A COMPARATIVE STUDY OF GRADE 3 STUDENTS' CHINESE CHARACTER ACHIEVEMENT THROUGH CHARACTER STRUCTURE LITERACY METHOD AND CHINESE RADICAL LITERACY METHOD AT AN INTERNATIONAL SCHOOL IN SAMUT PRAKARN, THAILAND

Chih-Min Wu

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of MASTER OF EDUCATION in Curriculum and Instruction Graduate School of Human Sciences ASSUMPTION UNIVERSITY OF THAILAND 2017
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ABSTRACT

I.D. No.: 5829494

Key Words: CHINESE CHARACTER ACHIEVEMENT, CHINESE RADICAL LITERACY METHOD, CHARACTER STRUCTURE LITERACY METHOD, GRADE 3 STUDENTS, CHINESE LANGUAGE LEARNING

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The purpose of this study was to determine if there was a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method (CSLM) and Chinese radical literacy method (CRLM) at an international school in Samut Prakarn, Thailand, in the academic year of 2017-2018. This study was conducted on a population sample of 65 Grade 3 students from the target school. The Chinese Character Achievement Test was administered to students and collected in mid March 2018, to identify their Chinese character achievement after an experimental period of five weeks, from January 22nd to March 2nd, 2018, during which the experimental group was taught through CSLM, and the control group was taught through CRLM. The data collected from administering the Chinese Character Achievement Test were divided by two groups (the experimental group and the control group) and compared through both descriptive (i.e., means and standard deviations) and inferential (i.e. independent samples t-test) statistics methods. The findings
suggest that students learning through CSLM do not statistically differ from students learning through CRLM. Both literacy methods were found somehow effective when teaching students to learn a new Chinese character, as the mean scores of both groups were not significantly different. Despite the fact that no significant difference in Chinese character achievement was found, a numerical difference in favor of the experimental group versus the control group was observed. Finally, recommendations for teachers, students, administrators and future researchers were presented.
ACKNOWLEDGEMENTS

This has been such a long journey and it is hard to believe that this research has finally come together. The many challenges and difficulties that I have encountered during this whole research process has been a really valuable experience for me and it is truly an unforgettable one too. One thing that I am very sure of is that I would not be able to make it without the many supports and encouragements from my advisor, professors, colleagues, friends and family.

First of all, I would like to show my utmost gratitude towards my advisor, Asst. Prof. Dr. Orlando Rafael González González, for being so supportive and patient at all times, without his guidance and professional advice I would not have made it this far. He was always there to give suggestions, recommendations and solutions. It is truly my pleasure and honor to be able to learn from him.

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CHAPTER I

INTRODUCTION

This chapter provides an overview of the research by presenting the background of the study, statement of the problem, research questions, research objectives, research hypotheses and theoretical and conceptual frameworks. Then, the scope and limitation of the study, definition of terms, and the significance of the study are presented.

Background of the Study

Chinese Language learning has become more important in many places in the world. According to a news article published by Epoch Times (Tian, 2006), Chinese has become the language that people must learn in many Asian countries, Europe, and America. Moreover, from years 2000 to 2004, the number of students that participated in Chinese proficiency exam increased by 57% in the United Kingdom, Wales and Northern Ireland (Tian, 2006). This phenomenon is also observed in Asian countries, like Singapore, Malaysia, Thailand, Hong Kong, Japan, and other Southeast Asian Countries (Tian, 2006). However, this phenomenon can be seen most significantly in Thailand. For instance, Korea has the most interest in having students learn Chinese. For the past five years, the number of students learning Chinese has increased by 66% in Korea (Tian, 2006).

In Thailand, Chinese language learning has become more and more important for the next generation. The biggest reason behind this can be seen as to now the ASEAN (Association of Southeast Asian Nations) Economic Community (AEC) has become official in year 2015, with Thailand being an active member of this community. According to a research done in 2013 on the emergence of ASEAN Economic Community (AEC), entitled,
“Bangkok youth’s demography towards the decision to learn foreign languages”, the results collected from 400 Bangkok youths who were Thai native speakers have shown that Chinese ranked the second language that most youths were already learning and were interested in learning (Rotparsitporn, 2016). Thailand is preparing their next generation to be competent in the market and certainly being equipped with Chinese Language skill is crucial, as China plays an important role in the market and their significant contribution to the world’s economy. According to CCTV (China Central Television) English (Ya, 2013), the number of Thai students taking Chinese classes has tripled over the past five years. Since the AEC has been established, the demand of Chinese language learning in Thailand has increased. In response to this rising demand, the Thai government collaborates with China to set up Chinese language institutes. Around 22 Confucius Institute branches, a non-profit public institutions whose purpose is to promote Chinese language and culture, have been established in Thailand, more than any other country (Ya, 2013).

Understanding the need of learning Chinese language, many international schools in Thailand also have Chinese as a language of instruction in the school curriculum. Moreover, learning foreign language is also essential in public schools, as this is also part of the national curriculum of Thailand. The entire basic education core curriculum is English, while for other foreign languages, includes French, German, Chinese, Japanese, Arabic, Pali and languages of neighboring countries (Ministry of Education Thailand, 2008). They not only want students to learn Chinese in institutes, but learning through the language in a school setting. In other words, they not only want students to learn the language but to be able to advance the language.

For instance, an international school in Samut Prakan is one of the international schools in Thailand that has Chinese as a language of instruction in the school curriculum. Chinese is one of the major language of instruction used in the early year program (Nursery
Specifically, the school uses *Chinese radical literacy method* (CRLM) to help students learn a new Chinese character in the primary year program. Chinese radical literacy method is a literacy method that helps students to quickly recognize the meaning of one character through recognizing the radical of the character (Wu, 2010). The radical of a character can be one independent character.

Certainly, CRLM has helped many students learn Chinese Characters. However, a study done in National Dong Hwa University in Taiwan have shown that *character structure literacy method* (CSLM) enables students to make in-depth understanding and connection with the new Chinese characters they have learned (Chiu, 2013). Implementing such literacy method has a positive effect on inspiring students’ interest in word recognition. Moreover, the results have shown that it does increase students’ word recognition ability (Chiu, 2013). Character structure literacy method explains the structure of the characters, the strokes of the characters, how it is formed, the origin of the character, and the meaning that a character make can be related to the origin of that character.

**Statement of the Problem**

CRLM is a literacy method that has been adopted in an international school in Samut Prakan. Therefore, Chinese teachers start from teaching the “radical” characters in early year program (Nursery to K3). By the time students reach the primary year program (Grade 1 to Grade 3), they will be able to identify the radical in a new Chinese character that they will be learning. On the other hand, CSLM is a literacy method that is not use in the target school currently. It is a literacy method that helps students to learn the character in all aspects, not only knowing the radical. This includes learning the origin of the character, the strokes, how it is formed, and the meaning of the character.
By the end of Grade 3 in the target international school, students have to be able to read and write approximately 250 Chinese characters. Moreover, at the end of each school year, students will be assessed on the Chinese characters that they have learned during the school year. The assessment consists of mainly two parts: dictation and recognition. The teacher will say the characters and students have to be able to write them down. The same applies to recognizing the characters, the teacher will point to one character and students have to be able to read such character. There are a massive number of Chinese characters that students need to be able to learn and be prepared for assessments in merely one school year and about 90% of the students are foreign learners from Thailand. Thus, being able to remember all of the Chinese Characters has become an obstacle.

Based on the researcher’s experience, Grade 3 students in the target international school tend to forget the Chinese characters that they have learned under the CRLM. What they have learned in the current school year is a building block to what they will be learning in the following school years. Students need to be equipped with such massive Chinese character and vocabulary database, in order to help them learn in the following school year. Moreover, the Chinese class curriculum of the school gets harder each new academic school year. The majority of the students are struggling to remember the characters they have learned under the CRLM. Therefore, the researcher decided to investigate if there was a significant difference between mean measures of Chinese character achievement of Grade 3 students who learned through Chinese radical literacy method and an experimental group who learned through character structure literacy method at an international school in Samut Prakarn, Thailand.

Research Questions

In order to address the statement of the problem, the researcher answered the following questions.
1. What is the Grade 3 students’ Chinese character achievement through character structure literacy method at an international school in Samut Prakarn, Thailand?

2. What is the Grade 3 students’ Chinese character achievement through Chinese radical literacy method at an international school in Samut Prakarn, Thailand?

3. Is there a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand?

**Research Objectives**

This study was designed to achieve the following objectives.

1. To identify Grade 3 students’ Chinese character achievement through character structure literacy method at an international school in Samut Prakarn, Thailand.

2. To identify Grade 3 students’ Chinese character achievement through Chinese radical literacy method at an international school in Samut Prakarn, Thailand.

3. To determine if there is a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand.

**Research Hypothesis**

The following was the research hypothesis developed for this study.

There is a significant difference between students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand, at a significance level of .05.
Theoretical Framework

In this section, the two major literacy methods on which this study is based, CSLM and CRLM, are introduced.

Character Structure Literacy Method (CSLM)

CSLM (字理识字教学法, zì lǐ shí zì jiāo xué fǎ) is a literacy method that teaches student to learn a new character through recognizing the structure and the principles of the characters. The theory behind this method is to have students make learning the Chinese characters meaningful. Moreover, this literacy method conforms to the cognitive psychology from sensibility to rationality. This literacy method helps students to be able to analyze the strokes (笔画, bǐ huà) of the characters, explain the principles of the characters, remember the form or structure of the characters, and teaches students to be able to write the characters. It promotes turning characters into vivid pictures, development of image, make logical thinking, guide students to observe and think, in order to simulate students’ interest in learning Chinese characters. This method helps student make in-depth understanding of the characters they are learning and students can carry out meaningful memory rather than mechanically memorizing each character. Thus, this literacy method can help in reducing the burden of memorization of the Chinese characters (Chiu, 2013).

There are twelve approaches in CSLM used to teach students in recognizing a new Chinese character. They are association approach, comparative approach, component approach, demonstration approach, image approach, migration approach, practice approach, random approach, reasoning approach, riddle approach, song tactics approach, and story approach. In this study, the researcher used only one approach, which is the association approach. The reason why the other eleven approaches were not chosen was because their implementations were not aligned to the school curriculum. Moreover, this approach lies on the same difficulty level as CRLM.
Association approach. This method consists of learning the characters by making connection of the characters’ form and shape to its structure and principle. For example, the teacher may ask, “what do you see when water level lowers?” You will see 沙 (shā, meaning sand), because when water level lowers you can see the sand under the water.

Chinese Radical Literacy Method (CRLM)

CRLM (部首识字教学法, bù shǒu shí zi jiāo xué fǎ) is a literacy method which helps students to recognize the meaning or to make a guess of the meaning of a Chinese character when they see the association of the radical with a component in the character. For instance, the Chinese character with the same radical is likely to be associated to the similar meaning. The theory behind this literacy method is that most of the Chinese characters come from one of the six categories of Chinese characters (六书, liù shū), the pictophonetic compounds (形声字, xíng shēng zì). Pictophonetic compounds represent the largest group of characters in modern Chinese. Approximately 82% of the characters fall in this category (Culture China, 2014). Characters in this category are composed of two parts: the pictograph and the phonetic part. The first part, which is known as pictograph gives the general meaning of the character. For example the character 湖 (hú, means lake). The left side structure 氵 is known as “三点水” (sān diǎn shuǐ), in English it means water. The second part is a phonetic part, this part derived from a character pronounced in the same way as the word the new character represents. For example the same character 湖 reads “hú”, we have identified the first part earlier. The second part of this character would be 胡 also reads “hú”. According to this example, most of the Chinese characters are composed of the same structure. The first part, known as the pictograph was later used as the radical.
The design of this study consisted of two groups of Grade 3 students who have learned Chinese through two different Chinese literacy methods, which are as follows.

**Group A.** The experimental group. A group of students who studied Grade 3 Chinese Language by learning through CSLM for one Unit of Inquiry (five weeks) during the experimental period.

**Group B.** The control group. A group of students who studied Grade 3 Chinese Language by learning through CRLM for one Unit of Inquiry (five weeks) during the experimental period.

The researcher was eager to understand whether the two Chinese literacy methods; CSLM and CRLM would affect students’ Chinese character achievement. Therefore, it was the researcher’s decision to choose one of the Chinese literacy methods, CSLM, to make comparison with, because CRLM was adopted by an international school in Samut Prakarn already. The decision was taken to support the interest of the researcher.

Both groups studied the exact same content during the five weeks of instruction, only used a different literacy method, and the students’ Chinese character achievement were compared by running an independent samples t-test for significant differences.

---

**Figure 1.** Conceptual framework for the present study.
Scope of the Study

This study was conducted at an international school in Samut Prakarn Province, Thailand. In this study there were 65 Grade 3 students. Therefore, this study was limited only to Grade 3 students in the target international school and cannot be generalize to other grade level or international schools, which was also considered to be a small sampling. In this study, the researcher wanted to investigate the significant difference of students’ Chinese character achievement learning through CSLM and CRLM among Grade 3 students in an international school in Samut Prakarn, since the school is also trying to help students better learn their Chinese characters. There are many Chinese literacy methods to help students learn new Chinese characters. However, this study was limited to investigating only the CSLM and CRLM.

Furthermore, the sample of this study was limited to an area located in Samut Prakarn Province; therefore, the findings of this study can only be generalized to the students of an international school located in Samut Prakarn for further academic school years.

The design of this study consisted of two groups of students who learned through two different Chinese language literacy methods. This study took place over a period of five weeks, one month (one unit of inquiry). In these five weeks, the Grade 3 students of both groups were taught the 50 Chinese characters in the fourth unit of inquiry (see Appendix E).

Definitions of Terms

To help researchers get a clear understanding of this study, the following terms were defined to convey the sense in which they were used in this study.

An international school in Samut Prakarn. It is a private international school of approximately 850 students located in Samut Prakarn province.
**Character structure literacy method (CSLM).** This is one of the Chinese literacy methods that was implemented to teach the students from the experimental group to learn new Chinese character in this research. This is a literacy method that teaches student to learn a new Chinese character through recognizing the structure and the principles of the characters. There are twelve approaches in teaching new Chinese characters using this literacy method, among which only association approach was used in this study.

*Association approach.* This is learning the characters by making connection of the characters’ form and shape to its structure and principle. For example, the teacher may ask, “what do you see when water level lowers?” You will see 沙 reads “shā” meaning *sand*, because when water level lowers you can see the sand under the water.

**Chinese radical literacy method (CRLM).** It is one of the Chinese literacy methods that was implemented to teach the students from the control group to learn new Chinese character in this research. This is a literacy method that has long been adopted at an international school located in Samut Prakarn Province. It is a method to help students recognize the meaning or to make a guess of the meaning of a Chinese character when they see the relation of the radical with a component in the character.

**Chinese language subject.** It is defined as a homeroom class in the primary year program (Grade 1 to Grade 4) of an international school in Samut Prakarn, Thailand. They do not learn it for a period (one hour); instead they have to learn five to six periods of Chinese every day.

**Chinese character achievement.** It is defined as to how many reading and writing Chinese characters the students in the primary year program can be able to recognize at the end of the school year.
**Grade 3 students.** It is the groups of students, who have learned by using two different Chinese literacy methods. In this study the researcher has divided the students into two groups:

**Group A.** The experimental group, a group of students on which the researcher used a teaching approach of CSLM for five weeks during the experimental period.

**Group B.** The control group, a group of students on which the researcher used a teaching approach of CRLM for five weeks during the experimental period.

**Significance of the Study**

This is the first study being conducted on this topic at the target international school in Samut Prakarn Province, Thailand. The findings of this study will benefit students when they are learning new Chinese characters. Also, give guidance to teachers, administrators and future researchers in implementing such Chinese literacy method to enhance students’ Chinese learning.

The researcher of this study was able to examine which Chinese literacy method is more effective for Grade 3 students. The students can benefit from this research, because by learning through an effective literacy method they will be able to learn more Chinese characters. Moreover, the teachers will also be able to integrate different Chinese literacy method to help Grade 3 students learn new Chinese characters in a more effective way. Furthermore, the administrators can determine the most effective Chinese literacy method to help Grade 3 students learn new Chinese characters. Lastly, future researchers can conduct further research on such Chinese literacy method in other school with Chinese language setting or they can also try to implement other Chinese literacy method.
In this chapter, the researcher presented the reasons, purposes and importance behind her research on comparing the students’ Chinese character achievement learning through CSLM and CRLM for Grade 3 students. In Chapter II, the researcher will discuss about the six categories of Chinese characters, the different Chinese literacy methods, CSLM and CRLM, previous studies of both literacy methods, background of the school, and Chinese language class at the target school.
CHAPTER II

REVIEW OF RELATED LITERATURE

In the previous chapter, the researcher mentioned the purposes and the importance of the study. This chapter reviews relevant literature in order to establish what is known about Chinese literacy methods. The researcher first discusses about the six categories of Chinese character, the different Chinese character literacy methods, character structure literacy method and Chinese radical literacy method. Then, the researcher discusses about previous studies of CSLM and CRLM and then the background of the school and also more about the Chinese class in an international school in Samut Prakan.

The Six Categories of Chinese Characters

The six categories of Chinese character (六书, liù shū) are a classification of the structure and formation of the Chinese characters. In other words, Chinese characters with the same structure or similar principle of formation are classified into the same category. The classification of the six categories of Chinese character has long been there in the history of China. However, the person that really organizes such classification is a Chinese philologist named Xu Shen (许慎, xǔ shèn), from the Han Dynasty (206 BCE-220 CE). He was also the author of Etymological Dictionary; Shuo Wen Jie Zi (说文解字, shuō wén jiè zì), the first Chinese dictionary with character analysis. The dictionary contains over 9,000 character entries under 540 radicals. The dictionary explains the origins of the characters based primarily upon a study of the earlier Small Seal Script (小篆, xiǎo zhuàn). Small Seal Script is an archaic form of Chinese calligraphy (Zheng, 2014).
The six categories of Chinese characters are: pictograms (象形字, xiàng xíng zì), ideographs (指事字, zhǐ shì zì), logical aggregates (会意字, huì yì zì), pictophonetic compounds (形声字, xíng shēng zì), borrowing/phonetic loan characters (假借字, jiǎ jiè zì), and associate transformations (转注字, zhuǎn zhù zì) (Zheng, 2014).

### Pictograms

Pictograms (象形字, xiàng xíng zì) refers to the characteristics of Chinese characters in accordance with its contour and curves. The Chinese characters are created in the way things look, so that when people see the characters, they immediately knows what the character means; such as the Chinese character: 日 (rì, sun) and 月 (yuè, moon) is created based on how the sun and the moon looks like (see Figure 2). Pictograms are the basis for constructing other Chinese characters. As the basis for constructing other Chinese characters, they lesser the types, the better the versatility, so people creating the characters are very picky with the “look” and the “shape” of the characters they are creating. Only those ones with obvious features, the representatives or the “models” are qualified for this category. This is why pictograms represent the most important category in the history of Chinese characters. There are only around 364 pictogram characters in the Etymological Dictionary (说文解字, shuō wén jiě zì). After nearly 2000 years, people only created a few other characters that belong in this category, such as 伞 (sǎn, umbrella) 凹 (āo, concave), and 凸 (tū, convex). Characters in this category are single characters that cannot be split into another character. In another words, they are usually not formed by two or more Chinese Characters.

![Figure 2. Pictogram of the sun (left) and moon (right). Reprinted from Fengjianping’s Blog. Retrieved from https://fengjianping.wordpress.com/2010/07/02/my-word-is-日-月.](image)
Ideographs

Ideographs (指事字, zhǐ shì zì) refers to the fact that the meaning of the characters can be understood when you look at the certain structure of the character, for example the character 上 (shàng, up) is constructed of two parts (二、丄), it uses a horizontal line as a benchmark, and then add a short line above or beneath, indicating above or below the standard, thus representing the concept of orientation “up” or “down”. It can be seen that Ideograph is a category that uses symbols to create characters, which either adds an indicator to pictograms to form a new character or uses another symbol to create a new character, which illustrates an abstract concept directly. Just like Pictograms, characters in this category are single characters that cannot be split into another character. There are only 125 Chinese characters in this category.

Logical Aggregates

Logical Aggregates (会意字, huì yì zì) combines two or more “text” (pictograms or ideographs) to form a new word, and get the meaning of the character through the relationship of the combination of Pictograms or Ideograph. The meaning of the character usually symbolizes an abstract idea. For example the character 武 (wǔ, weapon), the Chinese character 武 is originally 戈 (dagger, axe) in Oracle Bone Script form, the oldest form of Chinese characters. A dagger is the most important weapon in the ancient times. The formation of the character has its meaning, as we can see the character “武” has “止” meaning foot from its shape, meaning to confront enemy with weapon (see Figure 3). There are around 1167 Chinese characters that belong to this category.

Figure 3. The origin of the Chinese character 武 (weapon), evolved from Oracle Bone Script.
Pictophonetic Compounds

Pictophonetic compounds (形声字, xíng shēng zì) refers to the fact that things are divided into different subordinates according to the attributes of things, with the text (or words) representing the type, indicating the meaning of the range (shape, or meaning), and then find an already known pronunciation character, as a part of the sound (tone) as a combination to form a new character. Characters in this category are composed of two parts: the pictograph and the phonetic part; also known as the semantic and phonetic part (Ho, Ng, & Ng, 2003). The first part gives the general meaning of the character. For example the character 湖 reads “hú” means lake. The left side structure 氵 is known as “三点水” (sān diǎn shuǐ), in English it means water. The second part is a phonetic part, this part derived from a character pronounced in the same way as the word the new character represents. For example the same character 湖 reads “hú”, we have identified this part earlier. The second part of this character would be 胡 also reads “hú”; when added 氵 (water) to 胡, a new character湖 is created.

Borrowing/Phonetic Loan Characters

Borrowing/Phonetic Loan Characters (假借字, jiǎ jiè zì) covers cases where an existing Chinese character is used to represent an unrelated word with similar pronunciation; sometimes the old meaning is then lost completely. Characters in this category are usually characters that are not recorded in the ancient text. Later, people add an indicator to an existing character that has a similar pronunciation to form the character. This category exists because some words (mainly functional words) or meaning (especially abstract), do not need to be expressed in image or cannot be expressed properly through image.
Associate Transformations

Associate Transformations (转注字, zhuàn zhù zì) originally didn't represent the same meaning but have bifurcated through orthographic and often semantic drift. For instance, 考 (kǎo) means to verify and 老 (lǎo) means old, were once the same character, meaning “elderly person”, but detached into two separate words. Characters of this category are rare, so in modern systems this group is often omitted or combined with others (Culture China, 2014). The classification of characters in this category is: when the form of one character changes (mainly pictograms) and cannot give any meaning through the form/structure/shape of the character itself or when one character is mainly borrowed to express it in another meaning (usually abstract meaning). Usually, they will add another pictograph or sound symbol to create another new character.

Different Chinese Character Literacy Methods

There are several Chinese literacy methods used around the world to help Chinese learners to be able to learn Chinese Language more effectively. One thing that Chinese educators should keep in mind and be aware of is that there will be no perfect literacy method and there are no perfect literacy methods to teach a specific age group or specific language proficiency group. Educators should differentiate the literacy methods according to Chinese language learners’ needs. Some educators will combine several literacy methods together in order to meet the needs of their students. Although there are many kinds of Chinese literacy methods, this study has reviewed six kinds of Chinese literacy methods, which are: decentralized literacy method, classified literacy method, Chinese radical literacy method, character root literacy method, zhu-yin or pin-yin literacy method, and character structure literacy method (Chen, 2008).
Decentralized Literacy Method

This is a literacy method that asks students to learn the characters through reading the text. The theory behind this literacy method is to have students read a lot of text, for it is said that words make meaning in phrases and phrases make meaning in sentences, sentences make articles, so the more students read, the faster they can recognize a character. Often times, vocabularies appear in the text and teachers will teach the lesson from the textbooks.

Classified Literacy Method

This is a literacy method that teaches students through classification of similar group of Chinese characters. Teachers will classify the characters according to the same pronunciation, according to quantifier, according to shape/form of the character, and according to synonym or antonym. The main point of this literacy method is to use the technique of classifying same group of Chinese characters together to enable students to remember the characters through observing and analyzing the characters.

Chinese Radical Literacy Method

This is a literacy method that helps students to recognize the meaning or to make a guess of the meaning of a Chinese character when they see the association of the radical with a component in the character. For instance, the Chinese character with the same radical is likely to be associated to the similar meaning. The theory behind this literacy method is that most of the Chinese characters come from one of the six categories of Chinese characters (六书, liù shū), the pictophonic compounds (形声字, xíng shēng zi). Characters in this category are composed of two parts: the pictograph and the phonetic part. The first part, the pictograph is also known as the radical of a character.

Character Root Literacy Method

This is a literacy method that teaches students the classification of characters
according to the root of the characters. In another words, to teach students characters that are from the same family.

**Character Structure Literacy Method**

This is a literacy method that teaches students to learn a new Chinese character through recognizing the structure and the principles of the characters. The theory behind this method is to have students make learning the Chinese characters meaningful. Moreover, this literacy method conforms to the cognitive psychology from sensibility to rationality. This literacy method helps students to be able to analyze the strokes (笔画, bǐ huà) of the characters, explain the principles of the characters, remember the form or structure of the characters, and teaches students to be able to write the characters.

**Zhu Yin or Pin Yin Literacy Method**

This is a literacy method that simply teaches students to recognize a Chinese character through learning the alphabets of Chinese characters. Just like English there are 26 alphabets, in Chinese there are 37 alphabets. Students simply learn the alphabets and they will be able to read the Chinese characters. Students not only learn the alphabets, but also the tone and they will be able to read the Chinese characters.

**Character Structure Literacy Method**

Character structure literacy method (CSLM) is a literacy method that teaches students to learn a new Chinese character through recognizing the structure and the principles of the characters. The theory behind this method is to have students make learning the Chinese characters meaningful. Moreover, this literacy method conforms to the cognitive psychology from sensibility to rationality. According to the psychological aspect, it is believed that children’s image thinking is more enhanced than their abstract thinking. CSLM is a literacy method that focuses on demonstrating the characters by its form and its shape, making the
characters appear as an image, making it more vivid. Therefore, it is relatively easier for young learners to remember the characters by making association to the image of the characters. This literacy method also helps students to be able to explain the principles of the characters, remember the structure of the characters, and teaches students to be able to write the characters (Chiu, 2013).

Why do people choose to use CSLM? Many young learners encounter difficulty in recognizing Chinese characters for its complex structure and complicated principle. This phenomenon is observable during the beginner level of learning Chinese characters. Students often recognize the characters wrongly, pronounced the characters wrongly, or write the characters wrongly. This is because some of the Chinese characters have similar strokes or strokes order (e.g., 折 (zhé) means fold and 拆 (chāi) means tear). The only difference between these two characters is the placement of one stroke. Also, there are many Chinese characters with the same pronunciation (e.g., 每 (měi) means each and 美 (měi) means beautiful). Moreover, there are characters with similar structure (form and shape) (e.g., 偷 (tōu) means steal and 愉 (yú) means pleased). In addition, there are characters with same pronunciation and similar structure (form and shape) (e.g., 跟 (gēn) means with 根 (gēn) means root) (Han, Luo, Wan, Pei & Zhao, 2014).

Learning Chinese characters is also challenging because students have to learn more characters. Their vocabulary database has to increase as they are advancing the language. It is good that students learn to recognize more Chinese characters, but on the other hand this also means that students have higher chance in recognizing the characters wrongly, if they are not taught correctly. Moreover, the attributes of Chinese character is usually seen as difficult to write, difficult to read, and difficult to remember. Most importantly, the reason that students cannot learn the Chinese characters well is because they did not get a grasp of the structure and principle of the characters. If they don’t know the principle of the characters, it would be
difficult for them to learn the meaning of the characters. It is harmful for students to learn Chinese characters through rote memorization method, because once their vocabulary database increases, the percentage of students recognizing the characters wrongly also increases (Chiew, 2008).

The feature of CSLM is able to resolve the problem as mentioned above. Character structure literacy method is a literacy method that is first proposed in 1992 by an experienced professor and educator, Guo-Jun Jia. In 1994 this literacy method has gained its reputation for its effectiveness in helping Chinese learners to learn the characters and be able to retain their memory of the characters. In Chiu’s (2013) study, the theory of CSLM is to teach a character according to its law of configuration, the use of its form and meaning, the tone and pronunciation. According to this study, there are three unique factor of CSLM:

1. The use of the principle of the formation of Chinese characters, such as the focus of characters’ form and meaning can help learners build in-depth understanding of the characters.

2. CSLM is the use of variety approaches in order to teach a character to the student, rather than just using specific strategy or method.

3. Teach the character through understanding and making association to the character improves students’ recognition of characters, which enables students to be able to master the four skills when learning language: listening, speaking, writing, and reading.

Moreover, through analyzing the characters, learning its origin and principle surely raises students’ interest in learning Chinese characters, rather than rote memorizing the characters and constant writing the characters like the traditional way of teaching Chinese language. By raising students’ interest in learning the characters somehow motivates students in learning the Chinese characters. They will become more eager to inquire the characters and
find out the principle of the creation of the characters. In addition to that, students will be able to cultivate their word recognition skills through knowing the principle of the characters, consolidate the effect of word recognition through memorizing the meaning of the character through its form and shape (origin of the character, mostly form from pictures), and improve the quality of their word recognition skills through reducing the frequency of error correction of the characters, meaning they will be able to be more accurate when distinguishing a character.

Technically, CSLM teaching strategy and method cover aforementioned the three main aspects (Han et al., 2014):

1. **Traceability (溯源, sùyuán) – Comparison (对照, duìzhào) method**: this method is applicable in teaching Chinese characters from the Pictograms and Ideograph category. Traceability means to trace back to the origin of the character and to find out how the characters have evolved. Comparison means to show pictures of the evolvement of the Chinese characters which allows students to learn from the original creation of the characters and relate the characters to its corresponding image.

2. **Decomposition (分解, fēnjiě) – Composition (组合, zǔhé) method**: this method is applicable in teaching Chinese characters from the Pictophonetic Compounds and Logical Aggregates category. Decomposition means to decompose a Chinese character into different parts and find out the function and meaning of each part. Composition means to assemble the parts (two or three different parts) together and discover the meaning and the significance of the character as a whole.

3. **Strengthen the principle of Chinese characters’ components and radicals**: some characters from the Pictograms, Ideograph, and Logical Aggregates category evolved through time and are formed into new characters. Therefore, to learn the
basic structure of the characters (e.g. characters from the Pictograms and Pictophonetic Compounds category) enables students to grasp the pattern of the characters.

As mentioned in Chiu’s (2013) study and Hsu’s (2009) study, CSLM teaching procedure can be summarized as the following four main points:

1. Teach the tone of the character: after the teacher has selected the characters to teach, he/she should make use of pin-yin, a Chinese phonetic transcription or the Romanization of Chinese characters, in order to teach the tone or pronunciation of the character.

2. Analyzing the principle of the character: teachers can use intuitive method to guide students to be able to observe, associate, compare, and analyze characters from pictograms, ideograph, and logical aggregates categories. Moreover, students will be able to differentiate the semantic radical and phonetic radical of the characters from the pictophonetic compounds category and its meaning and function. Then, the students will be able to apply these characters in forming vocabularies and sentences.

3. Analyzing the structure (form and shape) of the character: teach students the characters through learning its strokes, strokes order, and structure.

4. Writing exercise: after teaching a new character, immediately have students write it down once. Teachers can guide students through the writing exercise, if they write any characters wrongly, they have to find the mistake and make corrections immediately. An assessment of the characters can be given after the lesson.

There are also specific strategies in CSLM being used when teaching different categories of Chinese characters. In this study, the researcher has reviewed strategies used when teaching the three categories of Chinese characters: pictograms, logical aggregates, and
pictophonic compounds (Han et al., 2014).

**Strategy for Teaching Characters in Pictograms Category**

This is the strategy that focuses on teaching Chinese characters that belongs to the Pictograms category. It is believed that all Chinese characters were first created according to image and then later evolved into other characters. When teaching characters in this category, teachers have to emphasize on teaching the students to make comparison between the present character and its ancient pictograph. First of all, teachers can show an ancient pictograph of the character and have students guess the character, at the same time explain its structure and principle. Then, teachers can show the present character and explain about how it has evolved and the relation between the two.

**Strategy for Teaching Characters in Logical Aggregates Category**

This is the strategy that focuses on teaching Chinese characters that belongs to the Logical Aggregates category. Logical aggregates mean the combination of two or more components or characters into one character due to the meaning of each component or character in order to form a new character. The meaning of the characters in this category can be distinguished from two aspects: *concrete meaning* (此类会意) and *abstract meaning* (合宜会意). Characters that have concrete meaning usually are characters that is a combination of two or more components with particular symbols (the form and shape of the character) that are used in order to merge with another component (character) in order to form a new character with a new meaning. Characters that have abstract meaning usually are characters that are a combination of two or more symbolic components in order to represent an idea. For example, the character 歪 (wāi) means *crooked* is formed by the character 不 (bù) meaning *no/not* and the character 正 (zhèng) meaning *straight*, the combination of these two components expresses the idea that if something is not straight then it is crooked. When teaching the characters with concrete meaning, teachers can decompose the character and
have students learn the principle and structure of each component (character). Then, combine the components (characters) and learn its new meaning. As for teaching the characters with abstract meaning, teachers can also decompose the character and explain the principle and structure of each component (character). Then, explain the idea behind the combination of such two components (characters).

**Strategy for Teaching Characters in Pictophonetic Compounds Category**

This is the strategy that focuses on teaching Chinese characters that belongs to the pictophonetic compounds category. It is believed that characters in this category are formed by two components, one that provide the meaning and one that provide the pronunciation. There are three strategies used to teach characters in this category:

1. **Component principle teaching method (形声字形旁字理教学策略):** the theory behind this method is similar to CRLM. Students learn to categorize the components or the radical in order to guess the meaning of the character. Teachers can explain the structure and the principle of the character to build up in-depth understanding.

2. **Phonetic component principle teaching method (形声字声旁字理教学策略):** the theory behind this method is to teach students to read a character by its phonetic component, without looking at the radical. However, not all characters can be taught this way, so teachers can have students make a guess, then give the accurate and detailed explanation of the structure and principle of the character.

3. **Single character principle teaching method (单个形声字字理教学策略):** the theory behind this method is to teach students to analyze how a character is formed, to decompose the character into different components, and then find out the meaning of each component. After that find the connection between the meaning of the character as a whole and the meaning of the character’s radical.
Lastly, find out which component represent the pronunciation, then find the connection between the pronunciation of the character as a whole and the pronunciation of the character’s component.

CSLM is a literacy method that has been integrated on general students. In Hsu’s (2009) study, this literacy method is integrated on helping students with learning disability or literacy disorder. The reason the researcher adopted this literacy method is because it is believed that CSLM is a literacy method that is created according to the principle of the six categories of Chinese characters, in order to help students learn their Chinese characters in the most efficient way. In this study, literacy disorder is defined as students’ disability to recognize characters and is two years behind their peers, not because of intellect disorder, sensory defect, emotional distress, or unfavorable environment (Hsu, 2009).

In order to help students with literacy disorder, the literacy method used as teaching instruction has to be simple and straightforward. CSLM can be simple and straightforward as it promotes turning characters into images, which makes learning the characters more authentic. Students with literacy disorder react faster to graphics and images. There are several teaching strategies extended from CSLM as summarized in Hsu’s study (2009):

1. Make use of students’ learning advantages: the use of students’ image thinking skills and body language skills in order to help them remember the characters.

2. Applying image approach: as mentioned in the principle of CSLM, making use of the ‘image approach’ allows students to directly be in touch with the things that they are learning. Have students turn the characters into pictures and learn by their instincts.

3. Intensifying (Chinese) sight words/characters: guide students to make use of image memory to remember the characters, so even if they don’t analyze the tone, they can immediately recognize the character.
4. Instruction on character structural analysis: guide students to be able to analyze the character’s structure in order to learn the meaning and assist students’ memorization of the character.

There are many advantage aspects of using CSLM as an instruction to teach Chinese learners to learn new Chinese characters. However, it is argued in Hsu’s study (2009) that CSLM makes recognizing a new Chinese character more difficult, because they have to learn its origin, the structure and the principle of the character. This is accumulating students’ academic burden as they have to remember more details of the character. Moreover, the different language policy of China, Taiwan and other Chinese-speaking countries becomes a challenge in integrating CSLM to students learning in simplified Chinese (简体中文). For CSLM is more beneficial in teaching characters that are in traditional Chinese (繁体中文), because these characters still maintain its most original form and shape since the creation of such character. However, some characters in the simplified Chinese have lost its original form and shape due to the simplification of the structure of the characters. The simplification of the characters has its historical reasons which will not be discussed in this study.

Moreover, it is also true that character structure literacy method cannot be use to teach every Chinese characters, because some of the characters has already evolved from the ancient (original) characters and most of the time these kind of characters has lost its initial structure and meaning. These kinds of characters are usually the ones that are combined by different components to form a new Chinese character. It is challenging for teachers to explain to students the principle and the structure of the character. Also, it would be difficult for students to make an association to the characters. For example, the character 搏 (bó, fight), is difficult to explain to the students the reason why this character is formed by two components 甫 (fǔ, just) and 寸 (cùn, inch), and how does it relate to the meaning fight. In addition, CSLM is a literacy method that is more helpful when teaching a character’s
structure and principle (meaning), but not so helpful when teaching the pronunciation of the character (Hii, 2007).

**Different Approaches of Character Structure Literacy Method**

There are different approaches used to teach students to learn a Chinese character in CSLM and these approaches can be combined together to teach students to learn a new character. Educators do not have to use all of the approaches in order to teach, they can omit the approaches that does not fit with their group of students. The main point of this literacy method is to help educators to use all different approaches in order to really make the students learn. There are twelve approaches that are reviewed in this study and they are association approach, comparative approach, component approach, demonstration approach, image approach, migration approach, practice approach, random approach, reasoning approach, riddle approach, song tactics approach and story approach (Chiu, 2013).

**Association Approach**

This is the approach that will be used during the experimental period in this study. This approach is learning the characters by making connection of the characters’ form and shape to its structure and principle. There are three types of association approach stated in Chiu’s study (2013):

1. Approaching association: have students make association of the character through making a connection to any other object or subject from students’ past learning experience. For example when learning the character 男 (nán) meaning man, students can separate the character 田 (tián) meaning *field* and 力 (lì) meaning *strength*, which are parts that form the character 男. Students have learned these characters separately in the past, now that they see this new character they will be able to make an association which is a man using his strength to work in the field.
2. Parallel association: have students make association of the character through making a connection of the character to an object or subject of the similar type or characteristic from the real world. This method is most effective when learning characters from the Pictogram category. For example, the character 爪 (zhuǎ) meaning *claw* looks like the eagle’s claw in real world, so students can immediately learn the character from its structure (form and shape).

3. Comparative association: this is a method that has students make association of the Chinese character to a similar thing. For example, when teaching the character 沙 (shā) meaning *sand*, the teacher may ask, “what do you see when water level lowers?” You will see 沙 (shā), because when the water level lowers you will be able to see the sand under the water.

**Comparative Approach**

This is learning by comparing similar Chinese characters. The comparison between the Chinese characters as a whole (e.g., 慕 (mù) meaning *admire* and 墓 (mù) meaning *grave*; has similar top structure), the characters’ radical (e.g., 海 (hǎi) meaning *ocean* and 泪 (lèi) meaning *tears*; has same radical, the characters’ phonetic radical (e.g., 抱 (bào) meaning *hug* and 跑 (pǎo) meaning *run*; has the same phonetic radical 包 (bāo)).

**Component Approach**

This approach helps students to learn by identifying the component in the character. One character can be made with many individual characters. The component of the character may give it its meaning. For example when teaching the character 牧 (mù) meaning *shepherd*, the teacher can explain the meaning of each component. The first component of this character is 牛 (niú) this character is the transformation of 牛 (niú) meaning *cow*. The second component of this character is 手 (shǒu) meaning a *hand holding a stick*. Therefore, the
character 牧 (mù) means herding animals.

**Demonstration Approach**

This is the use of real objects that represents the character, physical actions that represents the character (e.g. acting out the form or shape of the character), or games to help students learn the origin of the character.

**Image Approach**

This approach is learning by seeing pictures/images. For example, the character 人 (rén) meaning people, human, or person, originally the character 人 derives from the image of a person. By showing the image of the character can help the student better relate the meaning to the characters.

**Migration Approach**

This approach is having students apply the same method or theory they learn character “A” to character “B”. This approach is similar to the theory of Chinese radical literacy method. For example when the student learn the character 目 (mù) meaning eyes, if they see this character appearing as a component in other character, they will immediately know that the character has something to do with eyes (e.g., 眼 (yǎn) meaning eyes, has the component 目mù.

**Practice Approach**

This approach is teaching students the character through constant practice. After students understand the structure and principle of the character, they can put into practice, apply to their daily use, design and create an activity to practice the characters. There are two ways in teaching this approach, the imitation practice approach and the creation practice approach.

1. Imitation practice approach: students learn from the way teacher analyze a characters’ structure and principle.
2. Creation practice approach: students design and apply what they have learned according to the meaning of the Chinese character.

**Random Approach**

This approach is learning the characters through daily life experience, such as communication with friends, information on bulletin boards, labels around the campus. Students will be able to learn from their environment and not only in an in-class setting.

**Reasoning Approach**

This approach is learning a new Chinese character through making inferences of the character according to its structure and principle. For example, 一 (yī) meaning one usually symbolize less in Chinese and 三 (sān) meaning three usually symbolize a lot in Chinese. Students make inferences according to this kind of reasoning of the Chinese characters that they are learning.

**Riddle Approach**

This approach teaches students to learn the new characters through guessing riddles. There are four types of riddle approach: word puzzle, picture puzzle, guessing the tone according to the shape of the character, guessing the radical according to the tone or the meaning of the character.

1. Word puzzle: this is the most frequently used method. (e.g., when guessing the character in traditional Chinese 办 (bàn) meaning to do, the teacher can ask the students what is a character that has to use 力 (lì) meaning strength in the middle and 辛 (xīn) meaning hard working at two sides. Then, the students can relate to the character 办 (bàn).

2. Picture puzzle: draw the picture of the character according to the principle and structure of the character and have students guess the meaning. For example, when
guessing the character 盗 (dào) meaning steal, the teacher can draw a person slobbering when looking at the food in a plate. This is because originally this character looks like a person slobbering when looking at the plate.

![Figure 4. The Chinese character 盗 (dào, steal) in the Oracle Bone Script. Reprinted from zdic.net, Retrieved from http://www.zdic.net/z/1f/zy/76D7.htm.]

3. Guessing the tone according to the shape of the character: teacher will provide the pictograph of the original character and the modern way of writing of the character together and have students guess what it is. For example, the character 目 (mù) meaning eyes, teacher can ask students, “What is a Chinese character that has the meaning of eyes?”

![Figure 5. The Chinese character 目 (mù, eyes) in the Oracle Bone Script. Reprinted from zdic.net, Retrieved from http://www.zdic.net/z/1f/zy/76EE.htm.]

4. Guessing the radical according to the tone or the meaning of the character: the teacher can give a riddle that guides student to find the appropriate radical for the character. For example, what is a character that is not quiet when you add the radical 口 (kǒu) meaning mouth? What is a character that means wonderful when you add the radical 女 (nǚ) meaning girl? What is a character that means a little time when you add the radical 禾 (hé) meaning grain? The answer is 少 (shǎo)
meaning *a little*, because for the first question, when we add 口 (kǒu) it is 吵 (chǎo) meaning *noisy*. The second question, when we add 女 (nǚ) it is 妙 (miào) meaning *wonderful*. For the last question, when we add 禾 (hé) it is 秒 (miǎo) meaning *seconds*.

**Song Tactics Approach**

This approach teaches students to learn a new Chinese character through songs. There are two types of song tactics approach: narrative and riddle.

1. **Narrative song tactics approach**: teaching through making a song of the character’s structure (form and shape) and meaning. For example the characters 辯 (biàn) meaning *debate* and 瓣 (bàn) meaning *petal*. We can debate when we have speech, 言 (yán) meaning *speech* and when we plant melon in the middle, 瓜 (guā) meaning *melon*, petals grow on the side.

2. **Riddle song tactics approach**: this is a song-type riddle. For example when teaching the character 蕊 (ruǐ) meaning *stamen of a plant (usually flower)*. The riddle could be “this is a weird character; it has grass on its head, nine grain, and three bean sprouts.”

**Story Approach**

This approach is the use of story to help students learn the characters. Teachers can create a story of the Chinese character in order to help students learn the origin and the creation of the characters. For example, when teaching the character 初 (chū) meaning *beginning*, the teacher can first introduce the process of tailoring. Then relate this character to how it is created from the character 衣 (yī) meaning *clothes* and 刀 (dāo) meaning *knife*. This means that before we start to make clothes we have to first cut the clothes with a knife/scissors. Therefore, this character 初 (chū) has the meaning of a start of or to begin.
Chinese Radical Literacy Method

Chinese Radical Literacy Method (CRLM) is a literacy method that helps students make a guess of the meaning of a Chinese character when they see the association of the radical with a component in the character. For instance, the Chinese character with the same radical is likely to be associated to the similar meaning. The theory behind this literacy method is that most of the Chinese characters come from one of the six categories of Chinese characters (六书, liù shū), the Pictophonetic Compounds (形声字, xíng shēng zi). Characters in this category are composed of two parts: the pictograph and the phonetic part. The first part, the pictograph or known as the semantic part, is a cue to the meaning of the character. The second part, the phonetic part is a cue to the pronunciation of the character (Chen, 2008; Ho, Ng, & Ng, 2003).

In the study of Ho et al. (2003), there are about 200 semantic radicals and 800 phonetic radicals. Semantic radicals usually appear on the left side of a Chinese character or at the top position of a Chinese character. Many radicals can stand alone as a character itself and others are bound form that does not appear alone, but have to appear with other characters in order to make sense. Although radicals of a character can allow readers to make a guess of the meaning of the character, still there is different degree of semantic radical transparency. In here, transparency means to what extent or to what degree can the readers make association of a radical to the meaning of the character. For example, the Chinese character 妈 (mā) means mother is a character with transparent semantic radical, for the semantic radical of this character is 女 (nǚ) means female, which gives a reliable cue for the meaning of the character as we know that mother is female. Therefore, readers can make a guess that this character is associated to female. On the other hand, an opaque semantic radical is when the radical of the character does not give readers reliable cue for the meaning of the character.
Phonetic radical cues the pronunciation of the character. It is important in the CRLM, for it gives readers clues to how the character is pronounced. It could either be “direct derivation” or by “analogy”. As the theory of characters from the six categories of Chinese characters, the Pictophonetic Compounds, the phonetic part of the characters in this group usually gives the pronunciation of the character, which is known as “direct derivation”. For example the character 蚂 (mǎ), the phonetic part of this character is 马 (mǎ) which is also pronounced as “mǎ”. At times, readers can also use analogy to guess the sound of the character that has the same phonetic radical. For example the character 码 (mǎ) means yard and the character 蚂 (mǎ) means ant shares the same phonetic radical. Therefore, readers can make a guess that the pronunciation of the new character 码 (mǎ) should be the same as the character 蚂 (mǎ) (Ho et al., 2003).

Currently, CRLM is being used as a major Chinese literacy method at an international school in Samut Prakarn. The major reason that the school chooses this literacy method is because most of the Chinese characters come from the pictophonetic compounds category (形声字, xíng shēng zì). It was estimated that around 80% to 90% of the Chinese characters belong to this category (Ho et al., 2003). In Xu Shen’s Etymological Dictionary, there are 9353 Chinese characters, which 7,697 Chinese characters are characters from the pictophonetic compounds category (Chiu, 2013). In order to support the school’s reason of choosing CRLM as the major literacy method, the researcher has analyzed the required writing Chinese characters that Grade 3 students has to learn according to a reliable online Chinese dictionary (汉典, hàn diǎn) (Zdic.Net, 2004). The result shows that out of a total of 249 writing Chinese characters, there are 168 writing Chinese characters from the Pictophonetic Compounds category (see Appendix A). The school has chosen 64 radicals that have strong semantic meaning to help students learn Chinese characters (see Appendix B).
Moreover, the school uses Xin Hua Dictionary (新华字典, xīn huá zì diǎn) in the curriculum, which has 214 radicals in total. Students also use this in class as a source to look for meanings of the characters.

Chinese language is difficult to learn and this is mainly because of its complex structured characters. It is composed of many strokes and in a way they form structures that can be called “radicals”. This means that a character can have more than one radical, for example the character 如 (rú) means such as, the radical in this character could be 女 (nǚ) means girl or 口 (kǒu) means mouth. Chinese radicals are characterized according to how frequently it occurs in different characters, mainly the larger groups like 扌 (tí shǒu páng) this radical means hands (e.g., 打 dǎ means hit, people hit something with their hands and that is why they use this radical to represent actions that requires hand motion) (Taft & Chung, 2015).

A multilevel interactive-activation and competition (IAC) framework (De la Rouviere, 2013) has been introduced to help learners and educators to better understand the role of the Chinese radical in recognizing a character (see Figure 6). This is also known as a three-tier orthographic structure in Xu’s study, which consists of three parts: character, radical and strokes (Xu, 2011). Looking at the figure we can see that when learners see a Chinese character they activates the feature level, When the feature level is activated, it sends activation signal to the orthographic units, which are letters of an alphabet or called graphemes, which represents the radicals. After the radical level is activated it will send signal to the character level and that is where the Chinese character is being recognized and being meaningful. The semantic units (meaning of the character) are associated with each character, so does the phonological units (pronunciation) (Taft & Chung, 2015).

In addition, Xu’s (2011) study has also mentioned that there is a linear relationship between radical knowledge and Chinese character acquisition. It is claimed in this study that when learners read a text, the radical level is activated, which means that learners tend to recognize a character by its radical before anything else. Moreover, when two groups of students were given a test regarding Chinese radical knowledge, those students with good radical knowledge performed significantly better than those who lack equivalent radical knowledge. This shows that radical knowledge is important towards vocabulary acquisition, for learners can recognize a character by how frequent a radical of the characters appears in the text. For example, characters with radicals placed at the left or top positions are the high-frequency Chinese characters and will be recognized easier than those low-frequency Chinese characters.
After understanding how Chinese learners recognize Chinese characters through CRLM, we can see the significance of radical teaching, because readers can quickly pull together the characters when they are able to recognize the radical of the characters they have encountered. Just as the multilevel interactive-activation and competition (IAC) framework shown in Figure 4, Chinese radical teaching should also be systematic in order to help Chinese learners build up their understanding. In Taft and Chung’s (2015) study, learners have to establish the foundation of the radical level first in order to build up their character level. In another words, if readers simply jump from feature level, also known as the strokes level, to character level then it would be like teaching words in written form (alphabet) without giving students any knowledge of how the letters make up the words. The result of their study has shown that the knowledge of radicals of a Chinese character does facilitate learning a new Chinese character. When learners begin to learn through Chinese radical literacy method, they can remember the characters better over a period of time comparing to those who learn without the Chinese radical literacy method.

Learning through Chinese radical literacy method has its benefits, such as students will be able to guess the meaning of the character by recognizing the radical of the character. For example the character 河 (hé) means river, the radical of this character is 氵 (sān diǎn shuǐ) means water. Therefore, students can make a guess that this character is related to water. Moreover, they will also be able to make a guess of the pronunciation of the character through learning the theory of radical characters, also known as the pictophonetic compounds, where characters are formed by the semantic part and the phonetic part. For example the character 清 (qīng) means clear, the phonetic part of this character is 青 (qīng) means green also pronounced as (qīng). Students immediately can guess the pronunciation of this character by seeing its phonetic part.
Furthermore, radical instruction helps to improve adult’s Chinese character (vocabulary) retention rate as well. This is to say that not only young learners are able to remember the characters learned through recognizing the radicals of the character, but adult learners are also able to do so. Just like Xu’s (2011) study, high frequency radicals are more recognizable for Chinese learners, for it usually provides more appropriate implications of meaning of the character than low frequency radicals. This means that it is easy for Chinese learners to make association of the radical to a character when they first encounter the character (De la Rouviere, 2013).

In Wu’s (2010) study, Chinese radical literacy method has its benefit on helping disadvantaged children to improve their reading capabilities. There are two important function of CRLM mentioned in this study: first of all, CRLM explains the meaning of the character. Chinese dictionaries usually adopt radical searching method, currently there are 214 radicals. Characters with the same radical usually means that they share similar origin or the meaning is somehow associated to the radical. Secondly, the structure (shape and form) of the character gives the meaning to the character itself. Within the 214 radicals, most of the radicals are pictogram, which enables children to easily learn through CRLM. Moreover, there are three major benefits of CRLM in this study: first of all, as many has mentioned, it helps students to understand the basic meaning of the character. Secondly, students can make use of the knowledge of radicals to increase their Chinese vocabulary, because there are many characters that share a common radical. This can help students learn more characters and at the same time they are constantly reviewing what they have learned before. Lastly, to strengthen strokes teaching through CRLM, because there are some similarities between the characters’ strokes names and the radicals, therefore, both can benefit from each other (Wu, 2010).
Although there are benefits of learning through CRLM, there are also some imperfections of this literacy method. Students can guess the pronunciation of the Chinese character by recognizing the phonetic part of the character. However, there are only about 26% of the cases that the characters’ phonetic part would have the same pronunciation (Taft & Chung, 2015). This is to say that students are more likely to encounter the situation where they see a character with the same radical, but might get the pronunciation wrong. For example the character 汉 (hàn) meaning Chinese (people), have nothing to do with water. It is only when the teacher explains about the origin of the character, then will the students be able to learn the character. If students know that the reason that 汉 (hàn) has the radical 氵 (sān diǎn shuǐ) meaning water, is because Chinese race developed around a major water source, then they will be able to make an association to why this character uses this radical (Taft & Chung, 2015).

Previous Research on CSLM and CRLM

This section will introduce some previous research studies on CSLM and CRLM.

Previous Research on CSLM

Han et al. (2014) implemented two different literacy methods in a primary school located in China. Both component literacy method (similar to CRLM) and character structure literacy method was implemented on 31 Grade 2 students to investigate which literacy method is more effective in helping students to learn new Chinese characters. The results of the research showed that CSLM is more effective than component literacy method, because CSLM provides different approaches in teaching characters from different categories (e.g., pictophonic compounds, logical aggregates, pictograms, and etc.). CRLM is only applicable to the Chinese characters from a certain category.

Chiu (2013) implemented the character structure literacy method in a public primary school located in eastern Taiwan. The literacy method was implemented on 12 Grade 1
students to investigate the effects of CSLM on helping students to learn new Chinese characters. The experimental period lasted for twelve weeks and the results of the research showed that it is positive to implement this literacy method on Grade 1 students, because the method greatly increases students’ interest in learning Chinese characters, and the result was reflected in the questionnaire. Moreover, students were able to accurately identify the characters after learning through this literacy method. The percentage of accuracy improved from 39.75% to 94.3%.

Hsu (2009) implemented the character structure literacy method in a public primary school located in Taiwan. The literacy method was implemented on 3 students that were diagnosed as having literacy difficulty; they are from Grade 4, 5, and 6. The literacy method was implemented to investigate the effects of CSLM on improving their literacy ability. The experimental period lasted for approximately a month and the results of the research showed that all three students have improved their literacy ability. They might not be able to accurately recognize and identify all of the characters in an assessment, but the improvement is evident. Through the interview with the students, the researcher found out that students learn better through image approach and through association approach.

Chua (2008) implemented the character structure literacy method in a primary school located in Malaysia. The literacy method was implemented on two of the 29 students in Grade 2. The selection of these students is to focus on the problem they have and to accurately find out the effectiveness of such literacy method. The results of the research showed that both students have improved their Chinese character achievement to around 90%. However, this study only focuses on characters that provide strong image support when learning a new Chinese character. Therefore, the researcher concluded that CSLM does not really help students in learning the pronunciation of the Chinese character.
Hii (2007) implemented the character structure literacy method in a primary school located in Malaysia. The literacy method was implemented on one of the 50 students in Grade 5. The selection of this student is because he doesn’t like learning Chinese and his Chinese grades is D. Therefore, the researcher wants to implement this literacy method on this student to investigate the effectiveness of CSLM. The results showed that the student has a positive opinion towards learning Chinese characters after the experimental period, because the researcher has adopted different approaches to help raise the interest of learning. In addition, CSLM also help improve students’ knowledge for a character’s structure and principle.

**Previous Research on CRLM**

Taft and Chung (2015) implemented the CRLM at the University of New South Wales located in Australia. The literacy method was implemented on four groups of students, each group with 10 students, in a total of 40 students. The implementation of such literacy method is to investigate the effectiveness of CRLM on Chinese language learning. The results of the study have showed that participants with radical knowledge performed better than those that have never learned about the radical method before. Even those that are only exposed to the knowledge of radical for a short period of time, performed better. This result is to emphasize the importance of helping students to build up radical knowledge. Thus, students will be able to identify a character quickly through recognizing its radical.

De la Rouviere (2013) implemented CRLM through spaced repetition systems in Stellenbosch University located in South Africa. Spaced repetition system is referring to an application online that helps students learn Chinese characters in this study. This literacy method was implemented on 18 students in this university that have been learning Chinese for just over one semester. This research wants to investigate a Chinese radical spaced repetition system in helping students to learn their Chinese characters. It is stated in this
research that the more chances the students are exposed to the repetition of the characters, the better they learn. Thus, the results of the research showed that students’ performance was sometimes lower than those that have more repetitions of the character. Moreover, the result of students’ performance is significant when a radical with the character is presented together at the first time when Chinese learners learn their characters.

Xu (2011) implemented the CRLM through meaningful interpretation and chunking technique. This technique is to decompose a character to the smallest unit, in order to learn the character as a whole. This method was implemented on 124 students from two local high schools, in which 63 students are from Palo Alto High School and 61 students are from Gunn High School in the United States. The researcher has conducted a pre test a month before conducting the post test in order to find out the distinctive results. The post test was taken a month after the experimental period in order to find out students’ character retention rate. The results of the research have showed that this method enhances learners’ immediate learning and retention of Chinese characters.

Wu (2010) implemented the Chinese radical literacy method at a preschool located in Taiwan. The purpose of the research was to investigate CRLM effectiveness on disadvantaged children. The literacy method was implemented on a total of 30 students, among them 10 are the ones not included in the experiment, they are just there as a comparison group, and the other 10 disadvantage students not included in the experiment, also acting as a comparison group. Lastly, there will be another 10 disadvantage students being treated as the experimental target. The experimental period lasts for 16 weeks and the results of the research have showed that the 10 disadvantage students’ literacy rate in the treatment group is higher than those that are not in the treatment group, although the differences does not differ much, but still has improved.
Ho et al. (2003) implemented the Chinese radical literacy method in a primary school located in Hong Kong. The literacy method was implemented on a total of 60 students, with 20 students from Grade 1, 20 students from Grade 3, and the last 20 students from Grade 5. The results of this research have showed that radical knowledge is important for children, especially when they are learning to read Chinese. For instance, Grade 5 students perform better than students in Grade 3 and Grade 1, because they can better use the knowledge of semantic radical to relate to the meaning of the character. In general, this method helps students build up the skills of decoding a Chinese character and to easily identify a new character by recognizing the radical of the character.

**Background of the School**

The research venue, an international school in Samut Prakarn is located in the Samut Prakarn Province and it has more than 650 students, (90% of the students are Thai). The school provides the International Baccalaureate (IB) Organization programs. It is also a trilingual international school that has English, Chinese, and Thai as the main languages of instructions. The school promotes an English-Chinese immersion program in the early years and primary years.

The target international school in Samut Prakarn is a private international school, and just like most international schools, is a member of the International Schools Association of Thailand (ISAT) and the East Asia Regional Council of Schools (EARCOS). It is also fully accredited by the International Baccalaureate Organization, the New England Association of Schools and Colleges (NEASC) and the Council of International Schools.

The founder of the school believes that the world needs well-educated and intelligent people, it also needs these people to be courageous and compassionate to help the ones that need help. Also, people who will be willing to give their helping hands to others in times of
need and people should be brave enough to stand up for the rights of all mankind. It is this believe that the founder of the school establish this school. The school wants to nurture future leaders and want to equip them with knowledge and also good characters that will help them to become a caring person that will contribute to the society.

The founder of the school is also the head of Chinese department. This is also why the school emphasizes on Chinese education and not only English education. What is special about the school is that from Early Year Program (Nursery to K3) up to Primary Year Program (Grade 1 to Grade 5), students do not learn Chinese as a subject, but rather learn through the language. Chinese is also made one of the major languages of instruction in EY and PYP.

**Grade 3 Chinese Class in an International School in Samut Prakarn**

As mentioned in the background of the school, Chinese is not taught as a subject in this school, at least not in the Early Year Program and the Primary Year Program of this school. The school promotes that students learn through the language. Therefore, students will have to learn Chinese for half day of the schedule, around three to four periods in a day.

In Chinese class, students not only learn Chinese Language Arts (LA), but they also learn math concepts in Chinese and they learn their Unit of Inquiry (UOI) in Chinese as well. Moreover, it is importation to teach students to inquire a topic in Chinese in order to make learning Chinese more authentic. There are in total six UOI in a school year, and for every UOI there will be around four to five cycles and one cycle has six days. In Grade 3, students have Chinese LA test on every Day 6 of the cycle. Students have to learn approximately 42 writing characters and 47 reading characters in every UOI. The higher the grade level, the more Chinese characters they have to learn.
In Grade 3 Chinese class, students learn new Chinese characters through CRLM. Students already have some basic knowledge of the theory behind this teaching method and they not only learn through this method in Grade 3, but in Grade 1 and Grade 2 as well. This method is greatly promoted in this school. In the beginning of teaching characters, teacher will introduce the character and then ask students what radical do they see and then have students make a guess of what the character might mean and what does it associate with. Most of the time students can make a correct guess through seeing the radical of the character. However, there is some character that does not have visible or obvious radical. Moreover, radical literacy method is sometimes misunderstood as component literacy method. Therefore, some students with language learning difficulties find it hard to identify a character through this method.

At the end of every school year, students from Grade 1 to Grade 4 will be assessed on the Chinese characters that they have learned. This also applies to the Grade 3 students. Usually, the students will be assessed on the writing Chinese characters and the reading Chinese characters. Students are assessed through an instrument which is also known as the Chinese character achievement test in this study. As for the Grade 3 students, they have to be able to know how to write 250 Chinese characters and to be able to read around 270 Chinese characters. They will be tested only once and this data will be collected in order to find out which student needs language support in class.
CHAPTER III

RESEARCH METHODOLOGY

In the previous chapter, the researcher presented a literature review on CSLM and CRLM and how each help students to learn their new Chinese characters. In this chapter, the researcher focused on the design and methods of this study. Participants, research procedures, data collection, data analysis was explained in this chapter.

Research Design

The purpose of this study was to examine if there was a significant difference between mean measures of Chinese character achievement of Grade 3 students who learned through Chinese radical literacy method and an experimental group who learned through character structure literacy method at an international school in Samut Prakarn, Thailand. The school has adopted CRLM method and at the end of the school year, Grade 3 students have to be able to learn 250 writing characters. However, based on the researcher’s experience, students tend to forget what they have learned. This was reflected on their year-end assessment, also known as the Chinese character achievement in this study.

For this purpose, a quantitative comparative intervention research was carried out. During the experimental period, the researcher employed a practical intervention involving a total of 65 Grade 3 students, with a group of 33 participants with CSLM and 32 participants with CRLM. This design has been selected in order to compare the scores of two groups of students who study by two different Chinese literacy methods with the same background. The data was collected through the Chinese character achievement of the participants. They were
assessed by testing the 50 Chinese characters from the fourth unit of inquiry (see Appendix E) that they have learned during the experimental period.

At the end of the research, descriptive statistics (means and standard deviations) and a quantitative hypothesis testing (independent samples $t$-test) were used to determine if there was a significant difference between Grade 3 students’ Chinese character achievement learning through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakan.

Population

The target population was all 65 students from the four classes in Grade 3 (i.e., G3A, G3R, G3W, and G3Y) at an international school in Samut Prakan during the academic school year of 2017-2018. About 90% of the students were Thai nationals and already had three years of experience in the Chinese immersion program.

Sample

The sample of this research was a population comprised of all 65 students from the four classes in Grade 3 at an international school in Samut Prakan, which consisted of around 15-17 students in each class. All of the Grade 3 students participated in this study. The selection of all classes was to avoid selecting only a few students and avoid being unfair in the selection of students. The 65 students from all four classes of Grade 3 were divided into two groups, 33 of them with CSLM and 32 of them with CRLM.

This study had two groups of students as participants (Group A and Group B), who have learned by two different Chinese literacy methods. Group A is G3R and G3A and this was the experimental group and this is the group of students which the researcher used a teaching approach of CSLM for one unit of inquiry (approximately one month) during the
experimental period. Group B is G3Y and G3W and this was the control group and this is the group of students which the researcher used a teaching approach of CRLM for one unit of inquiry (approximately one month) during the experimental period.

The selection of one class with one specific literacy method is to avoid having the same teacher teaching a group of students with only one literacy method. In the target school, from Grade 1 to Grade 4, there are 2 Chinese teachers, and every grade level has four classes, which means each Chinese teacher had to teach two classes. Therefore, in this case, Ms. A taught G3Y and G3A and Ms. B taught G3W and G3R. Thus, the researcher had to equally distribute the classes into two groups, in order to avoid Ms. A teaching only CRLM to her group of students and Ms. B teaching only CSLM to her group of students. In short, Ms. A taught G3Y using CRLM method and G3A using CSLM method. Ms. B taught G3W through CRLM method and G3R through CSLM method.

In order to find out whether the students’ Chinese character achievement was on the same level, the researcher conducted a preliminary test to make sure that the students were all on the same level of Chinese language proficiency. The test score was taken from the Chinese test that students have to take for every cycle of the unit of inquiry. There are in a total of four to five cycles in one unit of inquiry (UOI). The test score that the researcher had randomly taken was from Lesson 10 of the third UOI and the test was done around mid October, 2017. The maximum score of the test was 100 points. This applies to all the tests that they have to take every cycle.

The result of the test shown in Table 1 revealed that 65 students from all four classes of Grade 3 are on the same level of Chinese character achievement. The result was taken from the mean score of every class, in which the mean score of each class falling around 80 out of 100 points.
Table 1

*Results of the One-Way ANOVA Test on G3 Students’ Chinese Character Achievement*

*Distribution According to Class*

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</tbody>
</table>

*Note. There was no statistically significant difference between classes (statistical significance level set at p=.05).*

From the data shown in Table 1, for G3Y class, \( M = 83.59, SD = 11.57 \); for G3A class, \( M = 79.87, SD = 15.83 \); for G3W class, \( M = 81.56, SD = 20.02 \); and for G3R class, \( M = 80.25, SD = 18.18 \). In order to make sure that the result was valid and reliable, the researcher conducted a one-way ANOVA test using a statistical software package. The analysis of variance showed that there was no significant difference between all four classes regarding their Chinese language proficiency, \( F(3, 60) = .17, p = .92 \).

Because the students were all on the same level of Chinese character achievement, the researcher was able to distribute them into two groups, as shown in Table 2. The reason for such selection was because Ms. A was assigned by the target school to teach G3Y and G3A Chinese class and Ms. B was assigned to teach G3W and G3R Chinese class. Therefore, either one of their classes had to learn through CSLM and the other CRLM. The purpose of such selection was also to avoid the difference of results caused by the difference in teaching instruction.
Table 2

Population and Sample of Grade 3 Students Distributed in Experimental Group and Control Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Class</th>
<th>Population</th>
<th>Sample</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>G3A</td>
<td>16</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>Group A (experimental group)</td>
<td>G3R</td>
<td>17</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>G3Y</td>
<td>17</td>
<td>17</td>
<td>32</td>
</tr>
<tr>
<td>Group B (control group)</td>
<td>G3W</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

In order to find out if the selection of such grouping in Table 2 also had no significant difference in students' level of Chinese character achievement, the researcher conducted an independent samples t-test to find out if the two classes in the experimental group had no significant difference in their Chinese character achievement and is it the same for the two classes in the control group.

Table 3

Results of Independent Samples t-Test of the Selection of Experimental Group and Control Group According to the Test Results of Lesson 10 of the Third UOI

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental (Group A)</td>
<td>31</td>
<td>80.06</td>
<td>16.80</td>
<td>62</td>
<td>.62</td>
<td>.54</td>
</tr>
<tr>
<td>G3A and G3R classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control (Group B)</td>
<td>33</td>
<td>82.61</td>
<td>16.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G3Y and G3W classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. There was no statistically significant difference between the experimental group and the control group (statistical significance level set at \( p = .05 \)).

According to the results shown in Table 3, there was no significant difference between the experimental group and the control group. Therefore, it was concluded that all
G3 students are on the same level of Chinese character achievement and this selection does not affect the final results of the experiment.

**Research Instrument**

The research instrument that was used for this study is the Chinese character achievement test, which was similar to the final (year-end) Chinese character assessment test of an international school in Samut Prakarn.

The assessment consisted of two parts: dictation of the Chinese characters and definition of the Chinese characters learned in the fourth Unit of Inquiry after the experimental period. In this UOI (the fourth UOI), students had to learn to write 50 Chinese characters and be able to define the meaning of each character.

**Dictation of the Chinese Character**

The first section of the assessment, which was the dictation section (see Appendix C), assessed students’ memorization of the 50 writing Chinese characters that they had to learn during the experimental period through CSLM and CRLM, the weight for this section was 50% of the total 100%.

**Definition of the Chinese Character**

The second section of the assessment, which was the definition section (see Appendix C), assessed students’ understanding of the 50 writing Chinese characters that they have to learn during the experimental period through CSLM and CRLM, the weight for this section was the other 50% of the total 100%.

The weights described are similar to the school’s assessment rubric. The reason that the reading Chinese characters were not assessed was because teachers do not specifically teach each reading character in this school, but rather have students learn through the text. The researcher was unable to use CSLM as an instruction method to teach reading Chinese
characters, because it was not aligned to the school’s curriculum.

**Scoring Rubric of the Chinese Character Achievement Test**

The scoring rubric of the research instrument followed the scoring rubric of an international school in Samut Prakarn (see Table 4). The scoring rubric of an international school in Samut Prakarn was used to find out students’ Chinese character achievement, for the school follows a no fail policy, therefore, the test is not use as a tool to evaluate students’ academic performance, rather a tool to see the result of authentic teaching. There is no official percentage measurement for the retention rate. However, the school expects students to exceed 60% of the remembered Chinese characters.

**Table 4**

*Chinese Character Achievement Test Scoring Rubric*

<table>
<thead>
<tr>
<th>Score</th>
<th>Percentage scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>91 – 100</td>
<td>91% - 100%</td>
<td>Excellent</td>
</tr>
<tr>
<td>81 – 90</td>
<td>81% - 90%</td>
<td>Very good</td>
</tr>
<tr>
<td>71 – 80</td>
<td>71% - 80%</td>
<td>Fairly good</td>
</tr>
<tr>
<td>61 – 70</td>
<td>61% - 70%</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>≤ 60</td>
<td>≤ 60%</td>
<td>Recommendation for Chinese language support</td>
</tr>
</tbody>
</table>

**Validity and Reliability of the Research Instrument**

The researcher had modified the assessment according to the duration of the experimental period and has asked three experienced teachers from the same subject area (two Grade 3 Chinese teachers and the Primary Year Program Curriculum Coordinator) to establish content validity. The two Grade 3 Chinese teachers, Ms. Yvonne and Ms. Winnie has checked and approved the content validity of this assessment. The Primary Year Program Curriculum Coordinator, Ms. Sally, has also checked and approved the content validity of this assessment. Regarding the test reliability, the first part of the research instrument (dictation) to be used in this study has been administered as an assessment method in the
target school for the past 6 years. Therefore, this instrument can be considered reliable for the
diagnosis and assessment of Chinese language achievement at the target international school.
As for the second part of the research instrument (definition) is a similar method used in
Chiu’s (2013) study and claimed to be reliable, because the assessment was piloted on a
group of Grade 1 students.

Experimental Process

The length of the experiment was five weeks long, from January 22nd to March 2nd, 2018, during which two Grade 3 Chinese teachers have administered CSLM and CRLM to
two groups of students. Both Grade 3 Chinese teachers have to teach CSLM to one part of the
students and CRLM to another part of the students. Students of the experimental group,
Group A (G3A and G3R) learned through CSLM and students of the control group, Group B
(G3Y and G3W) learned through the CRLM method (see Figure 7). This was to avoid the
unfairness of teacher instruction. The role of the researcher in the current study was to
monitor the integration and implementation of CSLM and CRLM in all classes; moreover, to
support students when they were learning the new Chinese characters.

The selection was because one Grade 3 Chinese teacher has to teach two Chinese
classes, for in an international school in Samut Prakarn, one Chinese homeroom teacher
collaborates with one English homeroom teacher. There were two pairs of Chinese
homeroom teachers and English homeroom teachers. Students have to switch classes during
the day. They either learn English first in the morning and Chinese in the afternoon or learn
Chinese first in the morning and English in the afternoon. Therefore, for this study there
were two Chinese teachers teaching the two groups of students. Ms. A was assigned by the
target school to teach G3Y and G3A Chinese and Ms. B was assigned to teach G3W and
G3R. Thus, either one of their classes has to learn through CSLM and the other CRLM.
The material that was used during the instruction was the same for students from both the experimental group, Group A (G3A and G3R) and the control group, Group B (G3Y and G3W). The instruction was conducted during the Chinese class with their Chinese teachers. Both groups were evaluated similarly, using the same research instrument. For the experimental period of this study, students learned in a total of five Chinese character lessons, each lesson lasted for one to one point five hour. They have learned one character lesson per cycle, which means one character lesson per week. For each character lesson they have to learn 10 Chinese characters (see Table 5).

**Table 5**  
*Unit Four Lesson Plans for Experimental Group and Control Group During the Experimental Period*

<table>
<thead>
<tr>
<th>Target group</th>
<th>Date</th>
<th>Lesson taught</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(experimental group)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSLM</td>
<td>January 22</td>
<td>Unit 4: LA Lesson 5</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>January 29</td>
<td>Unit 4: LA Lesson 16</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>February 12</td>
<td>Unit 4: LA Lesson 20</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>February 19</td>
<td>Unit 4: LA Lesson 20-1</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>February 26</td>
<td>Unit 4: LA Lesson 20-2</td>
<td>60</td>
</tr>
<tr>
<td><strong>Group B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(control group)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRLM</td>
<td>January 22</td>
<td>Unit 4: LA Lesson 5</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>January 29</td>
<td>Unit 4: LA Lesson 16</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>February 12</td>
<td>Unit 4: LA Lesson 20</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>February 19</td>
<td>Unit 4: LA Lesson 20-1</td>
<td>60</td>
</tr>
</tbody>
</table>
The Chinese characters that students have learned during the experimental period were based on the Grade 3 Chinese curriculum of an international school in Samut Prakan. However, the school does not adopt CSLM. Therefore, the researcher developed the lesson plan of CSLM for the fourth unit of inquiry (see Appendix E) and have had the primary year curriculum coordinator checked the content before it was integrated in the lesson. By the end of the experimental period, students have to learn 50 Chinese writing characters and be able to give definition of the 50 Chinese writing characters.

Figure 7. The experimental process of this study.
Collection of Data

The researcher has already asked for the permission from the principal of the target international school in Samut Prakarn and was approved to perform her research. The researcher was granted permission from the head of the Primary Year Program to administer the Chinese character achievement test. The experimental period was carried out from January 2018 to March 2018.

After the implementation of CSLM and CRLM, the Chinese character achievement test was given in early March 2018. The data was collected on the same day after the students have completed the assessment. The students were assessed only once. The assessment was conducted after the whole experimental period, i.e., after approximately five weeks. The researcher collected the data herself.

After that the researcher analyzed the data by using a statistical software package. After analyzing the data, the researcher started to work on Chapter IV and Chapter V. Finally, by early July 2018, the researcher was able to do her final thesis defense.
Data Analysis

The researcher analyzed the data using statistical software. The present study used descriptive statistics (means and standard deviations) and statistical hypothesis testing (independent \( t \)-test) to analyze the quantitative data to be collected. The objectives and analysis methods are summarized below.

1. To identify Grade 3 students’ Chinese character achievement through character structure literacy method at an international school in Samut Prakarn, Thailand. 
   Method: Means and standard deviations were used to identify Grade 3 students’ Chinese character achievement through character structure literacy method.

2. To identify Grade 3 students’ Chinese character achievement through Chinese radical literacy method at an international school in Samut Prakarn, Thailand.
   Method: Means and standard deviations were used to identify Grade 3 students’ Chinese character achievement through Chinese radical literacy method.

3. To determine if there is a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand.
   Method: An independent samples \( t \)-test was used to determine if there is a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method.
Summary of the Research Process

The relationship between research objectives, sources of data sample, data collection method and data analysis are summarized in Table 6.

Table 6

<table>
<thead>
<tr>
<th>Research objectives</th>
<th>Source of data or sample</th>
<th>Data collection method or research instrument</th>
<th>Method of data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To identify Grade 3 students’ Chinese character achievement through character structure literacy method at an international school in Samut Prakarn, Thailand</td>
<td>2 classes of Grade 3 (33 students) Group A (G3A, G3R)</td>
<td>Descriptive statistics (means and standard deviations)</td>
<td></td>
</tr>
<tr>
<td>2. To identify Grade 3 students’ Chinese character achievement through Chinese radical literacy method at an international school in Samut Prakarn, Thailand</td>
<td>2 classes of Grade 3 (32 students) Group B (G3Y, G3W)</td>
<td>Chinese Character Achievement Test</td>
<td></td>
</tr>
<tr>
<td>3. To determine if there is a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand</td>
<td>4 classes of Grade 3 (65 students) Group A and Group B</td>
<td>Independent samples t-test</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER IV

RESEARCH FINDINGS

In the previous chapters, the researcher explained the purpose and importance of the study, provided the literature review and discussed how this study would be carried out. In this chapter, the researcher provides the findings of this study, in order to answer each of the research questions and test the research hypothesis of the current study.

For that purpose, an instructional intervention was carried out during an experimental period from January 22\textsuperscript{nd} to March 2\textsuperscript{nd} 2018, and 65 Grade 3 students of an international school in Samut Prakarn in the academic year 2017-2018 participated in this study. The data was analyzed by the researcher employing a common statistical software package. The findings from such analysis are presented and organized by research objectives.

Research Objective 1

Research Objective 1 was to identify Grade 3 students’ Chinese character achievement through character structure literacy method at an international school in Samut Prakarn, Thailand. In order to address Research Objective 1, the Chinese Character Achievement Test was implemented at the end of the experimental period to collect data of students’ Chinese character achievement through CSLM. Table 7 displays the mean scores, standard deviations and interpretation of Grade 3 students’ Chinese character achievement through character structure literacy method at an international school in Samut Prakarn,
Table 7

Mean Scores, Standard Deviations and Interpretation of Students’ Chinese Character Achievement Through Character Structure Literacy Method (Group A)

<table>
<thead>
<tr>
<th>Group</th>
<th>Minimum</th>
<th>Maximum</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (experimental group)</td>
<td>26</td>
<td>93</td>
<td>33</td>
<td>69.27</td>
<td>18.80</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>G3A class</td>
<td>26</td>
<td>84</td>
<td>16</td>
<td>67.25</td>
<td>16.55</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>G3R class</td>
<td>28</td>
<td>93</td>
<td>17</td>
<td>71.18</td>
<td>21.02</td>
<td>Fairly Good</td>
</tr>
</tbody>
</table>

Overall, the total mean score of Grade 3 students’ Chinese character achievement through CSLM in an international school in Samut Prakarn, Thailand, was $M = 69.27$ points, which was interpreted as satisfactory. The total standard deviation of the test scores for the entire group was $SD = 18.80$ points. For the entire experimental group, test scores ranged from 26 to 93 points.

The total mean score for G3A class student’s Chinese character achievement through CSLM in an international school in Samut Prakarn, Thailand, was $M = 67.25$ points, which was interpreted as satisfactory. The total standard deviation of the test scores for this class was $SD = 16.55$ points. For this class, test scores ranged from 26 to 84 points.

The total mean score for G3R class student’s Chinese character achievement through CSLM in an international school in Samut Prakarn, Thailand, was $M = 71.18$ points, which was interpreted as fairly good. The total standard deviation of test score for this class was $SD = 21.02$ points. For this class, test scores ranged from 28 to 93 points.

Table 8 displays the student distribution according to the percentage of scoring rubric of the Chinese Character Achievement Test (CCAT).
Table 8

*Student Distribution According to the Percentage of Scoring Rubric of the CCAT*

<table>
<thead>
<tr>
<th>Percentage scale</th>
<th>Interpretation</th>
<th>Number of students</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>91% - 100%</td>
<td>Excellent</td>
<td>3</td>
<td>9.1</td>
<td>9.1</td>
</tr>
<tr>
<td>81% - 90%</td>
<td>Very good</td>
<td>9</td>
<td>27.3</td>
<td>36.4</td>
</tr>
<tr>
<td>71% - 80%</td>
<td>Fairly good</td>
<td>7</td>
<td>21.2</td>
<td>57.6</td>
</tr>
<tr>
<td>61% - 70%</td>
<td>Satisfactory</td>
<td>4</td>
<td>12.1</td>
<td>69.7</td>
</tr>
<tr>
<td>≤ 60%</td>
<td>Recommendation</td>
<td>10</td>
<td>30.3</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>for CLS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $N=33$.

In an overall look, 69.7% of the students have achieved satisfactory and above. Only 10 students were below or equal to 60% of achieved Chinese characters in the CCAT, at the end of the experimental period, which means that a total of 30.3% of the students in the experimental group will be recommended for CLS for the following school year. According to Table 8, four students showed a satisfactory Chinese character achievement, seven students showed a fairly good Chinese character achievement and nine students showed a very good Chinese character achievement. Fortunately, three students showed an excellent Chinese character achievement.

**Research Objective 2**

Research Objective 2 was to identify Grade 3 students’ Chinese character achievement through Chinese radical literacy method at an international school in Samut Prakan, Thailand. In order to address Research Objective 2, the Chinese Character
Achievement Test was implemented at the end of the experimental period to collect data of students’ Chinese character achievement through CRLM.

Table 9 displays the mean scores, standard deviations and interpretation of Grade 3 students’ Chinese character achievement through Chinese radical literacy method at an international school in Samut Prakarn, Thailand.

Table 9

*Mean Scores, Standard Deviations and Interpretation of Students’ Chinese Character Achievement Through Chinese Radical Literacy Method (Group B)*

<table>
<thead>
<tr>
<th>Group</th>
<th>Minimum</th>
<th>Maximum</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>B (control group)</td>
<td>12</td>
<td>89</td>
<td>32</td>
<td>62.78</td>
<td>19.66</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>G3Y class</td>
<td>36</td>
<td>89</td>
<td>17</td>
<td>64.18</td>
<td>17.63</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>G3W class</td>
<td>12</td>
<td>84</td>
<td>15</td>
<td>61.20</td>
<td>22.26</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

Overall, the total mean score of Grade 3 students’ Chinese character achievement through CRLM in an international school in Samut Prakarn, Thailand, was $M = 62.78$ points, which was interpreted as satisfactory. The total standard deviation of test score for the entire group was $SD = 19.66$ points. For the entire control group, test scores ranged from 12 to 89 points.

The total mean score for G3Y class students’ Chinese character achievement through CRLM in an international school in Samut Prakarn, Thailand, was $M = 64.18$ points, which was interpreted as satisfactory. The total standard deviation of test score for this class was $SD = 17.63$ points. For this class, test scores ranged from 36 to 89 points.

The total mean score for G3W class student’s Chinese character achievement through CRLM in an international school in Samut Prakarn, Thailand, was $M = 61.20$ points, which was interpreted as satisfactory. The total standard deviation of test score for this class was $SD = 22.26$ points. For this class, test scores ranged from 12 to 84 points.
Table 10 displays the student distribution according to the percentage of scoring rubric of the Chinese Character Achievement Test.

Table 10

*Student Distribution According to the Percentage of Scoring Rubric of the CCAT*

<table>
<thead>
<tr>
<th>Percentage scale</th>
<th>Interpretation</th>
<th>Number of students</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>91% - 100%</td>
<td>Excellent</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>81% - 90%</td>
<td>Very good</td>
<td>8</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>71% - 80%</td>
<td>Fairly good</td>
<td>5</td>
<td>15.6</td>
<td>40.6</td>
</tr>
<tr>
<td>61% - 70%</td>
<td>Satisfactory</td>
<td>6</td>
<td>18.8</td>
<td>59.4</td>
</tr>
<tr>
<td>≤ 60%</td>
<td>Recommendation for CLS</td>
<td>13</td>
<td>40.6</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note. N=32.*

In an overall look, 59.4% of the students have achieved satisfactory and above. Only 13 students were below or equal to 60% of achieved Chinese characters in the Chinese Character Achievement Test (CCAT), at the end of the experimental period, which means that a total of 40.6% of the students in the control group will be recommended for Chinese language support for the following school year. According to Table 10, six students showed a satisfactory Chinese character achievement, five students showed a fairly good Chinese character achievement and eight students showed very good Chinese character achievement. Unfortunately, no students showed an excellent Chinese character achievement.

**Research Objective 3**

Research Objective 3 was to determine if there was a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand. In order to address Research Objective 3, data collected after the experimental period was used; specifically, students’ scores in the Chinese Character Achievement Test were obtained and
to perform an independent samples t-test comparing to the overall achievement scores of the
groups participating in this study. The researcher used an independent samples t-test because
the students in the experimental group (Group A) were in no way paired or matched with
members in the control group (Group B).

Table 11 displays the result of the independent samples t-test comparing Grade 3
students’ Chinese Character Achievement Test through Chinese radical literacy method and
ccharacter structure literacy method at an international school in Samut Prakarn, Thailand.

Table 11

| Results of the Independent Samples t-Test Comparing Grade 3 Students’ Chinese Character
Achievement Through CSLM (Experimental Group) and CRLM (Control Group) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>df</td>
<td>t</td>
</tr>
<tr>
<td>Experimental (Group A)</td>
<td>33</td>
<td>69.27</td>
<td>18.80</td>
<td>63</td>
<td>-1.36</td>
</tr>
<tr>
<td>Control (Group B)</td>
<td>32</td>
<td>62.78</td>
<td>19.66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. There was no significant difference between Grade 3 students’ Chinese character
achievement through character structure literacy method and Chinese radical literacy method
at an international school in Samut Prakarn, Thailand. Statistical significance level set at
p=.05, two tailed.

The results of the independent samples t-test shown in Table 11 failed to reveal a
significant difference between Grade 3 students’ Chinese character achievement through
character structure literacy method and Chinese radical literacy method at an international
school in Samut Prakarn, Thailand, t(63) = -1.36, p = .18. The overall sample means for each
group, displayed in Table 11, can be interpreted as significantly different between the control
group and the experimental group. For the experimental group (Group A), M = 69.27,
SD = 18.80, Chinese character achievement scoring rubric interpretation = satisfactory.
Similarly for the control group (Group B), M = 62.78, SD = 19.66, Chinese character
achievement scoring rubric interpretation = satisfactory. The results for both groups can be
interpreted as both experimental and control group obtained, from a statistical point of view, similar scores in the Chinese character achievement test.

Despite the fact of not finding a significant difference in scores between the experimental and control groups, a numerical difference in favor of the experimental group versus the control group was observed. In fact, the total mean score obtained by the control group ($M = 62.78$ points) was, numerically, 6.49 points lower than the total mean score obtained by the experimental group ($M = 69.27$ points).

In this chapter, the researcher presented the research findings of this study. As the main findings, the researcher found out that the results of Grade 3 students’ Chinese character achievement by learning through CSLM does not significantly differ from students learning through CRLM.

In the next chapter, the researcher presents the conclusions, discussion of findings, limitations, recommendations and suggestions about using various teaching methods for teaching Chinese to Grade 3 students in an international school in Samut Prakarn, Thailand, and about future research in this field.
CHAPTER V

CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

This study investigated Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand. In this chapter, the researcher summarized the study and the research findings. Then, the researcher also gives conclusions, discusses the implications of those findings and presents limitations of this study. Finally, the researcher presented recommendations for practice and suggestions for further research.

Summary of the Study

This study was designed to determine if there was a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand, in the academic year of 2017-2018. For this purpose, the following research objectives were addressed.

1. To identify the Grade 3 students’ Chinese character achievement through character structure literacy method at an international school in Samut Prakarn, Thailand.

2. To identify Grade 3 students’ Chinese character achievement through Chinese radical literacy method at an international school in Samut Prakarn, Thailand.

3. To determine if there is a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and
Chinese radical literacy method at an international school in Samut Prakarn, Thailand.

This study was conducted on a population sample of 65 Grade 3 students from an international school in Samut Prakarn, Thailand. Chinese character achievement test was administered to students and collected in mid of March 2018, to identify their Chinese character achievement after an experimental period of five weeks, from January 22nd to March 2nd, 2018, during which the experimental group was taught through CSLM, and the control group was taught through CRLM. The data collected from administering the Chinese character achievement test were divided by two groups (the experimental group and the control group) and compared through both descriptive (i.e., means and standard deviations) and inferential (i.e., independent samples t-test) statistics methods, to determine if there was a significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand.

Summary of Findings

This section summarizes the findings obtained from the data collection and analysis. Findings are organized by research objectives.

Research Objective 1

Regarding this research objective, the following findings were obtained.

- Overall, Grade 3 students’ Chinese character achievement in the experimental group (Group A) learning through CSLM was interpreted as satisfactory.

- Overall, G3A class, from the experimental group (Group A) learning through CSLM, showed a satisfactory Chinese character achievement.
Overall, G3R class, from the experimental group (Group A) learning through CSLM, showed a fairly good Chinese character achievement.

Research Objective 2

Regarding this research objective, the following findings were obtained.

- Overall, Grade 3 students’ Chinese character achievement in the control group (Group B) learning through CRLM was interpreted as satisfactory.
- Overall, G3Y class, from the control group (Group B) learning through CRLM, showed a satisfactory Chinese character achievement.
- Overall, G3W class, from the control group (Group B) learning through CRLM, showed a satisfactory Chinese character achievement.

Research Objective 3

Regarding this research objective, the following findings were obtained.

- Overall, there was no significant difference between the experimental group (Group A) and the control group (Group B) in terms of Chinese character achievement.
- Despite the fact that no significant difference in Chinese character achievement was found, a numerical difference in favor of the experimental group versus the control group was observed.

Conclusions

From the findings, the following conclusions were drawn.

Research Objective 1
The findings from Research Objective 1 revealed that, overall students learning through CSLM showed a satisfactory Chinese character achievement. Students in G3A class showed a satisfactory Chinese character achievement, while students in G3R class showed a fairly good Chinese character achievement. These results suggest that CSLM is also somehow effective when teaching students to learn a new Chinese character, as the average of students’ test scores in the experimental group are passing according to the school’s scoring rubric as well. Remarkably, G3R performed fairly good, which is better than G3A. This result may suggest that CSLM is more effective on certain group of students than others. In addition, it is stated in the study of Chiu (2013), CLSM not only meet the characteristics of students’ image thinking, but also stimulate students’ curiosity and the urge to learn. Thus, arouse their interest to know more. Therefore, this may also indicate that this literacy method could in some way arouse students’ interest in learning Chinese characters, as students in G3R performed a little higher than G3A. Moreover, this result can also indicate that G3R students’ understanding might be a little better than G3A, as they both learned under the same literacy method and were given the same instructions, but the results are, numerically, slightly different. This could also indicate that two teachers’ teaching method might be a little different as well.

**Research Objective 2**

The findings from Research Objective 2 revealed that overall, students learning through CRLM showed a satisfactory Chinese character achievement. Students in both G3Y and G3W classes showed a satisfactory Chinese character achievement as well. These results suggest that CRLM is somehow effective when teaching students to learn a new Chinese character, as the average of students’ test scores in the control group are passing according to the school’s scoring rubric. Both classes under the control group also showed a satisfactory Chinese character achievement. This result may suggest that there is no difference in teacher
instructions, as both classes were taught by two different teachers. This could also suggest that students’ learning ability and understanding are on the same level, as the teaching materials used were the same for every student. Most importantly, the results suggest that the school has chosen a literacy method that is fairly effective in Chinese language teaching and learning.

**Research Objective 3**

The findings from Research Objective 3 revealed that overall, students learning through CSLM and CRLM showed a satisfactory Chinese character achievement. This result indicates that students learning through CSLM do not statistically differ from students learning through CRLM. Both literacy methods are somehow effective when teaching students to learn a new Chinese character, as the mean scores of both groups were not significantly different. Although the average mean scores of the experimental group did not exceed much of the control group, still there was a numerical difference in favor of the experimental group versus the control group. The total mean score obtained by the control group was, numerically, 6.49 points lower than the total mean score obtained by the experimental group. This result could suggest that the difference is not big enough to be significantly different. However, this somehow indicates that CSLM could be more effective than CRLM if the implementation continues.

**Discussion**

The findings of the current study show that there was no significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand. Based on that, this section discusses the findings obtained from the current study,
placing such findings in context of previous research. The discussion is presented and organized by research objectives.

**Research Objective 1**

The findings from Research Objective 1 revealed that, students from the experimental group (Group A) learning through CSLM, showed a satisfactory Chinese character achievement according to the school’s scoring rubric.

The result has proven that CSLM is effective when teaching a new Chinese character because most of the students were able to remember the characters in the Chinese character achievement test. As mentioned in the study of Chiu (2013), this literacy method helps students to be able to explain the principles of the characters, remember the structure of the characters, and teaches students to be able to write the characters, which is also aligned to the study of Chiew (2008), where students have to know the principle and the structure of the characters in order to learn the meaning of the characters as their vocabulary database increases, the percentage of students recognizing the characters wrongly also increases. Remarkably, students in the experimental group were unlikely to write the characters wrongly than the control group, because they were taught specifically and in detail the form and structure of the characters.

What is remarkable in the experimental group is that one of the classes in this group showed a Chinese character achievement above satisfactory, which was the G3R class. The total mean score of this class was 71.18%, which was interpreted as fairly good on the school’s scoring rubric. This result reflects the study of Han et al. (2014), where CSLM is more effective than component literacy method (a literacy method that is similar to CRLM), because CSLM provides different approaches in teaching characters from different categories (e.g., pictophonetic compounds, pictograms, and etc.). CRLM only teaches Chinese characters from a certain category. Moreover, it is also aligned to Chiu’s (2013) study, where
most students were able to accurately identify the characters after learning through CSLM. This is reflected on the results of the experimental group, as they were able to write the characters more accurately than the control group. Therefore, it comes as no surprise the fact that the experimental group obtained a Chinese character achievement score a little higher than the control group.

The results of this study are aligned to the ones obtained by Hsu’s study (2009), where students learned better through the image approach and association approach of CSLM. In the current study, the researcher also applied the association approach when teaching the students to learn a new Chinese character and the results reflected on the experimental group was a little higher than the control group. In addition, the current study is aligned to Hii’s (2007) study, who reported that CSLM help raise students’ interest of learning a new Chinese character and help students to improve their knowledge of a character’s structure and principle. Moreover, the current study is somehow aligned to Chua’s (2008) study, which was reported that using CSLM improves students’ Chinese character achievement. The reason that it is only somehow aligned to Chua’s (2008) study is because Chua only focused on characters that provide strong image support (i.e., 背bèi/ bēi meaning back or to carry). In the old bone script, this character looks like the back bone of a human body. However, for the current study, there are characters that do not have strong image support (i.e., 事shì meaning business). In the old bone script, this character does not look like its current shape and the structure of the character does not really associate to the meaning business.

In addition, regarding arousing students’ interest in learning a new Chinese character, CSLM was really effective in this aspect. The results of the current study were aligned to the study of Chiu (2013), where Chiu gave a survey questionnaire to the students and most of the students agreed that learning through CSLM was interesting and enabled them to think and
make association to the characters that they are learning. Thus, students became more focused during lessons and could absorb more. When students are more focused, they are more willing to participate in the questions and activities. Therefore, concluded that the result in Chiu’s (2013) study indicates that interest does affect achievement.

Similar situation could be observed during the experimental period of the current study, when the teacher showed the students the pictograph of the Oracle Bone Script (old Chinese characters), from the researcher’s observation, students became more engaged in learning the characters. Many of them started to make a guess of what each shape and form means and this certainly arouse students’ interest in learning the characters. After the teacher explained the form and structure of the characters to the students, they were able to make in-depth understanding of the character, as immediate assessment was given to the students. They are given different shapes and forms of the characters and they have to identify the correct characters. Although, some of the shapes and forms were hard to identify, surprisingly, most students were able to accurately identify the correct character.

One notable difference between the control group and the experimental group is the second part of the test (definition). This really shows the effectiveness of implementing CSLM when teaching students to learn a new Chinese character. Overall, students in the experimental group scored higher than students in the control group. They were able to write down the accurate meaning of the character. This finding supports the theory from the studies by Chiu (2013) and Hsu (2009) emphasized on the analysis of the principle of the character as one of the important aspect of CSLM teaching procedure. Students have to be able to observe, associate, compare and analyze characters, knowing its origin and meaning. For example one of the characters that appears on the test, 汽 (qì) which means steam or vapor, one of the students in the control group wrote the meaning as 汽水 (qì shuǐ) meaning soda drinks. The students were taught to guess the meaning of the character through its semantic
radical, which caused this error in identifying the meaning of the character. Whereas, more
students in the experimental group get it right.

No matter the results of the overall test of the experimental group, as the different part
of the tests (Part II) of the experimental group, or as different classes of the experimental
group, the statistics of the findings indicates that the students showed a satisfactory Chinese
character achievement. However, when we look at the student distribution according to the
percentage of scoring rubric of the Chinese character achievement test, there were still 10
students in a total of 33 students in the experimental group recommended for CLS (Chinese
language support) for the following school year. That is 30.3% of the experimental group
being recommended for CLS in the following school year. Therefore, this result aligns to the
argument in Hsu’s (2009) study, where CSLM makes recognizing a new Chinese character
more difficult, because they have to learn its origin, the structure and the principle of the
character. It is accumulating students’ academic burden as they have to remember more
details of the character.

Apart from that, there is also some positive result from the findings. In the control
group, there was not any student that scored higher than 81% - 90%. However, in the
experimental group, there were three students that scored between 91% - 100%. From this
data, it is evident that CSLM might be more effective than CRLM, in terms of Chinese
character retention rate, as the students could still remember the characters by its principle
and structure. From the data shown in Table 8, we can also see that as the percentage scale
increases, the number of students also increases, in a stable and orderly fashion. The data
suggested that the implementation of such literacy method does help students to have higher
Chinese character achievement. If the experimental period lasts longer, possibly the results
could be more positive and significant.

Research Objective 2
The findings from Research Objective 2 revealed that, students from the control group (Group B) learning through CRLM showed a satisfactory Chinese character achievement according to the school’s scoring rubric.

The result has proven that CRLM is fairly effective when teaching a new Chinese character because most of the students were able to remember the characters in the Chinese character achievement test. Especially, for the first part of the test, dictations, where the teacher will say a character and students have to write it down. Students’ result in the first part of the test proves the theory behind this literacy method which was mentioned in Chen (2008) and Ho, Ng, and Ng (2003), that most characters are from the pictophonetic compounds and that characters in this category are composed of two parts: the pictograph and the phonetic part. Focusing on the phonetic part, it gives a cue to the pronunciation of the character. When students hear the teacher say the character, they are likely to get the phonetic part correct as the characters for the phonetic part does not vary greatly. Characters depicted as the phonetic part are characters that students have been learning since early years (K1-K3) and will continue to learn in Grade 1 and Grade 2. The school has chosen these characters as a building block to learn more difficult characters as they move on to next school year. Most of the characters are also radical characters, as mentioned in the study of Ho et al. (2003), and most radical characters are stand alone ones.

This is possibly why it is easy for the students to know the characters for the phonetic radical. In the study of Ho et al. (2003), due to direct derivation, phonetic radical is usually the pronunciation of the character. For example, the character that is really given in the Chinese character achievement test, 伴 (bàn) which means partner, the phonetic radical of this character is 半 (bàn) which means half, is also pronounced the same way as伴 (bàn). Therefore, the students can immediately make a guess that the phonetic radical of this character must be 半 (bàn) just by hearing the teacher pronounced the character.
In addition, from the vocabulary that the teacher gives as an assistance instruction, students will be able to guess the semantic radical of the character as it is a cue to the meaning of the character. So, during the test the teacher will give instruction such as, 伙伴的伴 (bàn, huǒ bàn de bàn) so students have to write down one of the characters of 伙伴 (huǒ bàn), which means *partner*, in the answer sheet. Students know that partner relates to human being and therefore can make a guess of the semantic radical. As they have learned before, the radical 亻 (dān rén pang) means *people* or *human being related*. Even if the students do not really remember the character 伴 (bàn), they will be able to make a guess from these cues and the guess has higher frequency to be correct.

Moreover, from the results of the test, students’ performance in Part II of the Chinese character achievement test conformed to the study of Taft and Chung (2015), that documented and emphasized the importance of helping students to build up radical knowledge so they will be able to identify a character quickly through recognizing the radical. In the second part of the test, students were given a question sheet of all the characters that they have to give a definition of. Students were able to remember the characters by identifying its radical, and then they were able to make a quick guess of what the characters are associated with, in order to make relation to a vocabulary that they have learned in class.

In addition, as introduced in the studies by Taft and Chung (2015), De la Rouviere (2013), and Xu (2011), in order to help students build a solid radical knowledge, learners have to establish the foundation of the radical level first in order to build up their character level, which is known as the theory of multilevel interactive-activation and competition (IAC) framework. According to the results of the test in Part II (definition), concluded and reflected the effectiveness of the implementation of the multilevel interactive-activation and competition (IAC) framework was fairly effective, as many of the students were able to write
down the meaning of the characters and the answers were quite accurate as well. Therefore, most students performed fairly in the second part of the test.

In the study by De la Rouviere (2013), it was reported a positive result of students learning through CRLM, the result showed a satisfactory achievement when a radical with the character is presented together at the first time when Chinese learners learn their characters. This also aligns to the results of the Grade 3 students’ Chinese character achievement test, especially Part II (definition), as it suggests that students learning through CRLM were able to quickly identify the character and make a quick and mostly accurate guess of the meaning of the characters.

No matter the results of the overall test of the control group, as the different parts of the test (Part I and Part II) of the control group, or as different classes of the control group, the statistics of the findings shows that the students showed a satisfactory Chinese character achievement. However, when we look at the student distribution according to the percentage of the scoring rubric of the Chinese character achievement test, there were 13 students in a total of 32 students in the control group recommended for CLS (Chinese language support) for the following school year. That is 40.6% of the control group being recommended for CLS in the following school year. Therefore, this result does not align to the study of Xu (2011), where the students’ immediate learning and character retention rate was positive and significant. If it was positive and significant then there will not be too many students failing to meet the requirement. Moreover, findings from this study do not align to the study conducted by Wu (2010) as well, where CRLM benefits disadvantaged children to improve their reading capabilities. Students that currently need Chinese language support did not score higher than those that do not need Chinese language support, which means that their recognition of the characters was relatively lower than the students that do not need Chinese language support.
Although, the statistics of the whole control group appeared to be satisfactory with 62.78%, but that is only 2.78% above the passing score on the scoring rubric. Therefore, the overall results cannot be seen as highly positive. The reason that could lead to this result is obvious because students’ Chinese character retention rate barely meet the standard. This data reflects the need to improve the methodology in teaching students to learn a new Chinese character, in order to help students build more solid understanding and knowledge of what they are learning, therefore, can increase students’ Chinese character retention rate. The reason behind this improvement could be because the time of learning Chinese characters could be longer. They only learn around an hour of Chinese character lesson in one cycle, which is almost once a week. Although students have time to review the characters during other time, but the result presented has proven to be not enough. Moreover, it could be because there are too many characters for students to learn and they do not have time to absorb such large database of characters yet. Just like when we eat our food, we need time to digest before we take in more food.

**Research Objective 3**

The findings from Research Objective 3 revealed that both group of students, students from the experimental group (Group A), learning through CSLM and the students from control group (Group B), learning through CRLM showed a satisfactory Chinese character achievement according to the school’s scoring rubric, which concluded to be no significant difference.

From the data shown in Table 11, it is evident that there was no significant difference between Grade 3 students’ Chinese character achievement through character structure literacy method and Chinese radical literacy method at an international school in Samut Prakarn, Thailand. This result indicates that both literacy methods appear to be somehow effective and they are not more significant than one another. However, when looking at the overall mean
score of the experimental group, there was not much difference from the control group, still it appears to be a little bit higher, numerically, than the control group. Therefore, the researcher concluded that despite the fact of not finding a significant difference, there is still a numerical difference between the experimental group and control group. The control group was numerically, 6.49 points lower than the total mean score of the experimental group.

One major reason that both the experimental and control groups’ scores were so close could be because the experimental period was five weeks; therefore, the length of the experimental period did not show a significant difference. Moreover, students only have 50 minutes of Chinese character lesson a day; this is not enough to have more activities for practice. If the implementation time was longer, probably the difference will be more significant, (i.e., in Chiu’s (2013) study, the experimental period lasted for 12 weeks and in Hsu’s (2009) study, the experimental period lasted for one month). Another important factor that caused such result was that students in the experimental group might be influenced by their past experience, because they were taught to learn through CRLM since K1 to Grade 2. CSLM is a new literacy method introduced to them and they need more time to be familiar with this literacy method. From the researcher’s observation, most students were still more likely to use the knowledge of CRLM when interpreting a new Chinese character.

Recommendations

Based on the findings of the current study, there are some recommendations for students, teachers, administrators, and future researchers.

Recommendations for Students

This research study revealed that Grade 3 students’ Chinese character achievement through Chinese radical literacy method does not differ greatly from character structure literacy method. This suggests that students can learn through both literacy methods.
However, students learning through CSLM performed slightly better than CRLM. From the researcher’s observation, students learning through CSLM seem to enjoy more when learning a new Chinese character, because they get to learn through seeing the image of the characters. Although this literacy method could cause more burdens for students, for they have to remember more details, still most students enjoy learning through CSLM. Therefore, the researcher suggests that students could learn through this literacy method to help increase their interest in learning a new Chinese character.

**Recommendations for Teachers**

This research study revealed that Grade 3 students’ Chinese character achievement through Chinese radical literacy method does not differ significantly from character structure literacy method. This suggests that teachers can teach through both literacy methods. However, students learning through CSLM performed slightly better than CRLM. Moreover, from the researcher’s observation, students become more interested in Chinese characters when learning through CSLM. Therefore, even though the teachers have to prepare more materials than teaching through CRLM, students will benefit more because they have more interest learning through CSLM. Therefore, the researcher suggests that teachers could teach through this literacy method to help arouse students’ interest in learning a new Chinese character.

**Recommendations for Administrators**

This research study revealed that Grade 3 students’ Chinese character achievement through Chinese radical literacy method does not differ significantly from character structure literacy method. This suggests that administrators can include either literacy methods in the Chinese curriculum. However, students learning through CSLM performed slightly better than students learning through CRLM. Therefore, the administrators can try to carry out this literacy method in the school and with high hopes; students will be able to have higher
Chinese character achievement. Even though the teachers have to prepare more materials than teaching through CRLM, however, both students and teachers will benefit from this implementation.

**Recommendations for Future Researchers**

This research study revealed that Grade 3 students’ Chinese character achievement through Chinese radical literacy method does not differ significantly from character structure literacy method. This suggests that future researchers can still compare the two literacy methods but maybe extend the experimental period. For there are some difference but the statistics were not big enough to be significantly different. If the time was longer, there are chances that the statistics could be significantly different. Therefore, future researchers can try to implement CSLM for a longer experimental period.
REFERENCES


Grade 3 Chinese Writing Characters for the Academic Year of 2017-2018
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168 characters from the category of Pictophonetic Compounds
APPENDIX B

64 Chinese Radicals Used in an International School in Samut Prakarn
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APPENDIX C

Chinese Character Achievement Test
(Student Version)
三年级
第四单元 习写字测验

一、听写：请将听到的字和拼音按照顺序写在下面的空格里。（50%）

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班级：G3
性别：□男  □女                   测验时间：50分钟

二、写字义：请将每个字的意思按照顺序写在下面的横线上。（50%）

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班级：G3
性别：□男 □女
测验时间：40 分钟

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| 27. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 28. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 29. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 30. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 31. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
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| 37. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 38. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 39. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 40. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 41. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
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| 44. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
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班级：G3
性别：□男 □女
测验时间：50 分钟

二、请看以下的字并且在作答纸上按顺序将每个字的意思写下来。

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APPENDIX D

Chinese Character Achievement Test
(Teacher Version)
班级(Grade/Class): G3  
Assessment time: 40 minutes  
性别(Gender): □男(male) □女(female)  
测验时间: 40 分钟

三年级（Grade 3）
第四单元 习写字测验 (UOI-4 Chinese Character Achievement Test)

一. 听写: 请将听到的字和拼音按照顺序写在下面的空格里。（50%）
Part I. Dictation: Please write down the character and pin-yin according to the order in the box below.

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二．写字义：请将每个字的意思按照顺序写在下面的横线上。（50%）
Part II. Definition: Please write down the meaning of each character according to the order below.

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<td>3.</td>
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<tr>
<td>5.</td>
<td>To sting, poke or stab.</td>
</tr>
<tr>
<td>6.</td>
<td>Thank you.</td>
</tr>
<tr>
<td>7.</td>
<td>Rubbish.</td>
</tr>
<tr>
<td>8.</td>
<td>To do or get.</td>
</tr>
<tr>
<td>9.</td>
<td>To prepare.</td>
</tr>
<tr>
<td>10.</td>
<td>Duty or business.</td>
</tr>
<tr>
<td>11.</td>
<td>Absorb, suck, inhale or breath.</td>
</tr>
<tr>
<td>12.</td>
<td>Clean.</td>
</tr>
<tr>
<td>13.</td>
<td>Tease or playful.</td>
</tr>
<tr>
<td>14.</td>
<td>Open eyes or open.</td>
</tr>
<tr>
<td>15.</td>
<td>A particle showing affirmation or an expression of surprise.</td>
</tr>
<tr>
<td>16.</td>
<td>Name of a person.</td>
</tr>
<tr>
<td>17.</td>
<td>Bitter (taste) or work hard.</td>
</tr>
<tr>
<td>18.</td>
<td>Plastic, model, shape or sculpt.</td>
</tr>
<tr>
<td>19.</td>
<td>Mix or blend.</td>
</tr>
<tr>
<td>20.</td>
<td>A field, section, branch, division or a family (in science).</td>
</tr>
<tr>
<td>21.</td>
<td>A room or an area in a closed space.</td>
</tr>
<tr>
<td>22.</td>
<td>Emotion or mood.</td>
</tr>
<tr>
<td>23.</td>
<td>To teach or to instruct.</td>
</tr>
<tr>
<td>24.</td>
<td>With, companion, partner or accompany.</td>
</tr>
<tr>
<td>25.</td>
<td>Fall.</td>
</tr>
<tr>
<td>26.</td>
<td>Efforts and power output.</td>
</tr>
<tr>
<td>27.</td>
<td>Left side.</td>
</tr>
<tr>
<td>29.</td>
<td>To raise, support, grow, cultivate or provide.</td>
</tr>
<tr>
<td>30.</td>
<td>To watch or to gaze.</td>
</tr>
<tr>
<td>31.</td>
<td>Pick up something.</td>
</tr>
<tr>
<td>32.</td>
<td>The back of the human body.</td>
</tr>
<tr>
<td>33.</td>
<td>Hope.</td>
</tr>
<tr>
<td>34.</td>
<td>Partner or assistant.</td>
</tr>
<tr>
<td>35.</td>
<td>Garbage or rubbish.</td>
</tr>
<tr>
<td>36.</td>
<td>Each one.</td>
</tr>
<tr>
<td>37.</td>
<td>Slow.</td>
</tr>
<tr>
<td>38.</td>
<td>Right side.</td>
</tr>
<tr>
<td>39.</td>
<td>Condition or situation.</td>
</tr>
<tr>
<td>40.</td>
<td>Another, other or separate.</td>
</tr>
<tr>
<td>41.</td>
<td>Lost something.</td>
</tr>
<tr>
<td>42.</td>
<td>To swim in the water.</td>
</tr>
<tr>
<td>43.</td>
<td>To raise or to carry.</td>
</tr>
<tr>
<td>44.</td>
<td>Plant.</td>
</tr>
<tr>
<td>45.</td>
<td>Belly, stomach or abdomen.</td>
</tr>
<tr>
<td>46.</td>
<td>A house with a roof and a door.</td>
</tr>
<tr>
<td>47.</td>
<td>A quantifier used when describing a horse.</td>
</tr>
<tr>
<td>48.</td>
<td>To talk or speak.</td>
</tr>
<tr>
<td>49.</td>
<td>To raise something with our hands.</td>
</tr>
<tr>
<td>50.</td>
<td>Brave, England or English.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Part I. Dictation: Teacher Instruction</strong></td>
<td></td>
</tr>
<tr>
<td>1. 丢掉的丢 (throw)</td>
<td>2. 汽车的汽 (car)</td>
</tr>
<tr>
<td>3. 认识的识 (know)</td>
<td>4. 自由的由 (freedom)</td>
</tr>
<tr>
<td>5. 刺伤的刺 (stab)</td>
<td>6. 谢谢的谢 (thank you)</td>
</tr>
<tr>
<td>7. 垃圾的圾 (trash)</td>
<td>8. 弄坏的弄 (verb: break)</td>
</tr>
<tr>
<td>9. 准备的准 (prepare)</td>
<td>10. 事情的事 (circumstance)</td>
</tr>
<tr>
<td>11. 呼吸的吸 (breath)</td>
<td>12. 干净的净 (clean)</td>
</tr>
<tr>
<td>13. 玩耍的耍 (play)</td>
<td>14. 睁开眼睛的睁 (open eyes)</td>
</tr>
<tr>
<td>15. 啊！ (particle showing affirmation)</td>
<td>16. 姓名的姓 (name)</td>
</tr>
<tr>
<td>17. 辛苦的辛 (hard working)</td>
<td>18. 塑料的塑 (plastic)</td>
</tr>
<tr>
<td>19. 拌一拌的拌 (mix)</td>
<td>20. 科学的科 (science)</td>
</tr>
<tr>
<td>21. 教室的室 (classroom)</td>
<td>22. 感情的情 (affection)</td>
</tr>
<tr>
<td>23. 教书的教 (teach)</td>
<td>24. 伙伴的伴 (partner)</td>
</tr>
<tr>
<td>25. 掉下去的掉 (fall)</td>
<td>26. 努力的努 (strive)</td>
</tr>
<tr>
<td>27. 左边的左 (left side)</td>
<td>28. 准备的准 (prepare)</td>
</tr>
<tr>
<td>29. 养动物的养 (raise)</td>
<td>30. 希望的望 (wish)</td>
</tr>
<tr>
<td>31. 捡东西的捡 (pick up)</td>
<td>32. 背后的背 (back)</td>
</tr>
<tr>
<td>33. 希望的希 (wish)</td>
<td>34. 伙伴的伙 (partner)</td>
</tr>
<tr>
<td>35. 垃圾的圾 (trash)</td>
<td>36. 各自的各 (each)</td>
</tr>
<tr>
<td>37. 慢慢走的慢 (slow)</td>
<td>38. 右边的右 (right side)</td>
</tr>
<tr>
<td>39. 情况的况 (situation)</td>
<td>40. 另外一个的另 (other)</td>
</tr>
<tr>
<td>41. 失去的失 (lose something)</td>
<td>42. 游泳的泳 (swim)</td>
</tr>
<tr>
<td>43. 提东西的提 (carry)</td>
<td>44. 植物的植 (plant)</td>
</tr>
<tr>
<td>45. 肚子的肚 (stomach)</td>
<td>46. 房子的房 (house)</td>
</tr>
<tr>
<td>47. 一匹马的匹 (quantifier one)</td>
<td>48. 讲话的讲 (talk/speak)</td>
</tr>
<tr>
<td>49. 举手的举 (raise hand)</td>
<td>50. 英文的英 (English)</td>
</tr>
</tbody>
</table>
APPENDIX E

CSLM Lesson Plans for UOI-4 Cycles 1-5
### CSLM Lesson Plan for UOI-4 Cycle 1

**Date:** January 22, 2018  
**Teacher:** Grade 3 Chinese Teacher

<table>
<thead>
<tr>
<th>No. of Students: 16/class</th>
<th>Grade level: Grade 3</th>
<th>Class: G3A &amp; G3R</th>
<th>Time: 60 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit Name:</strong> Unit 4: Where we are in place and Time</td>
<td><strong>Topic/lesson:</strong> Chinese LA Lesson 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Materials:** Projector, Whiteboard and lesson 5 Chinese character wordlist

**Objectives:**
1. Students will be able to learn the characters through association approach.
2. Students will be able to understand the meaning of the 10 characters.
3. Students will be able to identify the 10 characters.

<table>
<thead>
<tr>
<th>Chinese Characters:</th>
<th>背、房、慢、由、泳、耍、努、事、情、辛</th>
</tr>
</thead>
</table>

**Vocabulary:**

<table>
<thead>
<tr>
<th>(组词)</th>
<th>背包/后背 房子 慢走 由 自由 游泳 玩耍 努力 事情 心情 辛苦</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(bag/back) (house) (slow) (freedom) (swim) (play) (strive)(matter)(mood) (work hard)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Teaching Content</th>
<th>Activity</th>
<th>Remark</th>
</tr>
</thead>
</table>
| **Introduction** (5 minutes) | 1. “Lesson 5 - I want to”  
- Students sit according to their groups on the table.  
- Teacher gives students the Chinese Characters wordlist of Lesson 5. | -Lesson 5 Wordlist worksheet |
| **Introduces the 10 characters** (5 minutes) | 2. Introduces the 10 Chinese characters of this lesson.  
背、房、慢、由、泳  
耍、努、事、情、辛 | - projector |
| **Chinese Characters Teaching** (35 minutes) | 3. Teacher has to explain each Chinese character to the students. Including teaching the strokes, the structure of the character, the meaning, and also the vocabularies this character can be formed with. Students have to write the vocabulary in their wordlist worksheet. | -Lesson 5 Wordlist worksheet - projector |
| **Review** (10 minutes) | 4. After the lesson, teacher has to help students review what they have just learned, by showing picture of the characters and ask students to identify the character and its meaning. | -projector |
| **Wrap Up** (5 minutes) | 5. Check students’ understanding by asking questions regarding the characters. If students cannot answer, then the teacher will help |
班级(Grade/Class): G3  
Assessment time: 50 minutes

性别(Gender): □ 男(male) □ 女(female)  
测验时间: 50分钟

review again.
### Chinese character teaching (in detail)

1. **The first character ‘背’**
   - **A. Strokes:**
     - [Image of stroke steps]
   - **B. Pronunciation:** 背 / 背
   - **C. Character category:** Pictophonetic Compounds
   - **D. Structure (form and shape) of the character:**
   - **E. Principle of the character:** the character looks like the back bone structure of the human body.
   - **F. Association approach:** Parallel Association
   - **G. Meaning:** The back of the human body.
   - **H. Vocabulary:** 后背 (back) 背包 (bag)

2. **The second character ‘房’**
   - **A. Strokes:**
     - [Image of stroke steps]
   - **B. Pronunciation:** 房
   - **C. Character category:** Pictophonetic Compounds
   - **D. Structure (form and shape) of the character:**
   - **E. Principle of the character:** the character looks like the old Chinese door.
   - **F. Association approach:** Parallel Association
   - **G. Meaning:** a house with a roof and a door.
### H. Vocabulary: 房子 (house) 房间 (room)

3. The third character ‘慢’

A. Strokes:

```markdown
<table>
<thead>
<tr>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>
```

B. Pronunciation: 慢
C. Character category: Pictophonetic Compounds
D. Structure (form and shape) of the character:

![Character Image]

E. Principle of the character: the character means a person is lazy from heart, because they don’t want to work. The left component of the character looks like the human heart, laziness originates from the heart (mind).
F. Association approach: Approaching Association
G. Meaning: lazy and slow.
H. Vocabulary: 慢 慢地走 (walk slowly) 很慢 (very slow)

4. The fourth character ‘由’

A. Strokes:

```markdown
<table>
<thead>
<tr>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
<th>Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
```

B. Pronunciation: 由
C. Character category: Single Structure (None of the category)
D. Structure (form and shape) of the character:

![Character Image]

E. Principle of the character: This character originates from the character 油 ‘you’ meaning oil. In Chinese Oracle Bone Script, this character symbolizes a starting point.
F. Association approach: Approaching Association and Parallel Association
G. Meaning: a start or beginning.
H. Vocabulary: 自由 (freedom)
5. The fifth character ‘泳’

A. Strokes:

B. Pronunciation: yǒng

C. Character category: Pictophonetic Compounds

D. Structure (form and shape) of the character:

E. Principle of the character: the character looks like a river from the real world. The picture of the character shows that the character associates with water.

F. Association approach: Parallel Association

G. Meaning: to swim in water.

H. Vocabulary: 游泳 (swimming)

6. The sixth character ‘耍’

A. Strokes:

B. Pronunciation: shuǎ

C. Character category: Logical Aggregates

D. Structure (form and shape) of the character:

E. Principle of the character: the character looks like a person being playful and juggling with something.

F. Association approach: Parallel Association

G. Meaning: tease or playful.

H. Vocabulary: 玩耍 (play)
7. The seventh character ‘努’

A. Strokes:

B. Pronunciation: 努

C. Character category: Phonetic Compounds

D. Structure (form and shape) of the character:

E. Principle of the character: the character looks like a person working or laboring. Also, the character can be separated into two components, the first part is 奴 (nü) meaning slave, the second part is 力 (li) meaning strength. This character can be explained as a slave has to use a lot of strength to do their work.

F. Association approach: Approaching Association and Parallel Association

G. Meaning: efforts and power output.

H. Vocabulary: 努力 (strive)

8. The eighth character ‘事’

A. Strokes:

B. Pronunciation: 事

C. Character category: Phonetic Compounds

D. Structure (form and shape) of the character:

E. Principle of the character: the picture of the character from the Oracle Bone Script consists of mouth + scepter + grasp and the meaning of these parts means to transmit court orders in order to monitor implementation. This character is later used when associated to duty or business.

F. Association approach: Parallel Association

G. Meaning: duty or business.

H. Vocabulary: 事情 (duty/business)
9. The ninth character ‘情’
   A. Strokes:
   
   B. Pronunciation: 情
   C. Character category: Phonetic Compounds
   D. Structure (form and shape) of the character:

   E. Principle of the character: the picture of the character from the Oracle Bone Script consists of heart + beauty and the meaning of these parts means the feeling from the heart, an infatuation for someone or goodwill for a person. In modern Chinese, this character is associated to feelings and emotions.
   F. Association approach: Approaching Association
   G. Meaning: emotion or mood in modern Chinese; infatuation or goodwill in old Chinese.
   H. Vocabulary: 心情 (mood)

10. The tenth character ‘辛’
    A. Strokes:
    
    B. Pronunciation: 辛
    C. Character category: Pictograms
    D. Structure (form and shape) of the character:

    E. Principle of the character: the picture of the character from the old bone script consists of wood + knife + blade and the meaning of these parts means the use of knife to cut. In the old Chinese character, this character usually represents crimes, sinners or executions. In the modern time, this character is used to describe taste or a condition (working hard).
    F. Association approach: Parallel Association
    G. Meaning: autumn (season), gold (Chinese five nature elements), bitter (taste), and crime.
    H. Vocabulary: 辛苦 (work hard)
## CSLM Lesson Plan for UOI-4 Cycle 2

**Date:** January 29, 2018  
**Teacher:** Grade 3 Chinese Teacher

<table>
<thead>
<tr>
<th>No. of Students: 16/class</th>
<th>Grade level: Grade 3</th>
<th>Class: G3A &amp; G3R</th>
<th>Time: 60 minutes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unit Name:</th>
<th>Unit 4: Where we are in place and Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic/lesson:</td>
<td>Chinese LA Lesson 16</td>
</tr>
</tbody>
</table>

### Materials:
- Projector, Whiteboard and lesson 16 Chinese character wordlist

### Objectives:
1. Students will be able to learn the characters through association approach.
2. Students will be able to understand the meaning of the 10 characters.
3. Students will be able to identify the 10 characters.

### Chinese Characters:
- 失、室、准、备、捡、各、举、丢、姓、睁

### Vocabulary:
- 失去 教室 准备 捡东西 各自 举手 丢掉
- (lost) (classroom) (prepare) (pick up) (individual) (raise hands) (throw)
- 睁开 姓名
- (open) (name)

### Learning Objectives

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Teaching Content</th>
<th>Activity</th>
<th>Remark</th>
</tr>
</thead>
</table>
| Introduction (5 minutes) | 1. “Lesson 16 – Lost and Found”  
- Students sit according to their groups on the table.  
- Teacher gives students the Chinese Characters wordlist of Lesson 16. | -Lesson 16 Wordlist worksheet | |
| Introduces the 10 characters (5 minutes) | 2. Introduces the 10 Chinese characters of this lesson.  
失、室、准、备、捡、各、举、丢、姓、睁 | - projector | |
| Chinese Characters Teaching (35 minutes) | 3. Teacher has to explain each Chinese character to the students. Including teaching the strokes, the structure of the character, the meaning, and also the vocabularies this character can be formed with. Students have to write the vocabulary in their wordlist worksheet. | -Lesson 16 Wordlist worksheet  
- projector | |
| Review (10 minutes) | 4. After the lesson, teacher has to help students review what they have just learned, by showing picture of the characters and ask students to identify the character and its meaning. | -projector | |
| Wrap Up (5 minutes) | 5. Check students’ understanding by asking questions regarding the characters. If students cannot answer, then the teacher will help | | |
review again.
## Chinese character teaching (in detail)

### 1. The first character ‘失’

A. Strokes:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>失</td>
<td>shī</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. Pronunciation: 失

C. Character category: Pictophonetic Compounds

D. Structure (form and shape) of the character:

![Character Image]

E. Principle of the character: The character looks like a human in the real world. The principle of this character is a picture that is similar to a hand. The original meaning of this character is someone being unable to hold on to something, therefore, dropped the object in his/her hands.

F. Association approach: Parallel Association

G. Meaning: lost something in hand.

H. Vocabulary: 失 (lost something) or 失望 (disappointed)

### 2. The second character ‘室’

A. Strokes:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>室</td>
<td>shì</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. Pronunciation: 室

C. Character category: Logical Aggregates

D. Structure (form and shape) of the character:

![Character Image]

甲骨文 室 = 宀（房屋）+ 眦（至，躺下），表示倒卧睡觉的房屋。House + lay down = bedroom

E. Principle of the character: The character looks like the structure of a house, with a person lying down in the house, so the character usually associates to room or a closed space.

F. Association approach: Parallel Association

G. Meaning: room or an area in a closed space.

H. Vocabulary: 教室 (classroom)
3. **The third character ‘准’**

A. **Strokes:**

```
准
```

B. **Pronunciation:** zhǔn

C. **Character category:** Pictophonetic Compounds

D. **Structure (form and shape) of the character:**

```
准
```

E. **Principle of the character:** The character looks like a person standing on a structure (used during construction) holding a tool in hand to observe the progress of the workers. In medieval time, constructions cite usually have water source. Therefore, the character shows a structure of a building standing beside the river.

F. **Association approach:** Parallel Association

G. **Meaning:** standard or to prepare in modern Chinese.

H. **Vocabulary:** zhǔn, bèi (prepare)

4. **The fourth character ‘备’**

A. **Strokes:**

```
备
```

B. **Pronunciation:** bèi

C. **Character category:** Logical Aggregates

D. **Structure (form and shape) of the character:**

```
备
```

E. **Principle of the character:** This character originates from the Chinese Oracle Bone Script, the character looks like an arrow being placed in the quiver. This character symbolizes to prepare arrows for war. This character is later associated to planning or preparing ahead. Also, sometimes it is associated to being cautious as well.

F. **Association approach:** Parallel Association

G. **Meaning:** to prepare or being cautious.

H. **Vocabulary:** zhǔn, bèi (prepare)
5. The fifth character ‘捡’

A. Strokes:

B. Pronunciation: jiǎn

C. Character category: Pictophonetic Compounds

D. Structure (form and shape) of the character:

E. Principle of the character: the character looks like two people in the house and they are going to pick up something outside the house.

F. Association approach: Parallel Association

G. Meaning: pick up the pieces together.

H. Vocabulary: 捡 东西 (picking up something)

6. The sixth character ‘各’

A. Strokes:

B. Pronunciation: gè

C. Character category: Logical Aggregates

D. Structure (form and shape) of the character:

E. Principle of the character: the character looks like a foot marching towards an open door. In the Oracle Bone Script, this character is associated with having soldiers march into a city/town.

F. Association approach: Parallel Association

G. Meaning: each one

H. Vocabulary: 各自 (each individual)
7. The seventh character ‘举’

A. Strokes:

B. Pronunciation: jǔ

C. Character category: Pictophonetic Compounds

D. Structure (form and shape) of the character:

E. Principle of the character: the character looks like a group of people surrounding an object in the middle and at the bottom part of this character there’s a hand, the position symbolizes a gather of power to help life up something. Therefore, this character looks like a lot of people trying to raise something up together.

F. Association approach: Parallel Association

G. Meaning: to raise something with our hands

H. Vocabulary: 举手 (raise hands)

8. The eighth character ‘丢’

A. Strokes:

B. Pronunciation: diū

C. Character category: Logical Aggregates

D. Structure (form and shape) of the character:

E. Principle of the character: the character looks like a person standing in the middle of the road. The curve above the man is the path of the road, the person stood still without knowing where to go. This character is associated with being lost or to throw away something.

F. Association approach: Parallel Association

G. Meaning: lost or throw

H. Vocabulary: 丢东西 (throwing something)
CSLM Lesson Plan for UOI-4 Cycle 2

9. The ninth character ‘姓’

A. Strokes:

χìng

B. Pronunciation: 姓

C. Character category: Pictophonic Compounds

D. Structure (form and shape) of the character:

E. Principle of the character: In the Oracle Bone Script, this character is like a mother and a child. This character means the child’s mother. In the matriarchal era, people did not care much about the biological father, but worship and honor their biological mother. Therefore, this is the origin of this character. It is associated with the last name of a person.

F. Association approach: Approaching Association

G. Meaning: usually refers to a person’s last name or simply means name of a person.

H. Vocabulary: 姓 (name)

10. The tenth character ‘睁’

A. Strokes:

zhēng

B. Pronunciation: 睁

C. Character category: Pictophonic Compounds

D. Structure (form and shape) of the character:

E. Principle of the character: Looking at the character from the Oracle Bone Script, this character looks like a person raising his head up and there are eyelashes above the person. Moreover, the radical 目 (mù) means eyes. Therefore, the students can immediately relate the character to eyes, after recognizing the radical 目 (mù).

F. Association approach: Approaching Association and Parallel Association

G. Meaning: open eyes or open.

H. Vocabulary: 睁 开眼睛 (open one’s eyes)
### CSLM Lesson Plan for UOI-4 Cycle 3

<table>
<thead>
<tr>
<th>Date: February 12, 2018</th>
<th>Teacher: Grade 3 Chinese Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Students: 16/class</td>
<td>Grade level: Grade 3</td>
</tr>
</tbody>
</table>

#### Unit Name: Unit 4: Where we are in place and Time

#### Topic/lesson: Chinese LA Lesson 20

#### Materials:
- Projector, Whiteboard and lesson 20 Chinese character wordlist

#### Objectives:
1. Students will be able to learn the characters through association approach.
2. Students will be able to understand the meaning of the 10 characters.
3. Students will be able to identify the 10 characters.

#### Chinese Characters:
- 讲 (jiǎng)
- 识 (shí)
- 况 (kuàng)
- 弄 (nòng)
- 希 (xī)
- 望 (wàng)
- 提 (tí)
- 教 (jiào)
- 刺 (cì)
- 掉 (diào)

#### Vocabulary:
- 谈话 (talk)
- 认识 (know)
- 情况 (situation)
- 弄坏 (break)
- 希望 (hope)
- 提东西 (carry)
- 教书 (teach)
- 刺伤 (stab)
- 掉下去 (fall)

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Teaching Content</th>
<th>Activity</th>
<th>Remark</th>
</tr>
</thead>
</table>
| Introduction (5 minutes) | 1. “Lesson 20 – Planting Green Bean”
- Students sit according to their groups on the table.
- Teacher gives students the Chinese Characters wordlist of Lesson 16. | -Lesson 20 Wordlist worksheet | |
| Introduces the 10 characters (5 minutes) | 2. Introduces the 10 Chinese characters of this lesson.
- 讲 识 况 弄 希 望 提 教 刺 掉 | - projector | |
| Chinese Characters Teaching (35 minutes) | 3. Teacher has to explain each Chinese character to the students. Including teaching the strokes, the structure of the character, the meaning, and also the vocabularies this character can be formed with. Students have to write the vocabulary in their wordlist worksheet. | -Lesson 20 Wordlist worksheet
- projector | |
| Review (10 minutes) | 4. After the lesson, teacher has to help students review what they have just learned, by showing picture of the characters and ask students to identify the character and its meaning. | -projector | |
| Wrap Up (5 minutes) | 5. Check students’ understanding by asking questions regarding the characters. If students cannot answer, then the teacher will help review again. | | |
## Chinese character teaching (in detail)

1. **The first character ‘讲’**
   - **A. Strokes:**
     - 讲
     - jiāng
   - **B. Pronunciation:** 讲
   - **C. Character category:** Pictophonetic Compounds
   - **D. Structure (form and shape) of the character:**
     - 言
   - **E. Principle of the character:** The character is composed of two different parts. The left side structure is 言 (yán) meaning words or speech. Speech or words must be spoken out from our mouth, therefore any character with this part usually are associated to speaking or talking.
   - **F. Association approach:** Approaching Association
   - **G. Meaning:** to talk or speak.
   - **H. Vocabulary:** 讲话 (talk)

2. **The second character ‘识’**
   - **A. Strokes:**
     - 识
     - shí
   - **B. Pronunciation:** 识
   - **C. Character category:** Pictophonetic Compounds
   - **D. Structure (form and shape) of the character:**
     - 讲 + 连接 = detailed explanation
   - **E. Principle of the character:** The character has derived from weapon in the Oracle Bone Script. This character originally means to identify weapons. It is later associated with identifying things.
   - **F. Association approach:** Approaching Association
   - **G. Meaning:** know or knowledge
   - **H. Vocabulary:** 认识 (know)
### 3. The third character ‘况’

<table>
<thead>
<tr>
<th>A. Strokes</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Character Strokes" /></td>
</tr>
</tbody>
</table>

**B. Pronunciation:** kuàng

**C. Character category:** Pictophonetic Compounds

**D. Structure (form and shape) of the character:**

- 水 + 祈 = 拜

**E. Principle of the character:** The character looks like a person sacrificing beside a river. This is also the original meaning of the character. The people are sacrificing in order to pray for the change of winter drought condition. This character is later on associated with condition or situation.

**F. Association approach:** Parallel Association

**G. Meaning:** condition or situation

**H. Vocabulary:**

- qíng 情
- kuàng 况

### 4. The fourth character ‘弄’

<table>
<thead>
<tr>
<th>A. Strokes</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image2" alt="Character Strokes" /></td>
</tr>
</tbody>
</table>

**B. Pronunciation:** nòng

**C. Character category:** Logical Aggregates

**D. Structure (form and shape) of the character:**

- 人 + 王 = 弄

**E. Principle of the character:** This character looks like someone holding something with both hands as the Oracle Bone Script. This also means that this character is associated with using hands to handle something or to get something. It originally means to hold something with both hands as well.

**F. Association approach:** Parallel Association

**G. Meaning:** do, get, or to handle something (usually used as a verb)

**H. Vocabulary:**

- nòng 弄
- huài 坏
- dōng 东
- xī 西 (to break something)
5. The fifth character ‘望’
A. Strokes:

B. Pronunciation: wàng
C. Character category: Logical Aggregates
D. Structure (form and shape) of the character:

E. Principle of the character: this character looks like a person looking down at somewhere and the upper part looks like an eye of a person. This character means missing someone as well.
F. Association approach: Parallel Association
G. Meaning: hope or it can mean to watch or to gaze.
H. Vocabulary: 希 (wish)

6. The sixth character ‘提’
A. Strokes:

B. Pronunciation: tí
C. Character category: Pictophonetic Compounds
D. Structure (form and shape) of the character:

E. Principle of the character: the character looks like a hand and the other part is an abstract meaning that means correct, to not make mistakes. This character is associated with lifting up.
F. Association approach: Parallel Association
G. Meaning: mention, raise, or to carry something
H. Vocabulary: 提 东西 (to carry something)
7. The seventh character ‘教’
   A. Strokes:
   B. Pronunciation: jiāo
   C. Character category: Pictophonic Compounds
   D. Structure (form and shape) of the character:
   E. Principle of the character: the character looks like a person holding a stick pointing to something drawn on the board and there is a child standing beneath the board. This image shows that a teacher is teaching a student. Stick symbolizes discipline and discipline could mean to give physical punishment in the past.
   F. Association approach: Parallel Association
   G. Meaning: teach or instruct
   H. Vocabulary: 教 书 (to teach)

8. The eighth character ‘刺’
   A. Strokes:
   B. Pronunciation: cì
   C. Character category: Pictophonic Compounds
   D. Structure (form and shape) of the character:
   E. Principle of the character: the character looks like a tree with many thorns growing from its trunk. Also, the other part looks like a knife in Oracle Bone Script. Therefore, the character is associated with stabbing.
   F. Association approach: Parallel Association
   G. Meaning: sting, poke, stab or sometimes thorn of a plant or flower.
   H. Vocabulary: 刺 伤 (stab)
9. The ninth character ‘掉’
   A. Strokes:
   B. Pronunciation: 掉
   C. Character category: Pictophonic Compounds
   D. Structure (form and shape) of the character:
   E. Principle of the character: This character symbolizes the combination of hand and another part symbolizes an abstract idea of a net. The combination of two characters symbolizes to arrest someone or something with net. Therefore, this character is often time associated to lose something. Later associated to falling and dropping.
   F. Association approach: Approaching Association
   G. Meaning: fall, drop, reduce, or to exchange.
   H. Vocabulary:

10. The tenth character ‘希’
    A. Strokes:
    B. Pronunciation: 希
    C. Character category: Logical Aggregates
    D. Structure (form and shape) of the character:
    E. Principle of the character: The top structure of this character looks like stitches that are created from needle work and beneath there’s a cloth. This means that stitches can be made on cloth or fabric. Originally this character means to create royal clothing for kings and queens. Later, it can be used with another character to create the meaning of hope.
    F. Association approach: Parallel Association
    G. Meaning: hope and it can sometimes mean rare or infrequent.
    H. Vocabulary: 希望 (hope)
# CSLM Lesson Plan for UOI-4 Cycle 4

**Date:** February 19, 2018  
**Teacher:** Grade 3 Chinese Teacher

<table>
<thead>
<tr>
<th>No. of Students: 16/class</th>
<th>Grade level: Grade 3</th>
<th>Class: G3A &amp; G3R</th>
<th>Time: 60 minutes</th>
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</thead>
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## Materials:
- Projector, Whiteboard and lesson 20-1 Chinese character wordlist

### Objectives:
1. Students will be able to learn the characters through association approach.
2. Students will be able to understand the meaning of the 10 characters.
3. Students will be able to identify the 10 characters.

### Chinese Characters:
匹、垃、圾、植、左、右、净、汽、科、塑

### Vocabulary:
一匹马 垃圾 植物 左边 右边 干净 汽车 科学 塑料

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Teaching Content</th>
<th>Activity</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (5 minutes)         | 1. “Lesson 20 -1”  
- Students sit according to their groups on the table.  
- Teacher gives students the Chinese Characters wordlist of Lesson 16. | -Lesson 20-1 Wordlist worksheet | |
|                     | 2. Introduces the 10 Chinese characters of this lesson.  
匹、垃、圾、植、左、右、净、汽、科、塑 | - projector | |
|                     |                  |          |        |
| **Chinese Characters Teaching** | 3. Teacher has to explain each Chinese character to the students, Including teaching the strokes, the structure of the character, the meaning, and also the vocabularies this character can be formed with. Students have to write the vocabulary in their wordlist worksheet. | -Lesson 20-1 Wordlist worksheet - projector | |
| (35 minutes)        |                  |          |        |
| **Review**          | 4. After the lesson, teacher has to help students review what they have just learned, by showing picture of the characters and ask students to identify the character and its meaning. | -projector | |
| (10 minutes)        |                  |          |        |
| **Wrap Up**         | 5. Check students’ understanding by asking questions regarding the characters. If students cannot answer, then the teacher will help review again. | | |
| (5 minutes)         |                  |          |        |
# Chinese character teaching (in detail)

## 1. The first character ‘匹’

**A. Strokes:**

![Character Strokes]

**B. Pronunciation:** pǐ

**C. Character category:** Logical Aggregates

**D. Structure (form and shape) of the character:**

![Character Image]

**E. Principle of the character:** The character originally looks like the real horse’s face in the real world, especially the nose part. Therefore, the students can easily remember that this character is associated with horse.

**F. Association approach:** Parallel Association

**G. Meaning:** Used as a quantifier when describing horse or cloth.

**H. Vocabulary:**

<table>
<thead>
<tr>
<th>Character</th>
<th>Pinyin</th>
</tr>
</thead>
<tbody>
<tr>
<td>匹</td>
<td>pǐ</td>
</tr>
<tr>
<td>一匹</td>
<td>yī pǐ</td>
</tr>
<tr>
<td>马</td>
<td>mǎ</td>
</tr>
</tbody>
</table>

## 2. The second character ‘垃’

**A. Strokes:**

![Character Strokes]

**B. Pronunciation:** lā

**C. Character category:** Pictophonetic Compounds

**D. Structure (form and shape) of the character:**

![Character Image]

**E. Principle of the character:** The character looks like a person holding something in hand; we can say it’s something that is going to be disposed. The left image symbolizes soil or dirt.

**F. Association approach:** Parallel Association

**G. Meaning:** Garbage or rubbish

**H. Vocabulary:** 垃圾 (trash)
3. The third character ‘圾’
A. Strokes:

```
圾
```

B. Pronunciation: 垮
C. Character category: Pictophonetic Compounds
D. Structure (form and shape) of the character:

```
圾
```

E. Principle of the character: this character is similar to that as垃(lā). The image looks like a person squatting on a platform and the hand reaching out to the object on the left side of this character. The left side of this character symbolizes sand and soil. It can sometimes be associated to dirt.
F. Association approach: Parallel Association
G. Meaning: rubbish
H. Vocabulary: 垮 (trash)

4. The fourth character ‘植’
A. Strokes:

```
植
```

B. Pronunciation: 植
C. Character category: Pictophonetic Compounds
D. Structure (form and shape) of the character:

```
植
```

E. Principle of the character: This character represents an abstract meaning in a way that the right side structure of this character means straight 直 this character does not represent any image. The left side structure of this character looks like tree, which could represent a plant. Therefore, this character is associated with plant.
F. Association approach: Parallel Association
G. Meaning: plant (usually green plant)
H. Vocabulary: 植物 (plant)
<table>
<thead>
<tr>
<th>Character</th>
<th>Strokes</th>
<th>Pronunciation</th>
<th>Character Category</th>
<th>Structure (form and shape)</th>
<th>Principle</th>
<th>Association Approach</th>
<th>Meaning</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>“左”</td>
<td><img src="image1.png" alt="Strokes" /></td>
<td>zuǒ</td>
<td>Logical Aggregates</td>
<td><img src="image2.png" alt="Character Image" /></td>
<td>This character looks like a person raising his whole left arm up. This character is an image character from the Oracle Bone Script.</td>
<td>Parallel Association</td>
<td>left side</td>
<td>zuǒ, biān</td>
</tr>
<tr>
<td>“右”</td>
<td><img src="image3.png" alt="Strokes" /></td>
<td>yòu</td>
<td>Logical Aggregates</td>
<td><img src="image4.png" alt="Character Image" /></td>
<td>This character looks like a person raising his whole right arm up. This character is an image character from the Oracle Bone Script.</td>
<td>Parallel Association</td>
<td>right side</td>
<td>yòu, biān</td>
</tr>
</tbody>
</table>
7. The seventh character ‘净’
   A. Strokes:
   
   B. Pronunciation: jìng
   C. Character category: Pictophonic Compounds
   D. Structure (form and shape) of the character:
   
   E. Principle of the character: the character derived from an old Chinese character form other than the Oracle Bone Script. This character looks like plant beside the flowing river and the four dots in the river represents pollution. Therefore, this character means to remove pollution from the water, which also means clean.
   F. Association approach: Parallel Association
   G. Meaning: clean
   H. Vocabulary: 干净 (clean)

8. The eighth character ‘汽’
   A. Strokes:
   
   B. Pronunciation: qì
   C. Character category: Pictophonic Compounds
   D. Structure (form and shape) of the character:
   
   E. Principle of the character: the left side structure of this character looks like a river which symbolizes water and the right side structure of this character looks like wind, which is also a form of oxygen. The combination of two generates steam or a kind of mist.
   F. Association approach: Parallel Association
   G. Meaning: steam or vapor
   H. Vocabulary: 汽车 (car)
CSLM Lesson Plan for UOI-4 Cycle 4

9. The ninth character ‘科’
   A. Strokes:
   B. Pronunciation: 科
   C. Character category: Logical Aggregates
   D. Structure (form and shape) of the character:
   E. Principle of the character: This character’s left side structure is associated with grain, the image itself symbolizes grain and grain is also a type of plant as the image is associated to trees. The right side structure of this character is a grain measurement tool that was used in China. Before people in China use this tool to measure and set the price of grain.
   F. Association approach: Approaching Association and Parallel Association
   G. Meaning: field, section, branch, division, or a family (in science)
   H. Vocabulary: 科 学 (science)

10. The tenth character ‘塑’
    A. Strokes:
    B. Pronunciation: 塑
    C. Character category: Pictophonetic Compounds
    D. Structure (form and shape) of the character:
    E. Principle of the character: This character represents an abstract meaning of molding and sculpting something into shape. Therefore, there is 土 (tǔ) meaning soil as the bottom structure. This is because soil is soft enough to be molded into any shape. Later, this character can be associated with plastic, because heated plastic is also easy to shape and mold.
    F. Association approach: Parallel Association
    G. Meaning: plastic, model, shape, or sculpt
    H. Vocabulary: 塑料 (plastic)
Date: February 26, 2018  Teacher: Grade 3 Chinese Teacher

No. of Students: 16/class  Grade level: Grade 3  Class: G3A & G3R  Time: 60 minutes

Unit Name: Unit 4: Where we are in place and Time  Topic/lesson: Chinese LA Lesson 20-2

Materials: Projector, Whiteboard and lesson 20-2 Chinese character wordlist

Objectives:
1. Students will be able to learn the characters through association approach.
2. Students will be able to understand the meaning of the 10 characters.
3. Students will be able to identify the 10 characters.

Chinese Characters: 肚、养、英、另、伙、伴、拌、吸、谢、啊

Vocabulary:
肚子 (stomach)  养 (raise)  英 (English)  另 (another)  伙 (partner)  伴 (mix)  吸 (breath)  谢 (thank you)
啊! (particle of expression)

Learning Objectives

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Teaching Content</th>
<th>Activity</th>
<th>Remark</th>
</tr>
</thead>
</table>
| Introduction (5 minutes) | 1. “Lesson 20-2”
   - Students sit according to their groups on the table.
   - Teacher gives students the Chinese Characters wordlist of Lesson 16. | -Lesson 20-2 Wordlist worksheet | |
| Introduces the 10 characters (5 minutes) | 2. Introduces the 10 Chinese characters of this lesson. 肚、养、英、另、伙、伴、拌、吸、谢、啊 | - projector | |
| Chinese Characters Teaching (35 minutes) | 3. Teacher has to explain each Chinese character to the students. Including teaching the strokes, the structure of the character, the meaning, and also the vocabularies this character can be formed with. Students have to write the vocabulary in their wordlist worksheet. | -Lesson 20-2 Wordlist worksheet - projector | |
| Review (10 minutes) | 4. After the lesson, teacher has to help students review what they have just learned, by showing picture of the characters and ask students to identify the character and its meaning. | -projector | |
| Wrap Up (5 minutes) | 5. Check students’ understanding by asking questions regarding the characters. If students cannot answer, then the teacher will help | | |
review again.
# Chinese character teaching (in detail)

## 1. The first character ‘肚’
- **A. Strokes:**
  - [Image 1]
- **B. Pronunciation:** 肚
- **C. Character category:** Pictophonetic Compounds
- **D. Structure (form and shape) of the character:**
  - [Image 2]
- **E. Principle of the character:** This character can be broken down into two small parts, the first part is the left structure, which symbolizes human skin. The second part is the right structure, symbolizes soil. This means that the human body is made from soil.
- **F. Association approach:** Approaching Association
- **G. Meaning:** belly or abdomen
- **H. Vocabulary:** 肚子 (stomach)

## 2. The second character ‘养’
- **A. Strokes:**
  - [Image 3]
- **B. Pronunciation:** 养
- **C. Character category:** Pictophonetic Compounds
- **D. Structure (form and shape) of the character:**
  - [Image 4]
- **E. Principle of the character:** The character looks like a sheep and a stick that is used to herd sheep. Therefore, this character is associated with raising animals.
- **F. Association approach:** Parallel Association
- **G. Meaning:** raise, support, grow, cultivate, or provide
- **H. Vocabulary:** 养 (raise an animal/pet)
3. The third character ‘英’

A. Strokes:

B. Pronunciation:  

C. Character category: Pictophonetic Compounds

D. Structure (form and shape) of the character:

E. Principle of the character: This character represents an abstract idea. The grass on the top structure represents plants in general (could be flower). The bottom part is an image that symbolizes a reflection. This character originally means the reflection of a plants highlighted part will attract bees to spread pollen.

F. Association approach: Parallel Association

G. Meaning: brave, England or English

H. Vocabulary: 英文 (English)

4. The fourth character ‘另’

A. Strokes:

B. Pronunciation:  

C. Character category: Logical Aggregates

D. Structure (form and shape) of the character:

E. Principle of the character: This character represents an abstract meaning, the structure of the character looks like a person with three legs; this could mean that the person has internal conflict. Three legs in Chinese culture usually refers to not being loyal, it could be not loyal with his/her partner or work or in any other form.

F. Association approach: Parallel Association

G. Meaning: another, other, or separate

H. Vocabulary: 另外/另一个 (another or the other one)
5. The fifth character ‘伙’
A. Strokes:

B. Pronunciation: 伙
C. Character category: Pictophonetic Compounds
D. Structure (form and shape) of the character:

E. Principle of the character: this character looks like a person standing beside a camping fire. This is a direct association with the evolved character.
F. Association approach: Parallel Association
G. Meaning: partner or assistant
H. Vocabulary: 伙 伴 (partner)

6. The sixth character ‘伴’
A. Strokes:

B. Pronunciation: 伴
C. Character category: Pictophonetic Compounds
D. Structure (form and shape) of the character:

E. Principle of the character: this character looks like two people walking together, one in the front and one at the back. This image represents the idea of partner or companion.
F. Association approach: Parallel Association
G. Meaning: with, companion, partner, or accompany
H. Vocabulary: 伙 伴 (partner)
7. The seventh character ‘拌’
   A. Strokes:
   B. Pronunciation: 拌
   C. Character category: Pictophonetic Compounds
   D. Structure (form and shape) of the character:
   E. Principle of the character: the character derived from an old Chinese character form other than the Oracle Bone Script. This character also represents an abstract idea. This character looks like a person holding a stick in both hands. The person is using the sticks in his/her both hands to mix something together.
   F. Association approach: Parallel Association
   G. Meaning: mix or blend
   H. Vocabulary: 拌 (mix)

8. The eighth character ‘吸’
   A. Strokes:
   B. Pronunciation: 吸
   C. Character category: Pictophonetic Compounds
   D. Structure (form and shape) of the character:
   E. Principle of the character: this character represents an abstract idea as in the right structure of this character is a character that symbolizes obtain. The left side structure of this character symbolizes mouth. Therefore, this character transfers the idea of breathing through mouth.
   F. Association approach: Parallel Association and Approaching Association
   G. Meaning: absorb, suck, inhale, or breath
   H. Vocabulary: 呼 吸 (breath)
### 9. The ninth character ‘谢’

<table>
<thead>
<tr>
<th>A. Strokes:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Pronunciation:</th>
<th>谢</th>
</tr>
</thead>
<tbody>
<tr>
<td>xiè</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Character category:</th>
<th>Pictophonetic Compounds</th>
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</table>

<table>
<thead>
<tr>
<th>D. Structure (form and shape) of the character:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>[Image]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. Principle of the character:</th>
<th>This character originally means a person wants to retire, but expresses indirectly. However, the character was later written or recorded wrongly in the script. Therefore, the character was written the way it is today. By looking at the image of the character, we can see a person in a bending posture.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>F. Association approach:</th>
<th>Approaching Association and Parallel Association</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>G. Meaning:</th>
<th>thank you</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>H. Vocabulary:</th>
<th>谢 (thank you)</th>
</tr>
</thead>
</table>

### 10. The tenth character ‘啊’

<table>
<thead>
<tr>
<th>A. Strokes:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Pronunciation:</th>
<th>啊</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Character category:</th>
<th>Pictophonetic Compounds</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>D. Structure (form and shape) of the character:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. Principle of the character:</th>
<th>This character represents an abstract idea of a sound expressed by a person when surprised or any other kind of expression. Looking at the character in Oracle Bone Script, we can see that the left structure symbolizes mouth. Therefore, we can infer that the character is related to mouth.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>F. Association approach:</th>
<th>Parallel Association and Approaching Association</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>G. Meaning:</th>
<th>a particle showing affirmation or an expression of surprise</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>H. Vocabulary:</th>
<th>啊！(particle showing affirmation or an expression)</th>
</tr>
</thead>
</table>
APPENDIX F

Validity Approval Forms
Assumption University of Thailand
Graduate School of Human Sciences
M.ED Program in Curriculum & Instruction
Validity Approval Form

Student Name: Chih-Min Wu

Contact Information (phone/e-mail): 096-176-9270 / jossiewu24@gmail.com

Thesis Title: A Comparative Study of Grade 3 Students’ Chinese Character Achievement through Character Structure Literacy Method and Chinese Radical Literacy Method at an International School in Samut Prakan, Thailand

Questionnaire Title: Chinese Character Achievement Test

Validity Approval

Does the validity of this test paper have your approval?

☑ Yes. I, the undersigned, have read the test paper entitled Chinese Character Achievement Test, and certify its validity.
   My comments and/or suggestions are noted below.

☐ No. I, the undersigned, have read the test paper entitled Chinese Character Achievement Test, and am unable to certify its validity.
   My comments and/or suggestions are noted below.

Comments and/or suggestions:

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

Name: Weng-Hsin Wang
Validity expert Signature: Weng-Hsin Wang
Date: 18 Jan., 2018
Assumption University of Thailand
Graduate School of Human Sciences
M.ED Program in Curriculum & Instruction
Validity Approval Form

Student Name: Chih-Min Wu

Contact Information (phone/e-mail): 096-176-9270 / jossiewu24@gmail.com

Thesis Title: A Comparative Study of Grade 3 Students’ Chinese Character Achievement through Character Structure Literacy Method and Chinese Radical Literacy Method at an International School in Samut Prakan, Thailand

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☐ No. I, the undersigned, have read the test paper entitled Chinese Character Achievement Test, and am unable to certify its validity.

My comments and/or suggestions are noted below:

Comments and/or suggestions:

The research has shown relevant comparison between two different Chinese literacy methods and the following points sum up the validity of this test paper:

1. The lesson plan was user-friendly and easy to operate.
2. The results are able to show the difference between the two comparison groups.
3. The format of the test is aligned or somewhat similar to that of the school.

Just a little suggestion to make: Pinyin of the characters can be given as a cue to remember how to write or a vocabulary can be given as a cue with a blank space provided for the required written character.

Name: Winnie Yan Wang

Validity expert Signature: [Signature]

Date: Jan 9th, 2018
Assumption University of Thailand
Graduate School of Human Sciences
M.Ed Program in Curriculum & Instruction
Validity Approval Form

Student Name: Chih-Min Wu

Contact Information (phone/e-mail): 096-176-9270 / jossiewu24@gmail.com

Thesis Title: A Comparative Study of Grade 3 Students’ Chinese Character Achievement through Character Structure Literacy Method and Chinese Radical Literacy Method at an International School in Samut Prakan, Thailand

Questionnaire Title: Chinese Character Achievement Test

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My comments and/or suggestions are noted below:

☐ No. I, the undersigned, have read the test paper entitled Chinese Character Achievement Test, and am unable to certify its validity.

My comments and/or suggestions are noted below:

Comments and/or suggestions:
It is suggested to modify the administration of the test so the complexity of keeping the validity could be reduced to the lowest level.

Name: [Signature]
Validity expert Signature: [Signature]
Date: 11 Jan. 2018
BIOGRAPHY

Name: Chih-Min Wu (Jossie)

Nationality: Taiwan R.O.C. (Republic of China)

Occupation: Chinese Language Support Teacher

Organization: Concordian International School, Thailand

EDUCATION

Assumption University (Hua Mak Campus) Bangkok, Thailand
M.Ed. Curriculum and Instruction
Jan. 2016 – in progress

Fu Jen Catholic University (FJU), Taipei, Taiwan
B.A. English Language and Literature

Ramkhamhaeng Advent International School, Bangkok, Thailand
High School College Preparatory Diploma emphasis in Business
Aug. 1999 – June 2010

ORGANIZATION & ACTIVITY

New Taipei Municipal Guo-Tai Elementary School
Feb. 2013 – June 2013
Service Learning and Internship: observation and teaching grade 6 students.

New Taipei Municipal Guo-Tai Elementary School
Observation and teaching grade 5 students through children’s literature: picture books.

Encyclopedia Britannica Lesson Plan Project
May 2012
Design lesson plan for remedial teaching using the materials on Encyclopedia Britannica.

EXPERIENCE

Concordian International School
Aug. 2015 - now
Chinese Language Support Teacher
- Prepare teaching materials for students
- Support students with Chinese language difficulty

New Taipei Municipal Guo-Tai Elementary School
English Teacher (Experiment Teaching Project)
- Design lesson plan and prepare teaching materials
- Teach Children English (grade 3 students)
- Check and grade assignments

ACHIEVEMENT & SKILLS

- Certified for completing course hour of teaching Chinese as a Second Language (102 hours) Jan. 2015
- Language: English (Fluent), Mandarin (Native), Thai (Basic)