎? (Is it complex to go through the **procedure** of taking days off here?). Michelle's questioning created a meaningful context for vocabulary use. In Valerie's class, examples included 有沒有人最近生日，要怎麼樣慶生? (Is anyone's birthday around, how one **celebrates his/her birthday**?) and 有沒有人有很特別的慶生會，可以分享( Any special **birthday party** to share?). Mary's teaching assistant Alice asked questions to encourage use of new vocabulary in context saying 誰可以告訴我什麼是國家公園? (Who can tell me what a **national park** might mean?). One student responded 政府保護的地方 (places protected by the government). Alice continued asking 這個公園大還是小 (is national park huge or small?) and 誰知道台灣有幾個國家公園 (Anyone has an

idea about how many **national parks** are in Taiwan?) when she introduced the new vocabulary word 國家公園 /guo2jia1gong1yuan2/ (national park). All teachers were observed to verbally provide examples in context when examples are related to student's life and world experiences. According to Eun and Lin (2009), instruction that is meaningful for learners can arouse student's interest by "connecting it to their real lives in the real world" (p. 22).

Providing direct verbal examples, mostly statements, was a shared way to introduce vocabulary among the three teachers, with varied frequency. Michelle was observed to provide direct verbal examples more often than Mary and Valerie. The teachers provided verbal examples to: introduce a new word with multiple examples and introduce a new word with one example. It was observed that Michelle used both ways while Valerie, Mary and their teaching assistants used only the latter. Often, Michelle provided at least one example, including the following two verbal examples: 想到老字號的豆干就會想到大溪豆干(Da xi bean curd comes to mind when talking about **old-brand** bean curd) when introducing the three-character word 老字號(old-brand). In addition to providing at least one verbal example to explain a new vocabulary word, Michelle was the only teacher who was observed to employ multiple verbal examples to elucidate a new word. For instance, multiple examples of using the two-character word 火花(**spark**) were as follows. Michelle verbally explained that 男女眼神的交會，產生愛的火花 (eyes of a man and a woman interchange, this can kindle **spark** of love), 新舊文化產生火花 (new and old culture can make **spark**) and 古典跟現代也可以產生火花

(classical and modern can make **spark**). Mary's teaching assistant Alice used verbal examples often to elucidate new words. For instance, she said 我們如果有東西要請老師或教授看一下，我們會說麻煩請老師過目一下 that when we would like our instructors or professors taking a look at papers, we say please **take a look at it**, professor when she introduced the vocabulary word 過目(take a look). Providing verbal examples in context was one of the most frequently observed ways to introduce new vocabulary words in all three classes. Verbal examples were made to ensure students' understanding of the correct word usage. Introducing new words using more than one example can maximize learning of new words in various contexts. Students appeared to appreciate teacher's introduction of a new word in depth, particularly multiple usages in different contexts. This implied that in order to understand the proper use of a Chinese word, multiple examples of a new word using in various contexts are needed.

Introducing new vocabulary words by collocations was observed for all teachers. Collocations refer to word combinations. Michelle frequently introduced new vocabulary words with accompanying collocations. One example of collocation in Michelle's class was with the new vocabulary word 獲得 (to gain/get), Michelle made collocations as follows: 獲得機會(get opportunity), 獲得經驗 (gain experience), 獲得知識(gain knowledge) and 獲得同意(get agreement). Compared to the use of collocation by Michelle, Mary's teaching assistant, Alice, used collocation less frequently. As mentioned earlier, Alice's primary teaching responsibility was for vocabulary teaching. Alice provided the following examples: 房屋仲介 (House dealer), 高速公路收費亭

(ticketing **booth** on highway), and 參考文獻 (references). Valerie and her teaching assistant George introduced new vocabulary words through collocation less often than each of the other teachers. For examples such as 聖誕前夕 (Christmas **Eve**) and 除夕 (Chinese New Year's **Eve**) 花卉展覽 (flower **exhibition**). George was not observed using collocation when lecturing on new vocabulary . Observation revealed that introducing new vocabulary through collocations facilitated student learning of new words. Students appeared to have a better idea about how to use words properly when collocation was used to scaffold their understanding of new vocabulary.

*Different views toward introduction of new vocabulary.* As mentioned earlier, teachers generally had similar beliefs about using lectures to teach vocabulary, but their views differed with respect to how new vocabulary should be introduced. Different views on introduction of vocabulary implied different beliefs about the ways to scaffold to support of vocabulary development. Valerie and her teaching assistant George used pictures/photos to introduce new vocabulary words, supporting their belief that pictures/photos facilitate connections of printed Chinese meaning. Using pictures /photos to introduce new vocabulary words was common in Valerie's class. George also included photos/pictures when using power point slides to introduce new vocabulary words . When appropriate, Valerie often placed photos/pictures of leisure activities to introduce vocabulary words. This appeared to provide more resources for processing a written word to support pronunciation and meaning.

Compared to Valerie and her teaching assistant, Michelle used pictures/photos less often to teach vocabulary. Instead, she employed associations to facilitate in depth

learning of new vocabulary. This suggests that Michelle believed association can better prepare students to more fully understand how a word functions in context (see Table 3). Making use of associations for learning new vocabulary referred to verbal explanation of single character of a multi-character word (e.g., Chinese idioms), identification of written and conversational language, support by using antonyms/synonyms, identification of easily confused words/phrases with examples and supplemental explanation on the usage of the proper contexts.

Table 3

*Ways of Introducing Vocabulary in Michelle's Class*

<b>Explanation of single character of a multi-character word</b>	<b>Written Language</b>	<b>Association: antonyms and synonyms</b>	<b>Identification of easily confused word (same in translation)</b>	<b>Additional explanations on word usage</b>
<p>1. 嘆為觀止 (to be amazing) by saying 嘆 refer to 嘆息(mourn), 觀 equals to 看 (watch), 止 refer to 停止(stop).</p> <p>2. 假手他人” (through someone else’s hand) was explained by Michelle saying that “假”(borrow) means “借”(borrow).</p> <p>3. 一探究竟” (to</p>	<p>1. 規劃 (planning) is a written language when 計畫 (planning) can be used in both conversational and written language.</p> <p>2. 訊息(messages)/消息(news).</p> <p>3. 諮詢 (consultation) either 詢問 (inquiry) or 問 (asking) (conversational).</p> <p>4. 便是(is) is conversational</p>	<p>1. 真實(to be real) 虛假 (not true)</p> <p>2. 獲得(to obtain)/失去 (to lose)</p> <p>3. 職業 (professional)/業餘 (amateur)</p> <p>4. 古典 (classical)/現代 (modern),</p> <p>5. 創作 (creation)/抄襲 (Plagiarism)</p>	<p>1. 獲得(to obtain; to gain)/取得(to get; to obtain)</p> <p>2. 升高(to increase)/提高(to promote),</p> <p>3. 家鄉(hometown)/故鄉(birthplace, native place, meaning not live there anymore).</p> <p>For the first instance, Michelle explained saying 獲得(to gain/obtain) was to indicate someone give you</p>	<p>1. 並存 (coexist), Michelle explained by saying that 這兩樣東西一定是相反的 (These two things must be opposite). Later she also provided her students with two verbal examples saying such as 科學/人文</p>

<p>find out). Michelle explained that “探”(look or watch) refer to 看 (watch), 究竟 refer to 原因 (reasons). Michelle added explanation saying that the whole phrase refer to 看清楚, 弄明白 (watch closely; figure things out).</p>	<p>language for 就是 (is). 5. “隨著” (in the wake of) equaled to 跟著 (along with) when the former is the written language for the latter. 6. 猶如 (as if; like) and 好像 (like) when the former is the written language and the latter is conversational language.</p>		<p>while 取得(to get/obtain) was referred to one gives himself/herself. Michelle also provided two examples to clarify these two words saying 他獲得十大傑出青年獎(He <b>has obtained</b> the Top Ten Youth prize) and 我透過一個朋友和他取得聯繫 ( <b>I get</b> contact with him/her through one of my friends)</p>	<p>(science and humanities) and 理性/感性 (Sense and sensibility).</p>
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Intermediate-level texts included increased Chinese idioms; in other words, increased numbers of four-character words on the textbook, as well as increased written language, Michelle spent considerable time on these two areas. A four-character idiom was explained through elucidation of single character of a multi-character word in order to better prepare students for comprehension of a Chinese idiom. For instance, a single character of a multi-character word was four-character word 嘆為觀止(to be amazing). Michelle explained by saying 嘆 was referred to 嘆息(mourn), 觀 equals to 看(watch), 止 was referred to 停止(stop).

Identification of written and conversational language took place when intermediate-level learners of Chinese encountered increasing written language on the

textbook. Michelle directed students' attention on transfer between written and conversational language, explaining that 規劃 (planning) was a written language when 計畫 (planning) can be used in both conversational and written language. Furthermore, she often "translate" formal written language to conversational language for her students.

As observed, Michelle was concerned with preparing students for better use of new words and preventing them from using incorrect words. As a result, Michelle provided support on both antonyms and synonyms. For instance, 真實 (to be real) and 虛假 (not true), might prevent students from using incorrect words, time was spent on identification of easily-confused words, particularly those words that are the same in English translation. She did this by providing supplemental explanations on word usages using multiple examples, identifying easily confused words included: 獲得 (to obtain; to gain) and 取得 (to get; to obtain). Michelle explained 獲得 (to gain/obtain) was to indicate someone give you while 取得 (to get/obtain) was referred to one gives himself/herself. She also provided two examples to clarify these two words saying 他獲得十大傑出青年獎 (He **has obtained** the Top Ten Youth prize) and 我透過一個朋友和他取得聯繫 (I **get** contact with him/her through one of my friends).

Supplemental explanations for correct word usage in context were provided. When Michelle introduced the new word 並存 (coexist), she explained the meaning by saying that 這兩樣東西一定是相反的 (These two things must be opposite). Later she

also provided her students with two verbal examples saying such as 科學/人文 (science and humanitarian) and 理性/感性 (Sense and sensibility).

In sum, four shared approaches were utilized to introduce vocabulary in intermediate-level CHL classes. These approaches implied that, first, all teachers value the listening and speaking skills in Chinese the students possessed. Second, teachers utilized instruction practices that connected to students' experiences in order to arouse interest in learning. Third, teachers believed it is beneficial to introduce vocabulary in context. Fourth, using collocations supports student understanding of vocabulary. Different views toward vocabulary teaching among teachers implied that teachers have diverse perceptions that may result from their general beliefs about teaching. Valerie clearly believed that pictures/photos provide better support in accessing meaning. Michelle's practice of helping students draw from their own experience and then associate their experiences with new words was a cornerstone of her instruction. Also, to reduce the challenge students faced when they encountered idioms, Michelle supported her students by identifying the meaning of individual characters or morphemes in multi-morpheme word, which facilitated understanding. This practice is supported by research conducted by Packard et al., and Chen et al.

*Whole-class corrections.* Teacher-directed lectures were used across all classrooms, but for different purposes. Correction as a whole class among teachers included corrections of orthographic errors with characters, improper word usages, syntactically incorrect sentences, and mispronunciation particularly in tones and pronunciation of characters with multiple readings. All teachers were observed not to

correct errors as a whole class before students completed their activity, either reading aloud, sentence making or dialogue writing. Teachers collected all the errors, later explaining them to the whole class. Michelle placed more emphasis on improper word usages and sentences with incorrect grammar or improper sentence patterns. Valerie and Mary concentrated more on corrections of mispronunciation. Teacher-directed whole class correction took place when Michelle observed and collected character errors made by students on the whiteboard, worksheets and textbooks. Errors in characters were discussed through mini-lessons on identification of internal structure of a character if the misspelled character was a semantic-phonetic compound character and discussion on the internal structure of a shared component. An example of identifying shared component took place when Michelle asked the whole class to identify shared parts characters for, 集 (collection), 焦(burned) and 蕉 (banana). Correction on syntactically incorrect sentences was observed when students were invited to write their sentences on the whiteboard and when Michelle collected all errors on the sentence structures from students' workbooks and worksheets. Most corrections were addressed by written feedback on worksheets and workbooks in Michelle's class. Correction on mispronunciation was also addressed by using multiple readings. When Michelle observed that her students were challenged by 2nd and 3rd tones, she provided a mini-lesson on using correct tones. In addition, in order to facilitate students use of correct tones, Michelle made use of an intonation practice sheet. In this way, students were more able to pronounce using correct tones. Also, Michelle directed her students' attention on the character with multiple readings, such as 落 /lao4/腳處 (lodging place), 分 /fen4/內的事 (one's job) and etc..

Both Valerie and Mary primarily aimed at correcting mispronunciation errors more than corrections on syntactically incorrect sentences. Mary's pronunciation corrections were focused on tones particularly when 2nd and 3rd tones went together as a word. Correction was made as a whole class after she collected worksheets or other written work containing mispronunciations, particularly incorrect tones. For instance, when students read aloud a dialogue about going to temple to pray for good luck on the exam, students had trouble pronouncing two-character word 北港 /pei2kang3/ (a town in middle of Taiwan). In Valerie's class, she corrected the easily confused pronunciation and incorrect tones when she tracked students' errors while reading aloud. Students mispronounced r with l in the last character of the word 防曬乳 /fang2sha4ru3/ (sunscreen). Corrections were made when teachers collected orthographic errors in writing characters, improper word usages and syntactically incorrect sentences and mispronunciation either via mini lessons in Michelle's class or when providing verbal examples as did both Valerie and Mary. Michelle placed greater emphasis on improper word usage and sentence patterns. Both Michelle and Mary focused more on structures and Mary placed emphasis on pronunciation. Correction as a whole class was observed to provide students with opportunities to observe the many errors that their peers might make on characters, word usages and sentences, and pronunciation. Students were observed to appreciate corrections made by their teachers.

Each teacher also held lectures to emphasize corrections. All teachers corrected misspelled characters and syntactically incorrect sentences, yet each placed different emphasis on the various corrections. Michelle placed greater emphasis on improper usage

of words, sentences with incorrect grammar and improper sentence patterns while Valerie and Mary aimed at corrections on mispronunciation, particularly incorrect tone. The underlying concerns for teachers related to accuracy on character handwriting, proper usage of words, syntactically sound sentences and correct pronunciation, particularly native-like tone. Students were observed to appreciate corrections and pay close attention to teacher explanations. Clearly, corrections made in intermediate-level CHL classroom are more teacher-directed. Making corrections in the intermediate-level CHL classroom follows a traditional style of teaching, but students appreciated teachers' feedback on pronunciation, characters and sentences.

*Michelle delivered lectures to introduce sentence patterns (structures).* It is noteworthy that Michelle used a lecture format more frequently than the other teachers. Her lectures not only focused on new vocabulary learning and correction making, but also addressed crucial sentence patterns. On the other hand, Mary and Valerie employed discussion and comprehension checking as a more dominant format for presenting new dialogues. Mary and Valerie introduced sentence patterns via their direct verbal examples only when students practiced dialogue writing using unfamiliar sentence patterns, which was seldom observed. However, in Michelle's class, instruction of sentence patterns included asking students to highlight vital sentence patterns and grammar points. Later Michelle presented sentences herself or co-constructed them with students using the following frames (see Table 4): (1) teacher provided direct verbal examples (2) teacher provided the first part of an example and asked students to orally complete the rest part of the example and (3) teacher provided hints and asked students to provide examples using

new sentence patterns and (4) teacher directed students attention to identification of sentence patterns sharing similar meanings.

Table 4

*Introduction of Sentence Patterns in Michelle's Class*

<b>Teacher provided direct verbal examples related to Ss' school and life experience</b>	<b>Teacher provided the first part of an example and asked students to orally complete the rest part of the example</b>	<b>Teacher provided hints and asked students to provide examples using new sentence patterns.</b>	<b>Teacher directed student's attention on identification of sentence patterns sharing similar meanings.</b>
<p>Ex1: A 班的學生不但中文講的好，漢字也寫的很好。(Students at class A can <b>not only</b> speaks Chinese well, <b>but</b> can <b>also</b> handwrite Chinese characters well)</p> <p>Ex2: 例如最近常常下雨，氣溫因下雨而降低 (For example, it rains recently. Temperature goes down <b>because of</b> rain.)</p>	<p>Ex1.對中年肥胖而言.... (<b>In spoken of</b> middle age obesity and later students responded 少喝酒，多運動是有幫助的(less drinking and more workouts can help..</p> <p>Ex2.你們來台灣總不忘.....? (You will <b>never forget</b> what when coming to Taiwan?) Students answered that 吃台灣的小吃 (Have Taiwanese local foods).</p>	<p>Ex1: Provide hints: 我不喜歡搭長途飛機( I dislike taking long-term flights). Students answered that 一來空間很狹小，二來前面的小朋友會很吵。( <b>On the one hand</b>, the space is quite limited; <b>on the other hand</b>, children in the front seats can be noisy)</p>	<p>Ex1: Rina 喜歡吃麵因為麵既好吃，又很軟(Rina likes to eat noodles because it is <b>not only</b> tasty <b>but also</b> they are soft 麵既好吃，再加上麵很軟 (Noodles are not only tasty, <b>in addition</b> the noodles are soft.).</p> <p>Ex2: A 型的人既愛擔心，又要求完美 (Individuals of blood type A <b>not only</b> like to worry, <b>but also</b> like to be perfect in everything. ) A 型的人既愛擔心，再加上要求</p>

			完美(Individuals of blood type A not only like to worry, <b>in addition</b> , they demand to be perfect in everything.)
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Michelle was observed to verbally make up multiple examples related to students' life and world experiences. Such practices suggest she viewed students as capable learners having rich world and personal experiences. This supports notions that learners bring valuable experiences to learning situations and learners construct meaning often as a result of these experiences (Turuk, 2008). In one instance, Michelle provided the example 這班的學生不但中文講的好，漢字也寫的很好。(In this class students were generally more skilled in speaking and writing Chinese characters) when the new sentence pattern 不但...也.. (not only..but ) was taught. Most of time, Michelle provided more than one verbal example in order to familiarize students with the new sentences by applying them in various contexts. The following example demonstrates how she did this using multiple examples for 有 .....有 還有/也有( has ... and)

Example1:台灣很漂亮，有夜市，有 KTV，還有 101 百貨公司(Taiwan is fantastic. It **has** night markets, KTVs **and** 101 department stores)

Example2:今天的午餐很豐富，有魚有肉也有蔬菜 (Today's lunch is rich. It **has** fish, meat **and** vegetables.) Students were more motivated to learn new sentence patterns and

more capable of grasping how to use new sentence patterns in the right contexts if the examples related to their own experiences, and in contexts they understood.

The second way to learn new sentence patterns was verbal sentence completion when teacher provided the first part of the sentence and students complete the rest part of the example using new sentence pattern. For example, Michelle begun by saying 對中年肥胖而言....(In spoken of middle age obesity and later students responded 少喝酒，多運動是有幫助的(less drinking and more workouts can help) to complete the sentence when learning the new sentence pattern ”對....而言...(In spoken of). Another example was that Michelle verbally said that 你們來台灣總不忘.....? (You will **never forget** what when coming to Taiwan?) Students answered that 吃台灣的小吃 (Have Taiwanese local foods). Michelle often provided clues and expected students to apply sentence patterns. For example, Micelle provided verbal hints saying 大家都不喜歡下雨(No one likes the rain.) Students were expected to respond that 對一般人而言，下雨天不受歡迎 (**In spoken of** common people, raining days are disliked.). Application was not limited to verbal practice, opportunities were given for applying newly -learned sentence patterns in written forms, such as on the worksheets for sentence-patterns practice and sentence-making section on the textbook. Additional ways of teaching sentence structure emphasized interaction between teacher and students to co -construct knowledge through scaffolding. According to Turuk (2008), scaffolding involves social interaction when “a knowledgeable participant can create by means of speech and supportive conditions in which the student can participate in to extend current knowledge to a higher level of

competence” (p. 251). Michelle’s role as a mediator with more knowledge of Chinese sentence structures helped students to extend their current knowledge of sentence patterns.

Additional examples show how Michelle directed students’ attention to identify previously learned sentence patterns and newly-learned ones when each shares the same meaning. For instance, previously learned sentence pattern 既...又.. (not only.. but also) was compared with newly-learned one, 再加上 (in addition) using verbal examples. Michelle explained saying Rina 喜歡吃麵因為麵既好吃，又很軟(Rina likes to eat noodles because it is **not only** tasty **but also** the soft quality of noodles. 麵既好吃，再加上麵很軟 (Noodles are not only tasty, **in addition** the noodles are soft.). In this way, students were provided chances to review previous sentence structures and add knowledge to new sentence patterns. By so doing, Michelle could better prepare students for using sentence patterns in proper context.

To sum up, Michelle employed teacher-directed lectures on sentence patterns (structures) by: direct verbal examples, oral sentence completion, hints to elicit using new sentence patterns and identification of sentence patterns sharing similar meaning. Her instructional approaches are best characterized as: valuing the knowledge that students bring to the classroom; emphasizing social interaction between teacher and students to co-construct knowledge via scaffolding; and stressing empowerment of students to equip them with necessary knowledge to be able to extend their current knowledge. These characteristics used in teaching sentence structures implied that Michelle utilized sociocultural theory to guide her teaching.

*Discussion and comprehension checking*. Observation notes and observation protocol confirmed that discussion as a way to check comprehension was one of the most observed classroom activities in all classes, although this practice varied in frequency. The shared practice of conducting discussion for comprehension checking was both closed and open-ended. Closed discussion was typically used as a means to check overall comprehension of a new topic, open-ended discussion made use of students' background and world experiences, as well as their cultural knowledge and personal perspectives.

Discussions were teacher-led, and were also conducted using student pairs. Discussions usually were centered around whole class discussion of the textbook and discussions on culture-related topics using teacher-prepared worksheets or video clips. Teachers lead the whole class discussion on the textbook and on teacher-prepared worksheets. The usual procedure was for the teacher or students to read aloud the discussion questions before engaging in discussion. Teachers appeared to check for comprehension when students read the questions, and they noted pronunciation and accurate word segmentation.

Next, teachers asked the whole class to provide either oral or written answers on the whiteboard after asking both closed and open-ended questions. The former served as a way to check comprehension, from the dialogue (e.g., What can you learn about the customs as a result of dining in Taiwan? What museums do you plan to visit? Why?) Open-ended questions required students to make use of their background knowledge or their world experience or/and compare native and target language cultures. For example, What games are featured in the Olympics? Which are your favorite? Open-ended

questions requiring students to compare native and target language cultures were also utilized. Examples included: In your country, what are the dining utensils most people use? Or, The most representative theater performances in Taiwan involve hand puppet shows and Taiwanese opera. Is there any representative theater performance in your country? In Mary's class when students were introduced to a new topic on theater performance in Taiwan, students were asked to compare this experience of going to seeing a Broadway play. One student responded by saying 我小時候去 Broadway 看 Cats，但我睡著了。(I went to Broadway to watch "Cats" when I was little, but I fell asleep.) Mary then shared her opinion of a theater performance in Taiwan saying 戲劇表演應該賣一些便宜的給學生 (Theater performance should sell tickets cheaper to students.) and 常常位子都空下來 (very often, a lot of seats are remind vacant). Verbal interaction to exchange ideas between teacher and students were frequently observed. This demonstrates how scaffolding took place when more capable adults, the teacher, used language as a mediation tool to assist students in the language learning process by extending their current skill level (Kao, 2010; Turuk, 2008). Use of videos to provoke discussion on Chinese customs was observed in both Valerie and Mary's classes. One clip showed a scene depicting how to give and accept presents in Chinese culture. Valerie showed a movie on a Chinese wedding banquet before students responded to questions about Chinese wedding customs. Mary's teaching assistant, Alice, showed a video clip introducing national parks in Taiwan before students discussed the characteristics of each park. Mary's teaching assistant Alice, asked students to write down characteristics of each national park in Taiwan on the teacher-prepared worksheet after their discussion on

a video clip of national parks in Taiwan. Paired at -desk discussion emphasized peer learning. Mary led the whole class discussion on Fengshui (House geometry) after viewing a video on Fengshui.

The second type of discussion pattern was paired discussion. This was conducted by either teacher reading aloud the questions or students taking turns reading aloud questions. Later, students worked in pairs to come up with either oral or written answers and then shared responses with the whole class. Paired students were able to reread the dialogue several times before responding in oral or written form. This process required students to negotiate meanings and assist each other in order to construct a final answer, orally or in writing. Valerie and George her assistant assigned pairs of students to answer specific questions on topic-related worksheets on Confucius eating habits and Chinese table manners. In Mary's class, pairs of students were invited to share their responses to questions, such as in your country, do they believe in Fengshui (house geometry)? Students in Mary's class were also invited to write answers to assigned questions on the whiteboard like question 這些夜市是大同小異嗎? (Do these night markets make no differences?) Students worked in pairs and later wrote answers in characters on the whiteboard: 他們各有特色，有的主要賣衣服，有的賣小吃，還有的賣電動玩具。(Each has its characteristics. Some are to sell clothes. Some are to sell local Taiwanese foods, and some are to sell video games.) Collective scaffolding occurs when students work together to “exchange linguistic artifacts” during social interaction (Kao, 2010, p. 122). Paired at-desk discussion was utilized to ensure understanding of a new topic and its application either in oral or written form. Oral interaction developed student's

competence of discussing various topics in context, whereas written interaction provided students with opportunity to write Chinese characters and to compose their ideas in sentences.

In summary, two discussion formats were employed among teachers: whole-class and paired. This provided a good balance of interaction between teacher and students and between paired students. It also counterbalanced a potential weakness in the formats only having outgoing students respond to questions while shy students were more comfortable with paired work. Paired discussion stresses peer interaction ensuring comprehension of the new passage (dialogue) via meaning negotiation and construction.

Two types of discussion questions, closed and open-ended, were asked to ensure comprehension of a new passage/dialogue and to provide students with opportunity to apply what they learned to more familiar contexts. Open-ended questions allowed students to make use of their world experience and cross-cultural understanding. This supported beliefs that students have rich world and cultural understanding, and can make learning meaningful by using prior experiences to gain access to new knowledge. CHL learners who have prior cultural knowledge of the home language, Chinese in this study, can benefit from learning when it involves use of their cultural understanding. Yilmaz (2008) contends that a social constructivist view of learning regards learning as an active process; knowledge is co-constructed by both teacher and learners or between peers. Social interaction plays a role in mediating the learning process. Conducting discussion and comprehension checking activity is based on the notion that students are not passive receivers of knowledge but capable learners having rich background knowledge and

world experiences. They are able to construct knowledge using verbal language as a mediation tool. In the CHL classes negotiating meanings and exchanging ideas with teachers and peers facilitated development of oral competence. Exchanging ideas in conversational form and later in writing prepared learners of Chinese for writing competence. Paired discussion regards peers as facilitators in using both oral and written language to respond a closed and open-ended question.

***Reading aloud and dictation.*** Observation protocol demonstrated that oral reading was one of the most observed classroom activities. All teachers employed reading aloud as a routine classroom activity although the ways of conducting it varied to some degree. Reading aloud activity enables students to make better connections among printed Chinese, pronunciation and meaning ; therefore increasing both character recognition and oral reading fluency. Also this practice allowed teachers to see if additional help is required to help students make accurate word segmentation. Inaccurate word segmentation implies that students may encounter new words, challenging sentence structures and/or challenging pronunciation which requires detailed explanation. As a result, reading aloud facilitates both teaching and learning Chinese. Teacher-led read aloud and student paired read alouds were employed by the teacher participants . Teacher-led read aloud followed a traditional model in which teacher led the whole -class during the read aloud process. Student paired reading aloud implied the importance of learning as a collaborative achievement in the creation of the zone of proximal development (ZPD), in which less capable learners work with more capable learners to facilitate learning on to the next stage (Vygotsky, 1978) . In Michelle's class, teacher-led read

aloud was the only way used to conduct the reading, the teacher “solo” reading aloud and students followed along silently, then read aloud the new passage. Frequently, Michelle asked students to read aloud first without her help to determine if supplemental explanation on both word usage and sentences was required. After students completed reading aloud, Michelle then led them in reading in unison. However, both Valerie and Mary maximized opportunities for reading aloud by conducting both teacher-led and paired reading aloud. Teacher-led reading aloud was conducted every class session and included reading aloud text dialogues, vocabulary words and examples, and discussion questions. By so doing, teachers could check students’ accurate pronunciation, word segmentation and comprehension. Michelle focused on explanations of challenging words and sentence structures, particular attention was paid on pronunciation. Valerie paid close attention to the correct, i.e., or “native-like” tones, which her students found challenging, while Mary focused on the pronunciation of a character with multiple readings. For instance, the character 得 is a character with two readings, both (de2) and (dei3). Mary provided two oral examples to show students how 得 was pronounced. The examples were 你得/dei3/吃飽，才有活力 (You must eat well in order to be energetic) and 我得 /de2/到一支筆 (I got a pen). Paired reading aloud was conducted when students were asked to go to the front and read aloud both class dialogues and dialogues created by students themselves. The former was to provide opportunities for connecting phonology with printed Chinese without pinyin/zhuyin help. The latter was conducted when the teacher asked students, after learning a dialogue, to write up a dialogue using target words with a partner. Students in both Valerie and Mary’s classes were asked to

highlight words when Valerie or Mary was reading aloud these words. After completion of the created dialogues, students were asked to go to the front and read aloud their dialogues to the whole class. During paired students read aloud, Mary took notes and later explained grammatical points, pronunciation and word usages after all students completed their reading aloud.

Overall, all teachers were observed using reading aloud as a routine classroom activity. Reading aloud is seen as an activity that utilized CHL learner's highly developed oral skill to develop their underdeveloped written language. It was observed to best serve the needs of CHL learners in this study. Two types of reading aloud were conducted in the observed classrooms. Traditional reading aloud procedure, when teacher led the whole class to read aloud was employed by all three teachers. Michelle only conducted traditional reading aloud while Valerie and Mary conducted both traditional and non-traditional reading aloud. Non-traditional reading aloud refers to particularly paired reading aloud in this study. It emphasizes the significance of collaborative achievement between peers in the learning process. Peer scaffolding plays a crucial role in assisting CHL learners during this process.

Dictation quizzes conducted in the intermediate -level CHL classroom were as traditional as are typical for Chinese as L1 classes which are conducted to ensure students' competence in handwriting characters with accuracy and in character recognition. Both Valerie and Michelle held dictation quizzes on vocabulary words while Michelle added dictation quizzes on sentences. Michelle later discovered that dictation on sentences was not as helpful to students learning because it prevented students from

benefiting dictation. Students attempted to memorize the sentence by memorizing its individual character. This may have produced memory overload. In Mary's class dictation aimed at assessing students' writing competence in collocation instead of only vocabulary words. For instance, Mary conducted dictation on collocation, such as 廟宇拜拜 (go to temple to worship) and 保佑順利 (to bless to success) instead of on the vocabulary words, such as 廟宇/miao4yu3/ (temple) or 保佑 /bao3you4/ (bless). Dictation quizzes were one of the most observed classroom activities in all classes and were regarded as activities to measure students' competence in handwriting characters with accuracy and determine progress in recognizing characters and enabling them to read with speed and ease. Dictation was used to focus on vocabulary words. However, in the observed classes, dictation quizzes were extended to include collocations and sentences. Although Michelle considered dictation on sentences might not be as helpful as she once believed, more research may be required to better identify which dictation practices actually do enhance competence in character handwriting and character recognition.

In summary, dictation quizzes were one of the most observed classroom activities employed by all teachers. It is a deployed in highly traditional ways for assessing student's competence for writing characters when spoken language is provided by teacher. This activity simply meets CHL learner's needs when they still lack of knowledge of mapping sounds with written words and insufficient skill in writing characters. Dictation on collocations in Mary's class and dictation on sentences were observed in addition to shared dictation on vocabulary words in all three observed classrooms.

**Findings of observation protocol and discussion .** Data from observation protocols revealed the use of teacher and students resources (e.g., textbooks, whiteboard, worksheets); showed how students produced work (e.g., verbal response, short written answers) and revealed major classroom activities (e.g., oral reading, whole-class answer-checking) used in the CHL classrooms. In every class teachers used the textbook as the primary source of authoritative knowledge often accompanied by video/internet as the supplemental resource to support the textbook. Students also ranked the textbook as their most frequently used source for learning. Textbooks were used by all teachers during each class session for approximately one third of the time. The textbook was mainly used to introduce new vocabulary; explain passages (and dialogues); conduct teacher -led reading aloud; and to complete classroom tasks involving the textbook such as fill -in-the-blanks, sentence-making, sentence revision, sentence reconstruction, and responding to textbook discussion questions. Video/ Internet utilization was ranked the second most frequently used teacher resource by both Valerie and Mary. While Michelle often used the whiteboard, making it the second most frequently used resource. Video/internet was used by both Valerie and Mary to introduce unfamiliar topics. While Michelle used internet/video less often, she did use the internet, particularly YouTube, to introduce theater performance workshops which she used to support sentences construction and understanding sentence patterns. Michelle frequently used whiteboards to introduce new words and sentence patterns as well as to stress correct handwriting, specifically explaining and correcting Chinese characters and sentences. Compared to Michelle, both

Valerie and Mary used whiteboards only when noting characters unknown to students, clearly this resource was of lesser value in their classes

Student produced work most often involved recording oral responses, writing short answers, and filling -in-the blank responses. Across the three teachers, student produced work was typically generated as a result of oral response, although the frequency varied among teachers. Both Michelle and Valerie asked their students to produce oral response to questions about a new passage (and dialogues) and to respond to discussion questions based on the textbook.

Student produced work also included short -answer responses and writing in response to textbook discussion questions. Asking students to produce short written answers was the most frequently observed activity in Mary's class. Writing short answers was a preferred format when students responded to textbook generated discussion and the worksheets. Questions were not limited to closed questions, students were also required to answer open-ended questions. For instance, questions on the worksheets required that students respond to an open-ended question about a fortune cookie slip or respond to a question regarding transportation. In Michelle's class students wrote fill -in-the-blank responses to ensure they could supply the missing word to complete a sentence. Classroom observation field notes confirmed the most frequently observed activities noted on the observation protocols and shed light on instructional methods employed by intermediate-level CHL teachers.

**Findings of curriculum materials and discussion .** Curriculum materials included textbooks, worksheets, and power point presentations (PPTs). In order to meet

special needs of CHL learners in Taiwan, textbooks used in BCLC were written by BCLC faculty members, who were also teachers of CHL learners. Li and Duff (2008) and Liu (2009) pointed out the lack of relevant instructional materials for CHL and stressed the need for teaching materials designed to meet the unique needs of heritage students. Two textbooks were used for each class. One textbook focused more on reading and writing, the other textbook emphasized content for developing listening, speaking and culture. The reading and writing textbook included reading passages with vocabulary and supplementary vocabulary accompanied by both Mandarin Phonetics and pinyin and English translation. Text activities included sentence making, sentence revision, sentence reconstruction, fill-in-the blanks and essay writing. The goal for reading and writing was to better prepare CHL learners for increased competence for character handwriting and recognition. The textbook focused on developing listening, speaking and culture aimed at increasing students' interpersonal communication skills via extended vocabulary learning. Worksheets accompanying the second textbook provided supplemental learning on culture-related topics and skills addressed in the class. PPTs were collected from the two teaching assistants, Alice and George, after they delivered lectures on vocabulary and culture-related topics.

After reviewing all curriculum materials, three major themes emerged: topics exploring various aspects of culture, both Chinese and Taiwanese that were presented through multiple genres; materials emphasizing associations among orthography, pronunciation and meaning; and instructional approaches underlying curriculum materials. Examples of the content covered include a worksheet on national parks in

Taiwan and traditional Chinese table manners for dining. Multiple genres were represented as narrative passages, dialogues, a movie plot summaries, fairy tales, short directions to famous tourist spots, and fortune telling slips. Pinyin, zhuyin and translations were placed alongside vocabulary and whole passage translations were located as an appendage at the back of the textbook. It should be noted that Michelle did not provide pronunciation aids and translations on her worksheets.

Instructional approaches underlying the curriculum materials combined both traditional drill- practice learning and non-traditional vocabulary learning and comprehension checking. Drill practices were mostly on sentence patterns presented through sentence making activities and sentence revisions. Drills for vocabulary were presented using multiple-choice questioning use of fill-in-the-blank statements. Non-traditional vocabulary practices accompanying the textbooks was more context-specific and required students to use new vocabulary words in context in order to learn new words. Non-traditional comprehension checking was used and required students to make use of their world knowledge and cultural experiences to respond to tasks that focused on checking comprehension. These activities strongly reflected sociocultural principles associated with language teaching and learning. Comprehension checks located in curriculum materials included written questions, both closed and open-ended, dialogue writings for specific contexts.

Overall, observation protocols showed that CHL teachers used textbooks more often than other curriculum materials. Instructional approaches underlying curriculum materials were combined both traditional and non-traditional language teaching practices.

Traditional approaches of language teaching included mostly drills on sentences and words using fill-in-the blanks, sentence making, sentence revisions and reconstructions.

Non-traditional language teaching activities included context-specific vocabulary learning (e.g. dialogue) and comprehension checking incorporating students' world and knowledge and cultural experiences.

In terms of classroom observations, teacher interviews and curriculum materials, instructional approaches employed in intermediate-level CHL classrooms included literacy activities using both traditional and non-traditional instructional approaches. The major literacy activities revealed that CHL teachers valued traditional and non-traditional approaches to language teaching including whole-class lectures for developing vocabulary and making corrections. In addition, they engaged students in discussion and comprehension checking, as well as reading aloud and dictation. It is also noteworthy that teachers did draw from students' world knowledge and experiences supporting socio-cultural tenets, and as well, teachers used activities that supported interactions between themselves and their students and they encouraged student-to-student collaborations as a tool for scaffolding and making meaning. These practices draw from learner's prior aural and spoken knowledge as well as their cultural understanding, which supports using the prior knowledge and culture as the basis to develop reading and writing competence. Vygotsky's sociocultural theory, including scaffolding, ZPD and mediation play a crucial role in facilitating language learning process in intermediate-level CHL classes. It emphasizes the significance of student's comprehension as a priority to their language development. Learning is more effective when language used in the context. Multiple

genres provide opportunity to represent culture-related information as a means of developing literacy competence. This was a major aspect of instruction in the intermediate-level Chinese language classrooms observed here.

**Research question 2: How do CHL learners perceive and react to intermediate CHL language courses?**

This research question is answered by data from student interviews and their self-ratings on literacy background and literacy development. As a whole, student participants agreed that most literacy activities presented in the CHL class were helpful to their literacy development; however, some exceptions were noted.

**Helpful Literacy Activities**

**Student interview findings.** Student participants considered that reading aloud, teacher’s providing examples, sentence making using mandatory vocabulary and sentence patterns (structures), any types of in-class or after class writings, and dictation quizzes were helpful literacy activities (see Table 5).

Table 5

*Helpful Literacy Activities (From Students’ Perspectives)*

<b>Helpful Literacy Activities</b>	<b>Reasons</b>
<b>Reading aloud</b> (a) T-led reading aloud	1. T demonstration: correct pronunciation (native-like tone), Ss’ automatic self correction of their mispronunciation 2. Character recognition& word segmentation: connect written words with pronunciation &

	<p>phrasing of words</p> <p>3. Improve character recognition, word segmentation &amp; “speaking fluency”</p> <p>Suggestion: explanations on word usages and sentence patterns</p>
(b)(Fronted) paired reading aloud	<p>1. Prove being able to read without pinyin/zhuyin</p> <p>2. Read aloud to make sense to others</p> <p>3. Look at characters more closely</p> <p>4. Reading fluency via: repeated reading alouds, silent readings, pair work on (ensure correct pronunciation, accurate word segmentation, correct comprehension of words &amp; sentences</p> <p>5. Reading fluency is the prerequisite to speaking fluency</p> <p>6. Improve character recognition, word segmentation &amp; “reading” fluency</p> <p>Suggestion: Less advanced class (at-desk)</p>
<b>Multiple Examples</b>	<p>1. Multiple examples: couple examples of one word/sentence pattern in multiple contexts.</p> <p>2. One example is insufficient</p> <p>3. Examples in verbal &amp; written forms are both helpful. Written forms: for later review and read examples in characters.</p>
<b>Sentence Making using mandatory words &amp; sentence patterns</b>	<p>1. make up sentences on their own</p> <p>2. use more advanced words &amp; complex sentence structures</p> <p>3. observe peer’s sentences on whiteboard &amp; listen to peer’s verbal sentence making</p> <p>4. T’s feedback on word choices&amp; grammatical accuracy are necessary</p>
<b>More opportunities to write with T’s feedback</b>	<p>Ss are aware that they lack opportunities to write and believe any writings (short or long) improve writing</p> <p>Suggestions: maximize opportunities for Ss to write in and outside classrooms.</p>
(a) Paired dialogue writings	(a) Develops verbal & written competence via writing them down
(b) weekly essay writings (an assigned topic using mandatory words & sentence patterns, rewriting & individual conferencing)	(b) <p>1. Topics that do not normally write</p> <p>2. Mandatory words help expand vocabulary or mandatory sentence patterns facilitates</p>

(c) weekly journal writings	<p>complex sentence structures</p> <ol style="list-style-type: none"> <li>3. Rewriting: realize the areas Ss found challenging</li> <li>4. Individual conferencing: face-to-face clarifications &amp; explanations (most helpful feedback: word choices &amp; sentences prevented them from writing correct sentences</li> </ol> <p>(c) Ss select topics based on interests, make decisions about what to cover: expand vocabulary in Ss' interested areas &amp; develop Ss' competence of fully express ideas.</p>
<b>Dictation Quizzes</b>	<ol style="list-style-type: none"> <li>1. To practice and study characters in detail leading to better memorization of characters</li> <li>2. Repeated handwriting on the practice book Katie and Daniel believed copying characters: helps memorize words</li> </ol> <p>Others: believed that dictation quizzes: motivate them to consciously handwrite characters and voluntarily practice handwriting characters</p>

**Reading aloud.** Reading aloud was considered the most helpful activity based on students' interviews. Reading aloud activity consisted of teacher-led whole class reading aloud and paired reading aloud. Students, proficient and less proficient in the heritage language, agreed that teacher-led whole class read aloud helped them in character recognition, word segmentation, and speaking fluency, especially improved pronunciation. However, students differed somewhat in how they viewed the reading aloud formats, having marked preferences in terms of how paired reading took place. More proficient students enjoyed reading together as a pair in front of the class. However,

Alexie and Katie, less proficient students disliked this indicating it would be more helpful to read “privately” before having to read aloud.

**Multiple examples.** Student participants considered it was helpful when teachers asked them to highlight grammar points and sentence patterns, especially when their teachers provided multiple examples both orally and in writing. All student participants agreed that teacher’s multiple examples better prepared them for grasping word usages and sentence patterns in multiple contexts. Alexie, less proficient heritage language speaker, noted that teachers need to show students “how to use words in different situations using multiple examples.” Jayge, a more proficient speaker, indicated that “providing more examples to learn specific vocabulary words and sentence patterns helped him remember better.” Examples, both verbal and written were considered helpful by all student participants although two students who were stronger heritage language speakers, preferred examples in written form. Rina and Mango suggested teachers should provide written examples on the whiteboard. Rina described by so doing, she could copy sentences and take notes for later review. Students’ statements implied that, regardless of their proficiency level, liked when teachers provided multiple examples because this helped them learn new words and sentence patterns. It could be the case that learners, at least those in this study, need multiple examples to acquire new words and/or sentence patterns.

**Sentence making using mandatory words and sentence patterns.** Students’ sentence making, both in verbal and in written forms, using mandatory vocabulary words and sentence structures was considered one of the most helpful literacy activities.

Students found this practice helpful when they were given opportunities to use mandatory words and sentence patterns. All student participants agreed on that they could better grasp new words and sentence patterns in context when opportunities given for them to apply what they learned through practice. Jayge described that it was helpful to “make up sentences of one’s own with certain words.” Daniel indicated that sentence making helped “replace better words when students only use basic words.” Daniel’s classmate , Alexie stated that one could learn “using more complicated sentence patterns to express complex ideas and better improve writing. It appears that both verbal and written forms of sentence making were helpful by students. Students also pointed out that teacher’s corrections during word choices and grammatical accuracy were helpful. Katie and Mango noted the importance of teacher feedback to ensure sentence accuracy. In sum up, all student participants believed that sentence making, both in verbal and written forms was helpful.

***More opportunities to write and teacher’s feedback.*** Student participants asserted that having more opportunities to write in and out of class when teacher’s provided feedback helpful. An opportunity to write with teacher feedback was made possible through weekly essay and journal writing, and through paired dialogue writings. In the class containing more proficient heritage language speakers paired dialogue was highly utilized, while the less proficient heritage language speakers utilized a wider range of writing formats. Jayge said “it helps using words and phrases in the situation” and Mango indicated “it improves sentence structures.” Rina believed that “writing more improves writing.” Daniel said opportunities to use dialogue writing allowed him “to practice

conversational Chinese via writing it down.” Alexie said paired dialogue writing ensured “one was able to do it outside the classroom.” Paired dialogue writings facilitated the development of oral competence and development of conversational language writings, which certainly the development of writing in characters. In general students believed that having more in and out of class writings with teacher feedback can definitely enhance their writing competence.

The weekly essay writing activity required students to produce 200-250 words using an assigned topic, incorporating mandatory new words and sentence patterns. Student participants agreed that assigned topics provided them with opportunities to write about topics they do not normally consider. They believed that using mandatory new vocabulary “expanded one’s own vocabulary” and Alexie said it helped her to “better learn the usages of the new words prepared students to learn sentence structures and to improve sentence varieties.” Students’ believed that teacher feedback on misspelled characters, grammatical errors, and word choices during individual conference greatly benefited students essay writing in Chinese. Particularly, feedback on word choices was considered the most helpful. Daniel said, it helped to “use more advanced words.” Katie also said it was helpful when the teacher provided feedback “on using better words and explained in detail the reasons of why she corrected specific errors.” Daniel found very helpful when “teacher tell why they did this.” Overall students found the weekly essay writings were helpful.

Weekly journal writing, an opportunity for free writing that students later shared with fellow students was also mentioned as interesting and enjoyable. Students’ journal

writings mainly related to their school life and life in Taiwan while they were studying Chinese in Taiwan. Students noted that the weekly journal writings were helpful for expanding vocabulary knowledge in their areas of interests and developing competence to fully expressing their ideas. Alexie, who loved baking, indicated that journal writings helped her to learn new words in baking. Other student participants described that they could practice expressing their ideas in Chinese using what they learned about Chinese culture using new words and sentence patterns. Some students used the journals as a way to record their travel and dining experiences in Taiwan, while others were more interested in describing their hobbies. This implied that opportunities for free-writing allowed students to utilize new vocabulary and practice challenging sentence patterns. Mango, stated that “it doesn’t have to be a long essay, short answers can help students’ writing.” Students’ responses also suggested they desired more opportunities for writing. Alexie expected more writings to respond to a lesson and/or to rewrite a passage. While Katie expected to get “more worksheets to work on.” Daniel thinks teacher could provide them with opportunity for quick write, and Rina, expressed a desire to have more opportunities for paired writing by saying that “one can learn from the partner and be able to write a better essay next time.” Students’ descriptions implied that they were aware that they lacked of opportunities to write in Chinese and they believed “any writing improved writing”. These findings suggest that CHL teachers should be encouraged to provide students with maximum opportunities to write in class (e.g., quick write, respond to questions) and give students writing assignments.

*Dictation quiz.* Dictation quizzes were considered a helpful literacy activity and was supported who believed that dictation provided opportunities to practice and study characters in details leading to better memorization of characters. Alexie said “we get to study the words more and help remember the details of a character.” Rina liked dictation quizzes because they “helped her to remember stuff.” Daniel pointed out that students understood they needed to need to learn all words because of a dictation quiz. In terms of students’ descriptions, Overall students believed that dictation quizzes forced students to know more words and facilitated the study of characters in greater detail, leading to better memorization of a character. Daniel said “I remember character more by writing it a lot”, and Katie described that “it helped memory and retained words.” Alexie and Mango believed a quiz was better saying “it’s better to have a quiz than to make students write one character three times because repeatedly copying characters was just unconsciously copying characters and it was short-term memory.” “...when there is a quiz then there is pressure for people to learn”. All student participants believed that dictation quizzes provided them with opportunities to closely study the internal structures of a character and consciously handwrite characters on their own in the way to better print characters in their minds. It is noteworthy that students held different feelings about repeated copying of Chinese characters as homework. Daniel and Katie believed repeated copying characters helped memorize words while the other students were more inclined to use dictation quizzes to motivate them to practice handwriting characters. CHL teachers may need to utilize dictation quizzes to help students study characters in detail and as a way to practice handwriting characters.

## The Least Helpful Literacy

**Student interview findings.** The least helpful literacy activities (see Table 6) included introducing new vocabulary words via power point presentations, viewing movies in class and narrow oral discussions on the textbook. Three elements characterized the least helpful activity: lack of in-depth explanation of the vocabulary words, infrequent opportunities to practice new vocabulary, and inadequate knowledge of appropriate questions to check comprehension.

Table 6

### *The Least Helpful Literacy Activities (From Students' Perspectives)*

<b>The least helpful literacy activities</b>	<b>Reasons</b>
1. introduce vocabulary via power point presentations	Lack examples (verbal & written) One example-simple sentence Suggestions: multiple examples using complex sentence structures (oral& written)
2. movie watching	1.without introducing key words 2. check comprehension via only open-ended questions Suggestions: pre-viewing activities (introduce key vocabulary), ask closed questions to ensure understanding of the movie plot
3. discussion sections	Only assign specific questions Suggestions: answer all questions to ensure full comprehension

***Lack of in-depth explanation of the vocabulary words and infrequent opportunities to apply vocabulary activities in practical situations .*** In-depth discussion

of vocabulary words and phrases and opportunities to use them were considered crucial elements in identifying a helpful activity. Students considered literacy activities that introduced new vocabulary words in power point presentations and viewing movies as a way to understand vocabulary the least helpful activities. Using power point presentations to introduce vocabulary was unhelpful because teachers went over each slide very quickly without detailed explanations of the target words and did not utilize useful oral or written examples in order for students to understand the meaning and how to use target words. Students were concerned about their ability to use words appropriately in multiple contexts and how to develop more complex sentences using target vocabulary words. However, they discovered that using only one example presented in simple sentence structure, as was the case when PPTs were used, was inadequate. Also, they expected to learn how new words could go with a different character or other characters to form another word. Movie watching was not useful because teachers did not “front load” vocabulary by noting target words prior to movie viewing

***Inadequate knowledge of appropriate questions to check comprehension.***

Watching movies and whole-class responding to textbook questions through oral discussion of the discussion section on the textbook lacked this element and considered the least helpful by students. Students believed that teachers should use discussion as a way for them to understand the movie plot and check their comprehension. Also instead of being asked to respond to a limited number of textbook questions, students preferred to discuss “all” to ensure accurate comprehension of reading passages or dialogues.

**Findings of student ratings on teacher guided skills.** Students' self-ratings of literacy development as a result of teaching in the CHL class indicated that students believed that their teachers had well-prepared them for writing sentences and recognizing words (see Table 7). Students mean rating (M=4.5) on teacher's preparation of writing sentences was relatively high. Specifically, they felt they were well prepared in recognizing words (M=4.3) and writing short essays (M=3.0). It was noteworthy that across the CHL classes, differences were apparent. For example, more proficient students rated essay writing lower, M=2.0; while less proficient students' rating on essay was higher, M=4.0. This could be due to the fact that more proficient had fewer opportunities and their writing focused more on paired dialogue writings. Michelle, who taught the class containing more proficient Chinese language learners, expressed that requiring students to write more could result in overloading students and was very labor intensive in terms of grading. Michelle pointed out that she did however have students to engage in sentence construction as a way to support writing. A crucial skill for Chinese literacy concerns students' ability to recognize radicals. Students' mean rating in this important teacher guided skill was 3.5. During interviews teachers indicated they devoted considerable time to teaching radicals and related components, classroom observation teachers only made occasional explanations on radical related concepts and time spent on that was limited.

Table 7

*Teacher Guided Literacy Skills*

	Valerie's Class			Mary and Michelle's Class			Mean
	Alexie	Katie	Daniel	Rina	Mango	Jayge	
Recognizing radicals	3	3	5	3	3	4	<b>3.5</b>
Recognizing characters	3	4	5	4	4	4	<b>4.0</b>
Recognizing words	3	5	5	5	4	4	<b>4.3</b>
Text Reading comprehension	3	5	5	3	5	4	<b>4.1</b>
Writing Characters	3	4	5	5	3	4	<b>4.0</b>
Writing Sentences	4	5	5	5	4	4	<b>4.5</b>
Writing short essays	3	4	5	2	2	2	<b>3.0</b>

*Note.* Rating reflects 0-5 Likert-type scale.

Qualitative and quantitative data revealed students' positive attitude toward literacy activities in the intermediate-level CHL classes. However, there were some exceptions. Quantitative data determined that students believed that their teachers had prepared for writing sentences and recognizing words. This was not the case for writing short essays and for radical recognition. Student interviews, revealed that they valued literacy activities related to reading aloud, providing multiple examples, engaging in sentence making and having more opportunities to write and take dictation. On the other hand they believed teachers did not provide enough instruction in recognizing characters and words. For more proficient students, this finding appears to be directly related to less focus on writing short essays, M=2.0.

Whole-class discussions on the textbook was the major activity employed to check students' comprehension. However, students were given limited opportunities to respond to textbook questions. Teachers asked open-ended questions but ignored the importance of asking closed questions to ensure comprehension of explicit information. As a result students felt their reading comprehension ability needed more development, M=4.1.

Overall, intermediate-level CHL learners had positive responses to the instruction they received and rated a majority of literacy activities as helpful and expressed that teachers well-prepared them for recognizing words and writing sentences.

**Research Question 3: Does literacy Instruction support CHL learner's literacy competence?**

This research question is intended to explore the relation between literacy instruction and literacy development using both qualitative and quantitative data sources. Qualitative data were gathered from teacher and student interviews. Quantitative data sources included student self-ratings on literacy development, researcher ratings on the literacy learning environment, and exam scores (midterm and final exam). Two qualitative data sources, teacher and student interviews, were analyzed to determine the literacy activities both teachers and students considered helpful. Also of interest was whether literacy instruction supported students' literacy competence. *T*-tests were used to (a) determine the relation between researcher's ratings on literacy learning environment and students' final exam scores, and (b) the relation between students' self-rating of their literacy development at the beginning and at the end of the CHL course. Quantitative data

were intended to support qualitative data to better understand how literacy instruction supported CHL learners' literacy competence.

### Qualitative Data

**Findings of teacher interviews.** Teacher interviews revealed that teachers believed as helpful literacy activities (see Table 8) such as: reading aloud, making sentences using target vocabulary words with teacher feedback, dictation and paired writing tasks. Both teachers and students believed that practice writing of characters was useful.

Table 8

#### *Helpful Literacy Activities For Teachers and Students*

<b>Helpful literacy activities</b>	<b>Shared</b>	<b>Not shared</b>	<b>Suggestions</b>
<b>Reading aloud</b>	Increase character recognition, word segmentation and speaking fluency	T: Ss can observe word usages Ss: paired reading aloud helps word usages T: did not mention the advantages of paired reading aloud	Explanations on word usages/sentence patterns T need to be aware of the advantages & continue employment of paired reading aloud
<b>Sentence-making in written form with T's feedback</b>	Application peer learning T's feedback	T: written (on the whiteboard) is better, but time-consuming (observe errors by other Ss)  Ss: verbal & written	Strongly suggest to invite Ss to write on the whiteboard If not, verbal sentence making, make up sentence using worksheets as a take-home assignment.
<b>Dictation quizzes</b>	Study characters in details, competence of	X	Dictation quizzes were of necessity in

	handwriting characters via voluntarily practice handwriting characters		intermediate-level CHL classes
<b>Paired writings</b>	Develop verbal and written competence	T: lower writing anxiety, should be related to Ss' daily life S: did not indicate that individual writing is a tough task. Any writings including paired writings help. Did not indicate that topics should be related to Ss' life.	Maximize opportunities to write, including both individual & paired writings  Topics may not be a concern
<b>Handwriting characters</b>	Opportunities to practice handwriting characters	T: handwriting characters on bingo games/flash cards are helpful characters Diverse views on repeated copying characters on the practice book  Ss: more writings in Chinese are helpful  Majority of Ss like dictation quizzes better (Katie and Daniel like both)	Further research to investigate repeated copying characters contributed to handwriting correct characters

*Teacher perceived helpful literacy activities.* Four helpful literacy activities identified by teachers were: (a) reading aloud, (b) sentence -making in written form with teacher feedback, (c) dictation quizzes, and (d) paired writings.

*Reading aloud.* Teachers believed that teacher-led reading aloud provided learners of Chinese opportunity to associate printed characters with pronunciation and meaning, produced better pronunciation, and helped students use words in proper context. Teachers believed that their demonstrations of correct pronunciation during read-aloud served as a model for native-like pronunciation and enhanced writing. Mary, the most experienced teacher, indicated the advantages of oral reading aloud meant that “instead of reading with eyes, oral reading aloud helped students better comprehend and better prepare them to accurately use words in writing. She noted that as they observed how words to use idioms they were able target vocabulary in proper context. Teachers also believed that paired reading aloud allowed them to hear students’ challenges in pronunciation, words and sentence patterns and provide supplemental explanations. Paired reading aloud also provided students with opportunities to prove they could read aloud without pinyin/zhuoyin help, and focus on reading characters. During paired read aloud, Valerie and Mary directed attention to incorrect pronunciation, particularly incorrect tone. Michelle spent time elucidating words and sentence patterns not comprehended by students.

**Discussion of teacher and student interviews on reading aloud.** Both teachers and students confirmed that teacher-led whole class reading aloud was helpful literacy activity. Students and teachers believed that teacher-led reading aloud helped to enhance character recognition skill, word segmentation skill, and increased speaking fluency, particularly native-like pronunciation. Students did not indicate teacher-led reading aloud facilitated their use of words, however teachers believed this practice had a positive

influence on writings. Students from the class with more advanced class and their teachers considered paired reading aloud a helpful activity as this practice demonstrated that students ability to read in characters without pinyin/zhuyin help. Yet, less proficient students confirmed that paired reading aloud when helped them to understand words and sentences and support reading fluency. Rina stated that her teacher, Mary, should provide more explanations of word and sentence usage as opposed emphasizing mispronunciation and displaying non-native like tones.

*Sentence-making in written form with teacher feedback.* Teacher felt that inviting students to make up sentences with target vocabulary and structured sentence patterns using the whiteboard, although time-consuming, was helpful because, it provided students opportunities to apply new words and sentence patterns; provided learners of Chinese practice in writing characters and sentences with greater accuracy ; and improved students ability to use vocabulary and increased sentence accuracy.

**Discussion of teacher and student interviews on sentence -making.** Both teachers and students agreed that sentence making was a helpful literacy activity in intermediate - level CHL classroom. Teachers found it was more beneficial to conduct sentence making in written form, particularly on the whiteboard while students believed both verbal and written forms were helpful. Both teachers and students believed that sentence making was a helpful activity in conjunction with peer support and teacher corrections and feedback. Both teachers and students emphasized that these opportunities allowed multiple exposures to key words and patterns thus enhancing knowledge of vocabulary and sentence patterns.

*Dictation quizzes.* Teachers believed dictation facilitated handwriting of characters and recognition of characters, and increased students' ability to make orthographic connections

**Discussion of teacher and student interviews on dictation quizzes.** Both teachers and students believed that dictation facilitated them in studying characters in details and better memorize characters. Teachers and students understood that dictation quizzes forced students to practice handwriting characters by themselves in the way to improve accuracy of handwriting characters. Dictation quizzes were one of helpful literacy activities to develop student's competence of handwriting characters.

*Handwriting characters.* Teachers believed that opportunities given for students to write characters using game-like activities such as flash cards and bingo games supported students' knowledge of characters and accuracy. Flash cards and bingo games were fun formats that made learning fun and increased anxiety about making errors. However, teachers differed in their opinions about repeated copying of characters using the practice book. Valerie and Mary believed that copying characters would help students to realize errors and make corrections. Mary emphasized the importance of handwriting saying that "it makes great differences when one only looks at the character without writing." Valerie believed that copying characters helped students in memorizing characters. She thought learners of Chinese memorized each Chinese character and made associations to meaning by correcting the character to a meaningful image or picture. Valerie believed the repetitive act of copying enhanced memory thus promoting character learning and accuracy. Mary and Valerie asked students to also copy characters as

homework, while Michelle believed that rather than asking students to mechanically handwrite characters on the practice book, students should identify their own areas of need in terms of which characters were more problematic, and then voluntarily practice characters writing.

*Paired writings.* Teachers believed writings should be meaningful and relate to students' school and life experiences. This would lower writing anxiety because students might be motivated to write because the topics were meaningful and they could draw from prior knowledge. Teachers agreed that intermediate-level learners of Chinese did not yet possess an adequate knowledge of writing and needed more support. As a result, paired writing would maximize peer collaborative and facilitate discussion as students negotiated meaning.

**Discussion of teacher and student interviews on paired writings.** Students and teachers held different views toward paired writings. Teachers believed that paired writings could lower students' anxiety of individual writing. Yet, students did not indicate that individual writing was a taxing job. They proposed that all writings helped. One student across the three classes did not share this view suggesting that peer assistance on essay writing was more helpful. Teachers did, however, raise concern about writing assignments that did not allow students a choice of topics. Yet, students expressed a desire write, without regard to topic or they engaged in independent or paired writing activities.

**Correlation study.** Quantitative data supplied additional information about literacy in the CHL classes and supported findings from qualitative data sources. Two

variables, mean ratings of literacy learning environment and students' final exam scores, were utilized to conduct a correlation study using SPSS statistical procedures to investigate whether there is a relation between mean ratings of Chinese literacy learning environment and final exam scores (see Table 9).

Table 9

*Correlation between Literacy Learning Environment and Students' Final Exam Scores*

Descriptive Statistics			
	Mean	Std. Deviation	N
score	89.3333	10.24695	9
rating	2.6367	.37911	9

Correlations			
		score	rating
score	Pearson Correlation	1	-.549
	Sig. (2-tailed)		.126
	N	9	9
rating	Pearson Correlation	-.549	1
	Sig. (2-tailed)	.126	
	N	9	9

Correlation coefficient (r) provides information about the strength and direction of the relation between distributions. Results showed that there was a moderate negative correlation ( $r = -.549$ ) between Chinese literacy learning environment and students' final scores indicating that higher ratings on literacy learning environment was associated with

lower final scores. This was particularly the case in Michelle’s class. Possible explanations for the negative relation could be due to the relatively low initial proficiency level of students in this class and the low final score of one student in the class. Although steps were taken to control for threats to validity and reliability, the total number of participants was limited to nine students. As a result one relatively low environment rating or low final score influenced overall mean scores to a greater extent than might be the case with a larger population sample. It was the case that one student participant received a score on the final exam that was 10 points lower than other participants. This resulted in the moderate negative relation on the two variables.

Two *t*-tests using pre-and-post design were also utilized. The first *t*-test using pre-and post- design was conducted to investigate literacy skill as measured by the teacher constructed exams presented before (pre-test) and near the end (post-test) of the course. Descriptive statistics are shown in Table 10.

Table 10

*Pre-and Post- T-Test of Literacy Skills Before and After Course*

<b>One-Sample Statistics</b>				
	N	Mean	Std. Deviation	Std. Error Mean
Mary& Michelle	7	2.4286	.63431	.23975
Valerie	7	3.2629	.43007	.16255

**One-Sample Test**

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Mary &Michelle	10.130	6	.000	2.42857	1.8419	3.0152
Valerie	20.073	6	.000	3.26286	2.8651	3.6606

Results show that there was statistically significant relation between pre and post-test scores,  $p < .05$ . This indicated that there were gains in literacy competency as a result of participation in the literacy course. It is noteworthy that mean scores across the classes did vary. In Valerie's class which was composed of students having less Chinese language proficiency, the mean score was ( $M=2.43$ ,  $SD=.63$ ). In the other class, composed of students having more overall Chinese language proficiency, the mean score was ( $M=3.26$ ,  $SD=.43$ ). It is important to remember that BCLC determines placement in CHL classes based on pretest scores and instruction in the CHL class is designed to meet the collective needs of students.

Both quantitative and qualitative data were utilized to support understanding the influence had on development of student's literacy competence. Quantitative data, particularly pre-and-post t test has shown that there was statistically significant and positive relation in pre and post-test scores.

Student's self-ratings on literacy skill before and after course are presented in Table 11.

Table 11

*Students' Self-Ratings of Literacy Skills Before and After Course*

**Mary and Michelle's Class**

Literacy skills before/after course	Rina <b>before</b>	<b>after</b>	Mango <b>before</b>	<b>after</b>	Jayge <b>before</b>	<b>after</b>
Recognizing radicals	4	4	5	5	2	3
Recognizing characters	1	2	3	3	2	3
Recognizing words	1	2	3	3	2	3
Reading comprehension of texts	2	3	3	3	2	3
Writing characters	1	3	2	3	2	3
Writing sentences	1	3	2	3	2	3
Writing short essays	1	2	2	2	2	3
<b>Mean</b>	<b>1.58</b>	<b>2.7</b>	<b>2.9</b>	<b>3.1</b>	<b>2.0</b>	<b>3.0</b>

*Note.* Rating reflects 0-5 Likert-type scale; Mary and Michelle taught the same student, but on different days of the week.

**Valerie's Class**

Literacy skills before/after course	Alexie <b>before</b>	<b>after</b>	Daniel <b>before</b>	<b>after</b>	Katie <b>before</b>	<b>after</b>
Recognizing radicals	4	5	5	5	3	3
Recognizing characters	3	3	4	5	2	3
Recognizing words	3	3	4	5	2	2
Reading comprehension of texts	3	3	4	5	1	2
Writing characters	3	3	4	5	1	2
Writing sentences	3	4	4	5	1	2
Writing short essays	3	3	4	5	1	2
<b>Mean</b>	<b>3.1</b>	<b>3.4</b>	<b>4.1</b>	<b>5.0</b>	<b>1.58</b>	<b>2.3</b>

*Note.* Rating reflects 0-5 Likert-type scale.

Data reveals that most improvement in students self-rating of their literacy abilities occurred in sentence writing. Qualitative data from student interviews also that students considered sentence making and the number of class writing activities (dictati on quizzes, weekly journal writings, weekly essay writings and paired dialogue writings were helpful . These literacy activities clearly contributed to development of writing

ability and suggest that instruction in the CHL class contributed to writing development, especially writing sentence.

Writing characters was the second most improved skill area according to students' self-ratings. Competence in writing characters was developed by ongoing assessment through dictation quizzes and other activities in the CHL class design to support writing development, e.g., handwriting characters.

Self-ratings on writing development also showed improvement writing short essays and recognizing characters which also may have influenced students' perceived improvement for sentence writing accuracy. Gathering data on students' self-perception of their literacy ability in specific areas on writing could be helpful in future when planning writing instruction in the CHL classroom.

The *t*-test using pre-and-post scores on literacy exam scores conducted to investigate changes in literacy competence using mid-term and final examination scores and was statistically significance,  $p < .05$  (see Table 12). This indicates that students' experienced ongoing improvement overtime in the CHL class. This suggests that CHL students benefitted from the literacy activities and overall instruction provided in the CHL class.

Table 12

*Pre-and Post-T-Test Between Midterm and Final Exam Scores*

**Valerie's Class**

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Valpre	3	96.0000	1.00000	.57735
Valpost	3	97.6667	1.15470	.66667

**One-Sample Test**

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Valpre	166.277	2	.000	96.00000	93.5159	98.4841
Valpost	146.500	2	.000	97.66667	94.7982	100.5351

*Note.*  $p < .05$ . There is statistically significant between midterm and final exams.

**Michelle's Class**

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Michpre	3	89.3333	2.08167	1.20185
Michpost	3	84.0000	12.49000	7.21110

**One-Sample Test**

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Michpre	74.330	2	.000	89.33333	84.1622	94.5045
Michpost	11.649	2	.007	84.00000	52.9731	115.0269

*Note.*  $p < .05$ . There is statistically significant between midterm and final exams.

**Mary's class**

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Marypre	3	89.6667	11.67619	6.74125
Marypost	3	86.3333	10.11599	5.84047

**One-Sample Test**

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Marypre	13.301	2	.006	89.66667	60.6614	118.6719
Marypost	14.782	2	.005	86.33333	61.2038	111.4629

*Note.*  $p < .05$ . There is statistically significant between midterm and final exams.

**Research question 4: What reading and writing challenges do CHL learners in intermediate Chinese language classroom s encounter?**

This section describes the analysis of data on literacy challenges intermediate-level CHL students face, focusing specifically on obstacles they encounter at the character, word and sentence levels. Qualitative data sources included teacher interviews, student interviews and student literacy-challenge questionnaires, think-aloud protocols, and guidelines for analyzing student work samples, to formulate the students' most common reading and writing challenges. Common obstacles to intermediate-level CHL students were realized at the word level and are related to limited vocabulary, difficulty grouping characters to form words, and improper word usage, which not only can impede writing,

but also can influence reading comprehension abilities. At the sentence level, two primary challenges to reading and writing longer sentences with complex sentence structures and overall challenges to reading and writing Chinese.

### **Challenges in Character Level**

At the character level, two challenges have been realized, character recognition and handwriting characters with accuracy.

**Character recognition.** Teacher and student interviews confirm that even learners considered to have an intermediate knowledge of Chinese faced challenges for recognizing characters and recalling them from memory. Both teacher and student participants agreed that character recognition required a great deal of cognitive energy because one has to simultaneously make a connection between orthography, sound, and meaning to successfully comprehend the characters. Interestingly, teachers indicated that students relied greatly on pinyin/zhuyin to comprehend passages. Mary, the most experienced teacher, stated that her students liked it when she read passages aloud to them. This is because intermediate-level CHL students appeared to depend a great deal on verbal language to comprehend passages. Reading aloud appeared to trigger students' recollection of character meanings and pronunciations. Students' comments included:

- the hard part is making sure I pronounce words correctly, recognize the characters, and grasping meaning is just as hard
- my biggest challenge is recognizing and memorizing Chinese characters

-memorizing words. If I do not use the words I memorized before, I forget them -  
memorizing characters so that I can read and write

-I encounter difficulty remembering certain words that I have learned in the past

Overall, recognizing characters was a mentally overwhelming process.

**Handwriting characters with accuracy.** The other type of character-level challenge students face is writing characters with accuracy. Teacher interviews, student interviews, students' literacy-challenge questionnaires, and student work samples confirmed this challenging task. One of the major challenges to correctly writing characters related to recall of the characters. Teachers noted that their students:

-forgot a character's small elements

-confused simplified and traditional characters

-only partially understood the concept of a radical

-misused one or two components of a character

-misplaced component positions

-wrote components in the wrong direction

-confused the sometimes different print and written elements of the same character

-avoided using characters with a lot of strokes

- confused homophones and characters sharing similar pronunciations.

Teachers also noted that students often forgot dots or slants. The second major challenge in writing characters is that students often confuse simplified and traditional characters. All students in this study, except one, learned traditional Chinese characters in

a home setting. Nevertheless, all students were required to learn simplified characters when they learned Chinese in U.S. high schools because the majority of Chinese-language teachers are from Mainland China. Traditional characters are used as the official writing system of Taiwan, Hong Kong, and Macau. Simplified characters are mainly used in Mainland China, Singapore, and Malaysia. Students in this study often confused the traditional and simplified characters 后/hou4/(queen) and 後(/hou4/(behind, later). It was helpful that CHL teachers were familiar with both simplified and traditional Chinese characters and could therefore identify the exact nature of students' mistakes and help them make corrections.

The third challenge in writing characters results from students' incomplete understanding of radicals. A radical was referred to "a pattern of strokes that gives information about the meaning of the character" (Anderson, Ku, Li, Chen, Wu & Shu, 2013, p. 42). As we understand, Chinese characters can be divided into two types: simple characters and compound characters. Simple characters cannot be divided into components and they are composed of strokes or radicals, such as 日(sun). This type of characters only occupies about 5% of Chinese characters. The rest, 95%, are compound characters. Compound characters are referred to those that consist of semantic and phonetic components, which the semantic components are referred to radicals. The phonetic components can give a clue on pronunciation. A complete understanding of radicals includes the ability to identify radicals within a character, understand the different meanings radicals may have, and to make minor changes to radicals that stand as character components and as independent characters. For example, teachers discovered

that students could not identify that the radical 月/rou4/(body parts or monthly) is a component of the character 腳/jiao3/(foot). Furthermore, the students in this study did not understand that the radical 月/rou4/ or /yue4/ has two meanings—one meanings of 月 is flesh or body parts and the other is monthly. Within the character 腳/jiao3/(foot), 月/rou4/ means flesh or body parts but within the character 期/qi2/(a period of time), 月/yue4/ means monthly.

Moreover, when radicals are components of a character the radicals require minor changes that the students in this study often failed to make. The students had an incomplete understanding of the differences in orthographical form of a radical found within a character and a radical as an independent character. For example, Mary, the most experienced teacher discovered that students did not know that 食/shi2/(food) can be a character and a radical component within a character or differentiate that the orthographical shape was slightly different when 食/shi2/(food) became a radical component in the character 餓/e4/(hungry). Valerie, another teacher, described two other examples where students failed to recognize radical components within a character: 足/zu2/(foot) in the character 跑/pao3/(run) and the radical 玉/you4/(jade) in the character 珮/pei4/(jade ornament). Not making the necessary orthographical changes to a radical component within a character was the students' most common error. Perhaps the differences between the radical as a character and the radical as a component of a character were so small that students did not notice them. This finding suggests that CHL

teachers need to emphasize the correct orthographical form of a radical component within a character to improve students' mastery of written Chinese.

The fourth challenge in handwriting characters is misusing character components by mistakenly writing a component that looks similar to the correct component form. A component can be a radical or any other part of a character. This study found misused components in characters with all types of configurations, but the misused components were mostly found in left-right character configurations. This finding is unsurprising because most Chinese characters are positioned in left-right configurations, which more than 70 % have left-right structures (Shu et al., 2003). The following are examples of mistakes students made with left-right configuration characters. In the character 協 (collaboration) students often used the radical 忄 (heart) instead of the radical 十 (ten) because both look so similar. Moreover, in the character 歡/huan1/ (joyous), students often wrote the radical 見 (see) rather than the radical 欠 (related to an action of opening mouth) because they are also similar in orthographic form. Students also erroneously used 岡 instead of 岡 when writing 網/wang3/(net). In inside-outside character configurations students also mistakenly wrote components that are similar to the correct component forms. For example, when students intended to write 或者 /huo4zhe3/(or) they instead wrote 國著/guo2zhu4/. Here, students made two errors. First, students mistakenly wrote the character 國/guo2/(country) instead of 或 /huo4/(or) because they added an outer component. Next, they incorrectly wrote 著 /zhu4/(write, book) because they added an upper component to the character 者 /zhe3/(person). In top-down character

configurations students made similar errors. They incorrectly wrote 子/zǐ3/(son) instead of 見 /jiàn4/(see) when writing the character 覺 /jué2/(conscious). It is hard to identify which character components students would easily misuse as they encountered multiple challenges when presented with components with similar orthographical forms. This suggests that CHL teachers should familiarize students with semantic and phonetic radicals because this knowledge decreases the likelihood of students misusing character components.

The fifth challenge in writing characters is the placing of character components in incorrect positions. The misplacing of character components predominantly occurs in two conditions. First, if a character is spatially positioned in the left-right configuration, students may misplace the right and left components by interchanging them. For instance, the right component of character 郵 /yóu2/(post), 卩, was frequently positioned on the left, similar to how it is positioned in the character 陽 /yáng2/(light or sun). This suggests that CHL teachers should provide supplemental explanations on characters when the characters include radical components that are positioned at uncommon positions, such as in the character for 郵 /yóu2/(post). Furthermore, when characters have three or more components students are even more likely to misplace them. Students in this study often misplaced components in the character 暈 /yùn1/(dizzy) by interchanging the components 日 (sun) and 車 (car). One possible solution to this problem would be to create exercises where students are given cards with the different components of a character and they

have to assemble the character correctly; however, further research is needed to evaluate the effectiveness of this approach.

The sixth challenge to writing characters with accuracy is the writing of character components in the wrong direction. Intermediate-level CHL learners were confused about component directions, such as the last three strokes “彡” of the character 參/cān1/ (participate), which slightly leans to the left instead of the right. The last two strokes of characters 陽/yáng2/(sunshine) and 冬/dōng1/(winter) are also characters that students struggled to write in the correct direction. CHL teachers need to emphasize the correct directions of strokes since the component directions may be confusing to students.

The remaining challenges to writing Chinese characters were: confusing the sometimes different print and handwritten characters of the same character and avoiding characters with a lot of strokes. Printed Chinese is sometimes different from handwritten Chinese. For example, characters 爲/wéi2/(for), 眾/zhòng4/(majority), and 商/shāng1/(business) are different when typed versus handwritten. Teachers noticed that learners read signs printed in Chinese outside the class and attempted to write the typed characters even though the typed characters are orthographically different when written. Thus, students who use print characters to influence their written Chinese may reproduce characters incorrectly. This problem is very common because all Chinese textbooks contain print characters and not handwritten characters. Teachers should make an effort to point out characters that are orthographically different when printed versus handwritten in order to help students improve handwriting accuracy.

Characters with numerous strokes are a challenge to intermediate CHL learners. A Chinese word could be as simple as one stroke, such as the character for the number one (一), or include a maximum of 24 strokes. Students seem to choose avoid learning characters with several strokes. For example, CHL learners were less willing to learn the first character 艱 /jian1/ (tough) of the two-character word tough 艱苦 /jian1 ku3/. CHL teachers tried to facilitate students' learning of character containing numerous strokes. For instance, Mary tried making up stories to help students remember characters with multiple strokes, e.g., Mary created a story for the character 聽 /ting1/ (listen). Another teacher, Michelle, drew pictures of objects and animals that resembled the orthographic form of characters with many strokes. For instance, Michelle drew a dragon and turtle to help students remember the orthographic form of characters 龍 /long2/ (dragon) and 龜 /gui1/ (turtle) respectively. Further research is needed to investigate the effectiveness of creating stories and visual representations to improve students' handwriting of characters with multiple strokes.

Another challenge in handwriting characters involved errors in accuracy in homophones and characters sharing similar pronunciations. Student work samples indicated this problem but teachers did not mention this during teacher interviews. Homophones are characters that are written differently but share the same exact pronunciation—homophone's tone, onset, and rime are identical. However, some characters are pronounced only similarly because they share a similar onset and rime but have different tones. The two most common mistakes students made with homophones were using the character 工 /gong1/ (work) instead of 公 /gong1/ (public) in the words 公

車(**gong1**che1)(bus) and using the character 候/hou4/(wait) instead of 後/hou4/(later) in the word 回來之後 /hui2lai2zhi1 **hou4**/(after coming back). These two examples show that students need to learn the meaning of single characters to better facilitate handwriting accuracy. However, this approach may prevent students from misusing the character 候/hou4/(wait, await) because the meanings of characters 候/hou4/(wait, await) and 後/hou4/(behind, later) both refer to time. In general, the problem with homophone characters is related to understanding subtle differences in time. For instance, students often use the character 以/yi3/ (in order to) instead of the character 已/yi3/(already).

Finally, students encountered challenges in handwriting characters that had similar pronunciations, particularly characters only differing in tone. Learners of Chinese misused characters when a character carried the first tone. Students often interchanged characters with the first and third tones. For example, when trying to say 麵包 /mian4 bao1/ (bread) students often said 麵飽 /mian4 bao3/ and when trying to say 十分鐘 /shi2fen1 zhong1/(ten minutes) students often said 十分種 /shi2fen1 zhong3/. In order to improve students' handwriting accuracy, teachers should explain the meaning of the individual characters which make up multi-character words, when characters with similar pronunciations exist.

In summary, the two major challenges at character level were recognizing characters and handwriting characters with accuracy. Recognizing new and previously learned characters and recalling them from memory can be an overwhelming process, but giving students opportunities to read aloud and dictation may improve character

recognition, which teachers and students in this study found very helpful to improving character recognition.

### **Challenges in Word Level**

At a word level, results indicated three major themes: students' limited vocabulary for writing and comprehension, incorrect word segmentation, and improper word use.

**Limited vocabulary for writing and comprehension.** Intermediate-level learners of Chinese face the difficulty of having insufficient vocabulary to comprehend a passage and fully express their ideas in Chinese. Daniel, a student from the less-advanced class stated that, "I find it difficult reading passages when I don't know a lot of the words". Alexie, Daniel's classmate, also felt that "not knowing enough characters" impeded her reading comprehension. Rina, from a more advanced class, stated "my Chinese vocabulary is very limited which makes comprehending Chinese texts difficult". Students' statements imply that they were concerned with being able to comprehend passages and fully express their ideas in Chinese. Students' descriptions of a limited vocabulary also referred to their limited knowledge of characters. Shen and Jiang (2013), indicate that lower-level processing influences higher-level processing of text comprehension. In terms of writing, students' statements express a greater need for an expanded vocabulary in order to better express their ideas. This study confirmed that intermediate-level CHL learners still face challenges in character and word recognition that are present in beginning-level learners of Chinese. The intermediate-level CHL learners in this study were eager for more opportunities to read and write and considered most of the in and after class literacy activities helpful. Thus, CHL teachers should

provide students with opportunities to read and write employing helpful literacy activities such as sentence-making using mandatory words and sentence patterns, weekly journal writings, weekly essay writings, and paired dialogue writings.

**Inaccurate word segmentation.** Unlike English, where words in a sentence or phrase are clearly identifiable by spaces, words in Chinese are not identifiable by spacing because words may be made up of multiple characters and all characters are equally spaced. Grouping Chinese characters into a word and inferring the word's meaning is a challenge for intermediate-level CHL learners. The teachers in this study believed that students encountered challenges in grouping characters to form words. Student interviews and literacy challenge questionnaires demonstrated that students were also aware that they faced challenges in grouping characters to form words. Data from think-aloud protocols also showed that students found it difficult to group characters into words. Daniel and his classmate Alexie pointed out how difficult they found word segmentation. Alexie stated "I sometimes know a group of characters, but do not know what they mean when put together in phrases." Daniel indicated that "when there are characters I know and characters I don't know being put together I sometimes find it difficult to know the meaning of them." Mango also expressed a challenge to understanding the meaning of a several characters in the same sentence or phrase. The students' comments imply that when the students encounter new or even previously learned characters, they are hesitant to make decisions on which characters should go together to form words. Word segmentation procedures involve not only the accurate grouping of characters, but also the recognition of characters—both challenging processes which contribute to students'

difficulties in reading comprehension. Shen and Jiang (2013) indicate that word segmentation is a challenging task, which it requires knowledge that goes beyond the comprehension of individual characters. This study confirms that word segmentation is still a challenging task for intermediate-level CHL learners because reading comprehension in Chinese requires character recognition and accurate word segmentation. Reading aloud in both teacher-led and paired-student exercises are helpful literacy activities as confirmed by both teacher and student participants in the intermediate-level CHL classrooms. They believed reading aloud helps them to develop character recognition, word segmentation, and reading and speaking fluency skills. In future, CHL teachers should consider employing reading-aloud exercises to facilitate the development of character recognition and word segmentation skills. Also, findings here suggest that CHL teachers should equip students with better knowledge of word formation techniques to enhance their word segmentation skills. According to Chen, Hao, Geva, Zhu, and Shu (2009), one of the primary word formations techniques in Chinese is lexical compounding. Thus, equipping CHL learners with a better knowledge of lexical compounding may facilitate their comprehension of Chinese words. Lexical compounding exists in both English and Chinese; therefore, students can draw on their knowledge of lexical compounding in English to better understand word formation in Chinese and later improve word segmentation. Teachers should be aware that intermediate-level CHL learners may have imperfect knowledge of how Chinese words are formed and thus provide students with more resources to learn word formation, which better improve word segmentation skills. In addition, repeated reading may support

students make accurate word segmentation (Han & Chen, 2010; Shen & Jiang , 2013). Han and Chen (2010) indicated that unfamiliar words are made comprehensible through repeated reading while listening to the tape because phonological code aids segmentation of meaningful units. Shen and Jiang (2013) assert that repeated oral reading can be conducted through the teacher asks questions to elicit students to read aloud relevant sentences or paragraphs from the text.

**Use of improper words.** Student interviews, teacher interviews, students' literacy challenge questionnaires and work samples confirmed that a challenge in intermediate-level CHL is using the proper or accurate words in Chinese . Students perceived that they had a limited ability to determine what the proper Chinese word for the concept they want to express is. Jayge, a student from the more advanced class, described that he found challenging “the usage of words and phrases.” Jayge’s classmate, Mango, also shared that she struggled “to use words/phrases accurately and efficiently.” Teachers also recognized students’ struggle to use proper words. This study identified three issues that prevent students from using proper words: (1) interchanging characters in two -character words when the characters share the same meaning or pronunciation , (2) interference, (3) and overgeneralization. For example, students improperly used 贈送”/zeng4song4/ instead of 送贈 /song4zeng4/ because characters 送 /song4/ and 贈/zeng4/ both mean, “give as a gift.” Students also improperly used words when the individual characters in a two-character word are pronounced the same way; students often interchanged the characters in the words 秘密 /mi4mi4/(secret) and 意義 /yi4yi4/(meaningful). The first

issue is related to student's belief that characters sharing same meaning can be interchanged and student's challenges in recognizing homophones. Teachers need to direct students' attention on characters sharing the same meaning and inform them that interchanging them is not allowed. Teachers also need to underscore which character should come first when two characters share the same pronunciation.

CHL learners also use words improperly due to false interferences. Interference, or negative transfer, occurs when a learner's dominant language negatively influences their learning of a target language. Examples here show that interference occurs mostly in the use of Chinese nouns, adjectives and verbs. A representative example was students' mistaken use of 導遊 (tour guide) to refer to persons who work in art museums and explain famous paintings to visitors. Due to the nearly identical translation of the phrases 導遊 (tour guide), 領隊 (guide), and 導覽員 (guide working in the museums) into English, students were very confused with which phrase to use. In addition, students often misused the word 好笑 (funny) to describe someone who was 有趣 (interesting), such as can be seen in the following sentence: 我的朋友都好笨，我好喜歡他們。(All my friends were **very stupid**, I like them very much). Furthermore, students also made the mistake of writing 笨 (stupid) instead of 笑 (funny) when attempting to write the word funny, because the two characters' share similar orthographical forms. The resulting sentence becomes hilarious.

Students also misused the two-character word 繁殖 /fan2zhi2/(reproduce) in this

sentence: 熊貓曾經快要消失，但又重新繁殖。(Giant pandas are extinct but later reproduced). The correct word used in the previous sample sentence was 繁衍 /fan2 yan3/ (reproduce), but students used 繁殖 /fan2zhi2/ (reproduce) because they share almost the same meaning. The sentence, 糟糕，我的生日你沒來。(You are a **terrible** person; you did not come to my birthday party.), shows that students struggle to use Chinese words in the proper context if they directly translate from English to Chinese. Students' ability to correctly use words will improve if CHL teachers can direct student's attention to identifying easily confused words that share nearly identical translation and provide multiple examples to better support correct word usage.

Another common mistake that leads to the misuse of words is overgeneralization; overgeneralization occurs when students infer the possible usages of a Chinese word. Because both characters in the word happy 愉快 each mean happy, students often think they can interchange the position of the characters in the word 快愉 but that is incorrect. Students also think that they can put characters together to form the Chinese equivalent of English words, such as with 愉 (happy) and 心 (heart) to create 愉心(happy heart), but a literal translation of an English word may not exist in Chinese.

Students' work samples demonstrated problems with proper word usage resulted from overgeneralization and interference. Improper word usage was present in students' use of Chinese verbs and nouns, with verbs being the most frequently improperly used and nouns the least frequently improperly used. The following are examples of students' overgeneralizing with verbs:

### Example 1

**Incorrect:** 你下學時通常做什麼? What do you do **out of** school?

**Correct:** 你放學時通常做什麼? What do you do **after** school?

**Note:** Students incorrectly inferred **after school** as 下學 from the phrases 上課 (go to class), 下課 (get out of class), and 上學 (go to school).

### Example 2

**Incorrect:** 有人喜歡打網球，是爲了健康身體。Playing tennis **healthens** the body.

**Correct:** 有人喜歡打網球，是爲了鍛鍊身體。Playing tennis **strengthens** the body.

**Note:** Health is a noun but learners of Chinese used it as “verb.”

### Example 3

**Incorrect:** 大家都病了，不會把奶奶也感冒了吧? Everyone is sick. Did Grandma get **cold** too?

**Correct:** 大家都病了，不會把奶奶傳染了吧? Everyone is sick. Is Grandma **infected** too?

**Note:** Learners of Chinese misused the Chinese verb.

The another issue of improper use of words resulted from interference, particularly from direct translation when another word is more adequate for the sentence but when translated to English both Chinese words have the same meaning.

### Example 1

**Incorrect:** 我多麼的幸福能拿到這個機會。How lucky I am to **get** this opportunity.

**Correct:** 我多麼的幸福能得到這個機會。How lucky I am to **receive** this opportunity.

Example 2

**Incorrect:** 我必要很多空間。 I **must need** a lot of empty space.

**Correct:** 我須要很多空間。 I **need** a lot of empty space.

Example 3

**Incorrect:** 近年來爲了人物身體健康 . . . In recent years, in order to help maintain **individuals'** body health . . .

**Correct:** 近年來爲了百姓身體健康 In recent years, in order to help maintain the **general population's** health . . .

Example 4

**Incorrect:** 烤餅乾有一定的規矩 (Baking cookies has standardized **rules**.)

**Correct:** 烤餅乾有一定的程序 (Baking cookies has standardized **procedures**.)

Students in this study were aware that they lacked competence in using words properly and efficiently and teachers believed that this problem was a result of interference and overgeneralization. The analysis of students' work samples supports the students' and teachers' assertions and further demonstrates students' inability to use the proper words in their writing. To better prepare students for using proper words, CHL teachers need to be aware that students utilize their dominant language and imperfect knowledge of Chinese to write. It is necessary for CHL teachers to discuss with students' writing mistakes if the students' mistakes result from interference, especially words with similar English translations, such as those found in the examples mentioned above.

In sum, intermediate-level CHL vocabulary instruction should include: reading - aloud, sentence making using mandatory words, providing multiple examples used in multiple contexts, examining word formation, informing students of the formation and syntactical features of a word, and discussing similarities and difference between Chinese and English words. This study has found that reading aloud can help overcome challenges in students' limited competence in character recognition and word segmentation. Making up sentences using mandatory words can help overcome challenges in students' limited competence of vocabulary knowledge. Students' improper word usage is mostly due to interference and over generalization. Interference occurs because many Chinese words have the same English translation. Direct translations also cause difficulties in proper word usage when students do not know how words can be used in multiple contexts. Teachers should provide students with multiple examples using the words in multiple contexts to aid their use of words. Overgeneralization implies the need for additional explanations on word formation in Chinese and English. Teachers need to identify words susceptible to overgeneralization and teach these words to students with extra care.

### **Challenges in Sentence Level**

At a sentence level, two major challenges were discovered: challenges in reading and writing longer sentences with complex sentence structures and general challenges to reading and writing in Chinese.

#### **Challenge in reading and writing longer sentences with complex sentence**

**structures.** Teachers were aware that students had difficulty reading longer sentences with complex sentence structures. This was also confirmed by think -aloud protocols, student interviews and student work samples. A longer sentence with a complex sentence structure was defined as one independent clause with at least one dependent clause. For example, 太魯閣國家公園則是因河流形成的世界級峽谷景觀，令人讚嘆不已。(Taroko National Park amazes people with its world -class scenery of gorges carved by rivers). Longer sentences with complex sentence structures could be a challenge even to intermediate-level learners of Chinese. Teachers observed that students quickly lost patience or showed very low motivation when reading longer sentences. Reading complex sentences, requires learners to make decisions on accurate word segmentation and to analyze sentence structures. Valerie noted that her students faced challenges in segmenting words when reading complex sentences. Also, her students could not identify an independent clause resulting in the failure of accessing main ideas. Michelle explained that students hesitated when grouping characters into words and had limited knowledge for identifying independent clauses contained in complex sentences. Michelle commented that students “could not identify independent clause, conveying the main idea and could not identify dependent clauses, conveying minor stuff.” Thus, longer sentences with complex structures compounded processes difficulty for word segmentation and analysis of sentence structures. As noted earlier, word segmentation is a challenge at a word level, which Shen & Jiang (2013) considered to be lower -level processing in reading Chinese. However, it also influences encoding of individual sentence. This suggests that CHL teachers need to be aware that word segmentation plays a crucial role in both word and

sentence comprehension. Student's inability to comprehend sentences may result from failure to make accurate word segmentation, or to understand complex sentence structures, or both.

Identification of an independent clause in a complex sentence is not an easy task for intermediate-level CHL learners when they still lack knowledge of complex sentence structures. However, longer sentences with complex sentence structures are more common in intermediate-level reading passages. CHL learner's reading competence of complex sentences can be enhanced when CHL teachers direct students' attention to complex sentences by providing detailed explanations of the location of the independent clause in a complex sentence. CHL learners may need more exposure and support to develop writing competence when use of complex sentence structure is expected. More research is needed to explore instructional approaches to enhance reading and writing of complex sentences.

**Challenge in written language.** Confirmed by teacher interviews, student interviews, think-aloud protocols and student's work samples, reading written language and using written language to write can be a great challenge to intermediate-level CHL learners. Teachers were aware that students faced challenges in comprehending written language, they were also aware that students used conversational language, instead of written language to write a sentence. Valerie noted that, students use conversational language to write (我手寫我口 in Chinese). Students were aware of their limited grasp of reading written language and admitted that they used conversational language when

writing.

Teachers pointed out that students always asked the teacher to translate written language to conversational language in order to facilitate comprehension. This is likely a result of communicate with family members and friends using conversational language and limited opportunities to learn about formal written language. The following examples stress the point. 憑心而論，並非因為西方音樂普遍性較高，藝術性較長的緣故，彼此信任才是重要的原因之一。(To be honest, **it was not** because the commonality and long art history of western music, mutual trust was one of the important reasons.) Michelle provided other examples: conversational language of 並非(not) was 不是(not); 決定目的地之後，訂旅館便是行程中重要的規劃之一 (After destination is decided, booking a hotel **is** among the important plans.) Michelle described that she needed to verbally make clear to students that written language 便是(is) was equal to conversational Chinese 就是(is). As exposure to the written language increased, intermediate learners of Chinese it was clear that they were not well prepared for reading it.

This study confirmed that intermediate-level CHL learners faced challenges in reading written language and using language to write. CHL learners with Chinese ethnic backgrounds lack knowledge of the formal as a result of overwhelming exposure to spoken, conversational language. The CHL learners in this study made use of their knowledge of conversational language and used it to write. It is suggested that teachers use conversational language, an area of strength for CHL students in this study, as bridge

to learning to write using more formal written language. A helpful activity would use sentence revisions that required students to use written language or four-character Chinese idioms to replace conversational language. Also, teachers should introduce extensive reading materials containing expository writing structures (such as newspapers) as opposed to narrative or dialogue genre. The use of written language, in order to better prepare students for reading written language. Posing questions related to content and asking students to highlight key words and expressions could be helpful. Later they might share the crucial words in pairs or with the whole class. However, research in this area is insufficient and more work is needed to identify helpful instructional strategies and tasks.

## CHAPTER FIVE

Chinese language teaching and learning has become a significant field because of China's rapid economic development and growing political influence in the world (Zhao & Huang, 2010). An increasing number of young adults and adults are learning Chinese as an international language, both Chinese as a Foreign Language (CFL) and Chinese as a second language (CSL). In order to better support the literacy development of Chinese language learners, there is a need to explore and identify helpful literacy activities and instructional methods (Li & Duff, 2008; Liu 2009).

This study aims to explore the nature of Chinese literacy instruction in a CSL context with emphasis on instructional approaches and language challenges of heritage language learners. It also aims to identify whether literacy instruction supported these learners' literacy competence. The purpose of this study was to inform praxis in developing literacy for CHL learners in Taiwan with knowledge gathered from this study. The study was informed by the following questions:

1. What is the nature of literacy instruction (reading and writing) in intermediate Chinese language class?
2. How do CHL learners perceive and react to intermediate -level CHL courses?
3. Does this literacy instruction support CHL learner's literacy competence?

4. What reading and writing challenges do CHL learners in intermediate -level Chinese language classrooms encounter?

This study took place in a Chinese language center in a university situated in northern Taiwan. It used a mixed-method approach to study the complex teaching practices of literacy in the intermediate-level CHL classroom. Both qualitative and quantitative data were utilized to better support a holistic understanding of Chinese literacy instruction and the literacy challenges of intermediate-level CHL learners.

First, this chapter presents the conclusions in terms of knowledge learned from research findings. Second, implications of teaching practices and further research are discussed.

### **Conclusions**

I will discuss four major conclusions drawn from the study in the following sections: (a) the nature of intermediate-level Chinese literacy instruction, (b) attitude toward literacy instruction in terms of learner's perspectives, (c) confirmation of the importance of literacy instruction in the development of literacy competence, and (d) investigation of challenges. Later, the conclusions will be integrated to provide a holistic overview of the intermediate-level Chinese literacy courses to better inform CHL praxis.

#### **Nature of Intermediate-Level Chinese Literacy Instruction**

Four major types of teaching activities that characterize intermediate-level CHL literacy instruction were discovered: teacher-directed whole class lectures, discussion and comprehension checking, reading aloud, and dictation. Teacher-directed whole class lectures were predominantly held to introduce vocabulary and make corrections.

Teachers employed two methods to develop the competence of students in using new words in the proper contexts: traditional teacher instructional approach and non-traditional sociocultural instructional approaches. A traditional instructional approach of learning vocabulary in Chinese as L1 settings was utilized in the observed CHL classrooms. These instructions were primarily teacher-fronted questioning, or the use of fill in the blanks and multiple-choice questions to check students' understanding of Chinese words. Non-traditional instructional approaches were employed in four ways: a) by the use of conversational language instead of direct translation; b) by context-based verbal questions to elicit the use of new vocabulary or by asking questions with new vocabulary to provide students with an opportunity to see how new words can be used in context; c) by verbal examples provided by the teacher; and d) by the introduction of collocation. The underlying concepts of vocabulary instruction are emblematic of a non-traditional sociocultural instructional approach. This approach values the students' listening and speaking skills in Chinese, as well as the students' world and cultural knowledge and experience. It also emphasizes language use in context through multiple examples and associations, such as collocations.

Teachers introduced vocabulary in many different ways. Their methods reflected their concerns about learning vocabulary. Valerie and her teaching assistant, George, always used photographs or pictures on power point slides and worksheets because pictures directly facilitated character recognition, which provided visual understanding. Michelle made use of association when introducing vocabulary. Association refers to verbal explanations of a single character in a multi-character word, identification of

conversational and written language expressions, explanations provided by antonyms and synonyms, identification of easily confused words and explanations on the usage words in proper contexts.

Corrections were made within a whole-class lecture format in all observed classrooms. CHL teachers corrected orthographic errors in writing characters, improper word usage, syntactically incorrect sentences, and mispronunciation, particularly the tones and pronunciation of characters with multiple readings. Teachers approached corrections differently. Michelle attended more to improper word usage, sentence patterns, and incorrect grammar while both Valerie and Mary focused on mispronunciation. An error analysis of mispronunciation revealed that students encountered challenges particularly when second and third tones went together as a word and when a character had multiple readings. I suggest that CHL teachers direct intermediate-level learner's attention to the pronunciation of a character with multiple readings. For example, 分/fen4/(responsibility) and 分/fen1/(divide). Different readings involve different meanings, and thus influence comprehension.

Discussion and comprehension checking were important characteristics of the intermediate-level CHL classrooms. The purpose of discussion and comprehension checking was to develop CHL learners' competence of comprehending Chinese passages (dialogues) in detail. This study found that there were two main ways of conducting discussion and comprehension: traditional teacher-fronted questioning and non-traditional sociocultural discussion and comprehension checking. Teacher-fronted questioning for closed questions was one way of conducting discussion and

comprehension checking. It was conducted when the teacher asked only closed questions to elicit answers from students. This was a very common way of checking students' comprehension in Chinese as L1 settings (Wu, Li, & Anderson, 1999).

Another way of conducting discussion and comprehension checking was through sociocultural theory. This activity emphasized the significance that CHL learners brought to the classroom and viewed them as “active meaning makers” (Turuk, 2008, p. 248). These learners, who have a rich world and cultural experience, can construct knowledge with the assistance of teachers and peers. The discussion and comprehension checking activity focused on meaningful interaction between teachers and students, and between students or peers through scaffolding, which facilitated students to go beyond the current level. It encouraged the use of verbal language as a mediation tool to facilitate learners to move into and through their Zone of Proximal Development (ZPD) (Eun & Lim, 2009; Kao, 2010; Turuk, 2008). Students can be supported by this method and gradually they can be encouraged to become self-regulated learners who are able to construct knowledge without assistance. In this study, two types of discussion formats were employed: teacher-led whole class discussions and paired at-desk discussions. The purpose of conducting two types of discussions was to counterbalance the weakness of the pattern in which only specific students answer teachers' questions and to maximize peer learning. Peer interaction in this study included negotiating meaning and exchanging ideas in both verbal and written form (Eun & Lin, 2009) where the former stresses conversational language exchange and the latter composition of sentences in written Chinese. Peer interaction facilitated the development of oral and written competence. Two types of

questions, closed and open-ended, were utilized to ensure the comprehension of a new passage (or dialogue) and to prepare CHL learners to become more independent and apply what they already know into Chinese language learning.

I suggest that CHL teachers employ two types of discussion formats to balance interaction between teachers and students, and between peers to engage students in discussions. Both closed and open-ended questions should be included in the discussion to check comprehension and encourage application of what has already been learned. I strongly suggest that teachers ask students to respond to questions in written form to allow more practice in sentence writing. This is because students asserted that there should be more emphasis on the written form, which is discussed in detail in research question three in Chapter Four. Assigning specific questions to specific students may not meet the needs of intermediate-level learners. Instead, I recommend CHL teachers ask students to respond to all the questions and then ask specific pairs of students to answer the questions.

Reading aloud and dictation were the most observed routine classroom activities in the intermediate-level CHL classrooms. These two activities were used to achieve two goals: improvement of character recognition and of character writing. Two types of reading aloud were discovered in the intermediate-level CHL classes: teacher-led reading aloud and paired reading aloud. The traditional Chinese as L1 teacher-led reading aloud was an important activity in the intermediate-level classes (Wu, Li, & Anderson 1999; Wang, 1998). The reading aloud was either led by a teacher or students read as a whole class in this type of reading aloud. Reading aloud facilitated both teaching and learning.

Reading aloud by students as a whole class allowed the teacher to observe students' hesitation in grouping and pronouncing words and to provide feedback. The non-traditional way of conducting reading aloud refers to (fronted) paired reading aloud. Paired reading aloud maximizes peer interaction in the learning process and provides abundant opportunities for students to prove they can read without a teacher's help and without reliance on pinyin or zhuyin. It was observed that Michelle and Mary, who taught the same class, provided a nice balance between explaining challenging words and sentences and demonstrating challenging pronunciation. Michelle focused on teacher-led reading aloud while Mary frequently conducted paired reading aloud in front of the class.

In addition to reading aloud, dictation was one of the most observed classroom activities in the intermediate-level CHL classes. Dictation on vocabulary words is the traditional way of conducting dictation quizzes in Chinese as L1 settings. Teachers conducted dictation on collocations and sentences in addition to vocabulary words. Although the effectiveness of dictation on collocations and sentences may need further research, dictation provided students with opportunities to practice writing characters by themselves and checking if they were able to do so independently. This is different from only looking at characters without writing them down.

The instructional approaches employed in the intermediate-level CHL classrooms included literacy activities using both traditional and non-traditional instructional approaches. Most of the literacy activities discovered in this study were traditional, whole-class lectures on introducing vocabulary and making corrections, discussion and comprehension checking, reading aloud, and dictation. In fact, the instructional

approaches underlying these activities combine both traditional and non-traditional elements. Traditional instructional approaches include teacher corrections, teacher-fronted questioning for word definition, teacher-fronted questioning for comprehension checking, teacher-led whole class reading aloud, and dictation. Non-traditional instructional approaches include collaborative vocabulary learning, teacher-fronted and paired discussion and comprehension checking, and (fronted) paired reading aloud. The non-traditional sociocultural approaches have the following characteristics: (a) they emphasize the significance of what a learner brings to the classroom, including prior linguistic, cultural, and world knowledge and experiences; (b) they focus joint attention through interaction between teachers and students, and between peers, such as scaffolding; (c) they stress meaning and context-based language learning; and (d) they involve multiple genres of culture-related reading materials (e.g., fortune telling slips). The first characteristic stresses the use of learner's prior aural and spoken knowledge as well as their cultural understanding of the home language as the basis for developing reading and writing competence (Xiao, 2006). Learner's knowledge and experience of the world are regarded as invaluable resources for literacy development. The use of the prior knowledge of CHL learners as a resource can make literacy learning meaningful to them. Second, it provides a nice balance in the interaction between teachers and students, and between peers. More capable adults, teachers or peers, interact with less capable learners and use verbal language exchange as a mediation tool to achieve a higher level of proficiency. Vygotsky's sociocultural theory, including scaffolding and the role of the teacher as a mediator, plays a crucial role in facilitating the intermediate language

learning process. Third, it emphasizes the significance of students' comprehension as a priority in language learning, which is more effective when language is used in context. Fourth, culture-related materials presented through multiple genres, including reading passages, dialogues, transportation directions to famous tourist places, and so forth, allow students to meaningfully interact with written materials. Materials that discuss the culture of the home language can motivate CHL learners. Interacting with a variety of genres (Bakhtin, 1986) can better develop CHL learner's competence when facing multiple genres in the real contexts. The findings of most research conducted in the beginning-level CSL/CFL classrooms are inconsistent. Some CFL/CSL learners preferred form-focused instructions while others liked a more communicative approach, and some combined both the traditional and more communicative instructional approaches (Li, 1998; Duff & Li, 2004; Wang, 2008). This study has shown that both traditional and non-traditional instructional approaches were effectively employed in the intermediate-level CHL classes.

#### **Positive Attitude Toward Literacy Instruction (Learner's Perspective)**

CHL learners had a positive impression of the CHL language courses in BCLC, as revealed in student interviews and student ratings of teacher-guided literacy skills. CHL learners reported that most of the literacy activities were helpful and that the teachers increased students' competence in recognizing words and writing sentences. Interview results suggested that the following literacy activities were helpful: reading aloud; multiple examples provided by the teacher; sentence making, both verbal and written, with mandatory words and sentence patterns; writing activities conducted inside and

outside the classroom; and dictation quizzes. In contrast, introducing new vocabulary through power point presentations, viewing movies in class and narrow oral discussions on the textbook was considered the least helpful literacy activities. Three key elements prevented the activities from being helpful: lack of in -depth explanation of the vocabulary words, infrequent opportunities to apply vocabulary in practical situations and inadequate knowledge of appropriate questions to check comprehension. Students expected CHL teachers to provide them with opportunities to learn vocabulary with multiple examples in order to understand word usage and be better prepared to understand the movie. However, only one example was shown in the power point presentations and teachers did not teach key vocabulary prior to watching the movie. Moreover, students expected teachers to check their comprehension for accuracy by asking them to answer all the questions. However, teachers only asked them to answer specific questions. After watching the movie, teachers asked students to answer open - ended questions only. Students felt that even those who failed to understand the movie could answer these questions. Teachers should have asked them closed questions to ensure their comprehension.

Results of students' ratings of teacher -guided literacy skills indicated that CHL teachers prepared students well in writing sentences and recognizing words but not as well in writing short essays and recognizing radicals.

In terms of student interviews and student ratings of teacher -guided literacy skills, the opinions expressed in the interviews coincided with the ratings. Writing sentences may be facilitated through sentence making and a number of literacy activities inside and

outside the classrooms, such as vocabulary building and sentence pattern instructions when multiple examples were provided, paired dialogue writing, weekly journal writing, and weekly essay writing. Increased competence in recognizing words may be facilitated through reading aloud and dictation quizzes. However, students were not prepared to write short essays in the more advanced classes while students were more prepared in the less advanced classes. This is because teachers did not want to place additional burden on students in the more advanced classes. Recognizing radicals was indicated as unsatisfactory by students. Teachers perceived that they utilized component and radical instructions in their classes, but students did not notice them. As discussed earlier in Chapter Four, classroom observations revealed that teachers only made occasional explanations of radical related concepts and the time spent on them was very limited. Writing sentences was supported by vocabulary and sentence pattern instruction. Students explained that multiple examples were discussed in vocabulary and sentence pattern instruction that better prepared them for correct word usage and proper sentence pattern. I recommend that when delivering vocabulary instructions, CHL teachers need to provide multiple examples used in multiple contexts and they need to prepare these examples in both verbal and written forms. Written examples given, as handouts are useful because students can review them at a later time. Besides, students like to have hard copies of written examples to facilitate reading examples in written Chinese.

Competence in writing sentences can be supported by sentence making. This study confirmed that sentence making is a very helpful literacy activity in the intermediate-level CHL classes in two ways: it provides better grasp of words and

sentence patterns in contexts and it facilitates better use of new words and improved sentence varieties. Conducting sentence making involves three key elements: students make sentences on their own with mandatory words and sentence patterns, teachers provide feedback on word choices and sentence accuracy, and students learn multiple usages from their peers by making sentences in the written form on the whiteboard or by listening to their peers' sentences in the verbal form. An effective prerequisite to meaningful sentence making was to direct students' attention to important words, grammar elements, and sentence patterns by asking them to highlight these important words and grammar points. Later the teacher could provide multiple examples of one word or one sentence pattern, which was used in multiple contexts.

This study confirmed that intermediate-level CHL learners need multiple examples to grasp word usage and sentence pattern. I suggest that intermediate-level CHL teachers continue to conduct sentence making to better prepare learners to write sentences in Chinese. Prior to conducting sentence making, teachers can ask students to highlight important words and sentence patterns and introduce these words and sentence patterns with multiple examples. As many students claimed, a power point presentation was not sufficient to grasp word usage and words were not clear primarily because of the lack of multiple examples on PPTs. Multiple examples refer to providing more than one example to explain a word or a sentence pattern in a certain context. In addition to the teachers' verbal examples, CHL learners also like to observe word usage and sentence pattern in other contexts demonstrated by their peers. As a substitute, teachers can ask students to complete sentence making in teacher-prepared worksheets as an assignment to

save time if inviting students to write sentences on the whiteboard is time consuming. Asking students to use mandatory words and sentence patterns facilitated their use of advanced words and improved sentence varieties. Preparing intermediate -level CHL learners for better use of advanced words and complex sentence structures is a major concern for students who are aware of their limited ability to use advanced words and complex sentence structures to express their ideas. These students felt that through sentence making with mandatory words and sentence patterns, they developed knowledge of advanced words and varied sentence patterns. They also paid attention to teachers' feedback to ensure sentence accuracy.

Teachers dealing with learners from heritage backgrounds can better support their students to increase their skill in word recognition by the continued employment of reading aloud and dictation quizzes with reading aloud seen as the most helpful activity perceived by student participants. In general, students perceived that reading aloud definitely enabled them to enhance their character and word recognition capability, word segmentation, and speaking fluency. However, it was discovered in this study that both types of reading aloud, teacher-led and paired reading aloud, facilitated students' learning. Teacher-led whole class reading aloud was more helpful in the development of speaking fluency whereas paired reading aloud was more beneficial in reading fluency. The former indicates the development of speaking fluency in terms of teachers' modeling with correct pronunciation, particularly native-like tone and prosody, as well as learners' self-correction in pronunciation. The latter emphasizes peer learning on ensuring correct pronunciation, confirming accurate word segmentation, and clarifying semantic meanings

of unknown characters, words, and unfamiliar sentence structures to gain full comprehension. This whole process also requires repeated reading between peers, which improves word segmentation and text comprehension (Han & Chen, 2010). It is discovered in this study that reading fluency is a prerequisite for speaking fluency in Chinese. As student participants indicated, reading aloud does not make any sense to others if the students do not understand what they are reading. This also confirmed my observation in the think-aloud protocols. One student participant, Daniel, could pronounce every single character but could not comprehend what was being read. It is recommended that teachers continue to use both types of reading aloud. Teacher-led whole class reading aloud is more beneficial if CHL teachers spend time explaining sentence structures and word usages unfamiliar to students. Paired reading aloud is helpful for both levels of students but fronted paired reading aloud is more effective in the more advanced classes. Teachers should find out if students are comfortable with fronted paired reading aloud especially when their Chinese proficiency level is less advanced. Otherwise, it is better to conduct paired reading aloud at their desks, which also improves reading and speaking fluency.

Dictation quizzes played a central role in word recognition and production when CHL learners were forced to study the internal structures of a character closely and to produce the characters from memory. Students reported that the practice of writing characters enabled them to imprint these characters in their minds and memorize them. I suggest that CHL teachers should give dictation quizzes on a routine basis to enhance students' competence of writing and recognizing characters.

Two areas require attention to develop better students' literacy competence: writing short essays and recognizing radicals. This study confirmed that writing a short essay would not place an added burden on intermediate-level CHL learners. The findings of how teachers prepared students to write short essays have shown that students from less advanced classes had a positive attitude toward writing short essays. On the contrary, students from more advanced classes had a negative attitude when they were not given the opportunity to write short essays. Moreover, all student participants in the interviews asserted they needed more opportunities to write because of their awareness of limited opportunities to write in the U.S. I recommend that CHL teachers raise high expectations in students and provide them with opportunities to write essays regularly on a weekly basis.

Instruction in recognizing radicals may involve two critical questions. First, do intermediate-level CHL learners have sufficient knowledge of radicals, including their forms and positions, prior to the program? Second, can these learners apply radical knowledge in memorizing and guessing new characters? If the answers to both the questions are positive, explicit instructions on radicals may be not necessary. This is because radical awareness can not be ignored when learning to read and write in Chinese as L1 (Ho & Bryant, 1997; Ho & Ng 2003; Shu & Anderson, 1997) or in Chinese as L2/FL (Perfetti & Tan, 1998; Shen, 2005; Shen & Ke, 2007; Wang et al., 2003; Wang et al., 2004). Li (1998) and Zhao (2008) noted that radical or character component analysis is crucial in the beginning-level CFL classes. The researchers noted that limited time and less frequency on radical instruction were present in the observed classes although

teachers perceived themselves using radical and component instruction to emphasize concepts of radicals. I suggest that CHL teachers use a radical test to better identify if intermediate-level CHL learners need further instruction on radical knowledge and if they need opportunities to apply radical knowledge.

### **Confirmation of Literacy Instruction in the Development of Literacy Competence**

Both qualitative and quantitative data have shown that the literacy instruction offered at BCLC supports students' literacy competence. The results of quantitative data show improvement after the course as well as in the final exams. The findings of qualitative data reveal that literacy activities perceived by both teachers and students as helpful has a lot in common except for writing characters in the practice book. Shared helpful literacy activities were: reading aloud, sentence making with teachers' feedback, dictation quizzes, and paired writing. This study confirmed that reading aloud was a helpful activity for intermediate-level CHL classes. Both teachers and learners benefited from reading aloud. Teachers could identify learners' challenges and provide supplemental explanations and learners could increase character and word recognition skills leading to increased reading and speaking fluency. I suggest that CHL teachers conduct both types of reading aloud in more advanced learners (e.g., Mary and Michelle's class) and give more opportunities to less advanced learners (e.g., Valerie's class) to conduct at-desk reading aloud prior to their reading aloud in front of the whole class. Both teachers and students confirmed that sentence making was a helpful literacy activity involving application and peer learning. Application means opportunities given to students to make their own sentences with advanced words and more complex

sentence structures. Peer learning plays an important role in sentence making as learners are given the opportunity to observe peers' word usage and teachers' corrections of the errors they make. Instead of inviting students to compose sentences on the whiteboard, I recommend that CHL teachers conduct verbal sentence making or making sentences in worksheets as take-home assignments to substitute for fronted sentence -making, which teachers perceive as time-consuming. CHL teachers need to keep in mind that they should provide feedback to students about sentence accuracy. Teachers and students agreed that dictation quizzes facilitated learning characters in detail, better memorizing characters, and writing characters with accuracy. Students' practice in writing characters enabled them to better correspond orthography, phonology, and semantics in the way that ensured character accuracy and enhanced character recognition skills. I suggest that CHL learners hold dictation quizzes as a routine classroom activity. However, no decision could be reached about repeatedly copying characters in character writing and further research is needed to investigate the effectiveness of this practice. Teachers believed that paired writings can lower the anxiety of individual writing; yet, intermediate -level CHL learners believed that all writings, not only paired but also individual, helped. Teachers were concerned about topics for writing. They believe that the topics should be linked to students' daily lives whereas students did not have any preferences.

This study confirmed reading aloud, sentence making using mandatory words , and sentence patterns with teacher's feedback, dictation quizzes, and paired writings were helpful literacy activities for intermediate-level CHL learners and teachers. Learners improved significantly in each literacy skill after the course and there was significant

improvement between the midterm and final exam scores as well. Data from students' self ratings on literacy skill before and after the course showed that the most improved skills included sentence writing, character writing, short essay writing, and character recognition. The last two skills were ranked the third most improved skills. Literacy activities considered helpful by both teachers and students may facilitate the development of these skills. However, which literacy activities contributed to which skills development is unknown. I suggest that CHL teachers employ these helpful activities and provide learners with more opportunities for individual writings in topics that go beyond students' daily life experiences. More advanced topics that go beyond students' daily life, such as global warming, may develop the writing competence of intermediate-level young adult learners. All students considered radical recognition the least improved skill. Students felt that teachers did not emphasize radical concepts enough. I strongly suggest that CHL teachers administer a radical test to ensure that students have sufficient knowledge and are capable of applying this knowledge.

### **Investigation of Learners' Challenges**

Two major challenges have been presented at the character-level stage: recognizing and writing characters. This study confirmed that intermediate-level learners face challenges in these two areas. According to Hung (2000), character recognition forms the basis for reading in Chinese. Yet, intermediate-level CHL learners encountered this challenge, which usually exists in the beginning-level classes. According to Li (1998), character recognition was a challenge not only for beginning-level but also for intermediate-level CFL learners. This study has shown that intermediate-level CHL

learners do not present an advantage in character recognition. Failure in recognizing characters results from challenges in memorizing characters and then recalling them from memory to be able to access their meaning. Character recognition is an overloaded mental process. CHL learners try to seek teachers' help in pronunciation because phonological information plays a major role in character recognition (Shen & Jiang, 2013). Teachers' help with pronunciation enables learners to allocate their resources on gaining access to meaning for comprehension. Thus, it was shown that CHL learners need literacy activities that can facilitate character recognition. As discussed in the development of literacy instructions in the competence section, both teachers and students believed reading aloud helped improve character recognition, word segmentation, and reading and speaking fluency. Reading aloud was effective in improving reading fluency because it "forces students to keep their eyes on every character in the text as they sound it out loud" (Shen & Jiang, 2013, p. 17). Students also agreed that dictation quizzes facilitated study of the internal structures of characters and enabled them to memorize characters in detail. It is suggested that CHL teachers can better support their students in character recognition by the continued employment of reading aloud and dictation quizzes.

This study has revealed that writing characters with accuracy is still a challenge in the intermediate-level CHL classes. The research conducted by Xiao (2006) revealed that high beginning-level CHL learners' reading and writing did not present better advantages in "reading comprehension, vocabulary learning, and character writing" (p. 54) as compared with their non-heritage counterparts. This study confirmed that intermediate-

level CHL learners faced challenges in writing characters with accuracy. Incorrect writing of characters include the following types: (1) forgetting a character's small elements, (2) confusing simplified and traditional characters, (3) only partially understanding the concept of a radical, (4) misusing one or two components of a character, (5) misplacing component positions, (6) writing components in the wrong direction, (7) confusing printed and handwritten characters, (8) avoiding characters with a lot of strokes, and (9) confusing homophones and characters sharing similar pronunciations. In addition to the difficulty of recalling characters from memory (e.g., lack of small elements), Chinese language learners faced the challenges of confusing of character versions (e.g. traditional or simplified; print or handwritten), incomplete understanding of radicals, puzzlement of spatial configurations (e.g., positions, directions), avoidance of complex characters with a lot of strokes, and confusion of homophones.

When simplified and traditional characters confuse students or students are puzzled by printed and handwritten versions of characters, these challenges can be solved if CHL teachers ask students about their Chinese -language backgrounds. If teachers better understand students' Chinese -language backgrounds, they may be better able to determine which students need help in understanding the key differences between simplified and traditional characters and printed and handwritten versions of characters. A list of characters that are different in printed and handwritten form may not exist, but teachers should do their best to point out characters that they know are different. In situations where students struggle with radicals, CHL teachers should familiarize them

with the use of semantic and phonetic radicals by memorizing a semantic-phonetic compound character because it may improve their writing accuracy. Another solution is to inform students of the handwriting difference between the radical components of a character and the radical components of an independent character. Teachers are also encouraged to emphasize characters with components placed in uncommon positions. By so doing, learners will be more aware of the problem areas and teachers can better support their writing of accurate characters. To prevent students from writing character components in the wrong direction, CHL teachers may need to direct students' attention to this problem and demonstrate how to write them in the correct direction. In addition to this, in order to prevent students from misplacing character components, it may be effective to create exercises where students are given cards with the different components of a character and they have to assemble the character correctly. Yet, further research is needed to investigate its effectiveness on writing characters with accuracy. In order to facilitate the learning of complex characters with a lot of strokes, further research is needed to identify the effectiveness of creating a story or drawing scribbles on complex characters with a lot of strokes. When students have problems with homophones and characters with similar pronunciations, teachers should explain the meaning of the individual characters, which make up multi-character words. However, it is important to note that teachers did not mention challenge number nine in teacher interviews, which will be discussed in detail later. This may pose a substantial barrier to improving students' performance in intermediate-level CHL classes because this may mean that teachers are not aware that students struggle with writing homophone characters and characters

sharing similar pronunciations and therefore may not give sufficient instructions about how to correct these problems. Teachers may not notice students' challenges with homophones because these mistakes may not stand out as teachers may be focusing on other, more blatant, challenges. CHL teachers should specifically analyze students' writings for these mistakes because it would greatly improve accuracy.

The challenges of homophones or characters sharing similar pronunciations were discovered from students' work samples but not mentioned by teachers in the interviews. The reason for not indicating this challenge may be because they did not stand out or teachers did not observe them to be an issue. However, if the latter is the case, it may pose a substantial barrier to improving students' performances in the intermediate-level CHL classes. This is because it may mean that teachers are not aware that students struggle with writing homophone characters and characters sharing similar pronunciations accurately and thus they may not be able to direct student's attention and provide support. CHL teachers should specifically analyze students' writings for these mistakes.

At the word level, intermediate-level CHL learners faced three challenges: limited vocabulary to comprehend and write, inaccurate word segmentation, and use of improper words. First, for reading, limited vocabulary in terms of students' descriptions implied limited knowledge of characters. In other words, learners faced the challenge of knowing insufficient characters and words to enable them to gain comprehension. For writing, limited vocabulary is having insufficient vocabulary to fully express their ideas and implies the need to expand vocabulary. This study confirmed that intermediate-level

CHL learners encountered the challenge of having limited characters and words to gain comprehension and to express their ideas. It is very important to identify literacy activities for improving recognition skills in characters and words. CHL learners confirmed that reading aloud, dictation quizzes, and sentence making with mandatory words enabled them to improve character and word recognition and use advanced words. I suggest that CHL teachers should use these literacy activities to better prepare learners to overcome challenges in limited vocabulary to read and write. Further research is needed to explore ways to expand students' vocabulary in Chinese.

Second, this study confirmed that grouping of Chinese characters into a word and inferring the word's meaning is a challenge for intermediate-level CHL learners. These learners were hesitant to make decisions about which characters should go together to form words because of their inability to recognize characters. However, reading comprehension in Chinese requires character recognition and accurate word segmentation. I suggest that CHL teachers employ reading aloud and endow CHL learners with knowledge of word formation in Chinese to enhance word segmentation and character recognition skills. CHL learners believe that reading aloud, in both teacher-led and paired reading aloud, helped them develop character recognition, word segmentation, and reading and speaking fluency. Thus, it is beneficial to employ both types of reading aloud. According to research, lexical compounding is one of the major processes of word formation in Chinese (Chen et al., 2009). Thus, equipping CHL learners with better knowledge of lexical compounding may facilitate their comprehension of Chinese words. Teachers should be aware that intermediate-level CHL learners might have imperfect

knowledge of how Chinese words are formed and should provide students with more resources to learn word formation, which will better improve their word segmentation skills. In addition, repeated reading will enable students to make accurate word segmentation (Shen & Jiang, 2013; Han & Chen, 2010). Han and Chen (2010) indicated that unfamiliar words are made comprehensible through repeated reading while listening to the tape because the phonological code aided the segmentation of meaningful units. Shen and Jiang (2013) suggested that repeated oral reading could be conducted by teachers through questions to make students read aloud-relevant sentences or paragraphs from the text.

Third, intermediate-level Chinese students face challenges in the use of proper or accurate words in Chinese. The use of improper words can be attributed to three major sources: (a) misplacement of a two-character word when each individual character shared the entirely same meaning or entirely same pronunciation, (b) interference, and (c) overgeneralization. The first reason was probably due to the belief that characters sharing the same meaning can be interchanged and students' challenges in homophones. When a two-character word shares exactly the same meaning, it is very easy for students to get confused. It can be solved if teachers direct students' attention on characters sharing the same meaning and inform them when interchanging them is not allowed. Teachers also need to explain which character should come first when two characters share exactly the same pronunciation. The second and third issues are related to interference and overgeneralization. Interference and overgeneralization occur when CHL learners utilize their knowledge of English (e.g., literal translation and knowledge of word formation in

English) and imperfect knowledge of Chinese to produce Chinese words. This study shows that students struggle to use Chinese words in the proper context if students directly translate from English to Chinese because multiple Chinese words can be referred to by the same translation in English. For instance, the following three words have nearly identical translation in English, 導遊 (tour guide), 領隊 (guide), and 導覽員 (guide working in the museums). Students were very confused about which word or phrase to use. Students' ability to properly use words will improve if CHL teachers can direct their attention to identifying easily confused words that share nearly identical translations and provide multiple examples to better support correct word usage. Overgeneralization shows that additional explanations are required and that teachers should tell students what the syntactical form of a word is (e.g., whether a word is a noun or a verb) and how words should be used in various contexts in Chinese. For examples, students may use 健康 (healthy), which is a noun to describe an action in the following sentence 有人喜歡打網球，是爲了健康身體 (Playing tennis is to **healthen** the body.)

Pedagogical recommendations for CHL teachers to deliver Chinese vocabulary instruction include literacy activities that are perceived helpful by both teachers and students. These include reading aloud, making sentences using mandatory words, and providing multiple examples used in multiple contexts. In addition, improper word usage is mostly due to interference and overgeneralization. Vocabulary instruction is needed for further clarification of Chinese words with the same English translation. This is because students have no idea which words are best suited for a particular context. Teachers

should provide students multiple examples with the words in multiple contexts to help them use the proper words. Overgeneralization implies the need for additional explanations on word formation in Chinese and English. It is suggested that CHL teachers introduce word formations in Chinese. Prior to introducing new Chinese words, CHL teachers should examine the formation of new words and inform students about their formations and syntactical features (e.g. noun or verb), and hold discussions on shared and diverse knowledge between Chinese and English word formation. Discussions of shared and diverse knowledge between Chinese and English formations enable learners to use this knowledge to better guess a new word or learn a new word in Chinese. Young adult CHL learners at the intermediate-level are believed to have multiple knowledge sources, including knowledge of both the dominant language and the target language, though not perfect. CHL learners do not need to have perfect knowledge of word formation in Chinese, yet basic understanding will help them to draw from different knowledge resources to use proper words.

At the sentence level, intermediate-level CHL learners encountered two major challenges: reading and writing long sentences with complex structures and reading and writing in the written language. Limited ability to read complex sentences was hindered by three factors: low motivation, imperfect knowledge of word segmentation, and lack of knowledge of complex sentence structures, particularly the identification of independent and dependent clauses in a complex sentence. As mentioned above, reading aloud and dictation can improve word segmentation. Pedagogical recommendation to enhance students' competence in reading complex sentences is to direct their attention to complex

sentences in a new passage. Teachers are required to analyze complex sentence structures with an emphasis on the identification of independent clauses when students assert that they want to learn more about complex sentence structures. Teachers can also ask paired students to select a passage, highlight complex sentences, and identify independent clauses as a take-home assignment and later share a number of examples with the whole class. By so doing, learners may be more motivated to read complex sentences when they encounter these sentences in an intermediate-level learning passage. Teachers can also ask students to reconstruct sentence to reinforce sentence structures. Increased competence of writing long sentences with complex sentence structures can be better supported by making sentences with more advanced sentence patterns, especially when intermediate-level learners of Chinese produce only simple sentences. Sentence making characterizes improvement in sentence variety.

This study confirmed that intermediate-level learners of Chinese faced challenges in reading and writing the written language. Teachers observed that students asked them to transfer between conversational and written language when reading a Chinese passage containing written language. Learners perceived their limited competence to write in the written language. The main reason is probably limited opportunities to learn the written language in the CHL learners' home environments where conversational language is used. A pedagogical recommendation is to direct students' attention to discussing conversational and written language and familiarizing them with the written language through sentence revisions. Or teachers can introduce extensive readings containing advanced topics and written language, such as newspapers. Posing questions associated

with newspapers and asking students to highlight key words and expressions and sharing these words with their peers or with the whole class may support students' learning of the written language. However, the lack of research on instructional approaches for preparing students for comprehending the written language and using written language and their effectiveness in students' literacy learning are obvious. It is expected that further research will be conducted to support students' learning of the written language.

### **Implications**

This study focuses on understanding intermediate-level literacy instruction for heritage language learners and their challenges in a Chinese language center in Taiwan. The findings have suggested that (a) both traditional and non-traditional instructional approaches best serve the unique needs of intermediate-level CHL learners, (b) literacy instruction supports learners' competence, and (c) learners' challenges lie in different literacy levels—character, word, and sentence. Several implications have emerged from these findings for stakeholders in CSL and CHL fields, such as teacher educators and Chinese teachers of learners of Chinese as L2 and HL.

#### **For Teacher Educators**

CHL teacher educators can better prepare their student teachers for teaching intermediate-level learners of Chinese through a number of courses in linguistics and pedagogy. Intermediate-level Chinese literacy focused on teaching at both word and sentence levels. Linguistic courses on basic knowledge of English morphology and syntax may facilitate teaching learners when English is their dominant or native language and when instructions either on vocabulary or sentence structures are delivered. This is

because a comparative analysis between Chinese and English may better support young adult learners of Chinese to draw multiple resources of knowledge to acquire written Chinese. As I have noticed, most CHL teachers in Chinese language centers are undergraduates or graduates majoring in Chinese language and literature, who are equipped with knowledge of Chinese linguistics, such as morphology and syntax. Thus, student teachers need further knowledge in English morphology and syntax because they may lack this knowledge. If CHL teachers have this knowledge, they will be more capable of analyzing students' mistakes of words and sentences and providing support in learning words and sentences. Moreover, courses in pedagogy, such as a seminar on discussing instructional approaches proper to CHL learners may better prepare student teachers to employ proper and effective instructional approaches.

#### **For CHL teachers**

Two implications are offered to CHL teachers. First, CHL teachers are encouraged to employ combined instructional approaches because combined teaching methods may better serve the needs of CHL learners. It is suggested that CHL teachers reflect on their belief toward Chinese language teaching practices and challenge their previous belief on the improperness of utilizing traditional instructional approaches in CHL or Chinese as L2 or FL contexts. Native speakers of Chinese language teachers may consider employment of traditional language teaching improper and try to use non-traditional instructional methods that make use of videos and the internet to facilitate teaching. However, traditional instructional approaches (e.g., reading aloud, sentence making drills) may not be proper to CHL or learners of Chinese as L2/FL. This is

because written Chinese is a type of script, which is different from an alphabetic language, such as English. Instructional approaches effective in English literacy teaching and learning may not be as effective in Chinese literacy teaching and learning.

Moreover, CHL teachers may ignore one crucial element when they are using non-traditional instructional approaches, such as the use of videos or the internet to support Chinese literacy learning. They may not well prepare their students for watching a video or accessing the Internet. Their instruction will be more helpful if they prepare previewing and post-viewing activities or use the internet accompanying a teacher-prepared worksheet that can guide students' learning.

Second, CHL teachers are encouraged to work as a colleague community to meet and discuss instructional approaches in teaching Chinese literacy in a regular basis. They may organize their ideas and possibly conduct action research to identify helpful and not so helpful literacy activities, and ponder ways to improve their instructions.

### **For CFL teachers**

Although this study took place in the CSL context, it is reasonable to apply findings of this study in the CFL contexts where English is the dominant or native language of learners of Chinese in university settings. I suggest that CFL teachers may consider employing both traditional and non-traditional instructional approaches to help their students develop Chinese literacy. However, when CFL learners with less speaking and listening skills, it is important to note whether it is still helpful to utilize conversational language to prepare them for literacy competence. Moreover, CFL

teachers also can learn challenges and try to utilize the suggestions here to prevent their CFL learners from making the same mistakes when reading and writing Chinese.

### **Further Research**

This study provides understanding about the nature of intermediate -level literacy instruction of Chinese as a heritage language in a Chinese language center in northern Taiwan. It provides insight into learners' challenges in order to better inform praxis. The study bridges the gap of knowledge between beginning -level and advanced-level in learning Chinese as L2.

Although helpful literacy activities have been identified through qualitative data in this study, research must be extended to investigate what type of literacy activities mostly contribute to the development of literacy skill, such as writing sentences, through a quantitative study.

Further research on the written language is needed to better support intermediate -level Chinese literacy instruction when learners of Chinese encounter the written language and need to write. Research questions could be: What types of literacy activities can better prepare learners of Chinese to write using written language? How do CFL and CSL teachers support their learners comprehend the written language? And what types of learning materials contain the written language for learners of intermediate -level Chinese proficiency?

There is a need for exploration of instructional approaches that prepare students' writing competence in complex sentence structures. The findings of this study suggest that sentence making with mandatory sentence patterns may improve sentence varieties.

In addition, dictation on vocabulary is a routine and helpful classroom activity in both Chinese as L1 and L2/FL. Yet, closer attention needs to be directed to better understand the effectiveness of dictation on collocations or sentences on developing Chinese language learner's literacy competence. Repeated copying of characters in practice book is common in learning Chinese as L1. Due to students and teachers' diverse views on repeated writing of characters, more research is needed to understand whether it facilitates the development of writing of characters with accuracy. What are the activities that can best support learning of how to write characters?

In addition, the most important question that requires further research is whether written Chinese is a specific type of script that necessitates the use of traditional instructional approaches (e.g., reading aloud, dictation, drills on sentences) in order to acquire it?

**APPENDIX I: STUDENT QUESTIONNAIRE ON LITERACY BACKGROUND  
AND LITERACY DEVELOPMENT**

**Name:** \_\_\_\_\_

**Sex:** M / F (Please circle)

**Age:** \_\_\_\_\_

**Nationality:** \_\_\_\_\_

**Country of Birth:** \_\_\_\_\_

**Occupation (Please circle)**

- a. full-time student
- b. business-related
- c. educator or education related
- d. language or linguists related
- e. government related
- f. Others: \_\_\_\_\_ (Please specify)

**Educational Background (Please circle)**

- a. High School
- b. College or University
- c. Master degree
- d. Doctorate degree

If you are a **college/university graduate**, please answer the following

**Major area of study:** \_\_\_\_\_

**Minor area of study:** \_\_\_\_\_

If you have a **master degree** or in the process of doing your graduate work, please answer the followings:

**Major area of study:** \_\_\_\_\_

**Minor area of study:** \_\_\_\_\_

If you have a **doctorate degree** or in the process of doing your doctorate work, please answer the followings:

**Major area of study:** \_\_\_\_\_

**Minor area of study:** \_\_\_\_\_

**Native Language:** \_\_\_\_\_

**Years of studying Chinese:** \_\_\_\_\_ years    **Where:**

\_\_\_\_\_

Age that you **began studying/learning Chinese** : \_\_\_\_\_

If you studied Chinese, was it a \_\_\_\_\_ **required** \_\_\_\_\_ **elective** course.

### *Chinese heritage language learners*

1. Do your family members speak Chinese at home? Yes \_\_\_\_\_ No \_\_\_\_\_

2. Which Chinese dialect is spoken at your home? (if more than one, give a percentage)

A) Mandarin      B) Cantonese      C) Minnan (Fujian)

D) Other: \_\_\_\_\_ (please specify)      (E) Combination of these:

\_\_\_\_\_ ( please specify)

3. How often is Chinese spoken at home between parents and you ? \_\_\_\_\_% (give a percentage)

4. Do your family members read and write Chinese at home? Yes \_\_\_\_\_ No \_\_\_\_\_ (skip question 5 if your answer to Q4 is “No”)

5. How often is Chinese read and written?

A) Between parents 0% \_\_\_\_\_ 25% \_\_\_\_\_ 50% \_\_\_\_\_ 75% \_\_\_\_\_ 100%

B) Between children 0% \_\_\_\_\_ 25% \_\_\_\_\_ 50% \_\_\_\_\_ 75% \_\_\_\_\_ 100%

C) Between parents and children 0% \_\_\_\_\_ 25% \_\_\_\_\_ 50% \_\_\_\_\_ 75% \_\_\_\_\_ 100%

6. How do you describe your teacher preparing for the following skills? (From 0 -5, low to high)

Recognizing radicals	0	1	2	3	4	5
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Recognizing characters	0	1	2	3	4	5
------------------------	---	---	---	---	---	---

Recognizing words	0	1	2	3	4	5
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Reading comprehension of texts	0	1	2	3	4	5
--------------------------------	---	---	---	---	---	---

Writing characters	0	1	2	3	4	5
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Writing sentences	0	1	2	3	4	5
-------------------	---	---	---	---	---	---

Writing short essays	0	1	2	3	4	5
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7. How do you describe your literacy skills before this class? (From 0 -5, weak to strong as native level)

Recognizing radicals	0	1	2	3	4	5
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Recognizing characters	0	1	2	3	4	5
------------------------	---	---	---	---	---	---

Recognizing words	0	1	2	3	4	5
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Reading comprehension of texts	0	1	2	3	4	5
Writing characters	0	1	2	3	4	5
Writing sentences	0	1	2	3	4	5
Writing short essays	0	1	2	3	4	5

8. How do you describe your literacy skills now?

Recognizing radicals	0	1	2	3	4	5
Recognizing characters	0	1	2	3	4	5
Recognizing words	0	1	2	3	4	5
Reading comprehension of texts	0	1	2	3	4	5
Writing characters	0	1	2	3	4	5
Writing sentences	0	1	2	3	4	5
Writing short essays	0	1	2	3	4	5

**APPENDIX II: RESEARCH DESIGN MATRIX**

Research Questions	RQ1: What is the nature of literacy instruction (reading and writing) in intermediate Chinese language class?	RQ2: How do CHL learners perceive and react to intermediate CHL language courses?	RQ3: Does this literacy instruction support CHL learners' literacy competency?	RQ4: What reading and writing challenges do CHL learners in intermediate-Chinese language classrooms encounter?
Data Source #1	Observation (descriptive field notes)			
Data Source #2	Observation protocols			
Data Source #3	Teacher interview guide		Teacher interview guide	Teacher interview guide
Data Source #4		Student interview guide	Student interview guide	Student interview guide
Data Source #5				Think-aloud protocols
Data Source #6				Literacy challenge questionnaires
Data Source #7		Student's self-ratings on literacy background & development	Student's self-ratings on literacy background & development	
Data Source	Curriculum resources:			

#8	(textbooks, PPTs, worksheets & workbooks)			
Data Source # 9			Researcher's ratings on literacy learning environment	
Data Source #10				Guidelines for writing challenges
Data Source #11			Midterm exam scores	
Data Source #12			Final exam scores	

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