The Impact of Visual Pedagogy on Students’ Learning of Hanyu

- A case study of a western Sydney public school

Luhua HUO

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Ningbo University of Technology, China, 2010

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Centre for Educational Research
College of Arts
University of Western Sydney

Supervisory Panel
Dr. Jinghe Han (Principal Supervisor)
Professor Michael Singh (Associate Supervisor)

January, 2012
DECLARATION

I declare that except where due acknowledgement has been made; this research proposal is my own work and has not been submitted in any form for another degree at any university or other institute of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

..................

Luhua HUO

11 January, 2012
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LIST OF ABBREVIATIONS

CFL: Chinese as Foreign Language
TCFL: Teaching Chinese as a Foreign Language
ROSETE: Research Orientated, School Engaged, Teacher Education
VTR: Volunteer Teacher Researcher
NSW: New South Wales
WSR: Western Sydney Region
DEC: Department of Education and Community
NSWDEC: NSW Department of Education and Community
NMEB: Ningbo Municipal Education Bureau
UWS: University of Western Sydney
L2: Second Language
MoU: Memorandum of Understanding
SNASSP: National Asian Languages and Studies in Schools Program
CILT: National Centre for Languages in the U.K
ALP: Asia Literacy Program
GPC: Grapheme Phoneme Correspondence
ICLS: International Centre for Language Studies
OPT: Orthography-to-Phonology Transformation
VTA: Visual Teaching Alliance
BRT: Bloom’s Revised Taxonomy
IELTS: International English Language Testing System
ACARA: Australian Curriculum, Assessment and Reporting Authority
AUTHOR’S PRESENTATIONS


ABSTRACT

The learning of Chinese characters is considered to be one of the most challenging problems faced by learners of Chinese as a Foreign Language (CFL). The visual nature of characters is not fully used in CFL classes in Australia. This study aims at contributing to an understanding of the significance of Chinese character learning and exploring the effectiveness of visual pedagogy on non-background Australian students’ learning CFL. It is also expected to find out the existing problems in Chinese character teaching. A variety of qualitative and quantitative research methods are adopted in this study. Classroom observations, interviews, documents and students’ quiz results are the four main data sources. Nine Stage 2 students from a primary school in Western Sydney Region and two volunteer teacher-researchers were interviewed for their CFL learning and teaching experience. Data collected shows that visual pedagogy in Chinese character teaching can improve students’ understanding and retention of Chinese script, and promote their learning interest, creativity and visual literacy. However, its negative influences on students’ writing sequence and written form of Chinese characters are also found in this study.
Chapter 1

Introduction: Teaching Chinese Characters to CFL Learners

1.1 Research Background

Currently China is Australia’s largest trading partner and a significant neighbour in the Asia Pacific region. Consequently, teaching of China’s official language, Hanyu, has gained a foothold in Australia’s educational systems. Kevin Rudd, former Prime Minister of Australia was committed to making Australia “the most Asia-literate country in the collective West” (Rudd, 2008). Leonie Trimper, President of the Australian Primary Principal’s Association, once said, “Australian students need to be prepared for an interconnected world and where better to start than in our own backyard – the Asian region” (2008). Various programs concerning Hanyu teaching have been carried out in the form of Chinese volunteer aides, sister schools and in-country sojourns (Orton, 2010; NALSSP, 2009).

In 2008, the NSW Department of Education and Community (NSWDEC), the University of Western Sydney (UWS) and Ningbo Municipal Education Bureau (NMEB) in China signed a Memorandum of Understanding (MoU) to promote Chinese literacy in western Sydney schools in Australia (Singh & Zhao, 2008). According to the memorandum, NMEB selects no more than ten Volunteer Teacher Researchers (VTRs) to go to the Western Sydney Region (WSR) every year from 2008–2012, to assist in Chinese language and culture teaching in local schools. NSWDEC provides a four-month methodology course to help these VTRs to adapt to the local teaching environment. After finishing this methodology course, VTRs begin to do professional practice supervised by experienced teachers on a weekly basis. In the mean time, VTRs study for the degree of Master of Education (Honours) at UWS to develop their professional learning.

I am a VTR of the third cohort of this program. As part of the methodology training, I observed four Hanyu classes in some local schools before I started teaching. Contrary to my expectation, I found a great many Hanyu learners from these classes have little idea of Chinese characters – the written script of Hanyu – although most of them come from selective schools and have learned Hanyu for at least one year. Instead, they learn pinyin quite well – the Romanized Hanyu system for pronunciation.
This finding shocked me to some extent. I asked myself whether they are learning Hanyu or just the pronunciation of Hanyu without any knowledge of the script. Is this situation common in Chinese as a Foreign Language (CFL) classrooms in Australia? If it is, what can we, as CFL teachers, do to change the situation?

Characters enjoy a high position in the Hanyu system, which is the starting point of this study. Personally, I have had a strong affection towards Chinese characters since I was very young. Those square scripts were so mysterious and magic in my eyes. I kept asking the meaning of each single character that I saw on TV, storybooks, and even banners on streets. After I was enrolled into University, I became the editor of the School Journal. My job was to deal with all kinds of articles, news reports and interviews formed by Chinese characters and compile four pages of the journal before it was published. This experience offered me an opportunity to explore Chinese scripts from aesthetic perspective and exerted my ambition to promote Chinese characters.

However, the first experience in Australia, which was observing CFL classes in schools, challenged my ambition to “promote the language and the culture it is carrying”. These school observations and my preliminary teaching practice later on made me realize that the Chinese literacy education in local schools is still problematic, especially the teaching and learning of Chinese characters – the written script of the official Chinese language. Plenty of CFL learners only learn pinyin instead of Chinese characters as a shortcut to avoid the difficulty of characters and pursue fluency in oral speaking. After years of learning, the majority of the students could hardly read or write Chinese characters. Another issue is that the Chinese language class was more like a 45 minute or longer period of cultural enrichment activity, instead of a systematic language learning process (Leung, 2003; Orton, 2008). The effectiveness of CFL teaching and learning has become an urgent concern for educators in this area and beyond.

As a beginner teacher-researcher, I hoped to make the most of my 18-month staying in Australia. On the one hand, I expected to improve my English language proficiency and pursuit of professional teaching skills through the weekly teaching practices in two local schools. On the other hand, I desired to address this concern about Chinese character learning and help my students to learn characters. Based on the visual nature of Chinese characters, I developed a visual pedagogy in my teaching and explored the effectiveness of this new teaching strategy.
1.2 Intellectual Context
To have a clear understanding of Teaching Chinese as a Foreign Language (TCFL), I reviewed three areas as follows – Chinese language, visual pedagogy and CFL teaching in Australia.

1.2.1 A brief introduction to Chinese language
As a multiethnic country, China is very diverse in its spoken languages in local communities. The Chinese proverb “五里不同音，十里不同调 (wǔ lǐ bù tóng yīn, shí lǐ bù tóng diào)” precisely describes this situation. It means a word may be pronounced differently in a town which is five Lis (1 Li= half kilometre) away from you and its tone may change when travelling ten Lis. Currently, there are seven main dialect regions with more than 80 dialects (Ding, Guo & Zhao, 2000) in China. For instance, it is very unlikely that a Mandarin Chinese speaker is able to understand a word of Hokkien or Cantonese.

Despite the diversity of the pronunciations a word may have, its written script remains the same in most parts of China – except several regions where ethnic minorities live in compact communities such as Xinjiang and Tibet autonomous regions. That is to say, Chinese characters (written form) – the basic components of Hanyu, have been commonly used across the country. This united written form of Chinese language is attributed to Qin Shi Huang – the first emperor of China. He standardized Chinese written script (written form) after unifying the country in 210 BC (Sima, 2008). This identical script enables its foreign learners nowadays to access Chinese language and culture easily. Therefore, to some extent, Hanyu learning is a “read the word and the world” experience – Chinese culture opens a door for its readers through various written forms.

To assist with the pronunciation of Chinese characters, the Chinese government developed and introduced the pinyin system half a century ago (1958). This pinyin system adopted standardized Romanization. Pinyin is the pronunciation system of Chinese characters employing English alphabets with different tones marked above them. For instance, the written form of “China” is “中国” in Hanyu and its equivalent in pinyin is “Zhōng Guó”.

A distinctive feature of Hanyu is the visual attribute of its script – Chinese characters, which were created 3,300 years ago (Ma, 2004). As to the total number of characters, the Kangxi Dictionary contains 47,035. A more recent large dictionary of characters, the Hanyu Da
Zidian, published in 1986, contains 56,000 (Kane, 2006, p.53). Tracing the origin of Chinese characters is confusing. All that is left is the legend that a man named Cangjie created the earliest characters by copying the shape or configuration of things, especially those that existed in nature, such as the sun, moon and water. Later on, more complex characters were created on the basis of those simple ones and Chinese characters gradually developed into a huge writing system. According to their structural composition, Chinese characters can be divided into four categories – pictographs (象形字, xiàng xíng zì), indicatives (指事字, zhǐ shì zì), ideographic compounds (会意字, huì yì zì), and pictographic-phonetic compound ideograms (形声字, xíng shēng zì) (Xu, 2009).

“Chinese language” can be labelled as “Mandarin”, “Chinese”, “Putonghua” and “Hanyu”. The definitions of these terms in the Modern Chinese Dictionary (Table 1.1) are as follows, for reference, and Figure 1 illustrates their relationships. Mandarin (普通话, pǔ tōng huà), more commonly known as Putonghua (which literally means the common speech), is the official language in mainland China. Chinese (中文, zhōng wén) is the general name of various dialects used in different parts of China, including the official Mandarin, Cantonese, and Shanghainese as well as other languages used by minorities. Hanyu (汉语, hàn yǔ), as a language family, which literally means the language of the Han people (the major ethnic group of Chinese (91.51% of the population) (National Bureau of Statistics of China, 2011), includes seven main dialects (Figure 1.1) (Yuan, 2004). These seven dialects share the same written form despite their difference in spoken languages. Sometimes in its narrow sense, Hanyu refers to Mandarin and its corresponding script (Gu, 2008). In this study, I adopt the narrow sense of Hanyu, as referring to the official Chinese language – both the spoken language and the written script. However, considering the fact that there is no such a clear boundary line of these three terms in common usage, for example, a Chinese language lesson can be translated into “a Hanyu lesson” or “a Zhongwen lesson”, these three terms can be replaced with each other in this thesis.
### Table 1.1. Definitions of Putonghua, Zhongwen and Hanyu

<table>
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<th>普通话 (Putonghua)</th>
<th>现代汉语的标准语，以北京语音为标准音，以北方话为基础方言，以典范的现代白话文著作作为语法规范。 (CASS, 2005, p. 989)</th>
<th>The standard modern Chinese language. The phonology is based on the Beijing dialect. The vocabulary is drawn from the dialects spoken across northern China. The grammar is standardized to the modern literary works that define written vernacular Chinese.</th>
</tr>
</thead>
<tbody>
<tr>
<td>中文 (Zhong wen)</td>
<td>中国的语言文字，特指汉族的语言文字。 (CASS, 2005, p. 1629)</td>
<td>The spoken and written language of China especially refers to the spoken and written language of the Han people.</td>
</tr>
<tr>
<td>汉语 (Hanyu)</td>
<td>汉族的语言，是我国的主要语言。现代汉语的标准语是普通话。 (CASS, 2005, p. 496)</td>
<td>The language of the Han people, which is the main language in China. The standard modern Han language is Putonghua.</td>
</tr>
</tbody>
</table>

### Figure 1.1. The relationship of Chinese, Hanyu, Putonghua and Mandarin

Chinese language

Hanyu (in broad sense)

Hanyu (in narrow sense)

Compared to minority languages (Tibetan, Inner Mongolian and Uyghur) etc.

Compared to other dialects (Wu Dialect, Yue Dialect, Min Dialect, Xiang Dialect, Hakka Dialect and Gan Dialect)

Mandarin (spoken language) comparing to Chinese written language (characters)

### 1.2.2 Visual pedagogy

With the development of new technologies, visual teaching has been widely adopted in a variety of disciplines. Visual pedagogy is defined as a teaching method implementing methodologies well-matched with the audio-visual paradigm and encouraging learners’ media
literacy in the classroom context through the use of visual representations (Goldfarb, 2002). Visual representation can be divided into two categories, concrete visual representations and abstract visual representations. “Concrete visual representations are those that illustrate the real-life objects corresponding to a problem’s cover story” and “abstract visual representations are those that use conventional symbols to represent the relevant elements of a problem’s cover story” (Moreno, Ozogul Reisslein, 2011). Visual pedagogy as an innovative teaching method has immense advantages. They consider that visual pedagogy benefits students by making a problem more readily accessible in memory. It is also found that there is an overwhelming link between the using of the concreteness of visual imagery and comprehension and recall (Sadoski & Paivio, 2001). These views are verified by Gangwer’s study. He indicates that the brain processes visual objects sixty thousand times faster than it processes text and visual support in teaching can advance students’ learning by up to 400 per cent (Gangwer, 2009, p.37).

Visual pedagogy in Chinese character teaching can be regarded as the teaching method which uses the visual nature that exists in Chinese characters, by exploring the original etymology or creating visual connections by teachers and learners themselves. The ultimate goal of visual pedagogy is to improve Chinese character learning efficiency.

1.2.3 Problems in CFL teaching

Although it has developed very fast, CFL teaching has been problematic in terms of teaching materials, time allocation, exam syllabus, high cost, the difficulty of the language, unqualified staff and inadequate advisory support (Clegg, 2003; Wang, 2009). In the context of Australia currently, two problems call for attention. Firstly, given the little time for Hanyu teaching in school and the small scale compared with other languages commonly taught in schools, the goal of developing at least 12% of students completing Year 12 who are fluent in one of the four Asian languages – Chinese, Indonesian, Japanese and Korean -- by 2020 nationally remains a huge challenge. Orton (2010) implies that “in numbers, Year 12 is currently about 3000 students short of its target in Chinese; in standard, Year 12 classroom learners of Chinese are well short of the desired competence”.

The development of Chinese character education is constrained due to a series of reasons. A survey of primary schools conducted by the National Centre for Languages in the U.K. (CILT) shows the most commonly reported constraint encountered by the primary schools teaching Hanyu is staffing, followed by funding, curriculum time, availability of resources and
difficulty for pupils (CILT, 2007, p.15). Orton addressed this issue in Chinese language teaching in schools – Australia, USA and UK (2010), appealing for “increasing the number and quality of school programs and developing appropriate curriculum, materials, and assessments, including technology-based delivery systems” (Orton, 2010). Clegg (2003) attributes this to the problems in teaching materials and exam syllabus, staffing and teacher supply, organisation of teacher training, curriculum time constraints, perceptions of the Chinese language and inadequate advisory support. Wang (2009, p.85) also examines the problems in the provision of Mandarin courses and indicates that inexperienced Mandarin teachers, the high cost and risk of offering Mandarin courses, the difficulty of obtaining satisfactory results, and the relative lack of appropriate Mandarin teaching materials also contributes to the underdevelopment of CFL education.

Aligning with these problems, there is a significant issue worth exploring in CFL teaching. That is, Chinese character teaching is ignored in western countries such as the UK and Australia, and the reason is due to the great difficulty of Chinese characters and inefficiency for both the teacher to teach and students to learn (Allen, 2008; Moser, 1991; Sharp, 2010). This idea has been dominating Chinese language teaching and learning in these countries. Consequently pinyin has been the main focus for both the teacher and learners. This is reflected in CILT’s report:

The teaching is split into two distinct parts: cultural information and language skills. The pupils have workshops about Chinese dance, music, tai chi, and cookery, but these are kept quite separate from the academic side of learning Mandarin…….The lessons are taught using pinyin and concentrate on speaking and listening. (CILT, 2007, P.14)

The current state of Chinese Language Education in Australian Schools is that pinyin is taking the place of characters in Hanyu teaching, due to its similarities to alphabetic languages. Chinese character learning, on the contrary, is put into a secondary position as an additional option for those top learners (Orton, 2008). However, research (Lin, 2001) shows that teaching pinyin is not an effective way to learn because CFL learners could easily confuse it with English words. Comparing the authentic Chinese Characters with their Romanised pinyin, a question might be worth asking: Are CFL learners learning the logographic Chinese or just another alphabetic language?

1.3 Research Questions
One main research question and three contributory questions are raised in this study, corresponding to the situation of Hanyu teaching in WSR and my assumed responsibility as a Hanyu teacher in local schools. They are:

- How can the visual features of Chinese characters influence CFL learners’ learning of Hanyu in western Sydney schools?
- What are the main factors that hinder Chinese character learning for CFL learners in western Sydney schools?
- What are the effects of visual pedagogy in Chinese character teaching and learning for CFL learners?
- What are the restrictions in using visual pedagogy in CFL teaching?

1.4 Aim, Outcome and Significance of this Research

1.4.1 Aim

This study aims at exploring the impact of visual pedagogy on CFL learners’ learning of Hanyu. An old Chinese saying is: “授人以鱼不如授人以渔 (shòu rén yǐ yú bù rú shòu rén yǐ yú)”. It means “give a man a fish and you feed him for a day, but teach a man to fish and you feed him for a lifetime”. Pinyin teaching is similar to offering a person a fish rather than offering the fishing method. The Pinyin system can only provide very limited information for a learner whereas Chinese characters enable the learner to access the language’s formation, and structure and often visual features which will help the learner to create a life-time of learning the skills of this language. Therefore this research expects to find out the existing issues in Chinese character teaching and will attempt to develop an effective visual pedagogy of Chinese character teaching and improve L2 learners’ Hanyu learning.

1.4.2 Outcome

This study contributes to an understanding of the significance of learning Chinese characters and provides insights into effective strategies of Hanyu teaching. The outcomes of this study will be:

- Finding out current problems in pinyin teaching and the underlying reasons.
- Clarifying issues existing in Hanyu teaching plans and strategies, in particular those on Chinese character teaching.
• Identifying the impact of visual pedagogy of Chinese characters on second language (L2) acquisition.
• Initiating an effective character teaching method in CFL education.
• Raising the possibility for learners to have a greater opportunity for L2 output, and thereby promoting their learning interest.

1.4.3 Significance

Language is the key to understanding the cultural and political complexity of every society. This study of Chinese character teaching and learning is of notable significance because it responds to the Australian government’s language policy, contributes to the exploration of new methods of CFL teaching, and the improvement of language learning efficiency.

Firstly, this research responds to the Australian Government’s effort in engaging with its Pacific neighbours. In 1994, the Australian Government initiated the Asia Literacy Program (ALP) and listed Hanyu as one of the four priority Asian languages for Australian students to learn. Although it had gone through “a generation of discussion and no fewer than sixteen reports written on the matter, (ALP) had been met with no real policy response” (Prestidge-King, 2009). In terms of Hanyu learning, there exists a huge gap between the planned and the real number of learners in Year 12. Moreover, Hanyu teaching became “teaching Chinese (language) to Chinese (people)” in Australia. Targeted for all students in the nation, ALP ended up mostly attracting those with Chinese ethnic backgrounds. Kirby’s (2008) study shows that close to 80 per cent of students studying Hanyu in Australia were from Chinese ethnic backgrounds. It is not optimistic for the Government to achieve its language policy based on the current situation. However, taking advantage of Chinese characters’ visual features to motivate and engage Australian L2 young learners will be a helpful way to contribute to the solution of this problem.

Secondly, this study contributes to an exploration of an innovative method of Chinese language teaching in Australian schools. The sharp dropping rates in the enrolment in Chinese language learning in senior high schools demonstrates that the traditional CFL teaching pedagogy is powerless in retaining Chinese language learners. By investigating visual pedagogy in Hanyu teaching, this research will provide valuable information to language educators, especially those in the area of Hanyu teaching, regarding new and efficient
methods of language teaching. Therefore the findings of this research have the potential to provide insight into the reform of foreign language teaching pedagogy in Australia.

Thirdly, this research will contribute to improvement in language learning efficiency. Learning Chinese through characters has great advantages compared with learning Chinese language through pinyin. This is because normally the formation and structure of complex characters is based on the simple ones and many simple characters still retain or partly retain the shape of the objects they represent. Therefore, a grasp of some basic characters helps to access groups of other characters and makes the learning of those characters easier in both pronunciation and meaning. Though the link between pronunciation and the written form of Chinese is not as obvious as in alphabetic languages, there are still connections between them. Around two fifths of characters have certain phonic correlations between one of their composed elements and their pronunciation (Orton, 2008). For example, 马 as an element to form characters, also appears in the characters of “妈 (mum)”, “吗 (interrogative)”, “骂 (abuse)”, “码 (code; yard)”, “蚂 (ant)”, etc, pronounced as “mâ”, “ma”, “mà”, “mǎ” and “mâ” accordingly. The element of 马 recurs in several characters all pronounced “ma”, with the only difference in tones, which offers easier access to more characters. Given the fact that there are some 48,000 known characters used since the distant past, and about 4,000 are needed to read a modern newspaper in Hanyu (Orton, 2008), these are both huge numbers for CFL learners, especially for a primary school students. Thus, the skilful reference to already-learnt characters in learning new characters is of considerable benefit. These characters are like ladders leading to higher learning of more characters in Hanyu. From a meaning perspective, characters contain the language context and Chinese culture. For instance, one of the meanings of the character “信 (xin)” is trust. The left part 亻 means human and the right part 言 means words. “信” as a whole suggests a prestigious doctrine in Chinese culture — keeping one’s word and be honest. Being China literate is far more than greeting with a pinyin “Nihao” on the street or counting from one to ten. Learning the language without appreciation of its characters is ignoring its language context. It will give learners a shallow appreciation of China – a country with 5000 years of civilization. Pinyin operates as “an empty vessel” therefore learning pinyin alone without knowledge of characters, no matter how critical it is, would not make Australia an Asia/China literate nation (Anderson, 2008).

1.5 Overview of Methodology
The case study is applied as the main research method in this study. A case study is “a specific, holistic, often unique instance that is frequently designed to illustrate a more general principle; the study of an instance in action; the study of an evolving situation” (Cohen, Manion, & Morrison, 2007). It is an empirical inquiry about a particular setting. More importantly, a case study can focus on critical incidents and is relatively more practicable than other methodologies for a beginning researcher.

Student participants in this study were recruited from a public school in the western Sydney region. Teacher participants were from the ROSETE (Research Oriented School Engaged Teacher Education) program, a group of Hanyu teachers who were teaching in WSR schools and at the same time enrolled as research students at a university in this region. Data is derived from four major sources: (1) observations of CFL classes and the self-reflection journal, (2) semi-structured interviews with school students and peer volunteer teacher-researchers (VTRs), (3) students’ quiz results and work samples, and (4) government and/or school documents and reports on Chinese language education in Australian schools. A large quantity of the researcher’s self-reflective journals were quoted as excerpts in data analysis chapters, particularly in Chapter 5 and Chapter 6, which attempt to measure both the strengths and limitations of visual pedagogy shown in this researcher’s CFL classes. In order to ensure credibility, data from other sources were triangulated with what I observed and reflected upon from my teaching.

Conceptual analysis is adopted in this study. Data collected will be broken down, compared, labelled, and categorized in the open coding process. Data will be analysed and discussed to respond to the four research questions.

1.6 Outline of the Thesis
Chapter 2 provides a review of the research literature on knowledge of Chinese characters (2.1), visual pedagogy (2.2) and problems in CFL education (2.3). It includes a brief introduction on knowledge and features of Chinese characters, and the advantages of visual pedagogy. The limitations of current research in CFL teaching is discussed at the end of this chapter.

Chapter 3 provides an outline and justification of this study’s research method. It explains the relationship between the research design and the research problem. Site selection and
participants are introduced firstly (3.2 & 3.3), followed by three methods employed in this study along with their theoretical bases (3.1), as well as the data analysis (3.2). Research principles including ethic issues are also discussed (3.3).

Chapter 4 answers the first subsidiary research question, investigating the main factors hindering Chinese character learning.

Chapter 5 answers the second research question, exploring the positive impacts of visual pedagogy on students’ CFL learning within the framework of Bloom’s taxonomy.

Chapter 6 answers the third research question, probing the limitations of visual pedagogy of Chinese character teaching, as found in this study.

Chapter 7 identifies key findings to answer the main research question: “How can the visual features of Chinese characters influence CFL learners’ learning of Hanyu in western Sydney schools?” It also explores implications for policy and practice, presenting the limitations of this study and putting forward ideas for further study.
Chapter 2

Chinese Language Teaching and Visual Pedagogy:
A Review of the Contemporary Research Literature

2.1 Introduction

This review indicates that there is limited research focusing on the specific topic of this thesis, although there is considerable research related to the various elements that constitute the subject matter for this study. In the light of the most recent research work conducted, this chapter concludes by indicating several reasons why this study was worthwhile. This chapter situates the research question within the context of CFL teaching in Australian public schools. As the research question for this project evolved, it was refined to: How can the visual features of Chinese characters influence CFL learners’ learning of Hanyu in western Sydney schools? This chapter reviews the literature on knowledge of Chinese characters (2.1), visual pedagogy (2.2), the debate over teaching pinyin and characters (2.3) and Bloom’s Revised Taxonomy (2.4). This research literature was used to inform considerations about data collection, and also to enrich the data analysis.

2.2. Knowledge of Chinese Characters

Chinese characters enjoy great significance in the Chinese language system or Hanyu. Research has demonstrated this. Huang and Ma (2007) argue that Chinese characters play a key role in inter-personal communication and it would be hard to imagine Chinese people’s daily life without the involvement of Chinese characters.

Chinese characters are basic functional units of the Hanyu writing system (Shu, Chen, Anderson, Wu & Xuan, 2003; Huang & Ma, 2007) possessing a number of strokes that are packed into square shapes. The writing system is constructed via three-tier orthographic structures: characters, radicals and strokes. Strokes constitute characters, characters form words, and a combination of characters and words makes sentences. Each square character in this language is a combination of strokes. There are 32 basic stroke types (Stallings, 1976; Gu, 1994) in the Hanyu system. The number of strokes in a character can vary from one to more than 20 with an average number of 9 (Wang, Ding & Liu, 2004). With the exception of
several single-stroke characters, an individual stroke by itself does not carry any meaning or sound of a character.

The function of a Chinese character is not exactly the same as the function of an English word. Characters represent a complex interweaving of sound, shape and meaning in isolation (Huang & Ma, 2007, p.9). All characters are individually confined within a fixed section, irrespective of the number of strokes they have. One or more (usually two) characters can form a word, which is a more common form of the language in daily life. Therefore the first step in processing Chinese words or sentences is to identify characters. A good grasp of characters can improve students’ learning of the word, sentence and Hanyu as a whole. Table 2.1 provides an example of strokes, characters, words and a sentence.

### Table 2.1 Strokes, characters, words and sentence

<table>
<thead>
<tr>
<th>Stroke</th>
<th>一(横); 丶（点）; 丨（竖）; 乛（横折）</th>
</tr>
</thead>
<tbody>
<tr>
<td>Character</td>
<td>中 (middle); 国 (kingdom)</td>
</tr>
<tr>
<td>Word</td>
<td>中国 (China, originally means middle kingdom)</td>
</tr>
<tr>
<td>Sentence</td>
<td>中国拥有五千多年的历史。 (China has a history of more than five thousand years.)</td>
</tr>
</tbody>
</table>

The table illustrates that the sentence is meaningful and is sequentially composed of characters. Therefore, an understanding of Hanyu is fundamentally built on the appreciation of characters. Chinese characters can be compared to the bricks that make the Great Wall. In the context of Hanyu learning, the whole Hanyu system can be regarded as the Great Wall and characters as the bricks used to build it. Without those single bricks, there would not be the existence of such a grand construction. Very similarly, without an accumulation of the individual characters, one cannot master the language.

Despite the varieties in their sounds in different dialects, Chinese characters are the only authorized written script in China. Hansen, professor of philosophy at the University of Hong Kong, depicts the position of characters in the language system (Figure 2.1).
Hansen (1993) provides a general idea of the position of characters in Hanyu and the relationship of three critical factors, namely character, sound and meaning (or “objects in the world” in the figure). In this visual description, Chinese characters are put into a central position, connecting sounds and meanings. Despite the difference in sounds, characters remain the same throughout the areas where Chinese is adopted, partly or as a whole. It illustrates the importance of learning Chinese characters for one who wants to access Hanyu.

This following section reviews the features and functions of Chinese characters, including the categories of characters (2.2.1), the weakening visual features (2.2.2), research about Mandarin teachers’ common concerns about pinyin teaching (2.2.3), Chinese character learning strategies (2.2.4) and the difficulty in character learning (2.2.5).

### 2.2.1 Categories of Chinese characters

The Hanyu writing system was originally drawn from nature, or the interpretation of nature through symbolic representations. The earliest mature Chinese writing system dates back to 3,300 years ago (Ma, 2004). Each Chinese character contains three linguistic components: sound, font and meaning. The ancient Chinese originally recreated the shape or configuration of things in their life with lines, dots and curves so as to form characters. Xu (2009) in his book Shuowenjiezi, classifies Chinese characters into four categories (Table 2.2) – pictographs (象形字), indicatives (指事字), ideographic compounds (會意字), and pictographic-phonetic

Firstly, Shuowenjiezi has the following definition for pictographs, “象形者，画成其物，随体诘詁，日月是也”. This means that some characters adhere most to the pictorial origins of the word-form. These characters have existed since Bronze-age China (BC 2000-1700).

Pictographs are symbolized objects, which use simple and figurative strokes to represent the shape and outline of the objects. Pictographs are stylized drawings of the objects they represent. Generally, they are the earliest forms of Chinese scripts dating back to oracle bones from the twelfth century BC (Ma, 2007). For example, 日 and 月, the characters for "sun" and "moon", are easily recognizable as straightforward pictorial derivations from their Bronze-age counterparts (Xu, 2009), which means pictographs are the abstract depiction of objects.

Secondly, indicatives are defined in Shuowenjiezi as “指事者，视而可识，察而见意，上下是也”, which means “indicatives can be understood from their written form and the meaning can be speculated from deep observation, such as character 上 and 下” (Xu, 2009). Indicatives are developed with specific reference to particular entities or events in the "outside" world, whose meanings could not be simply and straightforwardly traced pictorially, phonetically, or inferentially through the internal meaning structure of the ideogram itself. Indicatives represent an abstract idea through an iconic form, including iconic modification of pictographs. The formation of indicatives is based on pictographs but a geometry symbol is added to illustrate further. The difference between pictographs and indicatives are the different choices of abstract and concrete symbolizations. To be specific, pictographs are the concrete form of an object whereas the indicatives are the abstract representations.

Thirdly, Shuowenjiezi defines ideographs as “会意者，比类合谊，以指拈伪，武信是也”, referring to “the combination of pictograms or pictographic parts to create a new character that pictorially mimics the intended meaning of the new word” (Xu, 2009). According to Xu, ideographic compounds are the combination of two pictographs to stand for a new thing. Ideographic compounds can be seen as a combination of two or more logograms or pictographs, suggesting a third meaning, which is related to these logograms. For instance the character “旦”, pronounced as “dàn”, means dawn. Literally it is composed of the sun (日)
(rising upwards), and a horizontal line (__) below 日 (e.g. crossing the mountains and passing through the cloud layers) to tell people a new day has begun. It is safe to say that the earthenware signs are the first Chinese characters, which originated from drawings.

For pictographic-phonetic compound ideograms, Shuowenjiezi has the following definition as “形声者，以事为名，取譬相成。江河是也 (the combination of pictograms or pictographic parts with the intended phonetic properties to create a new character that phonetically mimics the intended sound of the new word, e.g. 江 and 河, the characters for "river", which combines the pictogram "water" as the radical with the pictogram for "work")” (Xu, 2009).

Phono-semantic compounds, as the name suggests, are constructed out of two parts – the semantic element and the phonetic element, providing cues to both the meaning and the pronunciation. Though a phono-semantic compound has less logographic features compared with the above three categories, the character itself is a combination of pictographs, indicatives, ideographic compounds or radicals. Although Chinese is often referred to as a logographic writing system (Hamada & Koda, 2011; Verdonschot, La Heij & Schiller, 2010; Francis, 2010; Unger, 2011) or an iconographic language (Huang & Ma, 2007, p.9), in fact most characters map onto both meaning and phonology, in which the pictographic-phonetic compound ideograms are the majority. Most modern characters (about 80-90%) consist of a phonetic component and a semantic radical (Tan, 1997, P.42).

<table>
<thead>
<tr>
<th>Category</th>
<th>Earlier form</th>
<th>Current form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>pictographs (象形)</td>
<td>木</td>
<td>tree</td>
<td></td>
</tr>
<tr>
<td>indicatives (指事)</td>
<td>本</td>
<td>Root; basis; origin</td>
<td></td>
</tr>
<tr>
<td>ideographic compounds (会意)</td>
<td>森</td>
<td>forest</td>
<td></td>
</tr>
<tr>
<td>pictographic-phonetic compound ideograms (形声)</td>
<td>淋</td>
<td>To drain; to drip</td>
<td></td>
</tr>
</tbody>
</table>

It is not hard to find the visual features of the characters in the first three categories. These visual semantic components can be quite informative in suggesting meaning relationships (Fan, 1986). They also offer the possibility, even for beginning learners, to make intelligent
guesses about new characters on the first sight, which makes the learning of new characters easier, effective and entertaining. This study will focus on testing the effectiveness of visual teaching of pictographs, indicatives and ideographic compounds, but it will also include pictographic-phonetic compound ideograms. This is due to the consideration that a good grasp of the pictographs, indicatives and ideographic compounds can also help the learning of the pictographic-phonetic compound ideograms.

The classification of Chinese characters suggests that characters map onto meaningful morphemes rather than phonemes, which implies that regular or quasi-regular grapheme-phoneme conversions existing in all alphabetic languages are impracticable in Hanyu (Tan, et al, 2001, p. 836).

2.2.2 The weakening visual features of Chinese characters

The visual nature is a distinctive part of Chinese characters. However, it is undeniable that many of its visual features are declining in the continually evolving process. Through thousands of years of development, the visual features of Chinese characters are weakening for various reasons. There are enough variations that render character reorganization a formidable and confusing task. A notable change in the revolution of Chinese characters is the simplification in the decades after the middle of the 20th century driven by social reform. In 1956 and 1977, the Chinese government officially promoted simplified characters in an attempt to increase literacy (Kaplan, 2008). The process of simplification involves both structural simplifications of character forms and substantial reduction in the total number of standardized Chinese characters, as well as the adoption of new standardized character forms (Zhao, 2005). The simplification makes it relatively harder to identify the original visual connotation by looking at the simplified characters, which are very dissimilar to the traditional characters, especially those whose component is replaced by an arbitrary and simplistic symbol. Two thousand two hundred and thirty-five (Wang, 1991) simplified Chinese characters have replaced their complex counterparts since then. At the same time, the debate over the use of traditional versus simplified Chinese characters continues in Chinese-speaking countries. Critics argue that Chinese characters have been over simplified and many have lost their original meanings. They criticize the situation after simplification as:

(親) 亲不见, (愛) 爱无心, (產) 产不生, (廠) 厂空空, (麵) 面无麦, (運) 运无车, (導) 导无道, (兒) 儿无首, (飛) 飞单翼, (涌) 涌无力, 有 (雲) 云无雨, (開) 开开关关无门, (郷) 乡里无郎, (義) 义成凶，魔仍是魔。
The characters in brackets are the original version of each Chinese character; in contrast, the one following it is the simplified version. The following are three examples of the meaning lost after character simplification (see Figure 2.2). The simplified character of “love” leaves out the middle part “心”, which means heart. The right part “见” (means meet/union) is omitted in the simplified character of “亲” (kin/relative). And the character of “乡” (means hometown) is missing the right part “郎” (means man/darling).

**Figure 2.2 Some examples of simplified Chinese characters (pictures from the internet)**

![Simplified Chinese Characters](image)

As the written forms of earlier characters were created on a pictographic basis, CFL learners should not have too many difficulties in learning pictographs, indicatives and ideographic compounds. However, after thousands of years of development, those characters have lost their function of being self-indicative. Most of them have become meaningless symbols. As a result, by contrast, these characters set great difficulty for CFL learners. In their eyes, these characters are merely combinations of irregular strokes with no clues of pronunciation or meaning (Fei, 1998, p. 120).

However, on the other hand, some scholars argue that in spite of the simplified forms, the visual nature of Chinese characters has not changed too much.

象形方块汉字历经数千年发展演变，虽然原始图画意味消失了，以形求义的象形功能弱化了，但其象形表义的本质却没有改变……汉字的象形特征使汉民族思维的直观表象得到极大的保留。与西方表音文字不同，从字义直达概念的汉字中看不出语音的真正面貌，但却富涵造字的理据，所谓“三人曰‘众’”；“法”从水，平之如水，去不直”，等等。这就为汉字读者的理解和想象创造了富有张力的施展空间。即使在汉字简化再简化的今天，“写山曰嶙峋嵯峨，状水曰汪洋澎湃，蔽芾葱茏，恍逢丰木，鳟鲂鳗鲤，如见多鱼”还依然能在我们心中引起共鸣。(Zhang, 2005, p. 34)
Translation: After thousands of years of development, the original meaning of the square script disappears, and the feature of looking for the meaning from the written form become weaker, whereas the visual nature has not changed ... The pictographic attribute shapes the straight thinking style of Chinese people to a great extent. Different from an alphabetic script, a Chinese character cannot show very much information about its sound, but it is rich in meaning, such as “众” and “法”, leaving abundant room for readers’ own understanding and imagination. Although the currently-used Chinese characters have been simplified several times, the sentence such as “写生曰嶙峋嵯峨，状水曰汪洋澎湃，蔽芾葱茏，恍逢丰木，鳟鲂鳗鲤，如见多鱼” can still evoke our sympathy. (Zhang, 2005, p. 34)

Zhang regards the Chinese characters as continuously evolving in both shape and writing style, but the visual nature remains. It is the visual feature of characters that contributes to the mode of thinking of Chinese people. Although there is very limited phonological information in a character, the script itself can provide abundant clues to the meaning. Even those simplified forms still retain unique cultural attributes.

As discussed above, character is the basic functional unit in Hanyu writing system. These symbols are not, for the most part, logically associated with phonology as are symbols in an alphabetic language such as English. How are these symbols read? Are they processed by the shape, the sound, or the meaning? The following section reviews Chinese pinyin and pinyin teaching.

**2.2.3 Chinese pinyin and pinyin teaching**

The sounds of Chinese characters can be written into pinyin, a phonic transcription system that helps the learning of pronunciation, with diacritical signs marked above it to indicate the tone of the character. Similar to the phonetic symbol for English, pinyin is one of the many ways to Romanise the language, so as to help the user to pronounce the character. The Pinyin system borrows the commonly used 26 alphabetic letters of English. The pinyin system is now almost universal, but the spelling outside mainland China is very irregular. Usage in Taiwan, Hong Kong and Southeast Asia sometimes differs from that in mainland China.

For those who teach Chinese characters, various teaching methods have been adopted in their practice. “It is possible to be able to understand written Chinese without being able to pronounce the characters on the page. It is also possible to articulate the characters without knowing what they mean; and one can know how to say a word and understand its meaning, but not be able to write it as a character” (Orton, 2008). This illuminates three common methods in Chinese language teaching: written form and meaning-centred, pinyin-centred,
and pinyin and meaning-centred. These three methods all deal with the three independent
elements of Hanyu, i.e. character, sound (pronunciation) and meaning.

In TCFL, pinyin-centred teaching is widely adopted for its similarity to English and
simplicity compared with Chinese characters in writing. Orton argues that “reading and
writing only in characters limits their range of expression and pace of output considerably”
condition over no on-screen pinyin for more experienced learners in their study. The
Interactive Constituency Theory assumes that a phonological form is routinely activated as
part of word identification (Perfetti, Zhang & Berent, 2008) because it is a constituent of the
identified word. A popular view is that phonological awareness is, among the three sub-
components, the most important factor in affecting reading growth (Wagner et al., 1997).
Chung’s study focuses on the effective use of Hanyu, pinyin and English translation as extra
stimulus prompts in learning of Chinese characters. He concludes that “the presentation of a
character first and the provision of its associated pinyin and English translation after a short
delay is recommended when teaching characters for non-native speakers of Chinese at the
early stage” (Chung, 2002, p. 149).

Different voices and perspectives are represented by many other researchers. To cite an
example, Spinks, Liu, Perfetti and Tan’s (2000) study shows that phonological codes in
Chinese provide early sources of constraint in access to meaning. McGinnis (1997) describes
this situation with the term the can effect. “Can” is pronounced as /tshan/ in Hanyu while as
/kæn/ in English. The can effect illustrates that pinyin spelling could be very easily confused
with English spelling.

2.2.4 The strategies for learning Chinese characters

Recognising Chinese characters is the foundation of developing reading and writing skills in
Hanyu. For this reason, it is important for educators in this area to understand what kinds of
learning/encoding strategies CFL learners adopt in understanding and memorizing Chinese
characters. Such an understanding will help learners to exert control over their own character
learning process, which, in turn, will reduce the difficulty of character learning (Shen, 2005,
p. 51). The multifaceted structure and formation of Chinese characters facilitates various
coding methods. A brief review of the existing literature in this field is presented below. In
the last two decades, there has been increasing interest in research on the acquisition of
Chinese characters by L2 learners (Shen, 2005; Ke, 1996). These studies primarily focused on the different encoding strategies applied by CFL learners, including the perceptual skill involved in learning the Chinese script. Those commonly used character encoding strategies are grouped below by factors in the learning of characters, such as visual encoding, phonological encoding and semantic encoding.

Shen (2005) examines eight consequential factors extracted from the 30 frequently adopted strategies by CFL learners. Her study indicates that graphic cues and knowledge of radicals are widely used to encode Chinese characters, showing that steadily introducing orthographic knowledge to beginning CFL learners can significantly facilitate their character learning. Shen also (2005, p. 61) encourages “the use of the three aspects of radical knowledge, graphemics, semantics, and phonetics” when dealing with a Chinese character.

In his book Remembering Simplified Hanzi, Heisig (2008) regards the written form of Chinese characters as associated to a visual scene or story, connecting the meaning of the given character; specifically, the meaning is the basic building blocks used to write that character. He makes use of all the constituent parts of a written character and a mnemonic device which he called "imaginative memory" to associate the meaning and writing of 2042 characters. This view is supported by a number of other recent studies in this field (Huang & Hanley, 1995; Shu & Anderson, 1999; Ke, 1996). Huang and Hanley (1995) report a significant correlation between visual paired-associate learning and Chinese word reading. The results illustrate that a test of visual skills (visual paired associates learning) is significantly related to the reading capability of the children in Hong Kong and Taiwan, but not to the reading of the children from English backgrounds. This suggests that visual processing plays an important role in learning Chinese characters. Shu and Anderson (1999, p. 1) argue that the encoding of Chinese characters is better built on a visually cognitive basis, that is meta-linguistic awareness – the awareness of identifying and pondering on the structural attributes of a language. Ke (1996) conducted a study to investigate students’ preferences in Chinese character perception and in character production. He found that most beginning CFL learners considered knowledge of radicals more useful than creating their own stories about the appearance of characters in learning new characters.

The graphic as a whole provides visual context that can lead to successful character recognition even when the reader does not have knowledge of all the character’s details. Students can also tap into different skills or knowledge sources to facilitate the recognition of characters (Ke, 1996, p. 346).
According to Ke, the use of orthographic knowledge as a cue is an effective strategy to learn Chinese characters. Students can successfully identify a character when adequate graphic details are provided. A visual context formed can even facilitate the recognition of the character even though students do not have knowledge of all the character’s details. Besides the visual information, he also indicates that other skills and knowledge may help the recognition process. This finding is contradictory to what McGinnis found later. McGinnis (cited in Shen, 2005) conducted a study in which he collected data from daily classroom learning activities. The subjects were first year college students, which is the same as Ke’s. He found that the creation of their idiosyncratic stories about the characters proved most useful, next to rote repetition, and therefore became the most frequently used strategy by beginning CFL learners.

After a series of word recognition tests, Hayes (1988) concludes that learners use both visual and graphic strategies in encoding Chinese characters in a word context, but they relied more heavily on graphic structure to recognize previously exposed characters in a sentence context.

Some other studies show that the processing of Chinese characters involves the processing of submorphemic information, such as the strokes, character height and width, font, and spatial relation. A recognition experiment was conducted to evaluate the impact of stroke number, character height, and character width on the legibility of Chinese characters by Chi, Cai & You (2003). The result indicates that the legible threshold is increased by the number of strokes and decreased by the character height and character width. In addition, the font for presenting characters also has a significant impact on the legibility threshold (Chi, Cai & You, 2003). In general, the written form of Chinese characters can affect students’ reading of the character.

In addition, some studies indicate that the frequency of occurrence of characters can have an influence on the brain processing. Huang and Ma (2007, p. 9) demonstrate that different frequencies of occurrence of Chinese characters may elicit different patterns of brain organization for their processing. To be specific, reading low frequency Chinese characters may command more mental resources for their visual-spatial analysis, phonological retrieval and articulator constellation, whereas reading high frequency characters enjoys a more direct association with semantic attributes for efficient lexical identification.
The above studies on character encoding strategies among CFL learners have provided rudimentary findings suggesting that orthographic knowledge-based cognitive strategies are the most commonly used in analysing Chinese characters. Especially the graphemics and semantics of a character are employed as cues for encoding purposes. Similarly, Shen (2005) found that students rely heavily on semantic (meaning) and graphic (shape) information in processing a character. The review of the above studies indicates that visual information processing related to the visual features of Chinese characters is the most commonly used of the orthographic cognitive strategies. The reason why orthographic and graphic issues have been frequently explored and adopted by CFL learners is that the distinct visual nature of Chinese characters offers the possibility for CFL learners to perceive them in such a cognitive way.

Moreover, the different processes in reading alphabetic and non-alphabetic systems have been broadly studied (Foorman & Siegel, 1986; Hung & Tzeng, 1981). A common belief is that phonological skills are important in learning to read alphabetic scripts whereas visual ability is vital in learning to read non-alphabetic languages (Lee, Stigler & Stevenson, 1986; Ho & Bryant, 1999).

Previous studies using a visual hemifield paradigm have demonstrated that the right cerebral hemisphere is more effective in processing single Chinese characters than the left cerebral hemisphere. While it is generally thought the left hemisphere is dominant in processing alphabetic words. Chinese characters have many distinct features that alphabetical words lack. Yet, the logographic nature of Chinese characters may engender a contention that there exists a closer relation between shape and meaning for Chinese characters than alphabetical words, which in turn leads to a conjecture that reading Chinese characters would preferentially engage the ventral processing stream (Huang & Ma, 2007, p. 10).

Huang and Ma proposed that the cognitive process underlying the reading of Chinese characters differs from that of alphabetic words. Due to the visual features of characters, the right cerebral hemisphere is more active in processing a single Chinese character than alphabetic words. Hence, they assumed that the shape and meaning are closed related in Hanyu. Very similarly, Biederman suggests that Chinese characters invoke meaning much faster than do words in an alphabetic language. Huang and Ma’s proposition is also supported by Tavassoli (2002). Tavassoli suggests that reading Chinese characters relies relatively more on visual cognitive processes than does reading alphabetic English words, whereas the latter relies relatively more on phonological cognitive processes.
In conclusion, the above studies show that due to the distinctive attributes of Chinese characters, most approaches rely more on the visual features of characters as the recognition basis. For this reason, Chinese character teaching is better built on the visual processes rather than phonological process in order to facilitate learning.

### 2.2.5 Chinese as a Foreign Language

Hanyu has been widely regarded as one of the most difficult languages in the world, especially for non-native learners (Liskin-Gasparro, 1982). Wang (2009) concludes with an inconsistent situation, from a number of factors (Figure 2.3) collected from a questionnaire distributed to 35 students who had dropped out of Hanyu classes, in which 23 out of 35 responses indicate the difficulty of Hanyu caused them to drop learning the language. The situation in Australia is not optimistic as well. In Australia, by the final year of high school, about 94% of those who began to study Hanyu sometime earlier have dropped the subject, and of the 6% who remain studying Hanyu at Year 12, 94% are ethnically Chinese (Orton, 2008). These shocking drop-out rates evidently demonstrate the difficulty of learning Hanyu. On the one hand, as indicated by many other studies (Orton, 2008; Shen, 2005), the unequal competition from the massive number of home speakers contributes to this situation. On the other hand, the difficulty of the language itself cannot be ignored. This section discusses the difficulty of Hanyu learning itself.

**Figure 2.3 Factors which cause students to drop Hanyu learning (Wang, 2009, P.90)**

The formation of Chinese characters indicates there are huge differences between Hanyu and English, such as the different visual complexity, the spatial structure and the number of
graphic components, which set enormous obstacles for CFL learners. The English expression “It’s Greek to me” is also comprehensible when you replace “Greek” with “Chinese”, considering the equivalent complexity. Many researchers (Pei & Sun, 2010; Shen, 2005; Moser, 1991) suggest that one main challenge is the learning of characters. Moser (1991) gives nine answers to his study of why Chinese is so damn hard to learn. Four of these put blame directly or indirectly on the writing system. He also indicates that from the title he is speaking of the writing system, but the difficulty of the writing system has such a pervasive effect on the general language mastery that he thinks the statement as a whole is still valid. Pei and Sun hold a similar idea.

汉字教学一直是汉语教学的‘瓶颈’，学生普遍认为汉字难认、难学、难记，由此产生厌学乃至弃学，更有甚者，认为汉字应该拼音化，无需学习汉字，应该说汉字教学严重制约着对外汉语教学的整体发展(Pei & Sun, 2010, p. 157)。

Character teaching is the bottle-neck of Hanyu teaching. Students regard character is hard to recognize, to learn and to memorize. Hence, some students are weary of the learning, even drop off their study in the half way. What’s more, some even hold the view that Chinese language should be Romanized to solve the problem. Character teaching hampers the CFL development as a whole (Pei & Sun, 2010, p. 157).

The metaphor of the “bottleneck” demonstrates the critical situation of Chinese character teaching and learning in CFL education. Pei and Sun did not give the underlying reasons in their study, while many other researchers explore this issue and give out their answers. Tian et al. (2010) state that differences between Hanyu and alphabetic languages have set huge challenges for CFL learners in learning characters. Firstly, because the written form of a Chinese character provides little clues to its sounds, it is difficult to pronounce a character by just looking at it. As a result, additional memorization is required to associate a character’s written form with its pronunciation. To make things worse, even the same character sounds differently in local areas of China. Secondly, it is hard to correctly recognize and transcribe the character when hearing the corresponding pronunciation. Tian et al provide the following data to verify their point of view that “there are only 416 unique pronunciations (syllables) in spoken Chinese vs. around 6,000 common characters” (2010, p. 1602). These numbers demonstrate the fact that many characters may share the exact same pronunciation or similar pronunciations with slight tone differences. To make things worse, stroke order in character writing is another headache for many CFL learners (Tian et al, 2010).
Tan et al (2001) suggest that the square configuration of a Chinese logograph commands a sophisticated analysis of the spatial information and locations of different strokes comprising the logographic character. They also consider that Chinese characters map onto meaningful morphemes rather than phonemes, implying that regular or quasi-regular grapheme–phoneme conversions that exist in alphabetic languages are impractical in Hanyu. By stating this, they imply that the principle of the Chinese writing system differs radically from that of alphabetic systems.

Huang and Ma (2007) propose the reasons for the difficulty in learning Chinese as follows.

There are 5731 most frequently used characters in daily life and more than 45,000 characters can be found in the Kang-Xi dictionary. The shapes of Chinese characters are complex, and many different characters have shapes that are similar to each other. Compared with recognition of other characters, recognition of Chinese character is a difficult problem since the character set is very large, and there are many similar characters in shape. Moreover, a character is constructed by combining several strokes in two dimensions. Therefore, Chinese characters are much harder to recognize than any other languages. (Huang & Ma, 2007, p. 8-9)

Huang and Ma suggest Chinese character recognition is admitted as a difficulty for foreign learners due to three reasons: (1) the huge Chinese character set, (2) confusingly similar character forms (similar character patterns), (3) the different configuration between Chinese characters and English alphabets contributes to the difficulty as well (high complexity). They regard Chinese characters as the most difficult to recognize compared with any other languages. From a different perspective, Shen (2005) argues that the two major challenges in character learning are the complexity of the graphic configuration of a Chinese character and its lack of obvious sound-script correspondence.

To sum up, three challenges have been mentioned with a high frequency by researchers. Firstly, the most frequently mentioned factor is the complexity of the graphic nature of Chinese characters (Tan et al., 2001; Huang & Ma, 2007; Shen, 2005), which requires the learners to have a good understanding of strokes, radicals and the whole character. This differs from the “letter-recognition-based models of word recognition” (Williams & Bever, 2010, p.590) in alphabetic languages. The long-term dependency on high tech–products such as computers, mobile phones and PDAs, has weakened writing skills.

The second reason is the absence of Grapheme Phoneme Correspondence (GPC) rules in Hanyu (Shen, 2005; Tian et al. 2010), which is put forward by Baron and Strawson (1976).
Alphabetic languages such as English have high-level GPC between spoken and written languages, while the graphic symbol, the character, does not provide clear clues to its pronunciation. In modern Hanyu, even the phonetic radicals in phonetic-semantic compounds can hardly represent the exact sound of the character. The reliability of the phonetic radical cuing the sound of a compound character is only 26%. That is, only a small number of phonetic radicals can completely represent the sounds of their characters without considering the variations in tones (Fan et al. quoted in Shen, 2005). Therefore, for non-native beginning Chinese learners, it is hard to map between the pronunciation and the corresponding written form when they first approach a Chinese character (Shen, 2005). To illustrate, the relationship between the elements of the spoken and written word “horse” in English is simple:

Shape: h orse

Sounds: [hɔ:s]

While in Hanyu, the written script for “horse” is “马”, which sounds like mǎ. There is no hint of any correlation between “马” and “mǎ”.

Shape: 马

Sounds: mǎ

The example given above demonstrates that pinyin teaching can help with learners’ pronunciation in Chinese language teaching. However, it cannot help their learning of Chinese script.

The last challenge is the confusing similarity in the pronunciation and written forms (Tian et al., 2010; Huang & Ma, 2007). Just as there are English words that are spelled similarly, there are Chinese characters that are pronounced or written alike (Liu & Lin, 2008, p. 93). Characters that are similar in their appearance or in their pronunciation can cause immense challenges for CFL learners. On the one hand, there is a one-to-many syllable to characters mapping problem in Hanyu (Tian et al, 2010, p. 1602). In other words, different Chinese characters may share one sound (phonologically similar characters/ homophones). Hanyu is a
tonal language that uses four distinctive tones and a complete specification of a Chinese syllable involves both its segmental (consonants plus vowels) and suprasegmental tonal information (Spinks et al., 2000). There are tens of thousands characters commonly used in daily life. However, there are only several hundreds of different pronunciations in Chinese - even including the tones. (The same pronunciation with slight differences in tones makes different sounds). Many characters have to be mapped to exactly the same pronunciation. Take the word Australia for example. Australia in Hanyu is “澳大利ӊ (dà lì yà)”. However, there are as many as 69 characters pronounced as “dà” in Hanyu, 55 as “dà”, more than 200 as “lì”, and 90 as “yà” (中国社会科学院语言研究所词典编辑室, 2005). Since so many characters map into the same pinyin, it is very hard to decode it and get back to its original characters. In other words, pinyin-dependent teaching and learning cannot effectively help students to learn the language itself. On the other hand, some graphically similar characters are easily confused, because they differ in subtle respects. The difference may be visually small, such as a single stroke. Examples are given in groups to see the confusion. 余 and 余; 找 and 我; 戍 and 戍; 酒 and 洒. An extra dash, hook or line can lead to a totally different character. Hence, it is quite hard for CFL learners to identify the characters written in a similar way (Liu & Lin, 2008).

Due to these difficulties mentioned above, Chinese characters are highly complex and require considerable effort to learn. That may also explain why students are usually enthusiastic when they first start to approach Hanyu but many lose motivation in a short period of time. The reason is that they cannot make the progress they expected, especially in writing. These difficulties result from differences in its nature which require CFL learners to devote more time to the learning process. Time needed for proficiency is a convincing indicator. The International Centre for Language Studies (ICLS) in Washington DC reports that approximately 2,200 hours are needed to become proficient in Hanyu for a native English-speaking learner, while the time for Italian is 650 hours (ICLS, 2011). This coincides with DeFrancis’s estimation. According to DeFrancis, Hanyu learner needs to devote at least two more years than other language learners do to the task of learning to read and write(1984, p. 219).
2.3 Visual Pedagogy

The study of visual pedagogy is an interdisciplinary section, covering education, art and other subjects. With the recent development of techniques and the increasing attention paid to multi-literacy, visual pedagogy is enjoying enormous popularity.

2.3.1 The definition of visual pedagogy

The vigorous growth of visual culture in this digital epoch has drastically changed the distribution and production of information and knowledge, and at the same time, it has fundamentally transformed our apprehensions of reality and education. Visuals are frequently suggested as an element of instruction for language teaching and learning. Buzan (1995) considers that education has been placed on structural patterns, which are in the main linear in nature. However, the human brain does not simply think in a linear fashion. What is not accounted for is the multi-modal nature of the human 'holographic' brain. The truth is that “we identify with and through the visual; we increasingly experience our everyday lives through media in which visual and sound-based representations predominate” (Goldfarb, 2002, p. 20). Goldfarb’s visual pedagogy calls for both “adopting teaching methodologies compatible with the contemporary audio-visual paradigm and developing students’ media literacy in the classroom” (p. 2).

Different to other pedagogies that “consider audio-visual technologies as mere supplements to traditional classroom and print-based education” (Hermida, 2006, p. 5), visual pedagogy puts these in the front position in classroom teaching. It recognizes the distinctive advantages that visual objects have as a powerful transforming tool by introducing an instructional treatment where abstract and concrete visual representations are combined. Brower and Barber (2005), and Rose and Howley (2007) give practical suggestions for how visual tools can scaffold teaching and learning across all subjects, such as using real objects, pictures, signing, symbols and even written words.

In terms of the content, visual representations can be divided into two categories, namely concrete visual representations and abstract representations. “Concrete visual representations are those that illustrate the real-life objects corresponding to a problem’s cover story” and “abstract visual representations are those that use conventional symbols to represent the relevant elements of a problem’s cover story” (Moreno, 2010). Their high resemblance to the real-world objects that they depict can facilitate comprehension and memorization.
Visual pedagogy in this study refers to a teaching method using visual tools to present the logographic nature of Chinese characters. It is an analytic approach to character-level processing. There are a large number of visual tools that can be used within a prearranged approach in a variety of ways to aid learning and teaching, including mind maps, concept maps and various other diagrams (Barlow et al., 2008). Visual tools provide powerful retention aids which increase understanding and transform the normally invisible, abstract act of thought into a concrete and public media (Caviglioli & Harris, 2003). Visual pedagogy makes ideas and thought processes visible through visual tools (Margulies & Valenza, 2005). It is a unique order for utilizing creative memory to combine the primitive elements of a character, namely the strokes and the radicals, into impressive visual symbols.

There are three elements that can be used to analyse a Chinese character: phonological, graphical and semantic information processing strategies. Research shows that word recognition involves the transformation of representations from visual word form into speech sound, which is called orthography-to-phonology transformation (OPT) (Huang & Ma, 2007, p. 10). The visual pedagogy adopted in this study is a combination of the last two - namely visual and semantic processing strategies, and adds pronunciation teaching and learning on this basis. Pinyin Romanization will be introduced to students at the same time as the written form and meaning of a character is introduced in order to give students a comprehensive picture of the character. It encourages the incorporation of pinyin teaching and written form teaching as promoting a way to access the meaning of a Chinese character. In other words, it is an upgrade to the basis of the normal teaching practice of Hanyu.

2.3.2 Theoretical underpinning of visual pedagogy

For centuries, the old Chinese saying that “百闻不如一见 (bǎi wén bù rú yī jiàn, means one picture is worth a thousand words)” has been widely quoted in many literatures (Larive, 2008). Although exaggerated, the saying makes a point that is still true, that is, a picture’s ability to communicate swiftly and accurately with its universal visual language. This feature has been recognized since earliest times, but since the 1970s scholars, on a broad scale, have started to probe the way pictures communicate. They praised “…the remarkable extent to which pictures communicate across barriers of time, age group, culture, and even species, without the viewer having prior knowledge of the conventions of the art” (Kennedy, 1974). There has been ample experimental evidence to support this view. A careful review of the
literature shows that the research on the theoretical underpinnings of visual learning and teaching mainly proceeds from the following four aspects: classifications of students’ learning styles, neural evidence, the role of concrete and abstract visuals, and children with various special needs.

First and foremost, a great deal of research shows that a great many students are visual learners. The data from the Visual Teaching Alliance (VTA) shows:

- Approximately 65 per cent of the population are visual learners.
- Visual aids in the classroom improve learning by up to 400 per cent.
- Students who are twice exceptional (2e) are often visual learners. (VTA, retrieved from http://www.visualteachingalliance.com/2011).

The numbers shown above strongly justify the rationality of visual pedagogy. Learners approach information in three different ways: visual learning, auditory learning and kinetic learning (Gangwer, 2009, p. 2). Some learners memorize things they have seen best; some memorize what they have heard, while others memorize what they have experienced.

Generally, nearly two thirds of the student population is visual learner, 30 per cent auditory learners, and 5 per cent kinaesthetic learners. As the name suggests, visual learners excel in spatial tasks and attend to information most effectively through seeing (Gangwer, 2009).

… our students are truly visual learners coming of age in an increasingly visual world. Notwithstanding individual differences in intelligence and learning style, this generation of students needs to be taught the way they best learn—with visual stimulation accompanied by active learning strategies. As educators, we need to recognize the nature of our students and prepare them for the world in which they will live and work. (VTA, extracted in 2011, http://www.visualteachingalliance.com/ABOUT/ABOUTWhoTea.html)

VTA indicates that visual pedagogy is a teaching approach suitable for the current information society. By conducting teaching in a visual way, students can achieve the most from what is taught.

Secondly, research provides evidence to support visual pedagogy from a neural aspect. “(There are) a million nerves connecting the eyes to the brain. That’s about 60% more than the number of nerves connecting the ear and the brain” (Levy & Yupangco, 2008, p.1). Data from VTA shows:

- The brain processes visual information 60,000 faster than text.
- 90 per cent of information that comes to the brain is visual.
- 40 per cent of all nerve fibres connected to the brain are linked to the retina. (VTA, 2011)
The findings of Paivio and Sadoski’s (2001) study also suggest that using the concreteness of visual imagery is overwhelmingly linked to successful comprehension and recall. Similarly, Ferrald and Schamber’s (1973) research indicates that 80% of learning takes place through the eye with visual memory existing as a crucial aspect of learning.

Thirdly, Moreno explains the theoretical underpinnings of visual pedagogy from two specific aspects – concrete and abstract visual representations. By using the concrete and abstract visuals, it promotes meaningful learning and meets individual learning styles.

Concrete visual representation promotes better problem solving by depicting a close correspondence between the representations and the concrete objects that it intends to represent, therefore, relying less on knowledge conventions for their interpretations and helping build connections between students’ prior knowledge and the information to-be-learned; … abstract visual representations promote better problem solving by focusing novice students’ attention on structural rather than superficial problems that are superficially dissimilar. (Moreno, 2010, p. 36)

Some experimental results corroborate this fact. A recent preliminary study conducted with some high school students (Moreno Reisslein & Ozogul, 2009) indicates that those who learned about electrical circuit analysis with abstract and concrete visual diagrams produced higher transfer scores and better problem representations than those who learned with diagrams that included only thorough descriptions of the circuit elements. This result coincides with the above view that visual pedagogy benefits students by making a problem more readily accessible in memory.

Lastly, research also shows that children with various special need benefit from the introduction of visual support in the classroom:

…children with speech difficulties (Bochner and Jones, 2003); poor understanding (Weitz et al., 1997); Down’s syndrome (Van Vuren, 2009); autism (Peterson et al., 1995); specific language impairment (Wellington and Wellington, 2002), severe speech and language impairments (Wijkamp et al., 2010), frequent ear infections (Bochner and Jones, 2003); and social communication difficulties (Bochner and Jones, 2003). (Cited in Wellington & Stackhouse, 2011, p. 185)

To summarize, visual pedagogy can promote critical thinking, develop problem solving skills, and identify gaps in knowledge. “Pictures offer equality of access to texts for all children, and provide an effective medium for promoting discussion and reflection” (Bromley, 2001). Pictures contain rich information. “Visual language could tell part of a story that the words don’t tell” (Browne, 1994, p. 186). These studies reveal the unquestionable advantages of
visual pedagogy in teaching and learning, which can more effectively boost students’ problem solving ability as compared to learning without the assistance of visual representations. The visual reading skill is one aspect of visual literacy that is needed in an increasingly globalised, technological age (Walsh, 2003).

Visual pedagogy in this study is a teaching method to explore, alter and use the visual features of Chinese characters in the CFL classroom. It is believed that it turns the biggest obstacle in CFL learning - character learning – into an effective and attractive aid for students’ acquisition of this language. Some studies of child psychology provide similar conclusions.

Engagement with pictures has many benefits for children including supporting the development of knowledge acquisition and meaning making skills. During reading, children connect their prior knowledge with information from the book’s pictures and written text, use strategic processes to identify key concepts, synthesize and summarize information, make inferences, and anticipate what comes next in the story. Gains in knowledge are often accompanied by increased interest and appreciation of the subject, both important indexes of engagement, which are related to actual activity choice and participation. (Mantzicopoulos & Patrick, 2011)

One of the advantages pictures have is their role in connecting students’ real life experience with the knowledge they learn in class. By making connections, students are able to discover key points and understand and generalize information, along with the increase in learning interest and appreciation toward this peculiar subject. Mantzicopoulos and Patrick’s conclusion corresponds to Kamil and Bernhard’s (2004) viewpoint that children learn best when instruction is based on story-like texts. Similarly, from a sociocultural perspective view, the concept of the zone of proximal development (Vygotsky, 1978) highlights that language learning is developmental. The characteristic of ‘prior knowledge’ is very crucial. It recognizes that new learning is built on prior learning – that is, the ideas and concepts that students bring to learning. Teachers work with these preconceptions in order to facilitate learning.

A few researchers in China have tried visual teaching of characters to native Chinese students. Wang and Wang’s (2010) study indicates that turning abstract Chinese characters into pictures or stories could encourage learners and produce effective learning. Zhao and Jiang (2002) conducted a correlation analysis between the strategies for learning Chinese characters and the character test scores of CFL beginners, and found that using radical components to learn Chinese characters was effective. These researchers also argue that radical components
imply the category of the character and are easy to use to compose different characters, thus helping the memorization of characters (Zhao & Jiang, 2002). Similarly, a longitudinal study demonstrates that pre-reading visual skills, rather than phonological skills, were significant predictors of Chinese character reading for beginning Hanyu learners (Ho & Bryant, 1999).

A similar pedagogy called “会意法” is proposed in Pei and Sun’s study. In 2010, Pei and Sun put forward a novel method of character teaching called “会意法” by building connections in all parts of a character. They indicate:

运用“会意法”，虽然有些已经偏离了文字学的原则，不管造字本意，机械地把合体字分解成几个部分，设想出一些事理加以重新会意，从而把这些部分有机地联系起来，但其效果显而易见，所以我们认为，教无定法，殊途同归。（Pei & Sun, 2010, p. 158）

Translation: “会意法” as a teaching method, doesn’t totally obey the rules of Chinese characters, ignoring the etymology and breaking down a character into parts, and endowing new connections and meanings to give clues, while it tells its own tale. Teaching should not be confined into particular methods. All roads lead to Rome. (Pei & Sun, 2010, p. 158)

“会意法” effectively explores and enhances the interest in learning Chinese characters. At the same time, it strengthens learners’ memory by clever imagination. Sequentially the mechanical learning upgrades to meaningful learning which is based on an understanding of the image and structure laws, and cognitive ability and comprehension are improved in this process. The unique structure of Chinese characters allows the use of visual extension – by its original etymology, even imagination. Some Chinese researchers and educators reached the same conclusion after years of practice.

2.4 Debate over Character Teaching and Pinyin-dependent Teaching

Chinese students are long blamed for learning “mute English” (Yang, 2009; Zhang & Holger, 2010; Huang, 2010). Many of them score remarkably high in written English tests, while failing in oral tests. Now this unbalanced situation can also be seen in Australian CFL education. The difference is that Australian CFL learners do better in oral Chinese than in character writing. After spending years learning Hanyu, many of them can introduce themselves, count numbers and greet each other in Hanyu fluently. However, they can hardly write Chinese. In other words, there is a heavy dependence on pinyin in CFL learning rather
than on the formal script of Hanyu – characters (Orton, 2008). As a result of the uncertainty of what to teach, teachers move backwards and forwards among different teaching methods during their teaching. Even though CFL teaching comes in a variety of ways, in general, the classroom is almost exclusively focused on pinyin. CFL learners are also uncertain of which to learn – Chinese characters or pinyin. The L2 learners “were found to use a mixed strategy of phonological and graphic processing, i.e. they adopt both pinyin and the visual written form of a Chinese character while they are learning Hanyu, suggesting that non-natives experienced much uncertainty about how to remember characters” (Ke, 1996, p. 341).

CFL learners at Year 12 are required to master 500 characters in New South Wales (Orton, 2008, p. 5). However, the lack of a unified curriculum on Chinese character teaching leads the current CFL education into troubled waters; particularly opinions vary on the necessity of teaching Chinese characters to CFL learners. Orton (2008) describes the disputed situation over character teaching in the report on The Current State of Chinese Language Education in Australian Schools:

Much debate has raged in Australia over whether school students should be permitted to write only in pinyin, or at least mostly in this form…As reading and writing only in characters limits their range of expression and pace of output considerably, entry to Chinese writing for learners is via the Mainland orthodox Romanization system known as pinyin…Many Chinese teachers tend to scorn Romanization – although they understand its necessity for students – and are keen for students to learn characters. Others, Chinese or not, point out that the Chinese use characters so the students’ task is learn them, and the sooner they make a start the better. (Orton, 2008, p. 29)

According to Orton, the focus of the debate is whether to teach pinyin or Chinese characters. Supporters of pinyin, whether pinyin-only or pinyin-mostly, argue for its efficiency in oral output, suggesting character learning greatly hinders learners’ range of expression and competence in spoken Chinese. Conversely, character supporters, including many CFL teachers, indicate that students should put emphasis on Chinese characters rather than pinyin as characters are normally used in China. They also suggest students start learning characters earlier in order to achieve more.

On the one hand, a review of the recent literature shows there are many researchers demonstrating their supportive stance in Chinese character teaching and learning in CFL classrooms. Everson (2008) and Chen (2011) argue that teachers and students have put too much emphasis on the phonological proficiency (pinyin) while they have neglected the significance of visual and orthographic skills in learning to read (characters). His advocacy for characters coincides with Xu, Bao and Xu’s (1997) point of view that using pinyin may
not be beneficial for learners who do not use Hanyu as a daily spoken language. Pei and Sun criticize the current pinyin teaching of Chinese characters in that it isolates Hanyu from Chinese culture.

Pei and Sun point out that the cultural information carried by the shape of Chinese characters has been neglected for a long time. Besides the sound, Pinyin carries very limited information about a character. As a result, pinyin-dependent teaching may bring fluency in oral speaking, but it is less informative in the cultural context, which is crucial for a language that has a long history. One result is the great memory load for CFL learners, as they have to memorize the meanings of hundreds or even thousands of Chinese characters by these tricky and arbitrary sounds, rather than finding a meaningful connection through the written forms. Kane (2006) proposes that “the added thrill” of actually being able to read those characters which are over 3,000 years old may promote students’ interest toward learning.

The above studies strongly support Chinese character teaching and learning in CFL. However, what they do not make clear is that character teaching and pinyin teaching are not exclusive of each other. Ouyang (2008) proposes these two should be synchronous:

Ouyang regards an introduction of both Chinese characters and pinyin at the same time for learners at the beginning level as important to help them to know characters better and reduce the difficulties in writing at a later stage of learning. He also suggests that pictographs are
very good materials to use to lead into Chinese characters at this stage. Likewise, Jin (2008) addresses the issue of characters and pinyin as follows:

Chinese characters should be given privilege in TCFL. Their key position in Hanyu teaching and learning should be emphasized since the very beginning. Teaching content, Chinese characters in particular should be organized and taught on a cognitive basis. Knowledge of characters should be built from the very beginning of learning. Chinese words can also be taught as a supplementary. However, educators should balance the relationships between: character teaching and pinyin teaching, as well as character teaching and communicative teaching. (Jin, 2008, p. 191)

Like Ouyang, Jin suggests that Chinese characters, even words, should be taught from the beginning stage of CFL learning. He proposes that character encoding should be built on a cognitive basis to facilitate students’ learning of words and sentences, step by step. Most importantly, he points out that due to the particularity of CFL education, the relation of character teaching and pinyin teaching and the relation of character teaching and communicative teaching needs more consideration. Kane (2006) compares the short term and long term effects of pinyin-only learning with those of character learning, implying that character learning can lead learners to a higher level of Hanyu learning, which pinyin learning cannot:

… students who study only the spoken language intensively attain a level of competence in spoken Chinese far higher than those who are learning both written and spoken Chinese at the same time in the short term. Beyond the basics, however, students who have learned characters (and associated them with the word elements, or morphemes, of which the Chinese language is basically constructed) are able to absorb and learn “higher level vocabulary” at a faster rate than those without this training in characters. In other words, you can get to a certain level of competence in spoken Chinese without learning the written language, but you cannot get much beyond that level of competence. There is practically nothing written in pinyin for you to increase your vocabulary, except textbooks… They are a long way from “real Chinese”. If you are really interested in Chinese for the long haul, you are better off learning Chinese characters right from the beginning - even if your progress is slow. (Kane, 2006, p. 24)

Kane believes that pinyin-dependent learning yields competence in spoken Hanyu faster than character learning assisted with pinyin learning, while the latter plays a scaffolding role in facilitating learners to achieve the next level, such as the acquisition of higher level
vocabulary. For this reason, she advocates Hanyu learners start learning characters from the beginning rather than relying excessively on pinyin.

On the other hand, there are also voices opposing teaching characters to CFL learners for the reason of the enormous difficulties of the Hanyu writing system. In his paper with a provocative title as “why learning to write Chinese is a waste of time: A modest proposal”, Allen (2008) argues that, for CFL students, learning to write Chinese characters by hand is an inefficient use of resources, considering the popular use of electronic devices nowadays such as computers and mobile phones, after carrying out student surveys, interviews with native speakers and his own observations. Moser (1991) gives nine answers to his own question of “Why Chinese is so damn hard to learn”, four of which put blame on the writing system directly or indirectly. The same attitudes also can be found in Sharp’s (2010)Don’t Learn to Write Chinese Characters, in which he considers, based on his own Chinese-learning experience, that learning to write Chinese characters is useless and probably the biggest waste of time.

Despite the difficulty in learning Chinese characters, researchers also propose that character learning does not produce long term benefits, as pinyin does. Ho and Bryant’s (1997) study indicates that children rely on phonetics for phonological cues in reading Chinese characters after the initial reading phase. Therefore there might be a symbol reading phase beyond the logographic phase for character readers, as for alphabetic readers (Ho & Bryant, 1997, p. 287). Wang and Thomas (1992) imply that “learners with mnemonically derived images did not produce any long-term advantages for the retention of second-language vocabulary items (p. 372)”.

2.5 Bloom’s Revised Taxonomy

Bloom’s Revised Taxonomy (BRT) will be used to analyse the positive impact that visual pedagogy exerted on CFL students’ learning in the data analysis step (Chapter 5).

From 1948 to 1956, a group of measurement specialists from across the United States led by Benjamin S. Bloom developed a series of six learning levels in the hope of reducing the labour of preparing annual comprehensive examinations. The idea, which is called taxonomy, has been widely adopted and applied at all levels of education, to classify educational goals and objectives (Forehand, 2005). This original taxonomy can be thought of as a hierarchical triangle, as follows (Figure 2.4).
Each of the six levels, except Application, was broken into subcategories. All categories were ordered from simple to complex and from concrete to abstract in a cumulative hierarchy.

During the 1990s, Lorin Anderson and David Krathwohl revised Bloom's Taxonomy and published it as Bloom's Revised Taxonomy (BRT) in 2001 (Figure 2.5), hoping to add relevance for 21st century education, which includes several seemingly minor yet actually quite significant changes. Key to the changes is in the three broad categories: terminology, structure and emphasis (Forehand, 2005). BRT changed the six major categories from nouns into verb forms and renamed some of the categories. BRT also rearranged the sequence within the taxonomy.
The new terms are defined as:

- **Remembering:** Retrieving, recognizing, and recalling relevant knowledge from long-term memory.
- **Understanding:** Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
- **Applying:** Carrying out or using a procedure through executing, or implementing.
- **Analysing:** Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.
- **Evaluating:** Making judgments based on criteria and standards through checking and critiquing.
- **Creating:** Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing. (Anderson & Krathwohl, 2001, pp. 67-68)

**BRT** as the cumulative hierarchical framework consists of six categories each requiring achievement of the prior skill or ability before the next (Krathwohl, 2002).
Bloom’s taxonomy and BRT are the first systematic classifications of the processes of thinking and learning. A search of the internet will yield clear evidence that BRT has been applied to a variety of situations including medical preparation and corrosion training, among which the educational setting remains the most often used application. BRT is proved helpful in almost all circumstances when an instructor desires to move a group of students through a learning process utilizing an organized framework (Forehand, 2005). It can be used efficiently to test the higher and lower levels of learning behaviours. For its role in reducing the duplication of efforts for teachers, BRT is widely popular in education areas, in particular as an instruction in preparing lessons and creating more scaffolding test items (Lord & Baviska, 2007; Forehand, 2005). When designing effective lesson plans and test items, teachers often look to BRT for guidance to design classroom activities, to arrange teaching content and access the learning outcomes (Forehand, 2005). It is useful in helping shaping multiple intelligences such as problem solving skills, creative and critical thinking. Teachers move from covering course information for students, through lecturing, to helping students discover course information through inquiry (Lord & Baviska, 2007). In this study, BRT is used to evaluate students’ learning behaviours under visual pedagogy in Hanyu classes. It works as a reference for the positive impacts visual pedagogy brought to CFL learners, in chapter 5.
Chapter 3
Methodology

3.1 Introduction
This chapter provides details of the methodology adopted in this research. Since this research focuses on finding out the existing problems in Chinese as a Foreign Language (CFL) learners ways of learning and testifying to the impact of visual pedagogy in a classroom setting, which principally requires descriptive data, qualitative research is adopted as the main research method, supplemented by quantitative method in this study. Descriptive case study (Yin, 1984), as a detailed and holistic instance, is applied to portray the impact, in a comprehensive way, of visual pedagogy on CFL learners’ performance. At the same time, quantitative research methods such as student quizzes are also adopted to give a comprehensive picture of the effects on students’ learning.

Data in this study are partly described by qualitative methods and partly represented by quantitative methods. On the one hand, qualitative research is a field of inquiry in its own right (Denzin & Lincoln, 2005). It consists of a set of interpretative, naturalistic and descriptive practices cutting across different disciplines, fields and subjects. It is often used to describe program implementation, to understand the perspectives of participants, and to elucidate, exemplify, intensify, or qualify findings from quantitative research in social studies. “Qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2005, p. 3). Qualitative research entails an interpretative, naturalistic approach to the world around. On the other hand, quantitative method generates a more rich and comprehensive picture of the effect of visual pedagogy. Data collected through students’ quizzes complemented other descriptive data.

Among the many research approaches that fall into the category of educational research, case study has been chosen as the main method in this study. Case study is an empirical inquiry which typically portrays “what it is like” to be in a particular environment. Its focal point is on a contemporary phenomenon within its real-life context and the boundaries between the phenomenon and its context are not clearly evident (Yin, 1984). Case study is defined as “a specific, holistic, often unique instance that is frequently designed to illustrate
a more general principle; the study of an instance in action; the study of an evolving situation” (Cohen, Manion, & Morrison, 2007). The reason to choose case study as the main method in this study is that it can focus on critical incidents and is relatively more practicable than other methodologies for a beginning researcher.

In this case study, the teacher-researcher has manifold roles: the Hanyu teacher, observer and analyser. Stake (1995) describes the role of the researcher in educational research with the following figure (Figure 3.1).

**Figure 3.1 The role of the researcher (Stake, 1995)**

These roles in Stake’s graph are not isolated from each other. On the contrary, many of them appear at the same time. That means the researcher, for instance, could be the teacher, the advocate and the evaluator at the same time, in practice. Subsequently, to balance the different roles is also an important issue to note, especially for a beginning teacher – researcher.

### 3.2 Site Selection

In this study, Peppermint Public School (PPS) located in WSR, is selected as the research site. The researcher offers Hanyu lessons as a volunteer teacher on a weekly basis for five classes in this school. Peppermint Public School is a large multicultural primary school in WSR with about 600 students, among which 45.4% are from a background of languages other than English. Multicultural education is integrated throughout the school via learning experiences inclusive of all students. There is Hanyu teaching is relatively new in this school. PPS started to offer a Hanyu course from 2008, to approximately 200 students from kindergarten to Year 6. In 2009, PPS, as one of the partner schools of the Learning Neighbourhood Asia Literacy Program, received a grant of $35,000 from the National Asian Languages and Studies in
Schools Program (NALSSP) together with three other schools (Asia Education Foundation, 2010).

3.3 Participants

This study focused on relatively small samples – 30 school students and 3 Mandarin Volunteer Teacher-Researchers. Around 30 Students from a Stage 2 class (Year 3 & 4) in PPS were invited to be observed, and 9 of them were interviewed according to their response on the consent form, including five girl students and four boy students. None of the participating students come from Hanyu background. All participants were in the lower levels of prior proficiency in Chinese characters. Some of them (11) had been learning Hanyu for two years and were competent in carrying out simple conversations in Chinese, while most of them (19) were in their first year of Hanyu. Most students had little or no knowledge of Chinese characters before participating in this study, even those who were in their second year of Hanyu learning, as a result of the pinyin-dependent learning in their earlier experience.

Besides the teacher-researcher herself, this project also involved two other Mandarin Volunteer Teacher-Researchers (VTRs). All three VTRs taught Hanyu in local primary and high schools weekly in WSR. They achieved a band score of 7.0 in International English Language Testing System (IELTS), which corresponds to sufficient proficiency in English language, as demanded by the selection requirement of this volunteering project. They had no formal teaching experiences back in China and started teaching in Western Sydney schools as soon as they finished a methodology course offered by NSWDEC.

3.4 Data Collection

A mixed methodology of qualitative and qualitative techniques privileges no single methodological practice over another. To have a comprehensive understanding of the research field, the researcher employed multiple methods to collect empirical data. The study mainly lasted for four months from May, 2011 to September, 2011, during which the data were collected via the following four ways – classroom observation and researcher’s self reflections (3.4.1), interviews (3.4.2), document reading (3.4.3) and student quiz results (3.4.4).
3.4.1 Classroom observation and self-reflections

Observations are methods by which researchers collect firsthand data on programs, processes, or behaviours being studied. The data from observations will be recorded in field notes during the research to trace events and impressions which form the connecting link between the preceding and the following phases. This helps the researcher to sustain a sense of progress and presents a sound basis for reflection.

In this study, the visual pedagogy is approached using a two stage process. In the first stage of design, three topic-related Chinese characters were taught in each lesson via visual pedagogy. The contents were chosen to suit the age and ability of student participants. Approximately 75 single characters were selected as targets. All targets were commonly used, according to the Modern Chinese Frequency Dictionary (1986). The detailed selection standard was discussed in Section 3.4.1.1. These targets were divided into ten groups, five in the first stage and the other five in the second stage. The first five groups of Chinese characters were introduced individually in each lesson. In the second stage, around ten Chinese characters were presented in a radial picture each lesson, with a core character in the middle and the others arranged around it (Figure 3.2). The arrangement is based on the connections among each group of characters and, in the light of activating those links, to help students to understand and to memorize them. In total, around 40 characters will be taught.

Figure 3.2 An example of the radial picture used in the second stage
Flashcards will be used with both the current written form and pictures displaying the etymology and development of each character to be taught in class (Figure 3.3). Related videos, posters and other illustrating objects will also be used to assist teaching.

**Figure 3.3 An example of flashcards**

To gain a clear clue of the teaching content, the researcher designed a preparation table. In preparing each lesson, the table will be filled. The following is an example of the preparation table.

**Table 3.1 An example of a Preparation table**

<table>
<thead>
<tr>
<th>New Characters</th>
<th>character</th>
<th>Script</th>
<th>Visual symbol</th>
<th>pinyin</th>
<th>Meaning</th>
<th>Visual instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NC 1</td>
<td>日</td>
<td>☀</td>
<td>̀i</td>
<td>sun; day</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>NC 2</td>
<td>森</td>
<td>🌳</td>
<td>sēn</td>
<td>forest</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>NC 3</td>
<td>早</td>
<td>☀</td>
<td>zǎo</td>
<td>early; morning</td>
<td>✓</td>
</tr>
<tr>
<td>Revision of learnt characters</td>
<td>LC 1</td>
<td>气</td>
<td>♨</td>
<td>qì</td>
<td>gas; air</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>LC 2</td>
<td>竹</td>
<td>🍾</td>
<td>zhú</td>
<td>bamboo</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LC 3</td>
<td>书</td>
<td>📚</td>
<td>shū</td>
<td>book</td>
<td></td>
</tr>
</tbody>
</table>
What is worth mentioning is that the emphasis of this study is teaching students to “recognize” rather than “write” Chinese characters, as character writing is laborious (Liu, Jaeger & Nakagawa, 2004; Tse, Marton, Ki, & Loh, 2007). Considering the cognitive features of lower grade pupils, this study focused on students’ recognition rather than the writing of Chinese characters as the main indicator of visual pedagogy’s impact on their Hanyu learning. This is supported by the authoritative curriculum in China - New Course Standards (2011). According to the Standards, “recognition” and “mastery” of Chinese characters in learning should be equal. For lower grade pupils, “more recognition and less writing” is desirable. The New Course Standards advances the goal for lower grade pupils as:

《语文课程标准》学段目标与内容：第一学段（1～2年级）
（一）识字与写字
1. 喜欢学习汉字，有主动识字、写字的愿望。
2. 认识常用汉字1600个左右，其中800个会写。
3. 掌握汉字的基本笔画和常用的偏旁部首，能按笔顺规则用硬笔写字，注意间架结构。初步感受汉字的形体美。
4. 努力养成良好的写字习惯，写字姿势正确，书写规范、端正、整洁。
5. 学会汉语拼音。能读准声母、韵母、声调和整体认读音节。能准确地拼读音节，正确书写声母、韵母和音节。认识大写字母，熟记《汉语拼音字母表》。

Translation: periodical objective for lower grade pupils
1. Be interested in learning Chinese characters and have the desire to recognize ad to write them.
2. Be able to recognize about 1600 frequently-used characters and be able to write about 800 of them.
3. To command the basic strokes and radicals; to write in sequence; enjoy the beauty of characters.
4. To write properly and neatly;
5. To master pinyin…
6. To recognize and read Chinese characters by means of pinyin. To look characters up in a dictionary via pinyin and radicals, and learn new characters independently. (Ministry of Education of the People’s Republic of China, 2011, p.7-8)

This goal provides some logical proof for the standpoint of this research. To focus on the recognition of Chinese characters follows the physical and psychological nature of lower grade pupils and alleviates the laborious work of writing Chinese characters.
The second reason for the emphasis on character recognition instead of writing is that, with the help of advanced technology, people nowadays are able to communicate in Hanyu without knowing how to write. For the sake of computer or text messaging, all that is needed is to input the pinyin of the character and recognize the right one from many choices. To illustrate, if a student wants to type “hello” in Chinese, she would type “nǐ hǎo” and then a selection of characters will appear on the screen for her to choose the correct one. So it is important to recognize the character associated with its pinyin.

The researcher is more than just a stand-by who writes everything down, but rather an observer who comes to the setting with a series of target concepts, inquiries, and criteria for describing events. During the class time, the researcher kept careful observations of the teaching process, including the conduct of the teaching plan, students’ responses, inquiries, learning strategies, persistence with the texts and outcomes that occurred in the classroom context. Students’ responses in class were also examined to determine those responses that appeared to be a specific response or reaction to the visual features of a character. Field notes and in-depth reflections on these detailed descriptions were kept during and after observations, which were designed to help the teacher-researcher understand and learn from teaching practice and provide information for further reflection and analysis. A timely and elaborate reflective journal could provide examples or evidence for analysis in the later stage and keep teachers thinking about the content, process and outcomes of their work in teaching. Working on one aspect of teaching and learning will naturally lead to a consideration of others, which is an ongoing cycle of reflection (Scarino & Liddico, 2009, p.3). A detailed reflection could provide examples or evidence for analysis in the later stage.

3.4.1.1 Character selection

For CFL beginning learners, they need to start from the easy characters; thus, to control the difficulty and complexity of Chinese characters effectively becomes an important issue for step-by-step educational learning.

The selection principles based on the study standard for the characters used for the experiment are as follows:
(1) Source of selection: all characters used in this study are selected from the General Standardized Chinese Character List (Tongyong Hanzi Guifan Biao) published by the Ministry of Education and National Language Committee of China in 2009.
(2) Selection principle:
A. Frequency: select those with high frequency.
B. visual features: select those with strong visual features.
C. stroke: representative samples are selected from 1-32 strokes in order to avoid too complex characters.

(3) In total, 76 Chinese characters are selected. (See Appendix 1)

3.4.1.2 An example of visual pedagogy of Chinese characters

In order to give a better understanding of visual pedagogy, the researcher here gives an example of the teaching of character “马”.

A flashcard (Figure 3.4) showing the character and its related pinyin, a video illustrating the etymology of the character, and a digital picture of a horse are used in that lesson. The following illustration of a running horse is used under visual pedagogy to teach the character of “马”. The characteristics of a horse can be found in the written form of the character “马” in the flashcard below, such as the cantering body, upward head, falling tail and mane in the middle. The character “马” lightly outlines the figure of the object which it refers to – a horse.

Figure 3.4 A flashcard shown in teaching the character “马”

3.4.2 Interviews

As the Chinese saying goes, “三人行必有我师焉 (Confucius, 2008)”, which means if three of us are walking together, at least one of the other two is good enough to be my teacher, ideas and suggestions from participants and researchers in associated research areas are invaluable. Interviews provide complementary data captured from the perspectives
of participants – direct quotations from people about their experiences, opinions, sensations and comprehension. The use of interviews as a data collection method aims at drawing out rich and thorough data that can be analysed. Open ended questions will be used in order to find as many details as possible, allowing interviewees to give answers from their own frame of reference rather than being restricted by the given questions (Bogdan & Biklen, 1982, p. 1).

In this study, the interview schedule was designed as follows:

1) Student interviews: On completion of the term, nine students were interviewed according to the feedback on the Information Sheet and Consent Form, for 10 minutes each. This semi-structured interview covers: (1) students’ viewpoints of the commonly-used pinyin teaching approach and the innovative visual approach, (2) the effectiveness of the new approach, (3) how this approach influenced students’ decisions on the further study of Hanyu. (See Appendix 2). Classroom teachers conduct the interviews for the researcher. As required by NSWDEC, volunteer Hanyu teachers in ROSETE program should give lessons with the help of classroom teachers in primary schools. On the one hand, classroom teachers could provide necessary assistance and professional suggestions for volunteer teachers, on the other hand, classroom teachers involved into the research indirectly and helped the researcher to improve her teaching. Besides, classroom teachers also helped in collecting the Consent Forms and the Information Sheets, and organizing student interviews.

2) VTR interviews: In addition, two peer volunteer teacher researchers (VTRs) were interviewed about their students’ learning of Chinese characters. These interviews focused on the effects of the common practice of pinyin teaching, which they adopted in their teaching practice, as well as their view of visual pedagogy. VTR interviews were carried out in an attempt to make the best of both pinyin teaching strategies and character teaching strategies.

All responses from students and VTRs except for those that are illegible or incomprehensible were collected and typed up in a list under each question for data analysis in the next step.

3.4.3 Document reading
Apart from the data gathered from interviews and observations that specifically address the research question, documents are another source of data collection in this study. Documents include “a wide range of written, visual, digital, and physical material relevant to the study at hand” (Merriam, 2009). Though these materials are not prepared for the purposes of the evaluation or at the request of the inquirer, they are easily accessible and practical in familiarizing the researcher with her research field.
Relevant documents were examined as authoritative and external information. These public documents were mainly from the Board of Studies NSW, Confucius Institute Headquarters (Hanban) in China and its affiliations in Australia, including a report published by the University of Melbourne and the Confucius Institute, The K-10 Syllabus for Chinese mandatory and elective courses published by the Board of Studies NSW in 2003, the International Curriculum for Chinese language education by the Confucius Institute Headquarters (Hanban) and the The Shape of the Australian Curriculum: Languages. However, what is worth mentioning is that written documents were only a supplement to interviews and observations but not the main source of data in this study, due to the research purpose and questions.

3.4.4 Students’ quiz results and work samples

The Quiz is a process aimed at understanding and improving students’ learning. Work samples can be used to document, explain, and improve performance. In this study, students took a quiz on the Chinese characters they had learnt the week before to evaluate the effectiveness of visual pedagogy. Six quizzes of 15 minutes each were included in this study at different stages of their Hanyu learning. The first five quizzes were arranged to test students’ periodic progress in Chinese character learning under visual pedagogy. The quizzes covered all the characters taught in the previous two to three weeks in the form of matching. All target characters, together with phonological, semantic and graphic distracters, were randomly dispersed throughout three columns, requiring students to recognize the three elements of a target character in a series of isolated choices. An example is given below. The three columns were marked with “pinyin”, “meaning” and “character”, under which each item was randomly aligned. Students were required to match the pinyin with its meaning (pinyin-meaning criteria), and the written form with its meaning (character – meaning criteria) accordingly. Finally, both of these two criteria were reviewed and analysed.
Figure 3.5 An example of the quiz

<table>
<thead>
<tr>
<th>Pinyin</th>
<th>meaning</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>jiù</td>
<td>electricity</td>
<td>晶</td>
</tr>
<tr>
<td>tián</td>
<td>farm</td>
<td>日</td>
</tr>
<tr>
<td>chōng</td>
<td>bright</td>
<td>旧</td>
</tr>
<tr>
<td>míng</td>
<td>bright; shining</td>
<td>昌</td>
</tr>
<tr>
<td>diàn</td>
<td>morning; sunrise</td>
<td>田</td>
</tr>
<tr>
<td>mù</td>
<td>sun</td>
<td>旦</td>
</tr>
<tr>
<td>dàn</td>
<td>past; old</td>
<td>电</td>
</tr>
<tr>
<td>jīng</td>
<td>eye</td>
<td>明</td>
</tr>
<tr>
<td>xīng</td>
<td>prosperous; flourishing</td>
<td>目</td>
</tr>
<tr>
<td>rì</td>
<td>star</td>
<td>星</td>
</tr>
</tbody>
</table>

The sixth quiz was conducted at the end of the term to test students’ mastery of Chinese character writing and application in a broad area. Different from the previous four quizzes, the sixth quiz was composed of listening, translation, character writing, dialogue completion, and a small-scale questionnaire, testing students’ learning in an integrative way.

The results of all these six quizzes were collected and analysed. The analysis mainly investigated students’ learning behaviours under visual pedagogy in a Hanyu class in the framework of Bloom’s Revised Taxonomy (BRT).

3.4.5 Triangulation

The use of a combination of multiple research methods can be a solution to the limitations of the above-mentioned methods. Triangulation, which originated from navigation and military
use, is defined by Denzin (cited in Jick) as “the combination of methodologies in the study of the same phenomenon” (Jick, 1979, p. 602).

Triangulation is not a tool or a strategy of validation, but an alternative to validation… the combination of multiple methodological practices, empirical materials, perspectives, and observers in a single study is best understood, then, as a strategy that adds rigor, breath, complexity, richness, and depth to any inquiry. (Flick, 2002, p. 227 & p. 229)

As a convergent methodology, triangulation possesses the strengths and highlights the weaknesses of each single research method. The mixture of methods of observations, interviews, student quizzes and document reading in this study concentrate on the advantages of each method and offset their disadvantages, aiming at providing accurate and impersonal data from different perspectives. “The use of multiple methods reflects an attempt to secure an in-depth understanding of the phenomenon in question”. (Denzin & Lincoln, 2005, p. 5)

In this study, for example, data gathered from interviews can be checked against observations on site. In this way, high-quality data can be collected for further analysis.

3.5 Data Analysis
Data collected cannot directly generate answers to research questions. It is like the clay in the hands of the potter, which can be shaped into something meaningful only with the potter’s dexterity. After the data is gathered, the researcher needs to break down and analyse all of it. Data analysing began following each teaching practice, classroom observation and interview, in order to review sources of statistics and identify recurring themes and patterns. Subsequent interviews and observations could then be adapted to focusing on emerging themes.

As indicated by Cohen et al., one of the important elements of a case study is “rich, vivid and holistic description (‘thick description’) and portrayal of events, contexts and situations through the eyes of participants” (including the researcher) (Cohen, Manion & Morrison, 2007). Data from a qualitative case study is presented in the form of words rather than in numbers, so the main issue is to move from these narrative data to findings. “The voluminous raw data are organized into readable narrative descriptions with major themes, categories, and illustrative case examples extracted inductively through content analysis. The themes, patterns, understandings, and insights that emerge from research fieldwork and subsequent analysis are the fruit of qualitative inquiry.” (Patton, 2005, p. 1633) Following each gathering phase, all the data collected will be reviewed with the research questions on mind, which in
this study could be extracted as a general goal: to probe the effects of the visual pedagogy of Chinese characters on students’ learning of Hanyu.

In this study, interviews, classroom observations, relevant documents and quiz results provide extensive, descriptive data.

- Interviews with 9 students and 2 VTRs were transcribed and coded by identifying topics, ways of talking, themes, events and so forth, including pauses and overlaps in the conversations, which can seem apparently trivial, but are sometimes crucial. Those lists became a catalogue of codes, consisting of different topics which will be discussed in the following data analysis chapters.

- The teacher-researcher’s reflective journals on classroom observation were analysed by conceptual analysis. During Term Two and Term Three of 2011 (4.28 –9.23), the researcher wrote 18 self-reflective journals (Table 3.2).

<table>
<thead>
<tr>
<th>Table 3.2 Statistics of self reflection analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of reflections</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

The final nine categories are listed as follows:

1 Intriguing students’ interest
2 Stimulating students’ active thinking
3 Promoting recognition and retention
4 Improving students’ understanding
5 Disadvantages and limitations of VP
6 Requirements of VP
7 Teacher’s practice and self-development in VP
8 Inhibiting factors of character teaching and learning
9 Pinyin as a barrier in Hanyu learning

According to these themes generated from my self-reflective journals, I revised the research questions further with the help of my supervisor.
• Related excerpts of documents are quoted and encoded through conceptual analysis.
• Students’ scores in each part of the quizzes are recorded in a form to make the data clear.
  Related work samples are taken as pictures for analysis.

Open coding is adopted in these steps for its inclusiveness of as many possibilities as possible, to “let the data speak for themselves” (Cohen, Manion & Morrison, 2007). For this reason, open coding is taken by the advocates of grounded theory into their concept of bracketing – setting aside presuppositions, prejudices and preliminary ideas about phenomena. Silverman suggests that the coding and data analysis should be “conducted without knowledge of the expectations or hypotheses of the research directions” (Silverman, 2000, p. 186). The point is that, as far as possible, researchers should try to interpret from the data what happened in the research context and not impose a conclusion based on pre-existing theory. In terms of the process, open coding involves "breaking down, examining, comparing, conceptualizing, and categorizing data" (Strauss & Corbin, 1990, p. 61). Variables involved in the incident are identified, labelled, compared, categorized and related together in an outline form. In this way, similar incidents are grouped together to form categories. So fundamentally, open coding is a “process of reducing the data to a small set of themes that appear to describe the phenomenon that is under investigation”. It is also in this way, able to move from descriptions, especially those couched simply in terms used by participants, to more general and analytic categories, which make reference to the more general significance of the event.

On the one hand, coding constructs codes separately from an examination of the data. On the other, coding is not only a way of analysing the content of the text, but also has another important purpose, to enable the methodical retrieval of thematically related sections of the text. (Gibbs, 2007)

In this research, data analysis began following each observation, interview and document reading, as the researcher reviewed sources of information to identify recurring themes and patterns. The analysis of the data involved summarizing the data according to the research questions, and exploring similarities and differences occurring among VTRs’ teaching practice and CFL learners’ responses to this visual pedagogy. The researcher examined the interview transcripts, classroom observation records, the self-reflection journals and documents for effective practices and barriers to effective practice, as well as for consistency between the reports and questionnaires.
Data collected from classroom observation and interviews will be firstly summarized into incidents – segments or units identifying the key topics covered and represented in the participants’ own words. Then similar incidents will be grouped together and given the same conceptual label/theme and at last corresponding categories will be given to each group. In this way, the substantial data will be organized and meaningfully reduced and reconfigured according to their themes.

To be specific, the transcripts from interviews and reflections are analysed qualitatively using codes derived from previous analysis.

Data display is the second factor in Miles and Huberman's model (1994) of qualitative data analysis. It allows researchers to consider the data more textually whether in word or diagrammatic form. The analogy of a funnel in Figure 3 describes the selecting and shaping process of data.

**Figure 3.6 Data Analysis Process**

Conceptual analysis is adopted in this study. In conceptual analysis, concepts are “chosen for examination, and the analysis involves quantifying and tallying its presence” (Writing@CSU, 2010). Since the purpose of this study is to investigate the impact of visual pedagogy on learners, conceptual analysis can offer a wide range of perspectives.

In addition, a web-based tool, Wordle, will be used as a supplementary tool to analyse part of the data collected from student interviews (5.3). Wordle is an application for visualizing text by generating “word clouds” according to the text provided and gives greater prominence to those frequently used words in the source text. It can demonstrate a quick and visually rich way to enable researchers to have some basic understanding of the data at hand for
preliminary analysis and for validation of previous findings (McNaught & Lam, 2010). However, as an adjunct tool, Wordle is not suitable to be used as a stand-alone research tool comparable to traditional content analysis methods. For this reason, I used it as a supplement to highlight those words which appeared with high frequency in students’ answers to some particular interview questions.

Besides, some Chinese concepts such as ancient Chinese sayings, *chengyu* and *suyu* are used in data analysis. *Chengyu* is the traditional Chinese idiomatic expressions, which always come from classics and consist of 4 Chinese characters. *Suyu* is a form of Chinese proverbs. It is less formal and less structured compared with *Chengyu*. Chinese sayings, *chengyu* and *suyu* are used in this thesis to make the descriptions more vivid, and also to bring Chinese culture to this research. Most importantly, all of them are good examples to show the cultural significance of Chinese characters.

### 3.6 Research Principles

This research is concerned with producing valid and generalisable knowledge in an ethical manner.

#### 3.6.1 Validity

Validity is defined by Merriam as “the extent to which the findings of a qualitative study can be applied to other situations” (2009, p. 166). It can be interpreted as the degree to which an account truly represents the social phenomena to which it refers, involving generalising a treatment or measurement to a population outside of the original study (Writing @ CSU, 2010). For simplicity, Silverman (2000) regards validity as another word for “truth” (p.175).

The case study method has long been blamed for its limited validity at the risk of selectivity and subjectivity, whereas, some researchers argue that the case study can produce broad generalisability just as other research methodologies do. “We need to recognize that case studies, limited to a particular set of interactions, still allow one to examine how particular sayings and doings are embedded in particular patterns of social organization” (Silverman, 2000, p.83). A case in point is Mary Douglas’s work (1975) on a Central African tribe, using a case study to make greater generalisations. By the use of comparisons, Douglas has jumped
out of a single case justification to a broader theory of the connection between social exchange and response to anomaly.

Validity can be approached through cautious attention paid to conceptualisation and the method of data collection. Findings have to be assessed associated with the circumstances of this research, rather than being a context-independent production of research methods or data. By claiming validity, I am not saying that the research findings of this study can necessarily be applied to other studies. Although the sample in this study is a specific and holistic instance – a group of English-speaking students of Chinese as a Foreign Language in a western Sydney public school, the research is designed to illustrate a more general principle, aiming at producing broader applications in CFL education, particularly in the area of Chinese character teaching and learning.

3.6.2 Reliability

Reliability refers to degrees of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions (Hammersley, 1992, p.67).

The very strength of the mixed qualitative and quantitative case study, that is, the in-depth access to single cases that researchers have, can also be its weakness. Silverman notes one such weakness as that of the problem of “anecdotalism” (1998, p.25). How are researchers to convince themselves and readers that their ‘findings’ are truly based on critical investigation of all their data and do not rely on a few well-chosen ‘examples’? Silverman is not the first one to question the reliability of much qualitative research. In 1988, Bryman (p.77) indicates that “there is a tendency towards an anecdotal approach to the use of data in relation to conclusions or explanations in qualitative research.” In general, qualitative studies tend to have an anecdotal quality.

Silverman suggests two common responses to the anecdotal problem – “to suggest method and data triangulation and/or respondent validation” (2000, p.177). Triangulation is attempted in the data collecting process in this research by combining four ways, as follows: classroom observation and self reflection, interviews, document reading and quizzes. When abstracting data from raw materials to produce summarized findings, the researcher should think critically about qualitative data analysis in order to aim at more reliable findings. At this stage,
respondent validation is applied by going back to the subjects with the tentative results and refining them in the light of the subjects’ reactions (Reason & Rowan, 1981).

3.6.4 Ethics of the conduct of the research

All research is contaminated to some extent by the values of the researcher (Weber, 1946). This study involves a practice which is an alternative to a standard practice, i.e. the visual teaching method of Chinese characters instead of the common practice of pinyin teaching. The proposal of this research, including design, methodology and evaluation has undergone a peer review process. The Confirmation of Candidature has been successfully completed.

The general principle regarding ethics issues is that there will be no risk to participants as a result of participation in this research project. Before this study is carried out, the “informed consent” (Punch, 1994, p.88-94)”will be received from all participants, which involves:

Table 3.3 What is informed consent? (Source: adapted from Kent, 1996, pp.19-20)

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<td>✗</td>
<td>Giving information about the research which is relevant to subjects’ decisions about whether to participate</td>
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<td>Making sure that subjects understand the information (e.g. by providing information sheets written in subjects’ language)</td>
</tr>
<tr>
<td>✗</td>
<td>Ensuring that participation is voluntary (e.g. by requiring written consent)</td>
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<tr>
<td>✗</td>
<td>Where subjects are not competent to agree, obtaining consent by proxy</td>
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The researcher also needs to assure everyone that evaluations of performance are not the purpose of the effort, and that no such reports will result from classroom observations. Much effort may be needed to assure participants that they will not be adversely affected by the researchers’ work and to negotiate observer access to specific sites (Lofland & Lofland, 1995). Other concerns are as follows:

- Issues of privacy and access will be paid special attention in this study. Consent will be obtained from participants for the use of their data for this study, that is, “informed consent”. No individual participant is identifiable by other members of their group.
• Take participants’ time commitment into full consideration. Each interview with volunteer Hanyu teachers should be limited to one hour; and interviews with participating students should be no more than 30 minutes each during the interval or other time as agreed by both parties, making sure it will not take up interviewee’s learning time.

• Treat participants with respect and seek cooperation with them throughout the research process (Bogdan and Biklen, 1982, p. 9). The participants will be notified that participation is on a volunteer basis.

• All participants will be fully informed of the research. Permission will firstly be granted from the National Ethics Committee to collect data from human participants. Parents of the participating students will also be informed and offered progress and final results of this research. Parents gave written informed consent for their children’s participation in the study ahead of time.

• The dissemination of results will not cause harm of any kind to individual participants – whether their physical, psychological, spiritual, emotional, social or financial well-being, or to their employability or professional relationships.
Chapter 4
The Hindering Factors in Chinese Character Learning

Chapter 3 reported and explained the methodology adopted in this study. This chapter addresses the main factors that hinder Chinese character learning for the learners of Chinese as a Foreign Language (CFL) in western Sydney schools. The discussion is based on the interview data collected from the volunteer Mandarin teachers (VTRs) and Australian school students, the researcher’s own reflective journals, and the students’ quiz results. It includes a review of four widely-used CFL textbooks, namely Nihao (introductory level), Chinese Paradise (elementary), Kuaile Hanyu (for beginners) and Learn Chinese with Me (beginners) and the Australian government and/or Department of Education and Community (DEC) reports on Chinese language teaching, such as a report by the University of Melbourne and Confucius Institute, The K-10 Syllabus for Chinese mandatory and elective courses published by the Board of Studies NSW in 2003, the International Curriculum for Chinese language Education by Confucius Institute Headquarters (Hanban) and The Shape of the Australian Curriculum: Languages. A number of top-down issues are discussed which are shown to influence Chinese character learning in CFL classrooms.

This chapter focuses on three of these issues which were observed as contributing to the current approach to Chinese language teaching in New South Wales, where there is a high-dependence on pinyin coupled with insufficient character teaching and learning. These factors include (4.1) insufficient curriculum support, (4.2) unqualified staffing and (4.3) the complexity of Chinese character learning.

4.1 Insufficient Curriculum Support

This section explores the factors in Australian language curriculum (The Shape of the Australian Curriculum: Languages) which constrain Chinese character teaching and learning in Western Sydney Region (WSR). Data collected from interviews, class observations, a literature review and a brief investigation into four widely-used Hanyu textbooks shows that the relatively insufficient support from curriculum to a large extent contributes to the current problems of Chinese character teaching. The lack of specific reference within the Curriculum to baseline requirements for Chinese character teaching and learning, insufficient time
allocation and teaching materials, and lack of knowledge of characters are identified as contributing to the current situation where Chinese character teaching is under addressed.

4.1.1 Marginalisation of Chinese character teaching in the Australian language curriculum

A curriculum provides a reference for planning, a framework for assessing language competence, and a basis for resource development to cater for a variety of Hanyu learners, without which many problems may occur. However, despite the increasing CFL population in Australia, currently there is no standardised Chinese language curriculum in its education system. Orton (2008) states in the report The Current State of Chinese Language Education in Australian Schools that:

Despite extensive curriculum development across Australia in the intervening years, no Chinese school curricula for use nationally have been developed since then. Those from 1993 are now considerably out of date with respect to Chinese society and language, which have both undergone radical change, and with respect to the focus on the learner and interdisciplinary work that are the norm in Australian schools, and to the nationally endorsed intercultural language teaching approach. (Orton, 2008, p. 14)

According to Orton, the latest effort made regarding Hanyu curriculum in Australia is nearly 20 years ago and therefore out of date as a guide for the current CFL teaching and learning contexts. She regards the current Chinese curriculum as obsolete, considering the out-dated context due to China’s radical development in recent years, the different teaching focus, teaching tactics and approach in Australian schools.

A more recent effort regarding Hanyu teaching is The Draft Shape of the Australian Curriculum: Languages, which was published by the Australian Curriculum, Assessment and Reporting Authority (ACARA) in January 2011. The priority of Hanyu learning in Australian schools is acknowledged in this draft. Along with Italian, it is“…..chosen because they represent languages that cater for greatest range of learners. Chinese is also a national priority… (ACARA, 2011, p. 35)” This statement clarifies the learner group as a main concern for choosing Hanyu as one of the priorities. However, within this draft curriculum document there are no specific requirements for the teaching and learning of Chinese characters. This lack of guidance has created challenges for VTRs. Interviewee Veron talked about the influence of the inadequate support from the curriculum on her teaching:

Unlike other subjects such as maths, Hanyu teaching doesn’t have a valid curriculum to refer to. There is no specific requirement on how many Chinese characters students should know at a certain stage, what characters should be taught and what methods we
can adopt to teach characters. That may explain the increasing irregularity, even the disputes in Hanyu teaching. (Veron, August, 2011)

Veron’s observations reveal that CFL has not received the same curriculum support as other subjects. The lack of requirements for Chinese character teaching in the current general language curriculum creates difficulty for CFL teaching. There is no specific guide on the aims, teaching content and methods that Hanyu teachers can refer to for their teaching practice. This may cause Hanyu teaching to be disordered and unsystematic. Likewise, Orton addressed this problem in her report:

Not all States mandate a specific number of characters to be learnt or identify which are a priority for school students to know, and whether ‘learned’ means being able just to comprehend, or also able to pronounce and write, but by the end of the most commonly used senior textbooks, senior secondary students will in fact have been engaging with about 500 characters. In the New South Wales [Higher School Certificate] HSC Chinese as a Second Language, students are only required to have mastered some 250 characters. (Orton, 2008, p. 13)

Like Veron, Orton contends that Chinese character teaching and learning is in a very tenuous position. The number of characters to be learnt, the priority and proficiency levels of Chinese character learning within CFL learning has not been addressed clearly by any of the States. However, although there was not an explicit curriculum, Chinese character proficiency was required in most senior textbooks and the NSW HSC. Students were expected to be proficient with 250-500 characters by completion of Year 12. There is thus a contradiction between the loose curriculum on Chinese character teaching and at the same time, a specific learning outcome set by the HSC Board. Deciding where to begin with Chinese character learning is therefore problematic. Furthermore, student competency with 250 characters is far from being proficient in Hanyu which requires familiarity with tens of thousands of characters. Compared to Chinese character learning in China, Stage 1 students are required to recognise 1600-1800 characters and be able to write 800-1000 characters (New Course Standards (2001) see section 3.4.1). This comparison of numbers clearly shows that the mastery of 250 to 500 characters is very limited and only at the beginning level of Stage 1 of Hanyu learning. Therefore, this required learning outcome for Chinese language learning is questionable in realising Australian “Asia literacy”.

Although CFL teachers in Australia are not supported by a current and practical curriculum, the Confucius Institute Headquarters (Hanban) takes a significant initiative to organise and describe objectives and content for a standardised CFL curriculum. The Confucius Institute Headquarters (Hanban) is a public institution affiliated with the Chinese Ministry of
Education, committed to providing Hanyu language and culture teaching resources worldwide. As a reference curriculum, the International Curriculum for Chinese Language Education (ICCLE) incorporates a standardized set of themes and topics, including sample activities and content for both English and Chinese and cultural studies, along with recommended grammar, character and word lists. The ICCLE (English version) was viewed for its requirements on Chinese character literacy. The ICCLE promotes the mastery of “Linguistic Competencies” as the goal of Hanyu education, which includes Linguistic Knowledge, Linguistic Skills, Strategies and Cultural Awareness. Chinese characters, as one of the six strands within the Linguistic Knowledge framework, are particularly emphasized in ICCLE.

Currently there is no curriculum specifically addressing the issue of Chinese character teaching and learning in Australia, the absence of which creates difficulties for CFL teachers in their planning and teaching. Within this context students are still expected to become proficient with up to 500 Chinese characters by the end of their CFL learning in secondary school. In terms of the total number of Chinese characters in Hanyu, this learning outcome for New South Wales HSC assessment students is minimal. A review of the curricula in both Australia and China shows Chinese character education is an issue that attracts the attention of educators in China (evident in the ICCLE document), but hardly gets any attention in Australia. Part of the reason may be due to the deficit policies by Australian federal and state governments in recent decades. Therefore, to change the situation in Chinese language teaching, particularly character teaching, a more effective CFL curriculum of this subject is in great need in Australia. The next section explores another critical problem in Australia’s CFL development – time allocation.

4.1.2 Limited time investment in Chinese language teaching and learning

This research also finds CFL learners did not develop sufficient proficiency. This is partly due to the inadequate time allocated to Hanyu learning. In this study, it was observed that each CFL class in the participating primary school was scheduled 40-45 minutes per week. As one part of Hanyu, this time allocation was insufficient for students to effectively learn Chinese characters as is exemplified in the following reflection:

I prepared a lot for today’s lesson. The topic is Peking opera. I planned to conduct a Q&A part after a brief introduction to Peking opera, to teach seven characters relating to the costume and roles, to enjoy a video clip of Ba Wang Bie Ji, a classic Peking opera performance. The result turned out to be not as good as I had expected. It took me about 5 minutes to organize the class: to ask students to get their notebook, to rub off the whiteboard, to set up the computer and Smartboard, etc. Then students took almost 20
minutes to finish reading and answering questions. When I started teaching characters, there is little time left. So I have to rush to explain them. But there is still no time left for the video clip. I came to think that how can students actually learn Hanyu on a weekly basis in such a short time? (The researcher’s self-reflection, August, 2011)

In this excerpt the teacher was unable to complete the lesson plan due to the limited class time. The lesson was planned to be very colourful by including a variety of activities such as passage reading, watching a video, character learning and Smartboard games. However, there was inadequate time to enable the planned content to be fully implemented with the students. Another VTR spoke of a similar experience:

A clear explanation of meaning, way of writing and the pronunciation of a Chinese character needs five minutes or so, moreover, we need to ensure time for students to practise writing, such as tracing the character on a worksheet, which takes another five minutes. So if I plan to teach 5 characters in a lesson, I could probably teach nothing else. It is really time-consuming and ineffective in some sense. For these reasons, I rarely teach characters, but pinyin and more cultural things instead. I would like to teach characters if I was given enough time. I think one Hanyu lesson per week is far from enough if they really want to learn Hanyu well, especially the writing. (Ayala, June, 2011)

“Time-consuming” was the main concern for interviewee Ayala in teaching Chinese characters in her class. She believed that teaching and learning Chinese characters was a slow process. Considering the short teaching time, she made her choice to teach other components of the language such as pinyin and Chinese culture instead of characters. This decision allowed more content to be covered in the given time. Ayala also pointed out that she would like to teach characters if the time permitted this, which further demonstrated the influence inadequate time-allocation may have caused on character teaching. Finally, her experience was that overall, there was limited time given to CFL teaching and learning. This time allocation issue on Chinese language teaching further reflected that this subject was not given priority in schools’ teaching and students’ learning.

The syllabus indicates that the essential content includes a compulsory 100-hours study of Hanyu over one continuous 12-month period between Year 7 and 10 (Board of Studies NSW, 2003, p. 19), which means Hanyu should be given 2.5 hours of school timetabling. However, there is no requirement for younger learners. As to other related official documents such as The K-10 Syllabus for Chinese mandatory and elective courses and The Shape of the Australian Curriculum: Languages, there is no specific requirement for primary schools to set up the teaching time for Hanyu. Individual primary schools had the right to decide the time allocation provided within the total curriculum for students to learn Hanyu. According to the Memorandum of Understanding (MoU, 2009), volunteers of the ROSETE program
provide up to ten class hours of teaching every week. However, the findings from this research based on VTR interviews and the researcher’s own teaching experience in two local schools indicated, 40 minutes on average was set for a Hanyu lesson every week in primary schools and 75 minutes in high schools in WSR. For a language commonly considered time-consuming, the current time investment would be insufficient to yield consistent progress for students. Less time is then available for Chinese character learning.

In general, the limited class time restricted the CFL teachers’ decisions to implement Chinese character teaching. Orton (2008) contends that students will not become literate in the use of Chinese characters if they are taught “only an hour a week” (Orton, 2008, p. 30). In the classrooms observed, the total class time was far less than this in Primary School and 15 minutes more in Secondary School. Given a greater effort is needed in character teaching, a review and revision of the time arrangement for CFL classes by policy makers and language educators is urgent. Educators should carry out a full-scale review of the school curriculum to ensure there is enough language exposure for students who learn Chinese, including immersion in Chinese characters. In addition to curriculum support and time allocation for Hanyu classes, the availability and quality of teaching resources is another concern.

4.1.3 Insufficient resources in Chinese character teaching

For native English-speaking students, Hanyu (including learning Chinese characters) is from a different language family and requires additional time and effort to achieve proficiency when compared to languages based on the same ‘English’ alphabet. When teaching CFL a suitable textbook is a useful approach to provide frequent, sustained opportunities for learners to read, to listen and to practise the language and an effective way to present neat and normative Chinese characters. However, data collected demonstrates that the insufficient appropriate teaching material is another problem in students’ character acquisition. Interviews showed that most primary school students in WSR had no textbooks or workbooks for CFL learning. This was mentioned as a problem by Interviewee Veron. She expressed her concerns regarding the quality of CFL teaching resources.

As to the teaching material, there is no stated textbook for CFL education in NSW. Teachers buy teaching materials themselves and copy those worksheets related to their topic and hand them out to students in class. Even in these teaching materials, students on most occasions are required to trace over characters by rote, which cannot attracts students as a final point. (Veron, August, 2011)
Two issues are raised in this excerpt. Firstly, students did not have a textbook dedicated to their CFL. The Hanyu course was given far less time and attention than other subjects. Secondly, even in those Hanyu teaching materials available, there were not many effective exercises for students to learn characters. The widely adopted way of learning – rote - was not a helpful way to learn characters considering the complex factors involved in this particular group of learners, the complexity of Chinese characters and the cognitive characteristics of these young learners.

In order to provide further insight into this issue the researcher reviewed four widely-used CFL teaching materials in Australia, namely Nihao (introductory level), Chinese Paradise (elementary), Kuaile Hanyu (for beginners) and Learn Chinese with Me (beginners). This review revealed that the contents featured the basic daily language organised around various ‘real life’ topics and settings including schools, families, food, clothing, sports and transportation. The texts were richly illustrated, providing stimulating language learning tools to motivate the users. In addition, Chinese characters were used throughout the texts to enhance learners’ reading and writing ability.

Nihao is a complete Chinese language course for beginning learners. There are five levels in the series and each level includes: textbook, student workbook, audio cassettes/CD, teacher’s handbook, CD-ROM game software and CD-ROM language lab software. Various printing fonts and hand-written scripts are included in Nihao to equip users with authentic materials and provide them with the opportunity to read handwritten texts. A distinctive feature of Nihao is that it includes the traditional form of Chinese characters in the vocabulary list in the appendix. This could be as one of the writers of this series is from Taiwan, where the traditional forms are broadly adopted. This book contains a section named “write the characters” in each unit of the text. The stroke order of some characters is provided clearly in the text in order for learners to follow. In addition, as a supplement to presenting characters stroke by stroke, there is a section illustrating the visual etymology of some characters. A total of two or three characters in each unit are included in this subsection.

Kuaile Hanyu consists of a student’s book, a teacher’s book and a workbook, as well as flashcards, CD and wall map. It focuses both on developing communicative competences in Hanyu and also on motivating the learners. Each lesson contains corresponding character writing practice named “write characters”, in which three to four Chinese characters are
dissected into strokes, and students are required to trace each character stroke by stroke. Even though this is a book designed for beginners, in the Foreword it is claimed the approach aligns with the cognitive needs of learners aged 11 to 16.

Chinese Paradise is a light and cheerful Hanyu resource offering varied opportunities for learning activities. It consists of a students’ book, a workbook, a set of flashcards and multimedia CDs. There are 12 lessons in 6 units. One or two Chinese characters are taught as a part of the content in each lesson (ten in total in the book). All these ten characters have colourful illustrations along with the scripts outlining their meanings, such as “床”, “尺”, and “耳”. Compared with other teaching resources, Chinese Paradise has less exposure to Chinese characters. It emphasizes the learning of pinyin, containing a good deal of exercises such as recognizing the sound and practising the tones.

Learn Chinese with Me is comprised of 36 lessons, each of which contains 6-8 exercises, including exercises on pinyin, Chinese characters, and vocabulary and sentence patterns. As a series of basic level Hanyu course books for 15-18 year-old secondary school students, it places more emphasis on character learning. A practice section entitled “Examples of Components” accompanies each lesson, in which 4-6 characters are displayed with a written explanation of their etymology and development from the different dynasties. A noteworthy principle in the formulation of this series is “identifying and pronouncing Chinese characters first and writing them second (Introduction)”. This principle aligns with the process outlined in the New Course Standards (see section 3.4.1).

The presentation of Chinese character learning in the first three resources, which describe character acquisition as a practising exercise such as tracing and rote memorisation, fails to consider how a character is best represented to young CFL learners, and how learners can best understand the structures and characteristics of a Chinese character and apply that effectively to their learning. One possible reason is that both Kuaile Hanyu and Chinese Paradise were developed by Hanban, which may lack the knowledge of this particular group of CFL learners in Australia. By contrast, Learn Chinese with Me more adequately acknowledges the need for Chinese character learning. It contains a variety of tasks and activities helping learners gradually acquire the knowledge of basic structures, basic strokes, and the most commonly used components, and the stroke order of Chinese characters. However, the target users of Learn Chinese with Me, as clarified in its Introduction, are secondary school students. In addition, some teaching materials developed for beginning CFL
learners are actually aimed at older beginners and as such, are not suitable for primary school students. Therefore, appropriate learning materials to scaffold and address the learning of Chinese characters need to be developed for CFL learners, at all levels, especially for young learners. The last issue that will be addressed in this section is a lack of knowledge of Chinese characters among learners, teachers, and communities.

4.1.4 Teachers and learners’ lack of Chinese character knowledge

Although increasing importance has been attached to CFL education in recent years, there is still a lack of significance attributed to the importance of Chinese character learning among both students and the schools. Many CFL learners and their classroom teachers do not have a clear picture of Chinese characters, which could explain the lack of emphasis given to this element of CFL. The following extract highlights this issue:

I asked students to copy the Chinese characters taught today. One boy put up his hand and asked, “Do we need to write down the symbols as well?” by symbols, he means Chinese characters. His question surprised me. When I say ‘copy the Chinese characters’, I certainly mean the script rather than the pinyin. But their classroom teacher answered his question before me, ‘No, you only need to copy the Pinyin.’ ‘Oh.’ Students seemed relieved. ‘Yes. Try to write down these characters as well, because they are the script of Chinese language. Pinyin is only to help you to pronounce the character.’ I added hurriedly. ‘Oh, is it?’ The classroom teacher seemed more surprised than me and kind of confused. (The researcher’s self-reflection, May, 2011)

Undoubtedly, both the students and the classroom teacher were confused about the role of characters and pinyin. The question raised by the student indicated his conception was that “Chinese character” was synonymous with “pinyin”. He used the term “symbol” for the Chinese character. The classroom teacher was also surprised at the researcher’s explanation that character is the standardized script of Hanyu while pinyin only serves as a tool to help its pronunciation. Consequently, students’ and classroom teacher’s ignorance of characters to a large part led to their ignorance of character learning.

The conclusion that the researcher made from classroom observations is consistent with the information gathered from student interviews. One of the interview questions was “What is the official script of the Chinese language, pinyin or character?” Of the nine students interviewed, four answered correctly. That is, character is the “real Chinese language”; three chose pinyin and the other two said they were not sure and made a guess. Less than half of the interviewees gave the correct answers. Students’ responses to this question demonstrate that the significance of Chinese characters is poorly recognized among these CFL learners. The reason could be the influence of the dominant English language which these young learners
were familiar with and were accustomed to since schooling. Interviewee Ayala met the same problem in her teaching. She justified it as follows:

It’s like a reaction chain…The Hanyu program as a whole has not been valued by schools and teachers in Australia. As a result, students don’t pay deserved attention to Hanyu and character learning. In other words, the curriculum holds low expectations for Hanyu learners. I mean Chinese characters are not required as compulsory. It offers a good excuse for students and CFL teachers not to learn and teach characters. (Ayala, June, 2011)

Ayala’s metaphor of a reaction chain showed there was a top-down reason behind the lack of character teaching. At the top level, not enough attention was attached to character teaching and learning from the decision makers; at the bottom level, consequently, the executer (CFL teachers) and the target objects (learners) may find it easy to neglect it. She suggested that even for those teachers who had recognized the value of character teaching they may in fact avoid the more difficult character teaching in preference for pinyin teaching. As no strict requirement in this respect can be found in the current curriculum, this approach is acceptable.

The challenges discussed in this section are interwoven. Inadequate curriculum support results in the insufficient emphasis paid to character teaching by schools, which as a result leads to ignorance amongst learners. The inadequate knowledge of character teaching results in the teaching content for Hanyu lessons becoming unsystematic. Hanyu classrooms in primary schools focus on familiarization activities such as making origami or other Chinese-style handcrafts, counting to 100, learning courtesy expressions, and drawing a few characters. It could be argued that in these classrooms, very little approximates real language learning and is more akin to providing students with “culture courses” (Orton, 2008). Chinese character learning is treated as a supplementary or extensional task but not a basic component in these ‘culture courses’.

CFL education in Australia is currently being challenged by issues at the policy and practice levels. This section has raised issues of the curriculum, time allocation, teaching resources and the understanding of Chinese characters as contributing to these challenges. The issue of the CFL teaching staff will be addressed in the next section.

4.2 The Supply of Chinese Language Teachers

The term may seem offensive, but by claiming teachers are unqualified, the researcher refers to a particular group of CFL teachers in this study - inexperienced student teachers, volunteer
teachers and beginning teachers on some occasions, including the volunteer teacher researchers (VTRs) from ROSETE groups. The adult participants in this study, including two VTRs and the researcher herself, are pre-service teachers of Hanyu, who had no formal teaching experiences back in China. They started teaching in western Sydney schools as soon as they finished a methodology course offered by NSWDEC. Although most of them achieved a band score of 7.0 in International English Language Testing System (IELTS), which corresponds to high competence in English language, they still lack the specified ability which is necessary to be a qualified teacher in an unfamiliar teaching environment. This section presents these problems regarding the staffing that we as student teachers met in our teaching.

In recent years, student teachers of Hanyu have been sent from China as participants in various programs to engage in professional practice being supervised by experienced teachers of Chinese or classroom teachers (Wang, 2009; Orton, 2008). Data collected from VTR interviews and correlated documents indicate staff can be another influential factor in the quality of Chinese character teaching. Unqualified staff can unwittingly impede students’ attitudes toward the learning of characters and the language as a whole. This section discusses potential influencing factors such as the CFL teacher’s English language proficiency, inadequate familiarity with the Australian educational system, lack of methodologies and teaching strategies, and teachers’ views of Chinese characters.

4.2.1 Hanyu teachers’ English proficiency

The student teachers (VTRs) in this research began their teaching in Australia as graduates of China. Although their English is proficient (as indicated by their IELTS test results), certain elements of English when teaching Hanyu to native English speakers present them with difficulties. In relation to Chinese character teaching, interviewee Veron explained how her English impeded her confidence in teaching characters.

… Most importantly, Hanyu teachers themselves could be the factors impeding character teaching. I don’t teach characters in my classes as a personal choice as I know Chinese characters are hard, for me to teach and also for students to learn. You cannot just write one on the whiteboard and ask students to copy it. They don’t like to do that and it’s a waste of time. So I have to put more time and effort in preparing lessons to make my explanation clear and interesting. But sometimes, I find it really hard to explain what’s on my mind especially when it comes to some specific aspects of a character, because of the language I’m using. So I choose to start from the relatively easy tasks such as listening and speaking. Character teaching is the last option for me. (Veron, August, 2011)
Veron admitted that the language barrier was one of her reasons to avoid Chinese character teaching. More time and effort were needed to meet the challenges brought by language issues, in both lesson preparation and in classroom teaching. Although Veron knew the explanation of the character in her head (in Hanyu), she lacked the English proficiency to fully engage the class in the character’s meaning. In this case the language barrier became a vital issue in character teaching. As a consequence Veron decided to teach Hanyu by listening and speaking (involving pinyin) rather than through writing and reading.

Similarly, the researcher’s experience was:

… I tried to explain the meaning of character “旧”, which basically means old and past. Actually Chinese characters can have more extensive meanings than an English word, such as the character “旧”, which means “familiar” in the word “旧地”, “former” in the word “旧居”, “second-hand” in word “旧货”, and “Palaeolithic age” as a whole in “旧石器时代”. It seems easy when I am writing these as I looked up these words in a dictionary. All I need to do is to explain all the different meanings clearly with examples. But it felt so hard when I actually met it in teaching today. I can’t find suitable expressions to translate all these different words when I was trying to teach them the character “旧”. All I can do is to repeat “old” and “past” again and again, which are most commonly used. Students got confused as I saw them attributing the meanings of these four words wrongly with each other. (The researcher’s self-reflection, August, 2011)

Through this teaching reflection, the researcher found that it was difficult to explain the different meanings clearly when she was teaching the character “旧”. She did not have sufficient English language skills to explain it. Although she knew these Chinese words and expressions very clearly, she was unable to translate and explain them in English. Successful teaching of Chinese characters entails having a thorough understanding of the character, a well-structured instructional language to motivate students, as well as knowing how to efficiently deliver the knowledge (including the meaning and cultural information) to students. It is proved that language was a barrier for all the volunteer teachers whose mother tongue is Hanyu. The lack of English language proficiency can easily lead to inefficient teaching, and constraining Chinese character learning.

In conclusion, the English language barrier for the Hanyu teachers could be one of the reasons hindering the successful teaching of Chinese characters. It concurs with Scrimgeour’s (2010) study which explored the challenges for non-English speaking background trainee teachers in Australian classrooms. This research indicated that teaching the first language in a second language is one of five major challenges faced by these teachers.
In addition to difficulties with English language proficiency in certain teaching situations, the newly-arrived student teachers (VTRs) also encountered significant challenges with their unfamiliarity with the local educational system.

4.2.2 Hanyu teachers’ understanding of the Australian educational system

To reiterate, the ROSETE program is an undertaking through collaboration between the Department of Education and Community (NSWDEC), the University of Western Sydney (UWS) and Ningbo Municipal Education Bureau (NMEB). Participants in this program come to Australia soon after graduating from their university in China, without having any background knowledge regarding the local educational system in New South Wales. This situation renders their teaching a challenging mission.

A critical issue for CFL teaching in Australia is “creating a supply of Chinese-language teachers” (Orton, 2010). She regarded the distribution as uneven with shortages in states such as Western Australia but a surplus of certificated educators in New South Wales and Victoria.

Given the cultural shaping of educational systems and practices, and the fact that both the educational tradition and the lived culture in China and Australia in recent decades have been markedly different, it is not surprising that the almost exclusively Chinese society-educated native speaker teachers of Chinese are far less likely to be effective teachers here than their counterparts teaching French, or even Japanese (Orton, 2010, p.11).

In the assertion that “….the almost exclusively Chinese society-educated native speaker teachers of Chinese” are considered far less likely to be effective L2 teachers, Orton (2010) contends the reasons to be: the cultural influence of the educational systems and practices in China, and the radical differences in the educational beliefs and cultures between Australia and China. The Chinese educational system commits itself to cultivate respectful and hard-working students, in which students are more likely to be disciplined. In Australia, students are encouraged to express themselves, which especially requires experienced teachers to guide their learning behaviour in class. Due to these major differences in educational systems, particularly the value of schooling and the students’ roles, CFL teachers who grow up in the Chinese educational system sometimes find it difficult to adapt to the local teaching environment. Their lack of familiarity with the Australian system of discipline, target setting, may lead to problems such as idealistic and possibly unrealistic expectations of pupils.
The ROSETE program is not a single case when considering the current composition of CFL teachers in Australia. A number of Hanyu teachers currently employed in Australian schools commenced their teaching after graduating from universities in China.

Similarly in the United Kingdom, CFL teachers recruited from China face challenges as they acclimatize to a very different education system. A report published by the National Centre for Languages in the United Kingdom –Mandarin Language Learning Research Study (2007) states:

Teachers from China are described as ‘lovely’ but their lack of familiarity with the English system of discipline and target setting is a problem. They also tend to have different, perhaps unrealistic, expectations of pupils. Concerns are expressed about Chinese teachers’ abilities to manage pupils, particularly whole classes or where there is a tendency for students to be disruptive. (CILT Research Report, 2007, p. 12)

This study reported the possible problems of CFL teachers from China. The unfamiliar teaching environment set a variety of challenges for these teachers, such as target setting, idealistic expectations of students and classroom management, which were the results of a totally different education system. The findings from this report coincide with that of Scrimgeour (2010), which identified four key challenges for teachers as:

1. Unfamiliarity with Australian “cultures of learning”;
2. Perceived low levels of learner motivation;
3. The consequent additional responsibilities required in planning, in order to engage students;
4. The need to see language learning from the learner’s perspective rather than from the teacher’s first-language perspective. (Scrimgeour, 2010, p. 130)

These four challenges indicated by Scrimgeour can be categorized as the CFL teachers’ unfamiliarity with the Australian educational system. Lack of acquaintance with the learning culture, low levels of student motivation, additional responsibilities and transformation of teaching perspective were the subordinating results of teachers’ lack of knowledge of the local education system. Different to the situation in China, where most ESL teachers are native Chinese speakers, many Hanyu teachers in Australia currently are native speakers from Mainland China, Hong Kong and Taiwan. Thus, the dichotomy between the CFL teachers’ own educational background and their new teaching context in Australia creates many challenges for their practice. Consideration of their pedagogy is an outcome of this
dichotomy which needs to be addressed by the VTRs at the commencement of their teaching in Australia.

4.2.3 Hanyu teachers’ pedagogy issues in Chinese character teaching

Another constraint for these volunteer teachers, in addition to their unfamiliarity with the local education system was their inadequate knowledge and practice of methodologies and teaching strategies which did not suit western learners. One of the results was that students were less engaged and motivated in class and particularly in character learning. Interviewee Ayala expressed her opinion on DEC training.

I don’t think we got enough eligible training from DEC or other organizations. During our training, we were mostly introduced to “Child Protection”, classroom games, communicative teaching and so on rather than the specific teaching method of Chinese characters…It is helpful but… As you know, Hanyu is a completely different language from any alphabetic language. Its teaching should be different from English teaching as well. As new teachers, we urgently need particular guidance more than these general training courses. (Ayala, June, 2011)

Considering the unique features of Hanyu, especially characters, Ayala stated that special training in appropriate methodology was needed. However, the methodology training for Hanyu she received did not enable her to feel confident to teach Chinese characters in a Hanyu classroom. From Ayala’s perspective, the training for pre-service Hanyu teachers should be different from general training, especially focusing on the pedagogy for effective teaching of Chinese characters. The researcher experienced a similar challenge:

I handed out the worksheets and asked students to trace the Chinese characters on it. A student complained, “Again…” I know they have been tracing Chinese characters for a long time, almost after each lesson, as a way to familiarize them with the Chinese characters they learnt that day. as well as to keep the classroom calmed down before the bell goes. I did not realize that kids thought it is boring. That is one disadvantage of character teaching, as it deals with the linguistic part of the language, in which students hardly have an interest… In the lunch break, the classroom teacher came to me. We talked about this issue and she kindly gave me some suggestions, for example, to encourage students to write the learnt characters on the whiteboard instead of the worksheet in the form of a game and competition, or to make some changes to the worksheet to engage students, etc. (The researcher’s self-reflection, July, 2011)

The student described in this extract complained as the researcher handed out the worksheet. As a new teacher, she had not considered how to diversify Chinese character learning in order to maintain students’ interest. The disengagement of the students was due to a methodology which was repetitive and monotonous. The classroom teacher was able to make suggestions for changing the teaching approach by including a variety of activities and different worksheets.
The need for adequately trained Hanyu teachers who have a suite of possible methodologies and teaching strategies to implement in practice is imperative. An inexperienced or underperforming teacher may easily miss a child’s chances of forming an interest and desire for learning.

To provide the necessary training for CFL teachers being recruited from China, and in order for them to be effective practitioners, they need to be “bilingual, bicultural and familiar with Australian schools, relationships and learning styles” and “there needs to be concerted, sound and innovative development in pedagogy for Hanyu and in the education of teachers of Chinese” (Orton, 2008, p. 5).

The teacher education programs for pre-service CFL teachers need to develop these teachers’ English language proficiency, provide them with an understanding of both the Australian education system and culture as well as ensure they gain expertise in a range of teaching strategies and methodologies.

4.2.4 The Hanyu teachers’ view of character teaching

In order to gain some insight into the CFL teachers’ attitudes to character teaching in CFL classrooms, the researcher drew on the data from interviews with VTRs. Two VTRs expressed their agreement about the significance of characters in Hanyu. Firstly, Veron stated that:

It’s very important, of course. Sure it is. An English learner who doesn’t know ABCD can be seen as an illiterate, so does a Chinese learner who knows nothing about characters. Among the four aspects of language learning (listening, speaking, reading and writing), two have something to do with Chinese characters, namely reading and writing. Pinyin is only a tool to help pronunciation (Veron, August, 2011).

Um… Pinyin is meaningless without Chinese characters. It is like a beautiful dress, which is a decoration only if it is hung there. But Chinese character is the body, with which the beauty of the dress can be displayed. (Veron, August, 2011)

Interviewee Veron used “It’s very important”, “of course”, “Sure it is” to express her affirmative attitude toward the significant role that characters play in the Hanyu system. It is also very interesting to note that she used an analogy and a metaphor to emphasize her point of view. She expressed the view that a Chinese learner who does not know characters can be seen as an illiterate, like an English learner who cannot read using the alphabet. She equated the position of Chinese characters in Hanyu to the alphabetic symbols in English, which serve as the foundation of each language. In describing the relationship between pinyin and
characters, the interviewee applied the metaphor of a dress and the body. By this she suggested pinyin is meaningful only when it was together with Chinese characters.

In another interview, interviewee Ayala indicated a similar view to Veron.

A second VTR (Ayala), supporting the significance of Chinese characters, stated, “Certainly, it is important. As a Chinese, I can’t agree more with the importance of characters in my mother language.” Here, she expressed her understanding of Hanyu language from her own identity as a Chinese. She strongly affirmed the significance of Chinese characters. Likewise, when asked to speculate from a cultural perspective instead of from the viewpoint of her identity, interviewee Ayala indicated:

Sure it is important. Chinese culture is formed by characters. Character is a reflection of people’s life in ancient China, such as poems, history recordings, and even calligraphy works. It is those characters that ensure Chinese traditions and civilizations passed on generation by generation. While in CFL teaching, it is not the case. It’s not necessary. Since the final goal of CFL teaching is communication, on most occasions, oral communication, Chinese characters are not that important for foreign learners. Even those who do not know any characters can communicate with Chinese people orally without too many problems. Not to mention it is really, really time-consuming. So it depends. (Ayala, June, 2011).

Interviewee Ayala strongly supported the significance of characters in Chinese culture by using the expressions “Sure it is important”. In this excerpt, her advocacy for Chinese characters was based on her understanding of Chinese culture. Chinese characters present a vivid picture of Chinese people’s material and spiritual life from and throughout history. However, Ayala held a negative view of the role that Chinese characters played in CFL learning. She regarded the ultimate goal of CFL learning as fluency in oral speaking, which facilitated her opposition against the “time-consuming” character teaching and learning. A change in her attitude toward the role of characters can be identified at this point. She acknowledges the role of characters as a Chinese educational and cultural icon but within her CFL teaching in a foreign country, she is less convinced of its significance. From her understanding of the Chinese language and culture, characters cannot be separated from the language and culture. However, resolute and firm as she was on the value of characters in language and culture, she negated the necessity of character teaching in CFL. She considered L2 learners can acquire fluency in oral Chinese by pinyin-centered learning without knowing any characters. The reason behind this change relates to a particular context, which is CFL education. The user group of a language and the purpose of learning are the
determinants. When asked to describe the relationship of pinyin and Chinese characters, as interviewee Veron was asked, Ayala’s comments were:

As I said, it depends. But generally Chinese characters are more important than pinyin. Characters are the writing system currently in use in China. If you want to know Chinese culture better, or if your future job requires you to be in touch with Chinese people, definitely you need to learn characters rather than pinyin. (Ayala, June, 2011)

This excerpt indicates Ayala’s support for Chinese characters in preference to pinyin. She recognized the fundamental role of characters in the Hanyu system and their importance in learning Chinese culture. In addition, she suggested that learning Chinese characters would be necessary if learners were proposing careers in China or in business or social relationships with Chinese people. In this comment she related the practical use of characters in real life.

Besides the problems brought by these new teachers, another issue worth thinking about is the insufficient support for recruiting CFL teachers. In these three primary schools involved in this study, none of them have a permanent CFL teacher. VTRs offer Hanyu lessons on a weekly basis under the help of classroom teachers in order to deal with the problems such as classroom management. One problem is that these VTRs only stay one and a half years in Australia, according to the MoU. Due to the low frequency of Hanyu lessons and the off and on teacher supplies, it is hard to build a long-term relationship between the Hanyu teacher and learners and the school, which to some extent also obstructs the character teaching and learning.

In summary, the inexperience of the newly recruited VTRs in terms of their CFL teaching, knowledge of the learning environment and teaching methodologies have been identified as inhibiting factors in the provision of quality Hanyu. Based on the evidence presented, one view acknowledged by the participants was that there is no necessity for L2 students to learn Chinese characters if one considers the aims of CFL education in Australian schools and the complexity of characters. Although the reasons for the VTRs’ choices of teaching methods and lesson content is a response to the above stated factors, both interviewee Veron and Ayala did also espouse the importance of learning Chinese characters. Moreover, it is very interesting to note the huge differences in CFL teachers and learners and classroom teachers’ attitudes toward character teaching. One possible explanation may be their different understanding and appreciation of Chinese culture.
4.3 The Complexity of Learning Chinese Characters

The complexities of learning Chinese characters (a logographic language) need to be acknowledged. There is no doubt that Hanyu learning is challenging for non-native learners whose first language is alphabetic-based. The challenge and sometimes frustration that learning Chinese characters may take could impede the learners’ motivation. In The dropout rate of Hanyu learning before Year 12 is reported to be 94 per cent of CFL learners once Hanyu is no longer mandated (Orton, 2008, p. 4). The retention of CFL learners therefore needs to be a major priority for all those involved. However, the VTRs interviewed in this study commented specifically that their students enjoyed the Hanyu. There is a contradiction between the high drop-out rate before Year 12 and the students’ enjoyment in learning Hanyu in the beginning stages. The reasons for such a high attrition rate need to be identified and addressed if developing Hanyu in schools is to succeed. According to Orton (2008), one main reason is that Hanyu is regarded as too hard by students, who withdraw once the complexities of the language, especially the learning of Chinese characters, become too difficult for them to master.

As discussed in Section 2.1.5, Hanyu, is a totally different language from alphabetic languages, and accordingly requires the learner to acquire a different skill set.

Talking about family members, students keep pronouncing “mā” as “mǎ”. It sounds funny to me, as the latter means a totally different thing – horse. After correcting them for several times, some students still can’t distinguish “mā” from “mǎ”. So I tried to make it clear by introducing them to the tones in Hanyu system. For example, just a small change in tone or stroke can make a completely different character. Taking today’s lesson as an example, I wrote down these four characters on the whiteboard: 妈 (mā), 麻(má), 马(mǎ), 萌(mà), sharing (ma) with slight different tones. However, the meanings diverge as mum, hemp, horse and to scold accordingly. I asked them to read after me. However, they laughed loudly and began to talk to each other. They said to me, “It’s the same. That’s hard!” (The researcher’s self-reflection, September, 2011)

Learners can be easily confused by the different tones in individual characters if they rely too much on pinyin. By contrast, character learning can support the comprehension of tonal differences, but at the same time, may make Hanyu learning more complicated. Students in this excerpt found it almost impossible to differentiate these tonal changes, regarding them as “the same” and “hard”. Hanyu is a tonal language. CFL students may become confused with tonal variations in words as there is no similar feature in the English language system. For an English speaker, no matter what tone you say a word in, the emphasis and emotional attachment to the word can change but there is no alternative meaning attributed to any word relating to its tone. While in the Hanyu system, for every Chinese character, even a slight
difference in tone can create a totally different meaning. The peculiarities of the sound system of Hanyu render learning characters a formidable task.

Besides the similar pronunciation with slight difference in tones, some Chinese characters look the same in their writing forms. Quiz 3 (See Section 3.4.4) was intended to investigate students’ recognition of the written forms of Chinese characters. Ten Chinese characters were listed as follows: 日 (rì, means sun), 目 (mù, means eye), 旦 (dàn, means morning), 田 (tián, means farm), 旧 (jiù, means old, past), 明 (míng, means bright), 昌 (chāng, means prosperous), 晶 (jīng, means crystal), 星 (xīng, means star), and 电 (diàn, electricity). (Figure 4.1, also see appendix). Students were required to match the pronunciation, the meaning and the written form of these ten characters accordingly. The results show that students did not have much difficulty in matching those single characters with the meaning and pronunciation, while around 60% of them failed in these characters which seem similar at the first glance such as “日”, “目”, “旦”, “田” and “旧”. The results of this quiz showed that as a complex writing system, the Chinese characters confused the majority of learners.
These distinctive features identified in the phonology and orthography of characters generated many problems for Hanyu learners in their learning. Student interviewee Ben talked about his experience in learning Hanyu:

I like learning Chinese. It is fun to know how Chinese people created it and the stories about it. But I don’t want to learn the language (Chinese characters). … Chinese is interesting, but to learn how to write is hard. All characters are different… I may not go on with Chinese in high school as… you know, the writing. I may pick up French. It should be easier for me. (Jiali, June, 2011)

On the one hand, learners were attracted by the etymology and cultural stories introduced through the learning of Hanyu. On the other, dissatisfaction by students resulted in the difficulties experienced in learning the characters and their writing. Interviewee Ben
mentioned he intended to withdraw from Hanyu learning in favour of French when he attended secondary school. For English speakers, learning French is easier than learning the ideographical Chinese as English and French share many commonalities, including the alphabet system.

Orton expresses the view that “Chinese characters are not conceptually difficult for students, but are laborious to learn and confusingly alike” (Orton, 2008, p. 29). Interviewee Veron introduces another layer to the discussion in that learning Chinese characters also involves the connection of the characters to the pinyin. She stated:

Frankly speaking, step-by-step acquisition of characters is not easy for them. They have to remember the meaning first, then to learn the related pinyin and pronounce them properly, after that they need to practise writing them stroke by stroke, and at last, they need to connect the pinyin, the meaning and the written form to reinforce their memory. This is reflected in the reality of my class. Students normally have no difficulty in recognising or pronouncing pinyin. But once characters (even if these character shave been taught before) appear on the whiteboard, students often exclaim “What is that?” (Veron, August, 2011)

Veron’s reflection highlights the steps involved in teaching and learning characters, wherein students were expected to acquire familiarity with a language involving a dissimilar spelling system, an entirely different writing system and a dissimilar grammatical system. This research revealed that the most challenging aspect of learning Hanyu was related to the teaching and learning of Chinese characters. Veron summarizes this with her belief that students found no difficulties in identifying or pronouncing pinyin, but rather experienced problems in recognising Chinese characters.

Pei and Sun infer that Chinese characters are the bottleneck of Hanyu teaching and learning, which students found hard to learn, write and remember (Pei & Sun, 2010, p. 157). Being compared as the bottleneck of CFL popularization, Chinese characters have seriously restrained the learning and teaching of Hanyu. For this reason, in recent years, there is a proposition to Romanize Hanyu, by adopting pinyin only instead of characters in daily use (Wang, 2009). Interviewee Veron and Ayala expressed their point of view on this issue: It is ridiculous to discard character just because it takes time to learn. Personally, I have spent many years learning Chinese calligraphy and sculpture since I was very young. I am deeply aware of the beauty and significance of Chinese characters. Character is artistic. How can we abandon an art just because it is special and entails time and effort? (Veron, August, 2011)
I strongly oppose the Romanization of Hanyu, as a Chinese teacher and a Chinese citizen. Chinese culture is built on the characters, which are handed down by our ancestors as great heritage to the whole nation and the world. No matter how hard it is, it is the language learners should devote time to. (Ayala, June, 2011)

Two interviewees were unanimous in their opposition to the proposition of Romanizing Hanyu. Interviewee Veron argued for the artistic value from her early experience of learning Chinese calligraphy and sculpture. Interviewee Ayala conveyed her opposition from the aspect of the characters’ cultural significance. These reflections acknowledge that Hanyu is difficult to learn but artistically and culturally significant at the same time. Therefore Hanyu teachers and language departments need to seriously address this issue in order to ensure the attrition rate from CFL classrooms in secondary institutions does not continue to increase.

4.4 Conclusion

This chapter has illustrated some of the many difficulties involved in implementing a successful Chinese character program in schools in the WSR. CFL education requires: suitable teaching resources; skilled language teachers who can cope with negativity; considerable class time compared to other languages based on alphabetized scripts; and would benefit from the development of a standardized curriculum and assessment framework for CFL teachers and students entering Australian schools. Currently there are no guidelines to reassure local teachers or VTRs of the progression, continuity and sustainability of Hanyu, or more specifically, Chinese character teaching. CFL teachers need to acknowledge the vital importance of learning Chinese characters within Hanyu. Providing CFL teachers with a suite of strategies for engaging students in their learning of Hanyu and characters may necessitate a review of in-service and pre-service education for CFL teachers.
Chapter 5
The Strengths of Visual Pedagogy

5.1 Introduction

The previous chapter explores the inhibiting factors in character teaching and learning in the context of Chinese as a Foreign Language (CFL). As identified in Chapter 4, a more supportive environment for CFL teaching and learning needs to be created, especially for Chinese character learning. In this endeavour, three aspects need to be strengthened, the curriculum, teacher qualifications and an effective method of teaching Chinese characters. This chapter explores the positive influences of visual pedagogy on students’ Chinese character learning, aiming at answering the second contributory question: What are the effects of visual pedagogy in Chinese character teaching and learning for CFL learners? Data mainly come from classroom observation, the researcher’s teaching reflective journal, student interviews and student quiz results. It reveals that visual pedagogy of Chinese characters has a thorough influence on the aspects mentioned in Bloom’s Revised Taxonomy (BRT), namely, remembering, understanding, applying, analysing, evaluating and creating, which exhibit a transition from Lower Order Thinking (LOT) to High Order Thinking (HOT). Bloom’s revised taxonomy is used as a framework to analyse the data from these six aspects. These positive impacts brought about by visual pedagogy, as shown by students’ learning behaviours, are explored and discussed. This chapter covers four sections: visual pedagogy’s effects on students’ remembering, understanding and applying the language; visual pedagogy’s influence on students’ analysis, evaluation and creation in learning; and its constructive influence on students’ learning interest, and on teacher-student relations.

5.2 Visual Pedagogy’s Effects on Students’ Remembering, Understanding and Application in Learning

Classroom observation, quiz results and interviews with both students and VTRs indicate that visual pedagogy can help students to recognize and remember Chinese characters, which could be justified using the first phase of BRT: remembering, understanding and applying.
The remembering level is the fundamental among the six items of Bloom’s Revised Taxonomy. Data suggested that visual pedagogy can considerably improve learners’ memorization of Chinese characters. The following is the researcher’s self-reflection on October 28, 2011:

To test the effect of the lesson last week, I asked students to write the word “China” in Hanyu on the whiteboard. A boy came to the front and wrote both two characters successfully with no hesitation. I was quite surprised as he was not one of the “top students” in the class. He didn’t even show much interest in Hanyu. So I asked him how he remembered the word. He told me that he remembered the picture which I had showed them last week—a pole in the middle of a court is “中” (middle) and a king (王) with a jade (丶) and land (口) owns the whole kingdom (国). (The researcher’s self-reflection, May, 2011)

The boy visualized the word “中国 (China)” into two separated pictures – both related to the meaning of each character. By recalling these two pictures, he successfully recollected related knowledge of the written form which he learned in the previous week. In BRT, remembering is defined as “retrieving, recognizing, and recalling relevant knowledge from long-term memory” (Anderson & Krathwohl, 2001, p. 67-68). In this case, the Chinese words for China have been recalled as factual information at this level by using genuine etymological information and visual clues. Kane (2006) suggests that “the more links you can make with the familiar, the more mnemonics you can use, the easier it will be to remember the characters” (p. 81). The student made connections between the written form of “China” and its meaning, which turned these two irrelevant things (written form and its meaning) into meaningful connections. This example indicates that students’ seeing how the character was composed during the period in which the script developed can ease the difficulty of memorizing.

There is further evidence from the researcher’s teaching experience, showing that visual pedagogy can help students to memorize Chinese characters. It is a lesson on typing Chinese characters on a computer as a response to students’ high-tech life. It proves that the Internet can be used to provide high frequency encounters with characters. It is especially beneficial for those students who live in a community that does not have many Chinese elements. PowerPoint slides were used with different pictures depicting the visual clues. Students were asked to type the character on the line according to the picture and the pronunciation given and then give the meaning of each character (see the example of “明” below). Here is the researcher’s reflection on her students’ typing practice:
The result was inspiring. Students typed all ten characters correctly. They successfully recognized all the characters they have learnt from a list of choices and gave out the correct answers. It is not hard to type Chinese characters. All they need to do is to input the according pinyin, and choose from a list of options shown on the screen (shown on the right). It is the choosing and explaining parts that are really hard as they require students to have the knowledge of its written form as well as to extrapolate the meaning from the picture. (The researcher’s self-reflection, July, 2011)

This lesson focused on students’ recognition of both the written form and the meaning of different Chinese characters during their typing. The character shown in this excerpt conveys its meaning through pictorial resemblance to the physical object. Huang (1985) explains the process of inputting Chinese characters as following these two steps: firstly, pressing the function key for shifting to the phonetic code; secondly, pressing a numerical key to select the correct code. In this task, as mentioned in this excerpt, students needed to complete one more step: interpreting the picture. After recognising the picture and the character represented by the picture, they could input pinyin, recognize the correct form and make a choice. Pictures given beside pinyin were expected to provide visual clues for processing the form and meaning of the character. The result shows that students have mastered both the written form and the semantic meaning of these Chinese characters. The recognizing and recalling process described in BRT are implemented by students in this process. The meaning interpreting part suggests that visual pedagogy also helps students in the higher level of understanding. BRT defines this level as “constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining” (Anderson & Krathwohl, 2001, p. 67-68). In the second taxonomic level, students are required to reword and explain the picture in a meaningful way. The success of this typing task could be attributed to the novelty of the Chinese orthography. The graphic characters construct meanings to be used in typing. The result reveals an understanding of the visual information presented on the PowerPoint slides. BRT recognizes this level as being more complicated than the remembering level. In other words, graphic
characters contain scaffolding elements which help students progress in their learning of Chinese characters.

In addition, visual pedagogy was also found useful in promoting students’ application of Chinese characters at the knowledge and comprehension level, which is the third taxonomic level of BRT. The following is an excerpt from the researcher’s reflective journal:

Moli told me that she learnt how to sing the Happy Birthday song from Youtube. So I invited her to sing for the class. She is so lovely though I cannot understand a word of her singing. I do appreciate her courage and passion for Hanyu learning. I was seized by a whim and decided to teach them how to say “happy birthday”. I wrote “祝你____快乐 (zhù nǐ ____ kuài lè, means happy ____ to you)” on the blackboard and asked them to fill in the blank. Some of them thought for a while and gave me the correct answer: “生 (shēng, means born)” and “日 (rì, means day)”—the former looks like a tree growing and the later a round sun, which means born and day in the extended sense. Although they learnt these two characters separately in two previous lessons but not in the form of a word, they made an intelligent guess. (The researcher’s self-reflection, August, 2011)

By referring to those learnt Chinese characters, students made up words or even sentences based on their prior knowledge. According to BRT, applying is “carrying out or using a procedure through executing, or implementing” (Anderson & Krathwohl, 2001, pp. 67-68). Students in this extract thought holistically about the Chinese characters learned and applied them to novel situations. They employed their prior knowledge to make a combination of two characters and form a new word.

Students’ quiz results support the above findings. For every one or two weeks, the teacher researcher set up a quiz for students to take so that she was able to check the effectiveness of Chinese learning using visual pedagogy. Six quizzes were conducted in this research in total, four for the first stage of design (during a school term) and two for the second stage (at the end of a school term). In the first four quizzes, the researcher used two experimental tasks: Pinyin-meaning correspondence (the phonetic judgement task), and shape-meaning correspondence (the ideographic judgement task). The researcher particularly chose those characters with strong ideographic features to teach and test. The characters in the quizzes share no blurred similarity so that participants have to make decision based on the semantic or phonological attributes of each character. And the results of these four quizzes (Table 5.1) definitely were consistent with the researcher’s finding from classroom observations. That is, visual pedagogy in CFL teaching was effective in helping learners to remember and understand Chinese characters.
Table 5.1 Results of the first four quizzes

<table>
<thead>
<tr>
<th>Quiz</th>
<th>Participating students</th>
<th>items</th>
<th>Average score: pinyin-meaning correspondence</th>
<th>Average score: shape-meaning correspondence</th>
<th>Difference value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz 1</td>
<td>25</td>
<td>6</td>
<td>5.44</td>
<td>6.32</td>
<td>0.88</td>
</tr>
<tr>
<td>Quiz 2</td>
<td>17</td>
<td>10</td>
<td>3.24</td>
<td>5.29</td>
<td>2.05</td>
</tr>
<tr>
<td>Quiz 3</td>
<td>17</td>
<td>10</td>
<td>2.18</td>
<td>4.47</td>
<td>2.29</td>
</tr>
<tr>
<td>Quiz 4</td>
<td>25</td>
<td>8</td>
<td>3.52</td>
<td>4.68</td>
<td>1.16</td>
</tr>
<tr>
<td>Average</td>
<td>21</td>
<td>8.5</td>
<td>3.595</td>
<td>5.19</td>
<td>1.595</td>
</tr>
</tbody>
</table>

The table shows that students scored much higher in shape-meaning connections than in pinyin-meaning correspondence, with a difference as high as to 1.595 points on average. The much higher scores in shape-meaning correspondence suggest that the Chinese character recognition is more often graphically related. In other words, the shape of a character provides more useful visual clues to access the meaning of the character. In contrast, pinyin offers very limited information for identifying a character considering the arbitrary match of the sound and meaning. In general, graphical information, such as the distinguishing visual features, could mediate access to meaning in Chinese and be fully explored to perform some Chinese character identification task. The results support the previous studies discussed in Section 2.1.4 (Huang & Ma, 2007). Huang and Ma propose “the logographic nature of Chinese characters engenders a contention that there exists a close relation between shape and meaning for Chinese characters” (p.10). In saying this, they indicate that reading characters relies more on visual cognitive processes than on phonological processes. On the one hand, it proves that visual pedagogy, which emphasizes the visual information of characters, helps students to learn Chinese characters; on the other hand, it provides evidence for the adoption of visual pedagogy in Hanyu classes. However, the evidence in the table also shows a very low scoring rate in the phonetic judgement task and higher in the graphical judgement task. Students score averagely 3.595 out of 8.5 in pinyin-meaning connection and 5.19 out of 8.5 in shape-meaning connection. In other words, students successfully recognised 45% of the learnt characters relying on phonological information but recognised 61% of the learnt characters using visual clues. This demonstrates that visual pedagogy is a much more efficient method than pinyin method in teaching Chinese characters to young language learners in Australian schools.
The other two quizzes in the second stage of design were conducted at the end of the term to test students’ mastery of Chinese character writing and real-life applications in a broader area. Different from the previous four quizzes, the fifth and sixth quizzes were composed of listening, translation, character writing, dialogue completion, and a small-scale questionnaire. In the character writing part, students were asked to write characters according to the meaning given, such as “China”, “water”, “rice”, “hand”, “book”, “meat” and “Chinese knot”. They demonstrated the ability to write most of the characters. One of the students answered all questions correctly. Most excitingly, he wrote two characters “书” and “手” which were taught last term in the extension part.

Interviewer Ayala and Veron, two VTRs teaching Hanyu in local schools, hold a positive attitude toward visual pedagogy in Chinese character teaching. They talked about the role of visual pedagogy in promoting students’ understanding of Hanyu language.

It (visual pedagogy) helps them (students) to understand, makes Chinese characters impressive and helps them to think creatively. Sometimes my students will create characters according to their understanding (Ayala, June, 2011).

Students understand the meaning better and faster using pictures. They can make full use of the connection that exists in pictures and their daily life. Visual pedagogy visualizes Chinese characters into vivid pictures. Students can refer to a picture to search for the meaning behind the script (Veron, August, 2011).

Both interviewees recognized the positive influence of visual pedagogy on students’ learning. Interviewee Ayala directly indicated that visual pedagogy could help students to understand the meaning and made Chinese characters impressive and the learning process creative. Interviewee Veron pointed out that visual pedagogy benefited students by mobilizing various connections that exist between their daily life and the unfamiliar scripts. In general, visual pedagogy helped in understanding and transforming the normally invisible, abstract act of thought into a concrete and public media (Caviglioli and Harris, 2003). In other words, the potential connections between the script and the meaning are activated and became visible through visual tools (Margulies and Valenza, 2005).

Visual pedagogy’s function in students’ remembering, understanding and applying Chinese characters can be justified by a research finding in the area of verbal memory. It suggests that memory can be greatly improved by relating new information to what the learner already knows, especially by putting new information in the context of learned knowledge that is semantically congruent with the new knowledge. From this viewpoint, applying learned orthographic knowledge such as strokes, components and even the whole character, that are
semantically congruent with the new characters and other prior knowledge students have acquired from other subjects, when analysing a Chinese character, could be considered an effective strategy for character learning (Shen, 2005, p. 61). When a character is visually presented, learners are able to get enough information from the pictures and therefore enhance their understanding and memory and facilitate their real-life use of the new characters.

5.3 Visual Pedagogy’s Effects on Students’ Analysing, Evaluating and Creating

Data analysis reveals that besides its role in developing students’ first three taxonomic levels – remembering, understanding and applying - visual pedagogy was also useful in the development of the next three levels in BRT - analysing, evaluating and creating.

In the fifth and sixth quizzes, students scored high in the “Sherlock Holmes” part. The “Sherlock Holmes” part was designed to test students’ flexible use of the learnt Chinese characters and learning new characters on the basis of the learnt ones. Examples are shown below (Figure 5.1).

**Figure 5.1 An example of the “Sherlock Holmes” part**

Guess the meaning of a Chinese character according to the clue provided.

1) ☀ means sun  →  ☉ means ( ) A. sunrise  B. farm  C. moon
2) ⼒ means heart  →  影 means ( ) A. upside-down B. unease  C. joy
3) 棵 means a tree  →  坑 means ( ) A. lake  B. forest  C. ocean

Characters shown in “Sherlock Holmes” are comprehensible on the basis of the prior convention. The information provided on the left of each arrow is the prior convention, which offers the necessary visual clue for students to analyse the characters and words on the right. Take the first one as an example. “☀” is the visualized sun. Students were asked to draw useful information from “☀” and analyse the “☉”, which has one more stroke under the character “☀”. So students may speculate the character “☉” refers to the scene of sunrise above the horizon. Then option A, “sunrise” should be chosen as the correct answer. The skills reflected in this part are in accordance with the fourth taxonomic level in BRT – the analysing level. BRT defines analysing as “breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through
differentiating, organizing, and attributing” (Anderson & Krathwohl, 2001, pp. 67-68). Students’ performance in this part of the test was outstanding. The results demonstrate that students scored 2 out of 3 points on average in this part. As abstract visual representations (Moreno, 2010), these characters involved in this part of the quiz promote better problem solving by focusing novice students’ attention on structural problems. The student participants broke ideas into parts and extended their prior knowledge of the learned characters. This is a far more difficult task than those given in the preceding categories as it requires divisible screening of the thought process (Lord & Baviska, 2007).

The researcher observed that as the students’ knowledge of Chinese characters increased in her Hanyu classes, visual pedagogy more frequently impacted on students’ evaluating skills. Most students showed an intense interest in Hanyu learning and started to explore the deep meaning in this language. They raised different kinds of questions concerning the formation, the etymology and other background information of characters. An example is given below.

One boy put forward his opinion when I was explaining the character "尖" (the upper part “小 (xiǎo)”, as a single Chinese character, means small and the lower part “大”, as a single character, means big) that there could be another way to write it. He asked that why not change their position and make the upper “大 (dà)” and the lower “小”? He went to the front and wrote the character which was made up by him on the whiteboard, which looks like 🍀. He then explained that if the upper part is obtuse and the lower part penetrating, the character could also mean sharp ... An interesting question, isn’t it? At least I’ve never thought about it in this way. He then said, “The shape of a character cannot show every aspect of its meanings. I think there can be lots of explanations for a character. (The researcher’s self-reflection, July, 2011)

This piece of reflection from the researcher indicates that the student participant was able to raise an evaluation-level question. He challenged the conventional ideology and gave a conclusion about the configuration of Chinese characters based on his understanding. As a native Chinese speaker, the researcher took the written form of the Chinese character "尖" for granted, as she was taught in the traditional way when she learned this character. However, it was not the case for most CFL students. As L2 learners, they start to learn a foreign language (in this context Hanyu) after they have developed some abilities to evaluate, to compare and to challenge the foreign language. BRT defines evaluating as “making judgments based on criteria and standards through checking and critiquing” (Anderson & Krathwohl, 2001, pp. 67-68). This participant’s ability to evaluate the particular Chinese character demonstrates that he was a visually literate learner and had a critical sensibility toward visual communication (Fransecky & Debes, 1972). Further evidence reveals that the student
participants of this research tended to visualise Chinese characters during their learning and enjoy their creative way of analysing Chinese words.

When teaching numbers in Chinese today, I asked the reason why “一” stands for “1”. One of the little boys in front answered, “Because it is upside down!” It was funny and creative, though my expected answer was “because there is only one line in the character”. (The researcher’s self-reflection, July, 2011)

Pictures offer equality of access to texts for students, and provide an effective medium for promoting reflection and thinking (Bromley, 2001). The student in this extract visualized the Chinese character “一” and connected it with the Arabic word “1”, and provided a unique answer. The student’s explanation of the Chinese written form of “one” was inspiring. For these CFL students, Hanyu is their second language, to some it is even a third language. They were able to access, justify and judge characters with their prior knowledge, and through their unique lens. This broadened their field of view and helped them to interpret those characters from a different angle.

Some students demonstrated their creative thinking in Hanyu learning through Chinese calligraphy lessons. They started to create new words by employing the visual knowledge of Chinese characters they learned. The following is an extract from the researcher’s reflective journal on the Chinese calligraphy lesson, which was designed to help students’ writing of Chinese characters and to offer more cultural information.

Fifi showed me his masterpiece as shown below (Figure 5.2). I tried hard to tell what character it is but I could not. He told me that it means “hospital”. He got me confused as I never taught them this character. In addition, his writing is wrong if it is the character for “hospital”. He explained that he made this character, but with particular meanings - the box outside means land, and the cross inside the box stands for the Red Cross, so the whole character means hospital. Obviously, he was inspired by the character “国 (guó)”, which was explained as the land outside (口), and a king (王) with a piece of jade (丶). (The researcher’s self-reflection, June, 2011)

Figure 5.2 The student’s creative masterpiece
Fransecky and Debes (1972) argue that the visual competencies enable the learner to discriminate and interpret the visible actions, objects, and symbols, natural or man-made, that he encounters in his environment. The student in this excerpt actually created a new character that makes sense in terms of Chinese orthographic rules but does not exist in Hanyu. He structured the character based on his prior knowledge -- the positional regularities for radicals in Chinese characters, which he acquired from previous Hanyu lessons. In spite of the accuracy of his creation, he showed the ability to pattern knowledge in new and original ways, demonstrating his creativity. BRT defines creating as “putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing” (Anderson & Krathwohl, 2001, pp. 67-68). The student combined what he experienced into what is considered a novel sensation. Such original thought resides high on a learning hierarchy.

5.4 Improving Students’ Learning Interest

Another important finding of this study is the effect of visual pedagogy in building students’ learning interest in Hanyu and Chinese characters in particular. A noticeable change in students’ attitude to characters was observed in classes. At the beginning of this study, many students were fairly reluctant to learn Chinese characters as they thought they were hard to learn. Those who had learnt Hanyu previously were only confronted with pinyin. Chinese characters were set aside as “extras” or reserved for those “good learners”. The teacher-researcher also found students used pinyin only in their note taking. Chinese character learning seemed to be an impossible task for these students. The difficulty in learning Hanyu was attributed mostly to the challenge in learning Chinese characters (Pei & Sun, 2010; Shen, 2005; Moser, 1991). Hanyu learners, young learners in particular found great difficulty in learning to write and remember the scripts. Pei and Sun address this problem as “the
bottleneck” (2010, p. 157) in Hanyu learning. This was regarded as the main reason why students drop off CFL learning. However, the situation changed dramatically after the teacher researcher’s months of teaching, using visual pedagogy. The following are from the researchers’ reflective journals in September and October – three months after visual pedagogy was implemented.

… What’s more exciting is that, a girl raised up her hand and asked me to write down the word for “panda” in characters when we were practising the Hanyu dialogue “what’s your favourite animal?” Usually, they asked me “how to say the word” when they want to know a word rather than “how to write the word” or “how to write the symbols”. This was the first time they asked me to show them the characters of a new word for them. I think partly it is because they were interested in panda, and partly because they came to understand that Chinese characters were not as hard as they perceived before. (The researcher’s self-reflection, September, 2011)

After reviewing the word “中国 (China)”, I introduced them how to say their nationalities using the sentence “我是____人 (I am ____ ).” Lucas asked, “Miss, can you write down the symbols of Australia please?” Then more and more students asked me to write their home countries for them: New Zealand, Fiji, India, Greece, etc. (The researcher’s self-reflection, October, 2011)

As indicated, students in these two excerpts showed great interest in character learning. Their reluctance disappeared as CFL learning progressed. Some of them took initiatives in asking the written form of some particular characters. Despite the interest in the words themselves, presenting characters in visual forms was new to students but provided them with stimulation in learning. This promoted their motivation and alleviated the difficulty in learning. This finding in the classroom coincided with Mantzicopoulos and Patrick’s (2011) conclusion that one of the benefits of engaging with pictures in learning is it can promote students’ interest and appreciation of the subject, accompanied by the gains in knowledge. Interest and appreciation of the subject are two important indexes of engagement that are related to actual activity choice and participation.

This transformation in attitude to Chinese learning is in accordance with evidence collected through student interviews. The excerpt below displays the responses from all student interviewees to one of the interview questions “Do you like learning Chinese language and characters in this visualized way?” Data revealed that students held a positive attitude to visual pedagogy.

Wenjie: Yes, It is interesting to learn the meaning and the written form of characters in pictures. (August, 2011)
Jiali: I think it’s very interesting. And you get to know different cultures. You learnt different words that you never heard before. It is easier for us to learn. If you just write a full page of questions, we don’t know what each is. You do characters in a circle. It is easier for us to learn and remember. (September, 2011)

Jingyan: Yes, I think it makes the learning easier and more interesting. You teach that one and make it more. (August, 2011)

Dehong: Yes, because it tells us stories. Looks just like the things. (August, 2011)

Yang: Yeah, I love it. It’s getting really interesting… It could. It might help me a bit. Sort of. It probably could help me remember characters… I probably will choose Chinese in high school. (August, 2011)

Chunlin: It is interesting. Pinyin is much easier, but characters are more fun and you get to know how to write this different language. It is good for us to understand, to remember and to imagine (September, 2011)

Junqing: Yes, a lot. I like it. It is fun. We can learn more languages. And it’s creative and interesting. (August, 2011)

The researcher used Wordle (see Chapter 4) to analyse the above interview transcript and generated the following picture (Figure 5.3).

Figure 5.3 The picture generated by Wordle

The picture provides a vivid interpretation to students’ preference to the visual pedagogy in Chinese character teaching. Words such as “yes”, “interesting”, “easier”, “characters” and “remember” are enlarged as words of high frequency in interviewees’ responses, which shows that generally interviewees held a positive attitude toward visual pedagogy. In particular, it gives special prominence to the word “interesting”, as it is used by almost all
interviewees. Gardner’s (1985) view is that the instrumental or integrative orientation towards another language motivates students to learn it. He defines the integrative orientation as the orientation motivating students to learn another language in order to identify closely with the other language’s speakers and cultures. The instrumental orientation on the other hand motivates them to learn another language for more utilitarian purposes such as gaining a good exam grade or selling more goods abroad. The analysis of the data found that students’ interest in Hanyu can be divided into the following kinds: an integrative motivation, such as to “learn more languages”, to “know different cultures” and to “learn the meaning and the written form”; interest in the teaching method/pictures, such as “characters in a circle” and “stories”.

In addition, the beneficial role of visual pedagogy in promoting students’ interest can also be found in Hanyu class observations. One of the lessons revolves around the picture below. The picture depicts natural scenery: shining sun, floating cloud, mountains covered by trees, deer standing on a rock, fish and boating. All of these factors are formed by eleven visualized pictographic characters and ideographic compounds, as shown below: 日 (rì, sun), 火 (huǒ, fire), 云 (yún, cloud), 木 (mù, tree), 林 (lín, woods), 山 (shān, mountain), 目 (mù, eye), 水 (shuǐ, water), 石 (shí, stone/rock), 魚 (yú, fish), 舟 (zhōu, boat). Most of these characters are derived from a pictorial representation of objects. Complex ideas are described by grouping of patterns, within an imaginary rectangular frame. The following is an extract from the researcher’s self-reflective journal of this lesson:

I showed them the picture (Figure 5.4) with these 11 visualized characters on PowerPoint slide and asked them to guess the meaning of each. Out of my expectation, they recognized 9 out of 11 characters according to the clue I gave them. They kept trying again and again. Even those who showed little interest in learning Hanyu joined their classmates. “Cool!” “It’s awesome!” Students kept saying that. A girl said, “They (ancient Chinese people) are amazing!” (The researcher’s self-reflection, May, 2011)
Students were attracted by the picture the researcher gave them in this lesson. They took an active part in the class and guessed most of the Chinese characters on the picture correctly. Interestingly enough, not only students who liked learning Hanyu, but also those who were less interested in the Hanyu class, participated into this class actively. As mentioned previously, research into child psychology (Mantzicopoulos & Patrick, 2011) suggested that pictures can notably evoke children’s interest. As a stimulus, pictures involve students by colours and shapes. The visualized Chinese characters are proved to have the same effects.

When the researcher first started to teach Hanyu, students preferred to learn pinyin to characters. A noticeable change took place after the researcher applied visual pedagogy in character teaching.

When the character “气” (complex form) shows up in the video, Madison asked (by shouting), “What does that mean?” I laughed to myself – it’s a fantastic opportunity to teach them Chinese characters. So I drew rice and steam on it (they laughed), “This is the origin of this character. Hot rice with steam on the top, means steam and spirit, extended as power and strength.” “Oh…” (The researcher’s self-reflection, July, 2011)

Students showed interest in Chinese characters. They took the initiative to ask the meaning when they showed up on the screen. The researcher took it as a good opportunity to introduce them to more interesting Chinese characters.
I asked students to copy the sentence “我是澳大利亚人 (I am Australian)”. Junqing was so surprised at the writing on the blackboard and asked me, is the component “米” in character “澳” because of the pattern on Australia’s national flag? I was surprised too. I explained to him the etymology of “米”, “奥” and “澳”. (The researcher’s self-reflection, August, 2011)

Joseph associated far away from the components of the Chinese character “澳”. He thought actively and built a connection between this character and the meaning of every component of the character.

When copying “星期 (xīng qī, means week)”, Yang asked me, “Does the right half of ‘期’ mean moon?” Yes. I taught them the character of moon last week. I was quite interested in hearing his question. So I explained to him what ‘日’ is and what ‘月’ is. The word ‘星期’ is related to sun and moon. Joseph thought for a while after my explanation and said pleasantly, “Yes, the movement of sun and moon. The ancient people already knew it at that time. That’s amazing!” (The researcher’s self-reflection, August, 2011)

Within cognitive theories of second language acquisition, learning involves building up the knowledge system or architecture which over time and through practice becomes automatically accessible in reception and production (Scarino & Liddico, 2009). Data collected from classroom observations and student interviews demonstrated how visual pedagogy encouraged students’ participation and facilitated their cognitive and affective engagement with Hanyu learning. It motivated students to explore the principle and beauty of Chinese characters by themselves and to learn more. A Chinese saying goes like this, “兴趣是最好的老师 (xìng qù shì zuì hǎo de lǎo shī)”, which means interest is the best teacher in learning. Visual pedagogy proved to be a successful method to stimulate the learners’ interest.

5.5 Better Teacher-student Relationship

The previous section explored the impact of visual pedagogy on students’ Chinese language learning and found that it was an effective method for the learners in the aspects of remembering, understanding, applying, analysing, evaluating and creating. It could also increase students’ interest in character learning. This section discusses how this pedagogy influenced the teacher-student relationship.

When she first started teaching a year ago, the teacher researcher found that some students showed little interest in Hanyu, particularly character learning. They behaved noisily and disrespectfully in class. Classroom management turned out to be a ‘big headache’ for the researcher:

…I tried to teach them the characters while this kind of trouble kept occurring all the time – Xiao throwing a rugby ball in the classroom, Qing spent all the time colouring a spider without paying any attention to my lesson, Zhe said 5 F words to Mr. Richards (the
casual teacher), boys kept talking after my kind reminding, boys refused to play the
game... It is of no use trying to persuade them. My experience told me, the Chinese
saying “晓之以理, 动之以情 (convincing with reason and moving with emotion)”
doesn’t work here. (The researcher’s self-reflection, June, 2011)

This piece of data reveals that the character teaching class was out of control. The students
were not concentrating on the Chinese characters. On the contrary they refused to listen; they
were distracted and misbehaved in class. The teacher researcher tried to attract their attention
but failed. Similarly, the following reflection journal records one of the lessons at her early
stage as a Hanyu teacher.

Before the lesson, students waiting in the corridor greeted me excitedly, "Hi, Miss." Fan
asked, "Are you going to teach us today?" "Yes, Miss Xu (the classroom teacher) asked
for leave." "Good, you are awesome." Wow... Getting praised for the first time, my heart
bursts with joy... It was not until the end of the class I came to understand what Xiao
meant by saying those words – you are awesome because you look nice and you will not
send us to Mr. Chou (the only teacher whom these boys are afraid of) and we can do
whatever we like in your class. (The researcher’s self-reflection, June, 2011)

Like the previous excerpt shows, the beginning stage of the researcher’s teaching seems
troublesome as students were not interested in learning Hanyu. They were excited before the
teacher researcher’s class started. This was not because they loved Hanyu but their ‘real’
Chinese teacher was absent. This implied that they could behave badly in her class without
punishment. However, the visual pedagogy changed the situation. Students became interested
in learning Chinese characters and Hanyu language. Pictures and stories behind the ages-long
Chinese script attracted them.

I explained the etymology of the characters “女”. A boy at the front row asked, “Did you
say ‘girls’?” I suddenly realized my pronunciation of ‘girls’ (in English) has an accent. I
felt sorry and explained embarrassedly, “Yes, I mean girls. Sorry for my accent. It may
lead you nowhere.” Some other students seemed angry. “You are so rude!” Some
students called out at the boy. It seems that they wanted to protect me from this
‘embarrassment’. Most of the students in my class showed great patience with my accent.
I guess this is because they are interested in my Chinese knowledge, the knowledge I
have, to explain the formation of Chinese characters (The researcher’s self-reflection,
June, 2011)

The student corrected the researcher’s mispronunciation in a disrespectful way, which caused
the criticism from the rest of the class. Most students showed their respect and friendship to
the teacher. The researcher attributed this to the unique visual pedagogy she employed –
explaining how Chinese characters developed from their original ideographic form. The
simple and interesting pictures allow them to start from the easiest one step by step and
gradually learn characters with high complexity. This brings positive impact on the emotional
aspect of the learners and boosts their leaning efficiency (Huang & Ma, 2007, p.16). More
importantly, the teacher-student relationship was improved through the researcher’s employment of visual pedagogy.

In addition, as part of the feedback from students, the researcher set two questions on one of the quizzes to gather their viewpoints.

One of the students wrote on the quiz paper to my question that “Do you like the visualized way we adopted to learn Chinese characters in class this term?” “I love Chinese so much I don't want you to go! I want to cept (keep) on learning Chinese till I die. Thank you for teaching everyone!” (Figure 5.5) My second question is “Do you think it helps you to learn Chinese? In what aspect?” And she wrote, "Yes, Chinese is very interesting and I appreciate you for coming all the way from China to teach us!!" I was deeply touched by what she wrote. (The researcher’s self-reflection, September, 2011)

**Figure 5.5 The participant’s written response**

This piece of evidence demonstrates the learner’s passion for the language and the Chinese teacher researcher. The student “loves Chinese”, felt “Chinese is very interesting” and loved it very much; she appreciated the teacher for “coming all the way from China” to teach them; she did not want the teacher researcher to leave; she expressed her willingness to “cept (keep) on learning Chinese” till she dies. Although it seems that she is not answering the listed questions at this point, she did show her affection to Hanyu learning and her appreciation to the teacher.
It is the last week of this term. I packed up and went out of the classroom after the class. A cool girl came to the front and said to me, “Thank you, Miss. Will you still teach us next term?” “Yes. I think so.” “Good. You are my best teacher.” Boys nearby chimed in with her, “Yeah. Thank you, Miss.”(The researcher’s self-reflection, September, 2011)

It is interesting to notice that a great twist in teacher-student relationship occurred. As a beginner teacher, the researcher met a lot of problems at the initial stage of her teaching practice when using traditional teaching methods. The introduction of Chinese language and culture conducted through visual pedagogy has established a closer link between her and her students in their everyday teaching and communication. Gains in knowledge often bring changes in students’ attitudes toward the subject and learning (Mantzicopoulos & Patrick, 2011).

5.6 Conclusion

The experience of those involved in this study shows that there are very positive learning outcomes for students who learned Chinese characters under visual pedagogy. The fear of learning characters is overcome and students are motivated by pictures and stories used in the Hanyu class. This creates a virtuous circle, as the Hanyu teacher could conduct the lesson in a more effective and supportive environment. In this process, a better teacher-student relationship is formed among students and the teacher. Generally speaking, visual pedagogy is found effective in developing students’ learning skills, including the six aspects mentioned in BRT, improving their learning interest and promoting a positive teacher-student relationship.
Chapter 6

The Limitations of Visual Pedagogy

6.1 Introduction

The previous chapter explored the strengths of visual pedagogy from three aspects: students’ six learning skills, learning interest, and the teacher-student relationship. But as the Chinese saying goes, “金无足赤，人无完人” (jīn wú zú chì, rén wú wán rén, which means ‘gold can’t be pure; people can’t be perfect’), visual pedagogy, as an innovative pedagogy, has also negative influences on Chinese as Foreign Language (CFL) learners’ acquisition of Hanyu. This study found that using visual pedagogy in CFL teaching has some potential problems. This chapter presents the relevant evidence, aiming at answering the second contributory research question: What are the restrictions of using visual pedagogy in CFL teaching? It explores the problems imposed by visual pedagogy on students’ character writing sequences (6.2), written forms (6.3) and its limited applicability (6.4).

6.2 Negative Influences of Visual Pedagogy on Students’ Character Writing Sequence

As introduced in Section 2.2.5, there are some challenges in learning Chinese characters for CFL learners, such as the huge character set, confusingly similar written forms, high complexity in the graphic configurations, and the lack of obvious sound-script correspondence (Huang & Ma, 2007; Shen, 2005). The stroke sequence in writing characters is not one of them. However, in this study, the evidence reveals that the writing sequence is problematic for most CFL students. Considering this finding and the complex structures of characters, the researcher proposes that the writing sequence of characters is another difficulty in need of attention.

Chinese characters are composed of various strokes. An important component in their writing is the stroke order, which strictly follows consensual principles such as from top-down, left before right, horizontal before vertical etc. It offers a sequence for learners, especially beginning learners, to follow. From thousands of seemingly disordered strokes, these principles help to structure the characters and guide them to write neatly. Therefore, a very important step in mastering Chinese writing is to grasp the stroke order (Qiu & Zhou, 2010).
The researcher found in her teaching practice that visual pedagogy could mislead students’ writing sequence of Chinese characters in some circumstances.

Chinese characters are presented in forms of pictures in visual pedagogy, which on the one side makes the learning more vigorous and interesting, but one the other, it can also mislead students to write Chinese characters in the wrong order. The following is an excerpt of the researcher’s self-reflection on this problem that she found in a revision lesson:

Without any help and hint, he (one student) successfully wrote “中丅” on the board – but the writing sequence is wrong: he draws the box of “中” clock-wisely. The same with “丅”, which he draws the box first and then three lines, followed by the vertical line and the dot at last. It is not the correct way to do it. I had shown them all the characters stroke by stroke, including this one – “丅” and asked them to write on their book following my instruction. In the following lessons, I found he was not the only one who made mistakes in stroke orders. In fact, more than half of the students had this problem, even though I had asked them to be careful of the stroke order of each character for several times. Is stroke that hard for them? Or they just don’t care about it? (The researcher’s self-reflection, June, 2011)

In this revision and practice lesson, the student successfully wrote the word “中丅” by himself. As indicated by Shen (2005), graphic cues and knowledge of radicals are widely used by CFL students to learn Chinese characters. He used the orthographic cues such as the two boxes and three parallel lines in these two characters to help writing. Regularly introducing orthographic knowledge to beginning CFL learners can facilitate their memorization and writing of Chinese characters. However, the student made mistakes in both the order and the direction of the strokes when he was writing. He had the whole picture of the word in his mind before he started to write, but not the correct way to write it. At some point, he was “drawing” these characters according to memory instead of “writing” them. This kind of mistake is commonly seen in other students’ writing. It is important to note that the researcher and teacher noticed this problem and tried to correct it by showing each character stroke by stroke and setting more practice. However, students still made mistakes in the stroke order. These mistakes were due to the way these characters were introduced – the visual form. As shown above, pictures and other visual forms exerted a powerful influence on students’ memory of characters, which outweighed the significance of the stroke order to create the characters themselves. Fei (1998) suggests that characters in CFL students’ eyes are “accumulations of lines and dots”, which may expose the reason why students in this excerpt were easily confused about the writing sequence of characters.
Translation: In the Chinese character system, the different composition of strokes is an important way to distinguish the characters. …Character components are accumulations of lines and dots, no matter whether they are independent or dependent. CFL educators need to help students to learn the commonly-seen ways of composition and the writing sequence of Chinese characters, including the stroke order and the order of writing different components. (Fei, 1998, p.121)

The significance of the knowledge of stroke has been discussed in Section 2.2. Fei implies both the stroke order and the order of writing different components of Chinese characters need to be strengthened in CFL teaching. Similarly, in one of the student interviews, an interviewee raised an interesting question and the researcher answered his question as follows:

Learning to write (Chinese characters) is hard. I mean, I know what it looks like, but I don’t know how to do it in the way it was taught. I forgot the rule when I was writing – the left to right and top to bottom thing. Why should we write it in a certain way? That’s hard. (Wenjie, August, 2011)

Yes, it is hard when you first learn it. But once you practice again and again, it will be easier. Just like the way we write English letters, we write the letter “O” from the top, counter-clockwise, writing Chinese characters involves sequencing skills as well. (The researcher’s self-reflection, August, 2011)

The interviewee Wenjie stated that it was the stroke order that made Hanyu hard to learn. For him, it was not difficult to remember the written forms but rather to write them in the correct way, with the correct stroke order. He also questioned the necessity of having a stroke order for Chinese characters. This confirms the difficulty in writing characters as indicated in other researchers’ work (Pei & Sun, 2010; Shen, 2005; Moser, 1991). The complicated writing system exerts a pervasive effect on students’ mastery of Hanyu. The researcher answered his question by giving a simple example and making a comparison of English alphabets and Chinese characters. Chinese character writing is not a continuous flow of drawing, but involves structural regularities. The transition from struggling with the writing form to one of skill and confidence takes time, which, however is a necessary and meaningful step in order to acquire the writing skill. Ayala, the VTR interviewee met the same challenge in her teaching:

Sometimes I showed them (students) pictures (of Chinese characters) to help them to remember the characters. But they started drawing the character rather than writing a character. They always asked me, “Can I draw it?” “Do we need to draw it?” I think it is because that a Chinese character looks like a literary sketch to them. They prefer to
remember the basic outlook of it when they are learning it as a new word. So it is easier for them to recall the picture and copy it in forms of a character when they are asked to write it. (Ayala, June, 2011)

It is very interesting to note that the interviewee Ayala adopted the verb “draw” three times in this excerpt. By using the first “draw”, she suggested that her students tended to see a character as a picture instead of a script which requires designated rules to write. The other two “draws” are found in the quotes of students themselves, which supported her point of view that students regarded characters as pictures. The choice of the word “draw” reveals that students tried to pattern what a Chinese character looks like, rather than how to write it, stroke by stroke.

To sum up, the introduction of Chinese characters as a visual form could confuse students in their learning of the correct stroke writing sequence.

6.3 Negative Influences of Visual Pedagogy on the Written Form

Another negative influence that visual pedagogy has is its misleading role on the written form of Chinese characters. This is well supported by students’ quiz samples. The quizzes show that some of students’ writing of characters is distracted by the pictures/explanations/descriptions used. The following are some examples of students’ writing of characters in Quiz 2.

In the character writing part, students were required to write the characters according to the English description given beside them. Seven examples of students’ attempts at character writing appear in Table 6.1. A very interesting example is how students wrote the Chinese character for “rice”. Three students wrote the character “米” like eight grains pointed to the middle, which was used as a visualized explanation by the teacher-researcher in teaching. While the correct form for rice, as shown above, is formed by a horizontal line (一), a vertical line (丨), and four short dashes. Another example is the character “书”. The description of the character as ‘it looks like a bookshelf on the wall and a book is falling down’ was how this character was introduced previously by the teacher researcher. A total of five students made mistakes on character “手” (two students), “中国结” (one student) and “肉” (one student).
Table 6.1 Some examples of students’ writing of Chinese characters in quizzes

<table>
<thead>
<tr>
<th>Character</th>
<th>Students’ writing</th>
<th>Visual pedagogy explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>男 (male)</td>
<td><img src="image" alt="Male writing" /></td>
<td>Farm and farming tool</td>
</tr>
<tr>
<td>米 (rice)</td>
<td><img src="image" alt="Rice writing" /></td>
<td>Eight grains</td>
</tr>
<tr>
<td>肉 (meat)</td>
<td><img src="image" alt="Meat writing" /></td>
<td>Barbeque shelf and two pieces of meat</td>
</tr>
<tr>
<td>书 (book)</td>
<td><img src="image" alt="Book writing" /></td>
<td>Wall, bookshelf and a falling booking</td>
</tr>
<tr>
<td>手 (hand)</td>
<td><img src="image" alt="Hand writing" /></td>
<td>Palm print</td>
</tr>
<tr>
<td>水 (water)</td>
<td><img src="image" alt="Water writing" /></td>
<td>Flowing water</td>
</tr>
<tr>
<td>中 国 结 (Chinese knot)</td>
<td><img src="image" alt="Chinese knot writing" /></td>
<td>Chinese knot (showing object)</td>
</tr>
</tbody>
</table>

It appears that some of the students’ writings of Chinese characters were influenced by the way the characters had been introduced and described. Curves and other visual features can be found in many of their writings. This finding in students’ quiz results is supported by Wang, Li, Zhong, and Xu’s argument:
多数留学生对汉字的认识跟我们本族人相比,有很大的不同。我们学习汉字是从笔画入手,从框架着眼,以字形区分字义,每一个汉字都有意义的符号,笔画之间是有联系的。但是留学生眼中的汉字只是一堆无意义的符号,他们无法体会笔画之间的相互关系。因此,很多学生初次接触汉字,往往觉得无从下手,只是盲目地描画这些汉字。(Wang, Li, Zhong & Xu, 1994, p.23)

Translation: Unlike Chinese natives, most overseas CFL students have a very different understanding of Chinese characters. We start from strokes and compositions, and distinguish meanings by the written forms. Each character is a meaningful symbol with connections between its strokes. However, for overseas CFL students, Chinese characters are meaningless symbols, which make it hard to tell the connections between strokes. Therefore, many students find it difficult to learn the characters at first. They draw characters rather than write properly. (Wang Li, Zhong & Xu, 1994, p.23)

According to Wang, Li, Zhong, and Xu (1994) the learning of Chinese characters is based on meaningful coding, such as the knowledge of radicals and other components. However, for CFL students, there is no such previous knowledge. Presenting students with the final visual form of the character, and cues for remembering what this visual form looks like, is insufficient to enable students to write Chinese characters correctly.

6.4 The Applicability of Visual Pedagogy

Besides the two unconstructive impacts of visual pedagogy on students’ stroke order and the final written form of Chinese characters, the applicability of visual pedagogy needs further discussion. The written forms of many Chinese characters have changed or lost their original configuration since the day they were created, for various reasons, one of which is the simplification process (Section 2.1.2). In addition, the difference between Chinese and western culture (in this context Australian culture) created another obstruction for Australian students in learning and understanding Chinese characters. The following section focuses on these two aspects: the simplification of characters and the cultural differences between the two cultures.

6.4.1 The simplification of Chinese characters

Rapid and far-reaching social and political changes have taken place in China over the past century, and these changes have been reflected in the language. The visual features in Chinese characters have faded over time and have changed more specifically as a result of the simplification movement. Consequently, this produces another challenge for visual pedagogy,
which substantially explores the etymology or extended visual meanings of Chinese characters in teaching and learning.

Interviewee Veron admitted that the less obvious visual features of many simplified Chinese characters is one of her major concerns about whether to use visual pedagogy in character teaching or not:

I first knew the original version of Chinese characters (complicated characters) through my learning of Chinese calligraphy when I was ten years old. I was soon attracted by those profound characters. It’s really a pity to see these over-aged characters being simplified as many of their meanings are lost in this process. Quite a lot of simplified Chinese characters cannot be explained by their etymology anymore. There is a gap between the original version and the current version, which is hard for these young CFL learners. In my opinion, whether visual pedagogy can explain simplified Chinese characters clearly or not is in doubt. (Veron, August, 2011)

As to the simplification of Chinese characters, on the one hand, interviewee Veron showed regret for the loss in meanings from their original cultural and artistic value; on the other hand, she questioned the applicability of visual pedagogy for the reason that many characters have been simplified in a way that visual pedagogy seems unable to deliver the original etymological meaning of the words effectively to students. The teacher researcher in this study has been confronted by this problem many times in her teaching practice. Visual pedagogy focuses not only on the etymology but also on the creative use of its visual features. Therefore, the simplification weakens the visual feature and narrows down the selectable range of characters which can be taught. As a result, many Chinese characters could not be included in the lesson plan and this created a dilemma for the teacher. The following is an extract of the researcher’s reflective journal:

The lesson was about country life in the rural areas of China. It was successful until I was stopped by two characters, “东 (east)” and “门 (door, gate)”. Actually they are not hard to explain with both of the two original versions – “東” describes the scene when the sun (日) is rising behind a tree (木), referring to “east” and “門” looks exactly like two pieces of gate board of traditional Chinese style. But in the simplified versions, there are only a few abstract structures left, while the sun and the gate board can hardly been found in the current written forms. Then I tried to explain these two simplified characters creatively by connecting them with two pictures which display their meanings by the pictures themselves. “門” is not that hard as it still looks like the door frame even after being simplified. However, I found the explanation of the other character “东” took me quite a lot time as it seems it has nothing to do with its meaning – “east”. (The researcher’s self-reflection, September, 2011)

The difficulty in teaching the Chinese characters “东” and “门” was because these two simplified characters lost their visual connection with the original forms and the meaningful
explanation of the characters. The current simple forms compared to the originals had lost their pictographic features. For this reason, the teacher researcher found it was very difficult to effectively teach these two simplified characters. Although she tried to use a creative way to teach them by engaging some connections between the current written forms with the meanings, the character “东” is still problematic as there was very limited visual connection existing in the script. The problems caused by the simplification of Chinese characters in teaching is mainly because many visual clues disappeared after being simplified and therefore the visual connections between the meaning and the written form no longer existed. After thousands of years of revolution and development, many Chinese characters have lost the ideographic function, which creates challenges for CFL teaching and learning (Fei, 1998). Another example is the teaching of character “本”. The following is the researcher’s self-reflection on that lesson:

When I introduced the origin of characters “本” and “末”, students did not show much interest as I expected. Even when I drew the picture of a tree (木), they looked so confused. The reason could be the character itself. Students did not get it very well. According to the etymology, the character “本” is defined as “木下曰本, 从木一, 在其下”. The earliest written form is like this: 🌳. While in modern Hanyu, the root part is replaced by a line, which has greatly decreased the original visual meaning. That could be the reason why they seem confused at my explanation. (The researcher’s self-reflection, July, 2011)

The simplified written form of the Chinese character “tree” lacks the clear visual clues apparent in the original form. As a result, students were confused at the researcher’s explanation and found it difficult to relate the character to its meaning.

The meaning of many Chinese characters cannot be explained directly by their simplified written forms as the visual clues no longer apply. The difference between the current form and the original form makes character learning more difficult for CFL learners.

6.4.2 The cultural gap

Languages are closely connected with culture (Emmitt, Komesaroff & Pollock, 2006). Hanyu is no exception. The development of Chinese characters is inseparable from China’s history of five thousand years. Those little square scripts are linked to China’s culture since writing began. However, due to the huge difference between Australian and Chinese culture, some Chinese characters cannot be effectively introduced to Australian learners who are unfamiliar with Chinese culture.
In the researcher’s teaching, she experienced this first hand as outlined in the following excerpt from her reflective journal.

The explanation of character “家 (jiā, means family or home)” really got me when I was trying to introduce the new topic today “family members”. This character has gone through the following changes from 宀 (oracle script); 家 (金文); 家 (小篆), and finally developed into the current form “家”. All these scripts of different ages depict the roof “宀” underneath which a domesticated pig (豕) is kept – means a place of shelter and, by extension, family, household etc. In the traditional Chinese culture, pigs are associated with fertility and prosperity. In Australia, however, domesticated animals are kept on farms rather than at home, which is commonly seen in the countryside of China. Students were surprised and confused at my explanation. Someone even called out “ew” – They could not understand why ancient Chinese kept pigs in their house. (The researcher’s self-reflection, September, 2011)

Students were surprised and confused at the teacher-researcher’s explanation of the background cultural information of the character “家”. Some students showed that they disliked it. The reason behind those students’ drastic response is that there is no cultural or historical connection for them to this character. It is difficult to motivate and engage these CFL learners when the background knowledge and significance of the characters is absent. Another similar experience is the teaching of the character “男 (male)” as follows:

When introducing the character “男”, I explained like this: the upper part (田) means farm and the lower part (力) is a farming tool. Who does the farm work and who the housework in a family? Unexpectedly, no one answered me. So I added: Man or woman? Some said, men. Others argued, sometimes women. Someone said, then what about The Farmer Wants a Wife(a reality TV series, record both the man and woman working in the countryside)? At that time I realized that our different culture, including the social formation, has an influence on our perception and understanding. A Chinese student should give a different answer. Men are regarded as the labour force. That is because for centuries, the mainstream Chinese ideology regards “男耕女织 (nán gēng nǚ zhī)”, which literally means men till the land and women weave cloth. (The researcher’s self-reflection, July, 2011)

The extract highlights the different ideology between Australian and Chinese cultures. “男耕女织” is very typical in Chinese traditional culture. This has been reflected within the language, with the formation of the characters “男” and “女”. Hence, there is no dispute over their written forms in Chinese culture. Nevertheless, this was not the case in Australia. Students argued for the rationality behind these two characters from their experiences of growing up in Australia. Different perceptions of a particular concept could lead to misunderstandings in their learning.
Conversely there are some phenomena within Chinese culture which are absent in the Australian context. The teacher researcher reflected upon this experience in relation to a Chinese calligraphy lesson. In that lesson, she taught the students five characters including 笔 (bi, pen) and 竹 (bamboo). The following is the extract of her reflection on that lesson:

I explained “笔” as two parts – the upper part means bamboo and the lower part means animal fur. Students looked confused as they could not see any connection between the usually seen pen with the plant bamboo and animal fur. Some even told me that they had never seen bamboo before. (The researcher’s self-reflection, September, 2011)

The formation of the character “笔” is a typical representation of traditional life in ancient China, in which the production of craftwork is fully reflected by some simple but illustrative strokes. Students’ confusion is with the etymology. They were not familiar with the product, bamboo. Their product called “笔” was made from plastic, metal and ink rather than bamboo and fur. Most of them had no idea of what a bamboo looked like. The different socio-cultural life of these Australian learners and some ancient components contained in Chinese characters generated obstacles for these CFL learners.

6.4.3 Conclusion

In conclusion, the teacher researcher’s application of visual pedagogy in her Australian classrooms produced three challenges for the students’ Chinese learning. These were; the writing sequence; the written forms of Chinese characters, and the applicability of visual pedagogy into a different cultural context. These were caused by various factors. Firstly, Chinese characters have evolved over time and many characters have lost their visual features in this process. Secondly, some pictographic characteristics of the Chinese language misled Australian students during their learning of the written form. Thirdly, many Chinese characters carry some components related to traditional or ancient Chinese culture. These stretched modern western learners’ imagination in their learning. In Chapter 7, the findings and further discussion of this study will be addressed.
Chapter 7
Discussion and Conclusion of this Study

7.1 Introduction

This chapter first provides a brief summary of the findings of this study (7.2), bringing answers to the four research questions. Then pedagogical implications for Western Sydney Region (WSR) public schools are discussed to better promote the teaching and learning of Chinese characters (7.3). At the end of this chapter, the limitations of this study are addressed in an attempt to provide suggestions for further study in this area (7.4).

7.2 Findings of this Study

This section presents two main findings of this study. As mentioned previously, there is a debate over teaching Chinese characters and teaching pinyin. This section firstly addresses this argument based on the data collected from interviews, classroom observations, document reading and students’ quiz results (7.2.1). Then a discussion involving both the positive influence and the limitations of visual pedagogy is provided in the next section (7.2.2), aiming at providing a comprehensive answer to the main research question of this study. That is “How can the visual features of Chinese characters influence Chinese as a Foreign Language (CFL) students’ learning of Hanyu in western Sydney schools?”

7.2.1 The rationality for learning Chinese characters

According to the evidence, Chinese characters and pinyin are not exclusive of each other. Considering their role and function in the Hanyu system, Chinese characters should be treated as a vital part in CFL teaching, while pinyin is an accessory tool for learners to learn the phonological system. Recognition of Chinese characters is extremely important in Chinese document processing. The researcher’s support for involving Chinese character teaching is approached from following two aspects: 1) cultural significance; 2) the limitations of pinyin-dependent teaching and learning. On the one hand, as the carrier of Chinese culture and the written form of the Hanyu system, characters are of vital importance for CFL learners who show an interest in China. As the standard script used in Mainland China, characters play an extremely important role in Chinese culture. Also, as the only surviving ideograph, Chinese
characters advocate their unique beauty in other languages around the world, with their unique enrichment and connotation. The artistic and well-proportioned structure, natural and flowing strokes and ever-changing and integrated combinations demonstrate their exceptional fascination. However, pinyin serves as a tool to help Hanyu users to familiarize with its pronunciation. Both Volunteer Teacher Researchers (VTRs) who have been interviewed in this study reached a consensus on the great significance of characters in Chinese culture, suggesting that characters cannot be replaced by pinyin. However, currently in WSR schools, pinyin has been widely accepted in CFL learning as it is regarded as being able to produce instant results in oral speaking. Teachers spend most of their time teaching the pronunciation of a character, rather than its written form. One of the results is that character learning has been neglected, and Chinese culture, which is attached to characters, has also been neglected. This situation can be concluded with a Chinese chengyu (traditional Chinese idiomatic expressions) – 本末倒置 (běn mò dào zhì), which means to put the trivia before the fundamental. Interesting enough, this chengyu itself is a good example of visual pedagogy.

The character 木 (木) means a tree, with a line added on the bottom (木) which means “root”, and the extended meaning is “important things”. Shuowenjiezi describes it as: “木下曰本, 从木一, 其下.” “木” with a line at the top (末) which means “branch”, and the extended meaning is “trivial details” or “side issues”. Shuowenjiezi defines it as: “木上曰末”. “倒置” which means “upside-down”. Hence, the literal meaning of this chengyu is “to invert root and branch”. A similar expression can be found in English – “to put the cart before the horse”. In the CFL learning context, “末” can be referred to pinyin and “木” to characters. Too much time and effort have been spent on pinyin while Chinese characters, the standard Hanyu script, are not well taught. In view of their cultural value, Chinese character teaching and learning should be promoted to achieve Hanyu literacy.

On the other hand, the feature of sharing pronunciation in Chinese characters demonstrates that the pinyin-dependent teaching is less ideal. As introduced previously, pinyin could correspond to more than one character. Pinyin-dependent teaching is undesirable as it ignores Chinese characters. Chinese characters map into language at the morphemic level rather than at the phonemic level (Rozin, Poritsky & Sotsky, 1971). A CFL learner could hardly get by in China without knowing characters since pinyin is not the “real world language use”(Orton, 2010). Pinyin-dependent teaching is a narrow set of skills that are insufficient for the comprehension of real-world language use that learners will encounter when they come into
contact with real Hanyu language use in the future or in the upper high school grades. Regarded as a “quick and efficient” way of learning Hanyu, pinyin-oriented teaching is actually not “efficient” in terms of the outcome achieved by learners. Two Chinese suyu (proverbs) state that “磨刀不误砍柴工 (mó dāo bù wù kǎn chái gōng)”, which means although a bit time is wasted on sharpening the axe, the firewood cutting process will be accelerated due to the sharp tool; and “工欲善其事，必先利其器 (gōng yù shàn qí shì, bì xiān lì qí qì), which means the knife needs to be sharpened to do the job properly. Both the suyu emphasise the importance of sharpening tools. A similar proverb can be found in English that “A beard well lathered is half shaved”. In the context of CFL education, Chinese character learning can be seen as the sharpening process, which lays a solid ground for further Hanyu proficiency. Therefore, familiarity with the features of Chinese characters is important to guide the development of students’ literacy skills across diverse contexts. Nevertheless, by stating that, the researcher has no intention of denying the role pinyin plays in helping students’ Hanyu learning. Instead, learning characters by transcribing pinyin texts into them, as assistance, can help students to acquire the oral proficiency and confidence in learning this language. Students should try to wean themselves off pinyin as their familiarity with characters increases (Kane, 2006). It may take much effort and time at the beginning, but character learning can achieve the maximum result later on.

7.2.2 The impacts of visual pedagogy on CFL learning

The evidential chapters indicate that visual pedagogy exerts both positive and negative influences on students’ CFL learning as shown in Table 7.1.

Table 7.1: The impacts of visual pedagogy

<table>
<thead>
<tr>
<th>Positive impacts</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helps remembering, understanding and applying</td>
<td>Misleads writing sequence</td>
</tr>
<tr>
<td>Facilitates analyzing, evaluating and creating</td>
<td>Misleads written form</td>
</tr>
<tr>
<td>Improves students’ learning interest</td>
<td>The limited applicability</td>
</tr>
<tr>
<td>Promotes better teacher-student relationships</td>
<td></td>
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</tbody>
</table>
On the one hand, visual pedagogy facilitates the six learning levels of Bloom’s Revised Taxonomy (BRT). It helps learners to understand and remember Chinese characters, improves their interest and creative thinking, and promotes the building of better student-teacher relationships. It greatly facilitates character learning by systematically introducing orthographic knowledge to beginning learners. Visual pedagogy which focuses on learners’ recognition rather than the writing of Chinese characters may not be sufficient to learn how to write the same character from scratch by hand, but it does help a lot in developing their interest in character learning and Hanyu learning. “Learning to control the pen to produce regular, unchildish characters takes considerable practice” (Orton, 2008, p. 32) Visual pedagogy, as the first step of character learning, helps learners to build the preliminary knowledge of characters. Having students analyse visualized characters directly contributes to the learning outcome and induces them to become self-empowered learners. The visual pedagogy of character teaching in CFL classroom has been proved to be a successful means of engaging students not only in Hanyu learning but also engaging them in multi-literacy learning. It opens up an opportunity to engage students to:1) apply newly acquired skills and knowledge of Chinese in authentic settings and in new situations;2) overcome specific linguistic difficulties and cultural hurdles faced by students learning Chinese in a way that is holistic, creative and leads to self-discovery.

On the other hand, however, this study finds that visual pedagogy could mislead students in their writing sequence and the written form of Chinese characters as a result of its distinctive visual nature. The distinctive linguistic features of characters are strengthened in visual pedagogy, which could easily inhibit students’ memorization of Chinese characters. This conclusion is quite evidential in students’ quiz and work samples. Moreover, the applicability of visual pedagogy requires further exploration. As a result of the simplification of Chinese characters, many of the visual features of characters have been weakened. The connections between the written form and the meaning became less self-evident. That seriously holds students back from efficiently analysing and memorizing characters. Besides, the culture gap between China and Australia also impedes students’ perception of characters. A different ideology sets obstacles for Australian CFL learners to understand characters from a proper perspective.
7.3 Pedagogical Implications

CFL teaching and learning in New South Wales (NSW) is experiencing a trial and a crucial stage as a result of policies of encouraging Asian languages and an increasingly close social and economical relationship. The findings of this research contribute to the pedagogical development. As a less familiar language, Hanyu attracts many new learners at first sight, for its mysterious and elegant writing. Unfortunately, it is the same reason that makes them lose curiosity and decide to give up learning no matter what their initial motivation is. A Pinyin-dependent teaching method is not ideal considering the real life use and the intrinsic essence of language acquisition. Therefore an effective teaching method catering for the difficulty in learning characters is needed.

7.3.1 Implications for the development of visual pedagogy

The researcher’s use of visual pedagogy is proved to be helpful in many aspects. Despite the benefits it brings to students’ Hanyu learning, visual pedagogy also encourages their visual literacy in the classroom context through the use of visual representations (Goldfarb, 2002) and by making an abstract concept more readily accessible in memory (Reisslein & Ozogul, 2009). As a powerful transforming tool in the language teaching classroom, the distinctive advantage of visual pedagogy needs to be recognized and explored.

The limitations found in chapter 6 suggest that further work needs to be done on the aspect of CFL teachers’ lesson preparation and teaching practice, in order to avoid or alleviate the negative influence of visual pedagogy on learners’ stroke order and written forms, as well as to overcome the limitations of character selection.

As mentioned in Chapter 6, these restrictions imposed by the peculiar structure of Chinese do not appear to be critical; in fact, they can be reduced and eliminated by some changes and improvements in the lesson planning and class execution process. To be specific, the negative influence on students’ writing sequence and written forms of Chinese characters can be removed by careful class execution, and the problem of limited applicability can be settled by careful lesson plan designing and class execution. Considering the loss in meanings with time and the cultural differences between China and Australia, the researcher assumes that characters do not need to be taught strictly according to their etymology in visual pedagogy. Besides the etymology of characters, a creative and imaginative analysing approach to Chinese characters should be applied to expand the applicability and increase its use with
more Chinese characters. As long as visual pedagogy can be effectively accepted by L2 learners, this teaching method can be adopted. As a Chinese saying states, “黑猫白猫，能抓老鼠的就是好猫 (hēi māo bái māo, néng zhuǎ lǎo shǔ de jiù hǎo māo)”, which means be it a black cat or a white cat, a cat that can catch mice is a good cat. To develop an effective visual approach would require clearer instruction, cautious selection and frequent repetition. For those characters that do not have a visual etymology, an innovative teaching method can be used to strengthen the visual feature.

The first two limitations can be avoided by means of clearer oral instruction in teaching and frequent review of the standard script of Chinese characters, including systematic preview and review. Repeated experience of a visualized character can increase the efficiency with which a reader can identify its form and meaning, and retrieve its pronunciation and other semantic associations. In addition, students’ understanding of visual pedagogy needs to be carefully built in order to reduce possible mistakes. For the last concern, the applicability of visual pedagogy in character teaching and learning requires teachers’ careful choice of Chinese characters to be taught and a creative teaching strategy, not limited to the etymology of Hanyu. A further investigation on the improvement of visual pedagogy is required in order to develop an effective visual teaching method.

7.3.2 Implications for character teaching in western Sydney public schools

The problems hindering CFL teaching and learning that occur at this stage, which are identified in Chapter 4, such as staff qualifications, the curriculum and the recognition of the significance of Chinese characters, need to be fully considered and be integrated into the curriculum in a sustainable way. There are many problems that need to be solved in this process, but first of all a reliable Hanyu curriculum emphasizing the learning of characters should be developed. Besides, all schools, teachers, parents and students involved in CFL teaching and learning need a high level of engagement.

Chapter 4 discussed three main factors attributing to the situation of high dependence on pinyin and insufficient character teaching and learning, namely insufficient curriculum support, staffing and the difficulty of learning Chinese characters. Acknowledging the complexity of the task of developing a comprehensive CFL pedagogy, especially in the light of the students of varying ages, diverse first-language backgrounds, in traditional and non-traditional educational settings, the researcher proposes the following aspects:
CFL educators and policy makers should find consensus in recognizing the importance of instructional standards, rigorous assessment and communicative and task-based classroom methodologies to help students attain Hanyu proficiency, especially in the learning of Chinese characters.

Additionally, this study highlights the critical importance of pre-service teacher training with regard to teaching methodologies, teaching context, and so on. Specific training for CFL teachers needs to be provided rather than general training, including teachers’ language teaching proficiency, knowledge of the target culture, and teaching methodologies for Chinese characters in particular in order to deliver the educational, language, and cultural backgrounds of Hanyu.

The complexity of Chinese characters needs to be faced rather than to be shirked. Chinese characters are relatively new and rarely-seen for CFL learners in WSR. So a Hanyu learning environment that involves high exposure to characters can greatly help to familiarize them with the language and eliminate the lack of acquaintance or even the fear of Chinese character learning.

In general, full immersion with many supports in place to keep learners motivated is needed. The key to reducing loss of motivation is better teacher education; more time on the task than for other languages, which Chinese requires; and above all, finding ways to ensure that, as a right, all students accepted into senior year Chinese have a rich educational course to follow, and examinations in which all the diligent and able can anticipate being highly successful (Orton, 2010).

7.4 Limitations of this Study

The time frame is one of the main concerns of this study. The Hanyu lessons in this study are part of the participating school’s normal teaching program. So the design of this study is based on the school’s time allocation for Hanyu learning, which is a forty-five minutes’ lesson per week for each class. All data about students’ learning behavior and interviews were collected from a dispersed time frame. However, Chinese character learning is a continuous and systematic process which requires planning and execution. The long term impacts of visual pedagogy on students’ learning need a longitudinal study to be carried out. In addition, partly for the reason of the time schedule of Hanyu lessons, the data collected from participating students, particularly from the class observations, may not reflect the exact
situation of students’ learning. This is because the researcher’s observations and reflections were made on a weekly basis, which could be one-sided. Therefore, the study design needs to be revised and further developed if a longer study on this topic is conducted.

Another limitation of this study relates to the generalisability of the findings. This study adopted case study as the main methodology. A small sample of merely a participating class, including the student interviewees and two Volunteer Teacher Researchers (VTRs) were involved in this study. The relatively small sample size might be a concern for some researchers as the data collected may not be convincing and generalisable. In addition, the proficiency levels of student participants’ Hanyu, the particular learning environment of the participating school and the Western Sydney Region, and the characteristics of the particular group of Volunteer Teacher Researchers involved may potentially affect the generalisability of the findings of this study. Considering these issues, the researcher hopes to provide referential information for studies in this particular setting by doing this case study.

7.5 Reflections on Becoming a Teacher-researcher

This study records the teacher researcher’s professional development as both a Hanyu teacher and a beginning researcher.

The teaching practice in the participating school provides the researcher with an insight into CFL teaching in a foreign context. The teaching and learning settings in Australian primary schools differ greatly from that of Chinese primary schools, which, as a consequence, requires different methodologies, teaching skills and class settings. At the beginning of being a volunteer teacher researcher, the researcher was concerned about her inexperience in CFL teaching and she did not have a clear picture of research on her mind. She tried hard to find a way to combine her teaching with the research she was doing. The training courses from the Department of Education and Community (DEC) of the Western Sydney Region (WSR) introduced suitable teaching ways and skills, which were proved effective in participating schools. On the other hand, through the routine workshops and seminars every week, the researcher began to know more about research. In view of the characteristics of the young CFL learners in this study, the researcher explored visual pedagogy which was proved successful in facilitating student’ memorization of Chinese characters. A positive impact is that most students were motivated by this visual learning approach. During this process, the
researcher kept a self-reflective journal in an effort to help data collection in the thesis and professional development as a beginning teacher.

7.6 Conclusion

This study provides a general and comprehensive picture of the use of visual pedagogy in a CFL classroom. Data indicate that visual pedagogy is a valuable strategy to teach Chinese characters. But by stating that, the researcher has no intention of claiming that this visual learning strategy is the only means to the efficient learning of Chinese characters. It should be pointed out that character learning is a complicated process and visual pedagogy is only one of the possible learning strategies. As a new method, visual pedagogy needs further studies to obtain a comprehensive picture of Chinese character learning and Hanyu learning.
**Timeline**

2010 Sept  
Preparing surveys;
Methodology training at NSWDEC;
Training for Chinese teaching materials in Melbourne;

2010 Nov  
Development of preliminary literature review;
COC draft;
Training for Chinese teaching materials in Beijing;

2010 Dec.  
COC proposal presentation;

2011 Jan.  
Development of theoretical edifice and consideration of appropriate methodology; Finalise Chapter Two: Literature review;

2011 Feb.  
Data collection; Draft Chapter Three: Methodology;

2011 Mar.  
Data collection;
Finalise Chapter Three;

2011 April.  
Data analysis;
Draft Chapter Four;

2011 June.  
Data collection;
Annual Progress Report;

2011 July.  
Data collection;
Finalise Chapter Four;

2011 Aug. – Nov.  
Data collection;
Chapter 5, 6 & 7;
IER presentation;

2011 Dec.  
First draft modification;
2012 Jan. –Feb.  Further modification and proof reading;

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Appendix

Appendix 1 Chinese Characters List

Lesson 1: 中，国，主，口，米，结;
Lesson 2: 马，生，心，大，小，肉;
Lesson 3: 日，月，明，女，男;
Lesson 4: 火，云，木，山，书;
Lesson 5: 鱼，舟，石，水，目，手;
Lesson 6: 木，林，森，休，本，末，果，巢，早，采;
Lesson 7: 日，旦，明，昌，晶，旧，星，电，目，田，白;
Lesson 8: 人，从，众，坐，体，休，仙，伞;
Lesson 9: 口，品，回，囚，吐，困，因，唱，吃;
Lesson 10: 妈，东，门，家，笔，竹，毛，雨，雪，雷.
Appendix 2: The Observation Form

Date of observation: \hspace{2cm} Number of students:

<table>
<thead>
<tr>
<th>Students’ understanding of characters</th>
<th>Notes, Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>How is students’ concentration on text?</td>
<td></td>
</tr>
<tr>
<td>Can students understand the meaning of these three characters? If not, what’s the difficulty for them?</td>
<td></td>
</tr>
<tr>
<td>When do students get the meaning of these characters? (pronunciation, pinyin, written form, visual explanation)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students’ retention of characters</th>
<th>Notes, Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>The accuracy rate of recognizing the previously learnt characters (character, pinyin or both pinyin and character)?</td>
<td></td>
</tr>
<tr>
<td>Can student recognize the characters learnt today after teaching? (under invention/no invention)</td>
<td></td>
</tr>
<tr>
<td>Can student recall the pinyin of the characters learnt today after teaching? (under invention/no invention)</td>
<td></td>
</tr>
<tr>
<td>The accuracy rate of the MATCH of characters learnt today on students’ worksheet</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students’ learning interest</th>
<th>Notes, Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do students like learning characters</td>
<td></td>
</tr>
<tr>
<td>What attracts students most in the teaching of characters? (Etymology/visualization, character development, related culture element, neologism, etc.)</td>
<td></td>
</tr>
<tr>
<td>Do students show special interest to the illustrated pictures, flashcards and videos? How?</td>
<td></td>
</tr>
<tr>
<td>Do students show interest in participating activities relating characters?</td>
<td></td>
</tr>
<tr>
<td>Do they show interest in further learning characters and Chinese culture?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students’ visual thinking</th>
<th>Notes, Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is different from the normal character teaching?</td>
<td></td>
</tr>
<tr>
<td>Students’ own understanding or even creation of characters.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General</th>
<th>Notes, Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the biggest obstacle in today’s characters teaching and learning? (pronunciation, pinyin, written form, visual explanation)</td>
<td></td>
</tr>
<tr>
<td>Any unexpected situation? What leads to this situation?</td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td></td>
</tr>
</tbody>
</table>
Appendix3: Interview Questions List (students)

1. How long have you been learning Chinese language?
2. Which is the script of Chinese language? Pinyin or characters?
3. How many Chinese characters do you know?
4. Which is difficult to learn, Chinese characters or pinyin?
5. Were you required to learn characters in Chinese lesson before (in class other than Miss Huo’s, if applicable)? Or just pinyin (the pronunciation)?
6. Which is important, Chinese character or pinyin according to your understanding?
8. Are you interested in learning Chinese characters or Chinese pinyin?
9. Which is easier to remember for you, Chinese characters or pinyin?
10. Do you think Chinese characters help you learn this language?
11. Do you think learning Chinese characters helps you understand Chinese culture better? Can you give me an example?
12. Do you think learning Chinese characters has improved your interest in learning Chinese? How?
Appendix 4: Interview Questions List (VTRs)

1. How long have your students been learning Hanyu? At what stage?
2. Which year are you involved in Hanyu teaching?
3. Which of the following aspects you think is important in CFL? Listening, speaking, reading and writing.
4. What, if any barriers, inhibit your CFL teaching? (multi-choices)
   - Pinyin
   - Characters
   - Meaning
5. Do you think character teaching is of difficulty in your teaching?
6. Do you teach Chinese characters to your students? Why or why not?
7. How many characters on average you teach in one lesson? Why this ration?
8. How long does character teaching take and its proportion of class time?
9. What teaching methods you adopted to teaching characters? (pinyin/radical/stroke/visual; character only; pinyin only; character and pinyin both.)
10. How do you choose the characters to be taught?
11. What’s the effect? Do students like to learn characters? (attitude)
12. Do you like teaching characters?
13. What problems do they have in learning characters?
14. What’s the role/value of character and pinyin in Hanyu system?
15. What do you think of the popular use of pinyin teaching in CFL?
16. What is the role of pinyin in CFL? (the advantage and disadvantage)
   - Is very helpful.
   - Can help, as an assistant.
   - Can not help, like straining at a gnat and swallow a camel
   - Impede Hanyu learning
17. What do you think of the view that “leaning character is a waste of time”?
18. Do you think Chinese should be Romanized?
19. Do you think it is necessary for CFL students to learn characters?
20. What factors inhibit the teaching and learning of characters? (school get involved?; How do you find time to do this while you're trying to cover all the academic content?)

21. Do you use visual pedagogy? How? Is it etymology-oriented or not?

22. Do they like learning characters in this way?

23. What’s the advantage and disadvantage of visual pedagogy?

24. How do you make the character skills relevant to their schoolwork, not just the playground?
Appendix 5 Teaching Content

This study can be divided into two stages. In stage one, the researcher teaches three-five Chinese characters per lesson to familiarize students with the visual nature of characters and form the basic idea about the learnable characters in their mind. After five weeks’ adjustment, in stage two, the researcher begins to teach around ten Chinese characters per lesson in a radiant diagram to build up their interrelations and enhance students learning interest.

Stage One

In this stage, the researcher tried to establish the basic idea of learnable Chinese characters in students’ minds. Three-five characters are taught in each lesson separately using visual pedagogy. This stage includes five lessons.

The preparation table is shown as below.

<table>
<thead>
<tr>
<th>Topic</th>
<th>character</th>
<th>Visualized symbol</th>
<th>pinyin</th>
<th>Meaning</th>
<th>Visual instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Characters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>flashcard</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>picture</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>video</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>others</td>
</tr>
<tr>
<td>Revision of learnt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>characters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lesson 1: 中，国，王，口，米，结;
Lesson 2: 马，生，心，大，肉;
Lesson 3: 日，月，明，女，男;
Lesson 4: 火，云，木，山，书;
Lesson 5: 鱼，舟，石，水，目，手;
5.2 Stage Two

After five weeks of immersion of visualized Chinese character learning, the researcher increased the number of characters to be taught in one lesson to about ten.

Ten Chinese characters are displayed in a radio figure with one in the middle and the rest nine around. These ten characters are purposefully selected in terms of their writing form, meaning as well as the pronunciation. The one in the centre is the basic one which has particular relation with the others.

Lesson 6

The following is the teaching preparation for ten Chinese characters.

<table>
<thead>
<tr>
<th>Character</th>
<th>Pronunciation</th>
<th>Visualized Representation</th>
<th>Basic Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>木 (mù)</td>
<td>a tree</td>
<td></td>
<td>tree; wood</td>
</tr>
<tr>
<td>林 (lín)</td>
<td>two trees</td>
<td></td>
<td>woods; grove</td>
</tr>
<tr>
<td>森 (sēn)</td>
<td>three trees</td>
<td></td>
<td>forest</td>
</tr>
<tr>
<td>休 (xiū)</td>
<td>a man beside a tree</td>
<td></td>
<td>rest</td>
</tr>
<tr>
<td>本 (běn)</td>
<td>the bottom of a tree</td>
<td></td>
<td>root; basic; important</td>
</tr>
<tr>
<td>末 (mò)</td>
<td>the top of a tree</td>
<td></td>
<td>treetop; unimportant</td>
</tr>
<tr>
<td>果 (guó)</td>
<td>objects on a tree</td>
<td></td>
<td>fruit</td>
</tr>
<tr>
<td>巢 (cháo)</td>
<td>object on a fruit tree</td>
<td></td>
<td>bird’s nest</td>
</tr>
<tr>
<td>早 (zǎo)</td>
<td>sun rising behind a tree</td>
<td></td>
<td>morning; early</td>
</tr>
<tr>
<td>采 (cǎi)</td>
<td>hand above a tree</td>
<td></td>
<td>to pick.</td>
</tr>
<tr>
<td>床 (chuáng)</td>
<td>half-frame and wood</td>
<td></td>
<td>bed</td>
</tr>
</tbody>
</table>

The researcher designed ten new Chinese characters with a radiation pattern based on the inherent connections in them.
It is the connections between characters that underpin the conduct of this lesson under visual pedagogy. The connections are expected to:

1) reduce students’ memory load by connecting the prior knowledge. E.g. students’ understanding of character “休” is built on a combination of previously learnt character “人” and “木”;

2) make the guessing interesting by referring to the same components of different characters. E.g. character “巢” is an interesting extension of character “果”;

3) infer the whole from a single instance, thus facilitate students’ understanding. E.g. the perception of character “森” is based on character “木” and “林”.

**Lesson 7**

<table>
<thead>
<tr>
<th>Character</th>
<th>Pronunciation</th>
<th>Visualized Representation</th>
<th>Basic Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>日</td>
<td>rì</td>
<td>sun</td>
<td>sun</td>
</tr>
<tr>
<td>旦</td>
<td>dàn</td>
<td>sun above land</td>
<td>morning</td>
</tr>
<tr>
<td>明</td>
<td>míng</td>
<td>sun and moon</td>
<td>bright</td>
</tr>
<tr>
<td>昌</td>
<td>chāng</td>
<td>two suns</td>
<td>flourishing</td>
</tr>
<tr>
<td>晶</td>
<td>jīng</td>
<td>three suns</td>
<td>shining; crystal</td>
</tr>
<tr>
<td>旧</td>
<td>jiù</td>
<td>a line on the left of sun</td>
<td>old; past</td>
</tr>
<tr>
<td>星</td>
<td>xīng</td>
<td>sun and “born”</td>
<td>star</td>
</tr>
<tr>
<td>电</td>
<td>diàn</td>
<td>a curve in front of sun</td>
<td>electricity</td>
</tr>
<tr>
<td>目</td>
<td>mù</td>
<td>eye</td>
<td>eye</td>
</tr>
<tr>
<td>田</td>
<td>tián</td>
<td>farm</td>
<td>farm</td>
</tr>
<tr>
<td>白</td>
<td>bái</td>
<td>curve on the sun</td>
<td>white</td>
</tr>
</tbody>
</table>
### Lesson 8

<table>
<thead>
<tr>
<th>Character</th>
<th>Pronunciation</th>
<th>Visualized Representation</th>
<th>Basic Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>人</td>
<td>rén</td>
<td>one person</td>
<td>people; person</td>
</tr>
<tr>
<td>从</td>
<td>cóng</td>
<td>two people</td>
<td>to follow</td>
</tr>
<tr>
<td>众</td>
<td>zhòng</td>
<td>three people</td>
<td>crowd</td>
</tr>
<tr>
<td>坐</td>
<td>zuò</td>
<td>two people on earth</td>
<td>to sit</td>
</tr>
<tr>
<td>体</td>
<td>tǐ</td>
<td>people and important</td>
<td>body; physic</td>
</tr>
<tr>
<td>休</td>
<td>xiū</td>
<td>people and a tree</td>
<td>rest</td>
</tr>
<tr>
<td>仙</td>
<td>xiān</td>
<td>people and mountain</td>
<td>immortal</td>
</tr>
<tr>
<td>傘</td>
<td>sǎn</td>
<td>umbrella</td>
<td>umbrella</td>
</tr>
</tbody>
</table>

### Lesson 9

<table>
<thead>
<tr>
<th>Character</th>
<th>Pronunciation</th>
<th>Visualized Representation</th>
<th>Basic Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>口</td>
<td>kǒu</td>
<td>mouth</td>
<td>mouth</td>
</tr>
<tr>
<td>品</td>
<td>pǐn</td>
<td>three boxes of product</td>
<td>product</td>
</tr>
<tr>
<td>回</td>
<td>huí</td>
<td>a track leading to the starting place</td>
<td>to go back; to return</td>
</tr>
<tr>
<td>囚</td>
<td>qiú</td>
<td>people trapped in a box</td>
<td>prisoner</td>
</tr>
<tr>
<td>吐</td>
<td>tǔ</td>
<td>mouth and earth</td>
<td>to spit</td>
</tr>
<tr>
<td>困</td>
<td>kùn</td>
<td>a tree in a coop</td>
<td>confine in</td>
</tr>
<tr>
<td>因</td>
<td>yīn</td>
<td>a big mouth</td>
<td>reason</td>
</tr>
<tr>
<td>唱</td>
<td>chōng</td>
<td>a mouth and a microphone</td>
<td>to sing</td>
</tr>
<tr>
<td>吃</td>
<td>chī</td>
<td>mouth and a tongue</td>
<td>to eat</td>
</tr>
<tr>
<td>呆</td>
<td>dōi</td>
<td>Be quiet as a box or a tree</td>
<td>foolish; quiet</td>
</tr>
</tbody>
</table>
### Lesson 10

<table>
<thead>
<tr>
<th>Character</th>
<th>Pronunciation</th>
<th>Visualized Representation</th>
<th>Basic Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>妈</td>
<td>mā</td>
<td>female and a horse (pronunciation)</td>
<td>mother</td>
</tr>
<tr>
<td>东</td>
<td>dōng</td>
<td>sunrise behind a tree</td>
<td>east</td>
</tr>
<tr>
<td>门</td>
<td>mén</td>
<td>gate</td>
<td>door; gate</td>
</tr>
<tr>
<td>家</td>
<td>jiā</td>
<td>a pig under the roof</td>
<td>house; home</td>
</tr>
<tr>
<td>笔</td>
<td>bǐ</td>
<td>bamboo and fur</td>
<td>writing stuff</td>
</tr>
<tr>
<td>竹</td>
<td>zhú</td>
<td>two bamboos</td>
<td>bamboo</td>
</tr>
<tr>
<td>毛</td>
<td>māo</td>
<td>fur</td>
<td>fur</td>
</tr>
<tr>
<td>雨</td>
<td>yǔ</td>
<td>rain</td>
<td>rain</td>
</tr>
<tr>
<td>雪</td>
<td>xuě</td>
<td>“rain” and bloom</td>
<td>snow</td>
</tr>
<tr>
<td>雷</td>
<td>léi</td>
<td>“rain” above a farm</td>
<td>thunder</td>
</tr>
</tbody>
</table>
Quiz 1

<table>
<thead>
<tr>
<th>Pinyin</th>
<th>Meaning</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>mǔ</td>
<td>Fire</td>
<td>女</td>
</tr>
<tr>
<td>shēng</td>
<td>Stone; rock</td>
<td>山</td>
</tr>
<tr>
<td>xīn</td>
<td>Female</td>
<td>云</td>
</tr>
<tr>
<td>nǚ</td>
<td>Heart</td>
<td>舟</td>
</tr>
<tr>
<td>huǒ</td>
<td>Mountain</td>
<td>火</td>
</tr>
<tr>
<td>yǐn</td>
<td>Horse</td>
<td>生</td>
</tr>
<tr>
<td>shēn</td>
<td>Cloud</td>
<td>鱼</td>
</tr>
<tr>
<td>yǔ</td>
<td>Fish</td>
<td>马</td>
</tr>
<tr>
<td>zhōu</td>
<td>Boat</td>
<td>心</td>
</tr>
<tr>
<td>shí</td>
<td>Bear; grow up</td>
<td>石</td>
</tr>
<tr>
<td>Pinyin</td>
<td>Meaning</td>
<td>Character</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>chao</td>
<td>rest</td>
<td>木</td>
</tr>
<tr>
<td>sen</td>
<td>branch; unimportant</td>
<td>本</td>
</tr>
<tr>
<td>guo</td>
<td>tree</td>
<td>采</td>
</tr>
<tr>
<td>zao</td>
<td>root; important, basic</td>
<td>休</td>
</tr>
<tr>
<td>mu</td>
<td>forest</td>
<td>林</td>
</tr>
<tr>
<td>cao</td>
<td>morning, early</td>
<td>森</td>
</tr>
<tr>
<td>me</td>
<td>to pick</td>
<td>末</td>
</tr>
<tr>
<td>lin</td>
<td>bird’s nest</td>
<td>窝</td>
</tr>
<tr>
<td>ben</td>
<td>wood</td>
<td>巢</td>
</tr>
<tr>
<td>xiu</td>
<td>fruit</td>
<td>早</td>
</tr>
<tr>
<td>Pinyin</td>
<td>meaning</td>
<td>Character</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>jùn</td>
<td>electricity</td>
<td>晶</td>
</tr>
<tr>
<td>tián</td>
<td>farm</td>
<td>日</td>
</tr>
<tr>
<td>chōng</td>
<td>bright</td>
<td>旧</td>
</tr>
<tr>
<td>mìng</td>
<td>crystal</td>
<td>昌</td>
</tr>
<tr>
<td>diàn</td>
<td>morning, sunrise</td>
<td>田</td>
</tr>
<tr>
<td>mò</td>
<td>sun</td>
<td>且</td>
</tr>
<tr>
<td>dàn</td>
<td>past; old</td>
<td>电</td>
</tr>
<tr>
<td>jīng</td>
<td>eye</td>
<td>明</td>
</tr>
<tr>
<td>xiāng</td>
<td>prosperous; flourishing</td>
<td>日</td>
</tr>
<tr>
<td>rì</td>
<td>star</td>
<td>星</td>
</tr>
</tbody>
</table>
### Quiz 4

**Name**

<table>
<thead>
<tr>
<th>Pinyin</th>
<th>Meaning</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>rén</td>
<td>follow; fellow</td>
<td>仙</td>
</tr>
<tr>
<td>sōn</td>
<td>immortal; fairy</td>
<td>体</td>
</tr>
<tr>
<td>tǐ</td>
<td>people</td>
<td>众</td>
</tr>
<tr>
<td>cóng</td>
<td>to sit</td>
<td>坐</td>
</tr>
<tr>
<td>xiù</td>
<td>umbrella</td>
<td>人</td>
</tr>
<tr>
<td>xiàn</td>
<td>crowd</td>
<td>从</td>
</tr>
<tr>
<td>zuò</td>
<td>body; health</td>
<td>休</td>
</tr>
<tr>
<td>dòng</td>
<td>but</td>
<td>但</td>
</tr>
</tbody>
</table>
Quiz 5

1 LISTENING TASK (5 marks):

Listen carefully and choose the correct answer and circle it. Each question will be repeated three times.

2. A 7    B 17    C 19    D 26
3. A 白   B 红    C 黄    D 黑
4. A 喜   B 恶    C 不动   D 易
5. A 上    B 下    C 左    D 右

2 CHOOSE THE CORRECT Chinese CHARACTER ACCORDING TO ITS MEANING (5 marks):

1. Three ( ) A 弗    B 弼    C 正
2. Female ( ) A 女    B 妇    C 妳
3. Meat ( ) A 肉    B 湿    C 肆
4. Kingdom ( ) A 国    B 地    C 霸
5. Bright ( ) A 干    B 明    C 焦

3 Match (6 marks):

Match the pinyin (pronunciation) with Chinese character and its meaning.

Pinyin   Chinese character   meaning:
shang    亡        middle
mèn      肉        food, meat
zhǎnɡ    跳        up, above
yue      歌        song, gate
xì      气        under, below
è      广        means

4 Write the Chinese character on line according to the picture (5 marks):

(1)______  (2)______  (3)______  (4)______  (5)______
5. Guess the meaning of a Chinese character according to the clue provided:

1) 旦 means sun (moon) – A. sunrise B. farm  C. moon
2) 心 means heart – A. upside-down B. upside C. cross
3) 木 means tree – A. lake B. forest C. cross

6. Finish dialogues (6 marks):

Scenario 1: A is ordering food in a Chinese restaurant.

A: 你好！
B: 你好！我想要________和_________（put any two food or drink here）.

Scenario 2: A shows appreciation to B.

A: ________！
B: 不客气！

Scenario 3: A is paying the bill after dinner.

A: 请！
B: ________元。（￥120 in Chinese）

Scenario 4: A is asking B's favourite number.

A: 你最喜欢数字是多少？
B: 我最喜欢_________。（Fill your favourite number here）

Scenario 5: A is saying goodbye to B.

A: 再见！
B: ________

---------------------------------------------

1. Do you like the visualized way we adopted to learn Chinese characters in class this term? Why or why not?

2. Do you think it helps you to learn Chinese? In what aspects? (e.g., helps my understanding, improves memory, makes Chinese learning more interesting, stimulates creative thinking, etc.)