



**USING PICTOGRAPH IN LEARNING CHINESE CHARACTERS
OF GRADE 4 THAI STUDENTS**



**BY
FANQI SUN**

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Assoc. Prof. Marut Patphol, Ed.D. Assoc. Prof. Usaporn Swekwi, Ed.D.
Examination Committee Chairperson Member

Nipaporn Chalermnirundorn, Ed.D.
Member and Advisor

Approved by Graduate School

(Asst.Prof.Plт.Off.Vanee Sooksatre.D.Eng.)

Dean of Graduate School

August 5, 2020

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Fanqi Sun

Researcher

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 Thesis Advisor : Nipaporn Chalermnirundorn, Ed.D.

Abstract

The objectives of this study were to (1) compare grade 4 Thai students' Chinese characters learning achievement before and after using pictograph and (2) find out grade 4 Thai students' satisfaction on the use of pictograph in learning Chinese characters. The mixed method research was applied. The study was conducted at a private school in Ayutthaya, Thailand, and involved 22 grade 4 students for six weeks. Mean, standard deviation and Wilcoxon Sign Rank Test were applied to analyze the scores before and after the treatment. Quantitative data were collected through achievement tests. Qualitative data were collected from classroom observation and semi-structured interview.

The outcome of the learning achievement showed that the post-test mean (16.27) was higher than the pre-test mean (7.14). The sign (P) value was .01 which meant that the sample group had statistically significant improvement after the treatment. In addition, the qualitative data revealed that using pictograph to learn Chinese characters had positive effects on Thai students' learning satisfaction.

(Total 115 pages)

Keywords: Pictograph, Chinese characters, Learning achievement, Grade 4 Thai
 Students

Student's Signature.....Thesis Advisor's Signature.....

TABLE OF CONTENTS

		Page
ACKNOWLEDGEMENTS		i
ABSTRACTS		ii
TABLE OF CONTENTS		iii
LIST OF TABLES		vi
LIST OF FIGURES		vii
ABBREVIATIONS		viii
CHAPTER 1	INTRODUCTION	1
	1.1 Background and Rationale of the Study	1
	1.2 Research Objectives	5
	1.3 Research Questions	5
	1.4 Research Hypotheses	5
	1.5 Scope of the Study	6
	1.6 Limitation of the Study	7
	1.7 Conceptual Framework of the Study	8
	1.8 Terminologies	8
	1.9 Significance of the study	9
CHAPTER 2	LITERATURE REVIEW	10
	2.1 Teaching and Learning Chinese as a Foreign language	10
	2.2 Teaching and Learning Chinese in Thailand	13
	2.3 Chinese Character	15
	2.4 Pictograph	20
	2.5 Pictograph in Teaching	24
	2.6 The Role of Pictograph Character	28
	2.7 Related Learning Theories	31
	2.8 Related Research and Studies	34

TABLE OF CONTENTS (CONT.)

		Page
CHAPTER 3	RESEARCH METHODOLOGY	37
	3.1 Research Design	37
	3.2 Population and Sample of the Study	38
	3.3 Research Instruments	39
	3.4 Validity and Reliability of Research Instruments	41
	3.5 Data Collection	43
	3.6 Data Analysis	44
CHAPTER 4	DATA ANALYSIS	46
	4.1 Quantitative Analysis	46
	4.2 Qualitative Data Analysis	50
CHAPTER 5	CONCLUSION, DISCUSSION AND RECOMMENDATION	59
	5.1 Conclusion of the study	59
	5.2 Discussion of the study	61
	5.3 Recommendation of the study	63
REFERENCES		65

TABLE OF CONTENTS (CONT.)

	Page
APPENDICES	73
Appendix A Letter of Approval	74
Appendix B Parental Consent Letter	76
Appendix C Experts Who Validated Instruments	79
Appendix D IOC of Lesson Plans	81
Appendix E Lesson Plans	83
Appendix F IOC of Semi-structured Interview	99
Appendix G Semi-structured Interview	102
Appendix H IOC of Classroom Observation	104
Appendix I Classroom Observation Form	107
Appendix J IOC of Pre and Post-test	109
Appendix K Achievement Test (Capital letter)	112
 BIOGRAPHY	 115



LIST OF TABLES

Table	Page
1.1 Timeline of the study	7
3.1 The demographic information of the research participants	39
3.2 List of topics to teach in 6 weeks	39
3.3 Item-Objective Congruence (IOC) result	42
3.4 Kuder-Richardson Formula 20 Test result	43
4.1 Individual student' pre-test and post-test scores	47
4.2 The comparisons of the Pre-test and post-test	48
4.3 Wilcoxon signed-rank Test result	48
4.4 Classroom Observation	55



LIST OF FIGURES

	Page
Figure	
1.1 Independent Variable and dependent Variables	8
3.1 Illustration of Research Design	38
4.1 Comparison of pre-test and post-test Mean	49



ABBREVIATIONS

Abbreviation	Meaning
TCFL	Teaching Chinese as A foreign language
FL	Foreign Language
SLA	Second Language Acquisition
CO	Classroom Observation
SD	Standard Deviation
KR-20	Kuder–Richardson Formula 20



CHAPTER 1

INTRODUCTION

This chapter mainly elaborated the research background, research objectives, research questions, research hypothesis and scope of the research. In addition, it also combs the common problems in Chinese character teaching, explains the research methods, purposes and significance.

1.1 BACKGROUND AND RATIONALE OF THE STUDY

Through the development of economic globalization and cooperation, exchanges between China and different countries and regions in the world are becoming more frequent. For thousands of years, development in China has been constantly improving and growing making china becoming the second largest economy in the world. More and more countries around the world now pay attention to it. Economy growth these factors provided opportunities for developing of Chinese language, attracting many foreigners to learn Chinese, and stirring up a spree of learning Chinese. At the same time, in order to promoting the development of diverse cultures and enhancing cultural soft power. At present, China is actively building Confucius institutes and Chinese International Promotion Base.

Thailand and China are close neighbors, with the close economic exchanges between the two countries. Thailand Chinese language has become more important dramatically. According to records, China and Thailand started economic exchanges more than 2,000 years ago, and there are many Chinese overseas nearly as one eighth of the total population. They first establish private schools in Thailand to teach their children Chinese, and these schools gradually changed into Chinese schools in their later development. Wei (2015) mentioned that since the 1990s, Chinese language education has developed rapidly in Thailand. In 1999, the Thai government listed

Chinese as an optional subject in the foreign language examination of the college entrance examination. In 2000, the Ministry of Education of Thailand officially allowed the high school Chinese course. Number of schools in Thailand, including colleges and public schools has started Chinese courses. Prior to 2008, most schools in Thailand had Chinese courses. In 2013, 1,524 institutions in Thailand offered Chinese courses and 863,056 people studied Chinese. Meanwhile, Thailand has also become one of the countries with the largest number of Confucius Institutes (Cui, 2014).

Li (2013) mentions that it is known that today's Thai schools have begun to pay attention to Chinese teaching to various levels from kindergarten to university. Some schools are also specialized and hire Chinese teachers to teach Chinese, however there are few Thai students who can recognize, read and write Chinese characters. Student who is passionate about Chinese, you cannot ignore about the Chinese culture and character.

According to Low, Hew, and Wong (2014) Chinese is one of the ancient languages in the world. The earliest known writing form in China was found on the "oracle bones" which appeared about five thousand years ago. Chinese is different from other alphabetical languages like Malay, Arabic and English. Chinese characters use pictograph to express meaning, and they do not have letter combinations to represent Chinese phonetic symbols.

Baxter (2012) shows that studying Chinese character is not easy for students. This is because Chinese characters are divided into two categories: sin-graph and alphabet-less language. In general, a student with good language skills needs One thousand three hundred and twenty hours of teaching to reach level two, compared with Four hundred and fifty hours for Latin.

The writing highlights the problem of learning and writing Chinese characters, and occupying a unique position in Chinese learning. When we learn Chinese, we

cannot ignore the study of Chinese characters. In addition, there are four main difficult areas for Thai students in learning Chinese characters (Zhou, 2017).

One of them being that, Chinese characters are different from alphabetical characters they have special characteristics. They think that Chinese characters are hard to read, learn, write, and remember and it is also the biggest difficulty for Thai students to learn Chinese. More-so, during teaching, most teachers will use simplified characters for Chinese beginners' learners. However sometimes we use traditional characters in our daily lives. Simplified Chinese are easy to write and traditional characters are easy to understand, while at the same time teaching two types of fonts will increase the learning difficulty. In addition, for Thai students, Chinese strokes and Chinese radicals are also difficult for Chinese learning. Chinese characters have complex structure. There are many strokes, and there are difficult to memorize.

There are many words in Chinese that have the same pronunciation but different meanings, so students often make mistakes because of pronunciation mistakes.

Li (2013) mentions that two reasons Thai students make mistakes: The first point is complex writing and phonetic-graphic of Chinese characters. The second point impact of Thai native language on students.

Xu (2008) explains three main problems existing in Chinese character teaching. furthermore, separating Chinese character teaching from Chinese teaching are independent of Chinese listening, writing, reading and speaking skills training, therefore, Chinese characters are taught as a writing symbol. Ignore the partial language role of Chinese characters. More-over, some teachers equate the teaching of Chinese characters with the teaching of Chinese. In this kind of teaching, the teaching of Chinese characters depends on the content in the textbook and the internal rules of Chinese characters broken. Lastly, one thing that has not received enough attention in teaching is how to boost the writing ability of Chinese characters by helping students

to understand the basic rules of the forming Chinese characters. However, some pupils use pictograph to coordinate teaching in teaching Chinese as a foreign language and have achieved satisfactory results.

Liu (2011) comments that, based on the pictograph; students can see the evolution of Chinese characters then find out the rules of forms of Chinese characters. This method can improve the overall identification and understanding of Chinese characters by foreign students.

Li (2013) points out that pictograph is the most basic form of Chinese characters and it comes from pictures. We can use pictures and pictograph to teach Chinese characters. This method can improve students' learning efficiency and interest, and make students feel good about Chinese characters psychologically and further understand Chinese characters.

Shu (2015) finds that by explaining the evolution between Chinese characters, old characters and pictures, students can better understand the strokes of Chinese characters and improve their writing skills and abilities.

Qin (2016) believes that Pictograph has simple structure, few strokes and strong character-building ability. Using word cards and multimedia to help teaching is conducive in helping young students to feel involved with Chinese characters. This reduces the difficulties in learning Chinese characters, strengthening memory and giving a new understanding of Chinese characters.

Research shows that Chinese characters, especially basic ones also have the shadow of old pictograph (Li, 2013). There are characters, as well as pictures and symbols. They have strong pictographic characteristics. On the other hand, pictographic teaching can help students understand the source of Chinese characters and cut out the ambivalence caused by writing difficulties in Chinese characters.

More-over, it can also improve students' understanding and memory of Chinese characters.

Therefore, the objectives of this research were to compare the achievement in learning Chinese characters and examine the satisfaction of Thai primary school students through the use of pictograph in teaching Chinese as a foreign language. In addition, Chinese education in Thailand has a long history, which reflects the difficulties and shortcomings of learning Chinese as a foreign language for foreign students. Thus, I hope this study can further help Thai students learn Chinese characters more effectively.

1.2 RESEARCH OBJECTIVES

1.2.1 To compare grade four Thai students' Chinese characters learning achievement before and after using pictograph.

1.2.2 To find out grade four Thai students' satisfaction on the use of pictograph in learning Chinese characters.

1.3 RESEARCH QUESTIONS

1.3.1 Would the use of pictograph enhance grade four Thai students' Chinese characters learning achievement?

1.3.2 Would there be any satisfaction on the use of pictograph in learning Chinese characters by grade four Thai students?

1.4 RESEARCH HYPOTHESES

1.4.1 The use of pictograph would enhance grade four Thai students' Chinese characters learning achievement.

1.5 SCOPE OF STUDY

1.5.1 Location of the Study

The study was conducted at a school in Ayutthaya, Thailand. The school included grade levels starting from kindergarten to grade 9.

1.5.2 Population and Sample

Population: The population in this study composed of grade four students at a school in Ayutthaya, Thailand. There were three classes in grade four and the total number of the student was 91.

Sample group: The investigator used a purposive sampling to choose a class of 22 students (9 males and 13 females) for the study. Students were between the ages of 9-11 and had mixed abilities in Chinese language.

1.5.3 Content of the Study

In this study, the researcher developed three lesson plans (each lesson plan uses 2 sessions) for 300 minutes (50 minutes each class). The content of this taught was from the fourth grade Chinese textbook in Thailand –"Experiencing Chinese 4" published by international center for language research and development in 2008. The teaching content was carried out around the content of the textbook.

In this study, there were 3 topics in the class plan: nature (月 moon 日 sun 田field 火 fire), human body (人 people 眼 eye 口 mouth 女 women) and animals (horse 鸟 bird 飞 fly 网 net). Before the course ends students should be capable to know the Chinese characters pronunciation, meaning and write method.

1.5.4 Time Frame

The study was conducted on the month of January and February, 2020. Researcher taught for six weeks (one lesson in a week). The whole study takes about 1.5 months. Moreover, the research process followed the timeline shown below.

Table1.1 Timeline of the study

Activity	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Literature Review									
Research Proposal									
Data Collection									
Data Analysis									
Final Defense									

1.6 LIMITATIONS OF THE STUDY

1.6.1 In this study, only one class of students was selected from grade 4 class of Thai school to conduct the research. This study would not represent the situation of all grade 4 students in Thailand, so it was not the representative.

1.6.2 The teaching plan and data collection of this study were completed within one and a half months; therefore, the research time may be not long enough and which may make the research results unreliable.

1.7 CONCEPTUAL FRAMEWORK OF THE STUDY

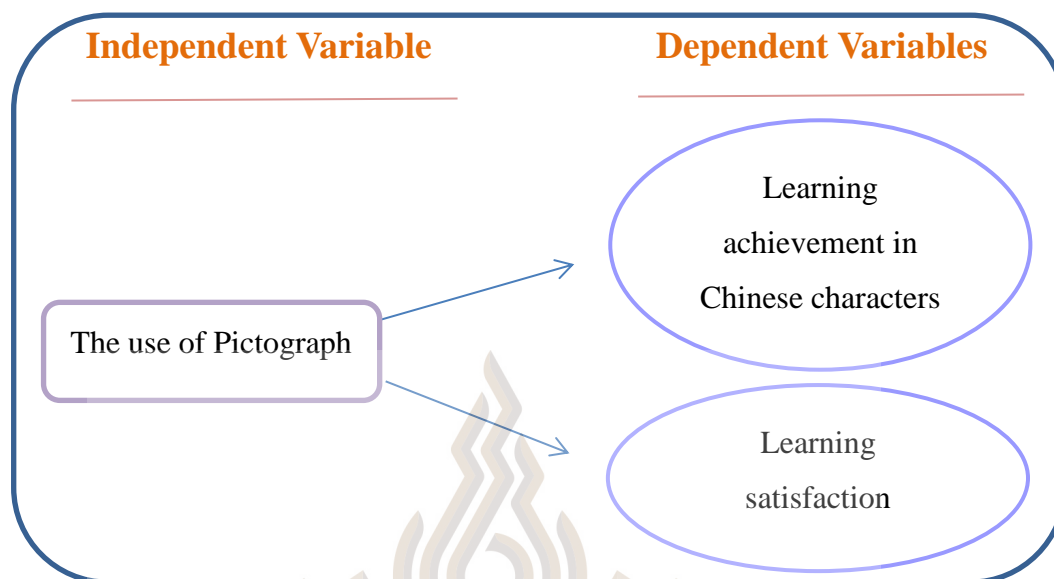


Figure 1.1 Independent variable and dependent variables

1.8 TERMINOLOGIES

Pictograph refers to 12 pictographs selected from the "experience Chinese 4" (published by international center for language research and development in 2008) textbook are ancient characters with simple shapes similar to objects in real life.

Chinese characters refer to 12 Chinese characters selected from the book "experience Chinese 4" It is a recording symbol including three aspects of pronunciation, font and meaning.

Chinese characters learning achievement refer to after learning the 12 Chinese characters in the "experience Chinese 4" textbook, students can write the 12 Chinese character. This can be measured by achievement test (pre-test and post-test).

Grade four Thai students refer to Thai students with Thai nationality between the ages of 9-11, in Ayutthaya, Thailand.

Satisfaction refers to the psychological state of students after the use of pictographic teaching, as well as their feelings (enjoy, interesting, easy) and attitudes (like) towards learning processer (learning methods, course content, learning result, student-teacher interaction). This can be measured by semi-structured interview and classroom observation.

1.9 SIGNIFICANCE OF THE STUDY

1.9.1 The use of pictographic characters in teaching Chinese character in Thailand would enhance students' achievements.

1.9.2 This study would provide reference for the application of pictograph in the teaching of Chinese as a foreign language in Thailand.



CHAPTER 2

LITERATURE REVIEW

This chapter recommends the literature review refers to this study. It includes the study of Chinese as a foreign language, the definition and classification of Chinese characters and pictographic characters, the teaching methods of pictographic characters, and related theoretical research. All these provide theoretical support for this study.

2.1 TEACHING AND LEARNING CHINESE AS A FOREIGN LANGUAGE

2.1.1 Teaching Chinese as a Foreign Language

With the development of globalization and the continuous integration of different cultures, all countries in the world are actively promoting language teaching, language as a tool of cultural communication. As a foreign language, Chinese is on the rise all over the world and is becoming a craze. On the one hand, with the continuous development of international Chinese language teaching in China, Chinese learners have shown a trend of diversification in groups, objectives and environments. On the other hand, the main content of teaching Chinese as a foreign language is to cultivate students' ability to use Chinese, which requires students to master solid basic knowledge of Chinese. Therefore, teachers, teaching materials and teaching methods have become the most concerned issues.

The first is the development of Teaching Chinese as a foreign language (TCFL). The teaching of Chinese as a foreign language has a long history. Due to the cultural differences between different countries, Chinese teaching is also different, and its

learning methods and characteristics will change with time and place. So far, the craze of learning Chinese has reached a special period all over the world.

Secondly, the characteristics of teaching Chinese as a foreign language are as a tool of communication and a bridge for communication. As one of the oldest languages in the world, Chinese language has formed its unique characteristics in the long cultural history and contains rich cultural deposits. Chinese is different from western languages. Therefore, Teaching Chinese as a Foreign Language is not in terms with the link of teaching, but also integration of cultural teaching into the current teaching system, guiding the compounding of language and cultural teaching.

Lastly, the teaching method of Teaching Chinese as a Foreign Language, The key to teaching Chinese as a foreign language is that we need to draw a general principle based on the accumulated experience and the specific situation of students, and properly deal with the relationship between theory and practice. In terms of teaching methods, we mainly study teaching principles, teaching objectives and teaching materials. Therefore, under the premise of clear principals, teachers should do a good job in effective classroom teaching, to achieve the task of course selection and lesson preparation (Xu, 2014).

2.1.2 Learning Chinese as a foreign language

"Imitation" activities are part of foreign language learning, and learners must repeat or imitate new information. The quality and quantity of language couple back are the main causal factor of language learning success.

Chomsky re-examined this approach in 1959 and found that from a biological standpoint, children are born with the ability to find the rules of the language system (Moeller & Catalano, 2015, p. 327).

Muñoz (2014, p. 24) showed in her research that learners have resonance with the following ideas "showed early awareness of foreign language learning and learning conditions as well as the influence of the learning environment and experience on the changes that reshaped their views" during their primary education. In addition, Vygotsky's socio-cultural theory "views cognition as a social faculty" which means that learners must take part in culturally organized social dialogue.

Ortega (2011, pp. 218-219) it is believed that Vygotsky's conceptual cognition and awareness are essentially social and socializing is the only way to learn a second language. At the same time, it has been complete mastery of second language acquisition theory by researchers of second language acquisition. Therefore, foreign language teachers should use second language-oriented learning structure, that is, concentrate on understanding the overall meaning of communication, use Chinese in a natural and real language environment, and understand learning progress of learners (Chu, Lin, Chen, Tsai, & Hang, 2015, p.1).

2.1.3 Satisfaction in learning Chinese as a foreign language

Sweeney and Ingram (2001) defined satisfaction as "The perception of enjoyment and accomplishment in the learning environment". Education is the key for every a country. Student satisfaction is an important part of attract and maintain good achievement.

According to Edens (2012) Student satisfaction is an important factor in the course of action, because studies shown that students who enjoy school tend to have high levels of satisfaction and work hard to graduate.

According to Oliver, Rust, and Varki (1997) Satisfaction is a state in which one can obtain pleasure by achieving an ideal or goal. Therefore, one of the important factors to stimulate students' learning motivation is to constantly improve foreign language learners' satisfaction with the learning results and teaching process. (Rashidi

& Moghadam, 2014; Wu, Marek, & yen, 2012). Wu, Tennyson, and Hsia (2010) and Asakereh and Dehghannezhad (2015) argue that foreign language learning environment has a significant impact on students' satisfaction.

Flammger (1991) defines satisfaction is the fulfillment of a need, a sense of joy, and a sense of sufficiency. Chen (1997) divided learning satisfaction into five aspects: teaching methods, course content, learning results, teacher-student interaction, and peer relationship.

Lin (2000) indicates that the reason why independent learning is more helpful than direct teaching is that it helps people understand their own needs. While strengthening learning, it also improves the satisfaction of learning. Therefore, the improvement of learning motivation means the improvement of learning satisfaction.

Abraugh (2000) believes that learning satisfaction covers inner feelings and attitudes toward the learning processes, as well as the satisfaction and realization of learning motivation to students' learning desire. Therefore, learning motivation is positively correlated with learning satisfaction. Harvey, Locke, and Morey (2002) believe that the development of learning satisfaction means that students like to participate in the activities of curriculum design.

2.2 TEACHING AND LEARNING CHINESE IN THAILAND

2.2.1 History

Sun (2016) describes that Thailand's existing preschool, primary, middle, high school, higher education began in 1913, after 1913, Thailand implemented education reform and attached great importance to investment in basic education. All children began to receive nine-year compulsory education. China and Thailand have had exchanges for more than 2,000 years, and over eight and a half million overseas Chinese have contributed to the development of Chinese language education.

1) The embryonic stage of Chinese education, it was recorded that during the western Han dynasty, China and Thailand had contacts. During the Qing dynasty, a large number of coastal residents immigrated to Thailand due to war and other reasons, and the number of Chinese people increased greatly, which promoted the emergence of Chinese education. During the great city dynasty, many Chinese began to teach their children Chinese.

2) Development stage of Chinese education, in the 20th century, Chinese education in Thailand developed initially. In 1908, sun yat-sen came to Thailand and founded several schools. Chinese in Thailand also invested in Chinese education, which became the beginning of Chinese education in Thailand, by 1920; there were more than 30 Chinese schools in Thailand.

3) The low tide of Chinese education, from 1933 to 1935, more than 80 Chinese schools was closed. In 1940, there were only two Chinese schools left in Thailand, and Chinese education was seriously hit.

4) Chinese education revival stage, in the late 1980s, the Thai government relaxed its education policy toward China, allowing Chinese to serve as principals and offer Chinese language courses. With the further development of china-Thailand relations in the 1990s, the Chinese education environment has become better and better, and Chinese education has entered a new stage.

2.2.2 Problems in learning Chinese

Lv (2017) focuses on one of the problems for Thai students learning Chinese: tone problems. Chinese are a tonal language, Tone is one of the phonetic units, and its proper use can distinguish word meanings. Thai is also a tonal language, and it has five tones. So the tone is not unfamiliar to Thai students. However, Chinese people's pitch range is relatively large, whereas Thailand's pitch range is relatively small. The

tone errors that Thai students typically make are tone one and tone four errors, where the first tone is not high enough, and the fourth tone too long.

Songsukrujiroad, Chen, and Kaewyod (2018) According to the data analysis in this study, the majority of students make the following six common mistakes in Chinese writing: 1) word selection, 2) word order, 3) punctuation, 4) incorrect Chinese character, 5) conjunctions, and 6) classification.

For Thai students, the hardest part of learning Chinese is writing Chinese characters. The Chinese character evolved from the pictographic, while the Thai language is a phonogram. Although there are currently Three thousand five hundred commonly used Chinese characters, there is not a single fixed sequence pattern and cut-off line for the development of Chinese characters. This particularity causes learners to face barriers in recognition, reading, and writing, leading to some students writing wrong characters.

Sun (2016) points out that the problems of Chinese education in Thailand mainly focus on two aspects. First of all, the local Chinese teachers in Thailand are not good at Chinese, while the teachers from China are not good at Thai language cannot meet the needs of teaching, and most of the teachers have just graduated and lack teaching experience. Secondly, the Chinese teaching materials in Thailand are not unified and lack coherence which seriously affect the development of Chinese teaching.

2.3 CHINESE CHARACTERS

2.3.1 The importance of Chinese characters

Jing (2014) shows that the difficulty of Chinese character teaching has always been a consensus in teaching Chinese as a foreign language. But, the foremost reason for this is short understanding of the importance of Chinese character teaching.

Chinese characters are pictograph, which are different from other languages. Chinese characters are an integral part of Chinese, Chinese character can express a lively figure and information. For foreign students, learning Chinese should focus on basic learning, especially of the Chinese characters.

Therefore, guiding foreign students to understand the rules of Chinese character, and find the fun of learning is helpful to improve students' Chinese ability and remove the psychological barrier of "difficult to learn Chinese" at short notice.

In linguistics, many pupils believe that Chinese characters play a crucial part in this language. Lv (1980) in the "yu wen chang tan" (语文常谈) presents that in Indo-European languages, it is apparent that "words" as the basic grammatical units.

2.3.2 Nature of written characters

Swihart (2004) indicates the written form of Chinese is non-phonetic and character-based. One character usually contains three meanings: 1) sound, the acoustic reality of the meaning; 2) meaning, concrete experiences with the world; symbol, a character who contains both sound and meaning.

Hence, when learning Chinese characters, we should learn its three aspects. First, we should learn its characters and the meaning of its expression. Second, we should learn its pinyin and pronunciation. (see example 1).

Example1

Graphic character: 月

Pinyin pronunciation: yu è

Meaning: moon / months

Hoosain (1991) highlights that in the Chinese writing system, characters are known as the smallest perceptive unit in Chinese orthography. Stroke and component, there are two basic orthographic structures that make up a character. Stroke is an important basis for the formation of Chinese characters. It contains a total of 28 different types of strokes, and each character has a different stroke. For instance, there are four strokes in the radical 夫 (husband), six strokes in the radical 休 (rest); 11 strokes in the radical 眼 (eye).


A component is the basic orthographic units of Chinese characters. Just like the letters of the alphabet and one or more components are grouped to composition characters. Depending on their functions in a character, there are two different components depending. The first is the semantic element which represents the meaning of words. The second is the phonetic component which represents the pronunciation of a word. Compared with the phonetic components, the number of semantic components is less, and this part we also called the radical or Bu Shou because they are the indexing system of the Chinese dictionary (Wei, 1953). That is why each character must have one and only one radical. A few radicals are not only appearing repeatedly in formation of Chinese characters, but also exist independently as Chinese characters.

2.3.3 Classification of Chinese characters

According to (Li & Kang, 1993) Chinese characters have been divided into 6 categories: 1) pictograph (象形) 2) compound ideographs (会意), 3) ideographs (指事), 4) phono-semantic compounds (形声), 5) derivative characters (转借), and 6) loan characters (假借).

The first type represents the basic principles of the formation of Chinese character, and it come from pictures.

The first two types of characters, pictograph and compound ideographs refer to a literal abstract representation of an actual object or an abstract representation of a concept. Specifically, pictograph depicts a physical object. They are only containing a radical so it's also called simple characters. In addition, when they are combined with other components, they can form new compound characters, called ideographs and semantic-phonetic compounds.

For example, the character 马 mǎ (horse) was initial pictograph  it shows the specific features of this animal, such as hairy tail and long face. Similarly, compound ideographs represent abstract concept, such as 上 shàng (up).

An ideograph composition of two or more pictographic and using the meanings of their constituent parts to synthesize new meaning.

Take the character 休 休 (rest) as an example, the left component 亻 亻 express a people and the right component 木 木 express a tree. The two parts are combined to show a person resting near a tree.

The last type of characters, as the name suggest, is a semantic-phonetic compounds that has a pictographic component that represents a meaning category and another for the entire character.

Take the semantic-phonetic compound 沐 (wash) as an example. The right component 木 signals the sound and the left component 氵 means 'water'. According to statistics about eighty-one percent of the seven thousand Chinese characters are commonly used fall into the semantic-phonetic category (Li & Kang, 1993).

2.3.4 Pedagogical issues in teaching and learning Chinese character

Zhan and Cheng (2014) the existing research has revealed two main problems in the Teaching of Chinese characters. These problems lead to difficulties in learning Chinese characters.

The first problem is the Chinese phonetic system of pinyin and Chinese characters when teaching dilemma of sequence order when introducing (Chen, 2005).

The second problem is the lack of attention to the writing of Chinese characters in the primary stage of Chinese learning and makes a critical analysis of the teaching methods.

Lam (2011) pointed out that Chinese classes are different from each other in many ways; they tend to adopt a character-centered and meaning-centered approach. Both approaches emphasize character recognition and understanding, but exclude how to write characters from the learning process.

Obviously, both character-centered and meaning-centered methods can improve learning ability of Chinese characters in different way. To make better use of both approaches, some teachers have adopted a hybrid approach called "texts of a family character" (字族文), which uses meaningful texts with a focus on a family of characters with certain shared attributes.

The meaning-centered teaching emphasizes teaching in a meaningful context to help learners expend their reading skills. But, the shortcoming of the meaning-centered teaching methods is that learners cannot fully understand Chinese character. Therefore, they are easily confused by words with the same pronunciation (Zhan & Cheng, 2014).

2.4 PICTOGRAPH



2.4.1 The definition of pictograph

Cesario, Comito, and Talia (2013) shows that Pictograph is a stylized visual painting used to convey analogical or visual information, directly express an object or express an idea. Pictographic have many functions. When information needs to be processed quickly, pictograph can be used instead of written indications to express supervision, coercion, warning and prohibition of information.

Xu (1963), A famous scholar of classics and philology in the eastern Han dynasty pointed out that pictograph refer to Pictograph creation is not just a simple painting, it is through observation, according to the natural objects, the curved lines into simple words, vividly represents the meaning of things. For example, the (sun) 日 and the (mountain) 山 are pictograph (see example2). In a nutshell, pictograph is the way things look, The Chinese characters we use today are derived from pictographic characters, which are among the oldest.

Example2

Sun:  →  → 日

Mountain:  →  → 山

Lu (1979) mentioned in "Men Wai Za Tan" (门外杂谈) that the basis of Chinese characters is pictographic characters. Pictograph is based on the observation of life, absorbing the appearance characteristics of things, and then depicting, Pictographic characters are the root of Chinese characters, and learning Chinese characters should start from pictographic characters, which is the foundation of foreign teaching.

Tang (1981) mentioned in "Zhong Guo Wen Zi Xue" (中国文字学) that the generation of characters is quite natural. Tens of thousands of years ago, human beings have been able to draw pictures, these paintings are mostly animals and human figures, and this is the forerunner of writing.

2.4.2 The characteristics of pictograph

Qin (2016) sums up three characteristics of pictograph in his article.

1) Simple structure

Pictographic originated from real objects that people saw in their lives. It used simple lines to describe the shapes of, and connected fonts with concrete ones through vision and showed their meanings. Using simple Pictographic teaching to help students understand Chinese characters, reduce resists students. Pictographic characters are used in the teaching and learning of Chinese characters to help learning, which is easier for students to write and identify, and helpful for associative memory.

In addition, the cognitive psychology have shown that Chinese characters with less stick figure structure have a higher recognition rate, and the shorter and easier it is for students to recognize and memorize them. Therefore, by making full use of the advantages of simple pictographic characters, we can solve the difficult problems in learning and teaching Chinese character, and make Chinese learning easier and improve performance.

2) Clear meaning expression

The meaning of pictograph is clear because they come from pictures and have many likenesses with real objects.

Pictograph has strong ideographic ability, for example, (Farmland) 田 田 the lines were shaped like fields. (Water) 水 𠂔 Like water from a hill, 𠂔 Like the jagged walls of a mountain, 𠂔 Like water splashing down from the mountains hill. (People) 人 𠂔 𠂔 Like a people working in a field.

Pictograph is symbolic ideographs. From the angle of form, the shape of Chinese characters has the characteristics similar to the real. Therefore, using pictograph in teaching cannot only improve students' learning efficiency and deepen their memory, but also enable students to learn how to imply the meaning of Chinese characters and lessen their writing mistakes.

To sum up, pictograph has the role of direct expressing meaning, On the one hand, it can make students easily understand and relieve teachers' teaching load. On the other hand, it can also make the boring learning of Chinese characters have specific object comparison and graphic reference to increase the interest and effectiveness of learning.

3) Characters-building ability

Although the number of pictographic characters is only more than 200, they are all single words and cannot be split apart. So, based on pictographic character, addition radical and structural part can form a compound character. As the basic symbol of Chinese characters, as long as students master pictographic characters, they can master more Chinese characters and improve learning efficiency.

The creation of characters according to pictograph:

Simple ideograms (指事字) it means to add a symbol to the pictograph.

For example: (Knife) 刀 → (Knife-edge) 刃.

Compound ideograms (会意字) it means composed of two or more pictograph.

For example: (Wood) 木 → (Forest) 林

Phono-semantic compounds (形声字) is divided into two parts: One is a semantic indicator, which is usually simplified graphically to represent the general meaning of the compound character, another is a phonetic, and whose pronunciation points the pronunciation of the compound character.

For example: (Flowers) "艹" means plant 化 means pronunciation.

2.4.3 The classification of pictograph

Many ancient philologists have different classification of pictograph, for example, Tang (1981) divided pictograph into three categories. One is the form of the person, Second, all living and non-living things in nature. The third is the product of human intelligence.

Zheng (1147) divided pictograph into ten kinds from different angles. At present, many scholars have tried to classify pictograph, although the classification standards are different, but there is little difference.

According to Qin (2016), In 100 AD, Xu (1963) first described pictograph in his dictionary "Shuo Wen Jie Zi" (说文解字). And divide it into five types.

1) About nature: (Sun) 日 (Moon) 月 (Cloud) 云 (Water) 水 (Rain) 雨 (Field) 田 (Mountain) 山 (Soil) 土, etc.

2) About the human body: (People) 人 (Big) 大 (Mouth) 口 (Heart) 心 (Eyebrow) 眉 (Female) 女 (Long) 长, etc.

3) About animal: (Horse) 马 (Cow) 牛 (Sheep) 羊 (Fish) 鱼 (Turtle) 龟 (Bird) 鸟 (Mouse) 鼠 (Elephant) 象, etc.

4) About tool: (Net) 网 (Umbrella) 伞 (Knife) 刀 (Car) 车 (Boat) 舟 (Kettle) 壶 (Spoon) 勺, etc.

5) About plant: (Wood) 木 (Bamboo) 竹 (Fruit) 果 (Rice) 米 (Cereal crops), etc.

2.5 PICTOGRAPH IN TEACHING

2.5.1 Teaching method

Chinese-Origin Teaching (字源识字)

According to Chen (2013) Chinese-Origin Teaching means tracing the source and exploring the origin of things. According to the formation of pictographic characters, we can adopt the method of Chinese-Origin Teaching, which focuses on the exploration of the initial shape and evolution of Chinese characters, in order to enable students to grasp the source of Chinese characters and have a preliminary impression of Chinese characters.

The earliest writing in world history originated from pictures, among which Chinese, Egyptian and ancient Greek are all Pictographic. But until now, only Chinese characters have survived evolution. Character-Origin teaching method is a teaching method that USES word source and change of Chinese characters to teach foreign Chinese characters. Its evolution process is regarded as a supplementary content in

Chinese character teaching. The Character-Origin teaching is still the modern Chinese characters teaching for the learners of Chinese as a second language.

The Chinese-Origin Teaching is mainly applied to single character, including pictographic character and Simple ideograms.

Character-Origin Teaching includes three aspects:

① Show the Origin. It is to show the initial form of Chinese characters to students, so that students can know more about the most specific image of Chinese characters.

② Show the evolution of Pictograph. Until now, Chinese characters have gone through the evolution from oracle bone inscriptions to inscriptions, in this process; Chinese character forms have become increasingly abstract. To show the evolution of abstraction of Chinese characters to the lower grade students, establish the relationship between glyph and concrete, this process also helps them to transition from concrete image thinking to abstract thinking.

③ Comb the relation between form and meaning. Font carries the meaning of Chinese characters. The teacher should not only show the evolution process of Chinese characters to students, but also explain the relationship between the meanings of Chinese characters, so that learners can roughly understand how it develops and changes, so that students can recognize and remember Chinese characters in line with understanding the meaning of Chinese characters.

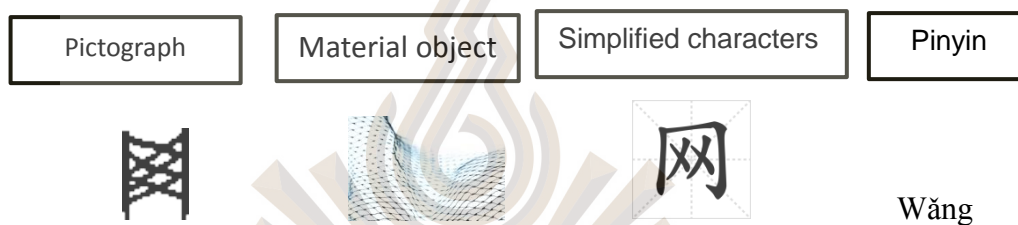
2.5.2 Application of teaching method

Qin (2016) points out that Pictographic are derived from pictures, and the form is similar to the picture, so that make learners can easily guess the meaning of

pictographic. Therefore, teachers can use pictures or flashcards to introduce pictograph in class to help students better understand the relationship between Chinese characters form and sound through teaching AIDS.

According to the Chinese Origin Teaching put forward some specific teaching methods.

① Pictures and Cards Method



Take the word 网 "net" as an example, when teacher teaching the word, they can follow this steps:

Step 1 using the word card to show the pictographic characters and let students to guess what the pictographic symbol looks like.

Step2 Showing the students pictures of fishing nets. Experience the evolution process from the material object picture to pictographic characters, and have a preliminary understanding of pictographic characters.

Step3 Showing the modern Chinese character "net" and guide the students to compare the similarity between pictographic characters and Simplified Chinese characters.

Step4 Teaches pinyin

① Body Language Expression Method

Teachers use word CARDS to display pictographic and simplified Chinese characters, next, ask the students to compare the two kinds of Chinese characters and then have a competition on the stage to imitate the characters. At the same time, guide the students to guess the correct Chinese characters.

Take the word 大 "big" as an example. When teacher teaching the word, they can ask the students to open both hands and feet.

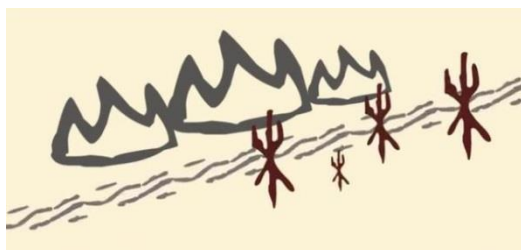
(Big) 大 → 

This method is conducive to active classroom atmosphere and improves the enthusiasm of students, so that the process of literacy becomes simple and vivid. Body language can also help students remember the form, Increase interest and decrease the difficulty of study, and achieve teaching goals.

② Combination Method

Because pictographic characters originate from pictures, teachers can combine students' interest in painting with the learning of Chinese characters to inspire students to turn Chinese characters into pictures.

For example, when teaching the word (mountain) 山、 (forest) 林、 (water) 水, use these old words to form a picture. Let the students guess and recognize the characters. Finally, ask the students to imitate drawing.



(Mountain) 山 →  (Forest) 林 →  (Water) 水 → 

③ Video and Multimedia Method

Since primary school students' attention cannot be focused continuously, multimedia assisted teaching is adopted to make the process of literacy more interesting. Many teachers use multimedia pictographic teaching to stimulate students' senses, attract students' attention, and let students remember the words in a short time.

Teachers should grasp the characteristics of pictograph, for example when teaching the word (rain) 雨, Use multimedia to show the evolution of glyphs. First, play the rain graphics, second, show oracle bone inscriptions, third, show modern Chinese characters.



2.6 THE ROLE OF PICTOGRAPHIC CHARACTERS

Qin (2016) pointed out the two functions of pictographic teaching, namely the role of teachers and students.

2.6.1 The role of pictograph in teaching

1) Reducing the difficulty of learning Chinese characters

First of all, it is difficult for Thai students to learn Chinese because of the huge difference between Chinese and Thai. Secondly, the structure of Chinese characters is complex, and there are many homophones and polyphonic characters, which increase the difficulty of learning Chinese characters. There are only over 200 pictograph in common modern Chinese characters, but they are simple in structure and easy to understand. It is also the basis of other Chinese characters. Therefore, teachers can teach pictographic characters first, and then use pictographic characters to learn new characters to reduce the difficulty and pressure of students' learning.

In the teaching process, teachers should teach the evolution process of Chinese characters to students according to the real situation of students, and try to use word CARDS, multimedia, video and other means to teach, so that students can remember the shape and pronunciation of Chinese characters in a short time. In the teaching should choose intuitive, simple hieroglyphics, such as (sun) 日, (month) 月 and (water) 水. When teaching, teachers first show the real pictures, and then show the outline diagram, to help students understand and remember the font, word meaning, and finally show the modern Chinese characters. Let the students understand the evolution process from picture to pictograph.

2) Improving the efficiency of Chinese character teaching

Most pictographic characters are single characters, which are common in daily life. They are simple in structure and are the important foundation of all Chinese characters. Therefore, in order to improve the efficiency of Chinese character teaching, we can start to teach Chinese characters from pictographic characters. Let students develop interest in learning at the beginning of learning.

Because the quality of early learning will affect students' later learning of Chinese, it is necessary to avoid boring teaching. Through vivid explanation, students can use pictograph accurately, improve their interest in learning Chinese, and make them understand Chinese characters easily and happily.

For example, the word female 女 depicts a woman kneeling on the ground with her hands crossed like a person on his knees, like crossed hands.

Moreover, the word "female" is also a common radical of Chinese characters, and its meaning is all related to women. For example, (grandma) 奶奶, (mom) 妈妈 and (sister) 姐姐 are all composed of female (女) characters, all representing females.

2.6.2 The role of pictograph in students' learning

1) Stimulating students' interest in learning

Interest is the best teacher in all work and the motivation for students to learn (Qin, 2016). It is very important to cultivate students' interest, which can make students in a relaxed and happy atmosphere and promote the efficiency of learning.

Traditional learning of Chinese characters will make students bored, therefore, we can take advantage of the rich imagination of young students to integrate pictographic characters and word CARDS into the teaching, so that students can experience the fun of learning Chinese characters. At the same time vivid images, bright colors, and pleasant sounds can significantly stimulate students' senses, attract students' attention, and make boring learning become enjoyable (Qin, 2016). At the same time, it also strengthens the imagination of learners and makes them feel the fun of learning Chinese characters.

2) Laying a foundation for the learning of Chinese characters

Pictograph comes from pictures, so their number is limited. But there are many things that need to be recorded and expressed in daily life. Pictograph alone could not meet the needs of daily life, so our ancestors combined Pictograph to form new Chinese characters and express new meanings.

Therefore, on the basis of pictographic characters gradually developed a compound character (会意), ideographs (指事) and so on. At present, Pictograph account for a high proportion of the 3,500 commonly used Chinese characters. After learning Pictograph, students can use Pictograph to further learn more complex Chinese characters and reduce the difficulty of learning Chinese characters.

3) Training students' thinking ability in Chinese

Pictograph has become an abstract symbol in the long process of its development, but it still retains some painting features. Ancient people used the simplest way to summarize the track and development of people's thinking.

Pictograph imitates the salient features of things, making the relationship between the font and the meaning of the word close. The similarity between pictographic characters and objects in real life is used to cultivate students' imagination. On the one hand, it is beneficial for students to establish the connection between the sound and meaning of Chinese characters. On the other hand, it also deepens students' understanding of words and develops their imagination.

2.7 RELATED LEARNING THEORIES

2.7.1 Humanism learning theory

"Humanism is a philosophy approach that believes learning is viewed as a personal act to fulfil one's potential" (Maslow, 1943). The main supporters of the learning theory are Abraham Maslow, Carl Rogers, and Malcolm Knowles.

The main idea of this theory is that students are centered and learning is individualized. Teachers are only promoters in the learning process, and students are the real masters (Parsons, 2013).

The Humanist Learning Theory aims at solving the problems of learner's personal development. (Merriam, Caffarella, & Baumgartner, 2007, p. 281) Growth potential means that teachers should strive to create a good learning environment (a good psychological environment) for students, and develop and build confidence in the process of teaching students, allowing them to learn at their own pace and direction. In addition, experiential learning is also an important part of this learning theory, which requires students to use their own experience to guide their current learning.

In teaching Chinese as a foreign language, teachers should focus on students. According to the thinking characteristics of primary school students, use CARDS, hieroglyphs and students' experience in daily life to better understand the development process and evolution of Chinese characters, pay attention to visual stimulation, and improve learning interest, so that students can get more and richer information, reduce the burden of learning, and improve the literacy rate.

In a word, humanistic teaching theory provides theoretical support for the research of this paper. In teaching Chinese as a foreign language, teachers should firmly grasp the student-centered principle, design courses in line with students' needs, and arrange teaching activities reasonably.

2.7.2 Monitoring theory

Monitoring theory says Language acquisition does not need to use a lot of grammar rules, and repeated training. Acquisition requires meaningful interactions in the target language - natural communication - in which speakers care less about the form of the speech than about the message they convey. An important component of

language acquisition is "comprehensible input" Therefore, the best way to do this is to provide "understandable input" in a good environment, including information that students really want to hear (Schütz, 1998).

The Monitoring theory has five main hypotheses, among which "input hypothesis" and "Affective Filter hypothesis" provide theoretical research for this study.

On the one hand, Krashen (1988) believes that learners can only improve their foreign language proficiency through "input hypothesis" and "understandable input" is very important in the learning process. Therefore, In teaching Chinese as a foreign language, the traditional Chinese character teaching method can only get relatively low "understandable input", while the method of displaying the source of Chinese characters by using Chinese character CARDS can help students improve their "understandable input", So as to further improve the foreign language performance.

On the other hand, one of the main ideas of the "Affective Filter hypothesis" was: The more "understandable input" the faster learners build confidence in learning. Therefore, the teaching method of using word CARDS to show the source of words cannot only increase the students' "understandable input", but also help students build up their learning confidence, which was conducive to the later learning of Chinese.

2.7.3 Dual coding theory

Dual coding theory originated more than 2500 years and has its roots in the practical use of imagery as a memory aid (Yates, 1966).

During the Renaissance, due to the influence of visual mnemonics and formal logic, the emphasis of language was changed, and words and things were brought into a "new logic", in which the purpose of language was to reflect the structure of the world. The emphasis on memory evolved into a wider use of images to speed up the

gain knowledge. Language has always been involved, but when images begin to be systematically externalized into pictures, language becomes an explicit educational partner (Rossi, 2002).

Paivio (2006) shows that dual coding theory and its educational significance is consistent with the historical emphasis on the concretization of knowledge through images.

According to an important principle of dual coding theory, using both language and vision to present information can enhance memory. Knowledge can be explained graphically, which helps with the understanding of language. (Paivio, 2006) Therefore, the teaching method of using pictures to show the evolution process of Chinese characters in this study was conducive to enhancing students' ability to remember Chinese characters, attracting students' attention and helping foreign students to understand Chinese characters as much as possible.

2.8 RELATED RESEARCH AND STUDIES

In recent years, there had been a lot of studies on Chinese character teaching in TCSL. Many researchers had found the advantages in using Pictograph to learn Chinese characters. Therefore, this part would summarize the contents, methods and results of these studies.

Low et al. (2008) conducted the research on "Interactive Chinese Character Learning System through Pictograph Evolution." Through Interactive Chinese Character Learning System (ICCLS) use character and object matching with skeletonization to relate Chinese character with pictograph evolution. Finally, it is found that use pictograph is conducive to improving the efficiency of Chinese character learning.

Lam (2011) study on "A Critical Analysis of the Various Ways of Teaching Chinese Characters" The authors tested 192 randomly selected second-year students from four schools, and used the method of learning Chinese characters by rationales in the teaching of Chinese characters in these schools. Let students understand why Chinese characters were created in the first place and why they are in their current form. Studies have shown that hieroglyphs are particularly useful in helping learners remember how to write Chinese characters accurately.

Liu (2011) studied the topic of "Chinese Characters Teaching On pictographic Character." This article focuses on pictograph characters teaching method in the teaching of Chinese character for foreign students. Through the analysis of the forms and structure theories of Chinese characters find out the problem of literacy teaching. At the same time, it finds out the coincident point between Chinese character cognition law and foreign students' developing cognition law. Then through the teaching of pictographic characters, enables foreign students to master the characteristics and rules of Chinese characters, and improves students' learning interest, and grasps the writing methods of Chinese characters.

Li (2013) conducted the research on "Pictograph Teaching in Chinese Characters Teaching to Foreigners." This article is aimed at analyzing the existing problems in pictograph teaching and student' learning, teaching practice and the present situation of the teaching environment and the foreign student' cognitive level of pictograph, and then put forward teaching strategy and improve of pictograph according to the characteristics of the pictograph and types, Let foreign students have a deeper understanding of pictograph, meanwhile, it also improves their learning enthusiasm and enriches their understanding of Chinese culture.

Shu (2015) conducted the research on "The importance of teaching Chinese character formation elements to Thailand students" Through the comparison of traditional Chinese character teaching methods and pictographic teaching methods, this paper finds that using pictographic elements of Chinese characters to supplement

Chinese teaching is of great help to Thai students and can improve their efficiency in learning Chinese. Then 58 Chinese characters combined with pictographic factors in teaching function, and on this basis, put forward some pictographic factors teaching methods. Finally, the author through the first time to learn Chinese students learning the situation of comparison proved that the use of Chinese pictographic elements teaching is very effective.

Zhao (2016) researched on "The Investigation of Word Teaching Method in Teaching of Literacy Primary grades" through the analysis of the questionnaire and classroom observation, this paper finds that the word based literacy method achieves the purpose of literacy through pictographic teaching. At the same time, this method also conforms to the thinking characteristics and cognitive rules of primary school students, which is easy to be accepted by students and improves the efficiency of literacy.

He (2017) studied on "Teaching Design of Elementary Chinese Character in Thailand Case Study of a Set of Pictographic Characters In grade HSK Chinese Character." This research was conducted in Huaykoengpittayakarn School in Thailand, and students in grade 2 of junior middle school were selected as the research objects. The content of the study was 9 hieroglyphs selected from the textbook, and then presents the source and development process of 9 pictographs vividly through multimedia. Finally, it is proved that the use of pictographic teaching reduces the difficulty of Chinese character learning and stimulates students' interest in learning.

In a word, the recent studies had shown that using pictographic to help foreign students learn Chinese characters was an effective learning method, which conforms to students' cognitive rules and was conducive to improving students' learning interest and efficiency. At the same time, students had deepened their understanding of Chinese culture in the process of learning pictograph.

CHAPTER 3

RESEARCH METHODOLOGY

As the title indicates, this chapter includes the research methods of the paper. In this section the author introduces the research design, research objects; research samples, research tools, data collection and analysis in more detail, and prove the effectiveness of the research tools.

3.1 RESEARCH DESIGN

Research methodology is a specific procedures or techniques used to select, process, identify, and analyze information about a topic. (Stoothoff, 2019) The research methods are: (a) qualitative, (b) quantitative, and (c) mixed methods.

Qualitative research is a method for to explore and the meaning give to social or human problems by individuals or groups. Quantitative research is a method of testing objective theories by studying the relationship between variables.

Mixed methods research is a way to inquiry involving collecting quantitative data and qualitative data and integrating of both forms of data. The core assumption of the mixed methods is that the research problem can be understood more comprehensively (Creswell, 2014).

The mixed method was used in this study. Quantitative data were including pre-test and post-test. Qualitative data were including classroom observation and semi-structured interview. The specific steps were shown in Figure below.

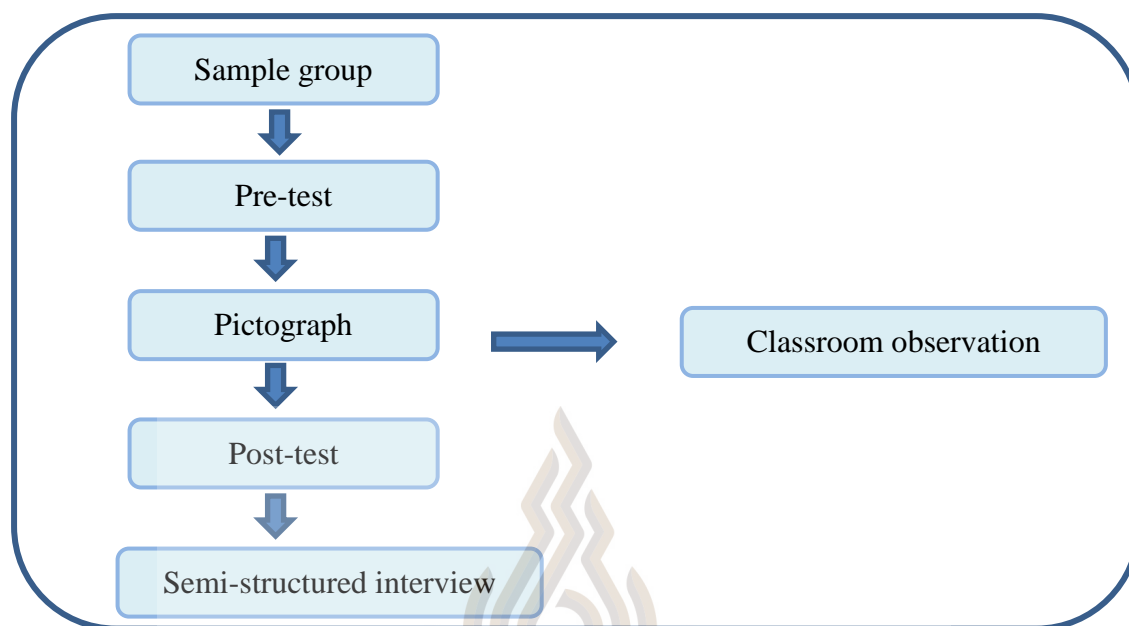


Figure 3.1 Illustration of Research Design

3.2 POPULATION AND SAMPLE OF THE STUDY

3.2.1 Population

The population of the study was grade four students at a private school in Ayutthaya, Thailand. Grade Four was divided into three classes with a total of 91 students, students ages range from of 9-11 years old, with mixed genders and mixed abilities.

3.2.2 Sample

The purposive sampling involved 22 students (9 Male and 13 Female) grade four Thai students for the study. These students were within the age range of 9-11 years old with mixed abilities.

These students had studied Chinese for more than three years and had mastered basic listening, speaking, reading and writing skills. All Chinese classes in the school

were taught by teachers of Chinese nationality. All the students were born in Thailand and speak; Thai as their mother tongue. Several of the students were of Chinese descent and had Chinese language skills.

Table 3.1 The demographic information of the research participants

Gender	Male	Female	Total
Number	9	13	22
Percentage	40.9%	59.1%	100%
Age group	9-11 Years Old		

3.3 RESEARCH INSTRUMENTS

3.3.1 Instructional Instrument

3.3.1.1 Lesson plans

Researcher developed 3 lesson plans, 50 minutes in each class, in total of 300 minutes (1 Lesson Plan = 2 Sessions), incorporating pictograph to be used in the class. The researcher taught 6 sessions (1 session per week) in duration of one and half months.

Table 3.2 List of topics to teach in 6 weeks.

Time	Topics	Learning objective	Hour
Week 1	About nature	1. Know the pronunciation and meaning. 2. Know how to write. 月(moon) 日(sun) 田(field) 火(fire)	50 minutes per class

Table 3.2 List of topics to teach in 6 weeks (Cont.)

Time	Topics	Learning objective	Hour
Week 2	About animal	1. Know the pronunciation and meaning. 2. Know how to write. 马(horse) 鸟(bird) 网(net) 飞(fly)	50 minutes per class
Week 3	About body	1. Know the pronunciation and meaning. 2. Know how to write. 人 (people) 目 (eye) 口 (mouth) 女 (woman)	50 minutes per class

3.3.2 Quantitative Data Collection Instrument

3.3.2.1 Achievement tests

In this study, the researcher used the achievement test as the main tool. The test was divided into two parts: pre-test and post-test with the same number of questions and the same standard. The test consisted of 24 questions; one point for each question. The test included 12 Chinese characters, which was selected from the "experience Chinese 4" textbook (compilation of the international Centre for language research and development, published in 2008) the P- 4 student Chinese textbooks. The scope of content was school curriculum including Lesson 1 to Lesson 8.

3.3.3 Qualitative Data Collection Instruments

3.3.3.1 Classroom Observation (CO) Form

Classroom observation is a method of directly observing teaching practice (Hora, 2013). "Classroom observation is widely recognized as a means to improve teachers' teaching quality, which means that teachers can better reflect on themselves and improve their teaching quality through classroom observation" (Lan, 2001).

In this study, the researcher used pictograph to help grader four learn Chinese characters and the classroom observation was conducted in three sessions (1th 4th 6th), the quantitative data collected during classroom observation served as an important reference for the effectiveness of pictograph teaching.

3.3.3.2 Semi-structured interview

Semi-structured interview mean that Semi-structured interviews mean that instead of strictly following a formal list of questions, interviewers can ask more open-ended questions that allow discussion with the interviewee, and it's not just a question and answer format (Doyle, 2017).

In this study, Semi-structured interview were applied to collect qualitative data regarding the student satisfaction. The researcher interviewed 22 grade four students, covering 8 questions.

3.4 VALIDITY AND RELIABILITY OF RESEARCH INSTRUMENTS

3.4.1 Content Validity

Validity is the ability of an instrument to measure what it is designed to measure (Shahril, 2015). In this study, Research instruments (achievement test, Classroom observation, semi-structured interview questions) examined by three experts, including two Chinese language teachers (1 language teaching and research officer and 1 senior teacher) and one from a university in Thailand.

The Item-Objective Congruence (IOC) score range from -1 to +1 and was used to evaluate the items of the research instruments.

+ 1 Congruent (The item is in line with specific objectives)

0 Questionable (Not sure if the project meets the specific objectives)

-1 Incongruent (The project does not meet the specific objectives)

In this IOC evaluation, if the value of test item greater than or equal to 0.67, the research instruments have validity. If the value of test is less than 0.67, the research instruments needs to be modified.

Table 3.3 Item-Objective Congruence (IOC) result

Sl. No	Attributes	Rating by Experts			IOC Average	Remarks
		Expert 1	Expert 2	Expert3		
1	Lesson plan	+1	+1	+1	+1	Accepted
2	Achievement test	+1	+1	+1	+1	Accepted
3	Classroom Observation	+1	+1	+1	+1	Accepted
4	Semi-structured interview	+1	+1	+1	+1	Accepted
Average					1	Accepted

As shown in table 3.3 the scores for Item-Objective Congruence (IOC) was 1 which meant that the research instruments were validity.

3.4.2 Reliability text: KR-20

Reliability means consistency and stability, predictability and accuracy of research tools. The kr20 score is between 0 and 1, and the closer the score is to 1, the more reliable the test is. Generally speaking, a score above 0.7 is usually considered reasonable. (Stephanie, 2016).

In this paper, Kuder-Richardson Formula 20 (kr-20) was used in this study, to test the reliability of achievement tests. In addition, the reliability test was conducted in two classes of grade 4.

Table 3.4 Kuder–Richardson Formula 20 Test result

Reliability Statistics

Cronbach's Alpha	N of Items
.740	12

Kuder–Richardson Formula 20 (KR-20) was used to test the reliability of achievement tests. A total of 50 fourth graders took the test, which included 12 questions. As shown in table 3.4 the scores for kr-20 was 0.740 which means that the achievement test was considered reasonable.

3.5 DATA COLLECTION

Data collection occurred in three phases.

Phase 1: Asking for permission

In this study, first, the researcher was approved by the Rangsit university research and development center. Secondly, before data collection started, the researcher received a letter of approval from the principal of the research school and the head of the foreign languages department. Lastly, because the study participants were minors, the researcher received a signed consent forms from the students' parents or guardians before the study began, to protect the privacy of the study subjects.

Phase 2: Testing and Classroom observations

First, the researcher gave a pre-test to 22 fourth-graders. Then, researcher collected classroom observations during the one-and-a-half month course. Finally, researcher conducted post-test.

Phase 3: Interviewing

The researcher interviewed every student, and then collected the data for analysis and interpretation.

3.6 DATA ANALYSIS

3.6.1 Quantitative Data Analysis

The quantitative data of this paper were from pre-test and post-test and the data included the comparison of mean, standard deviation and Wilcoxon signed-rank test.

3.6.2 Qualitative Data Analysis

Qualitative data can be observed by observation and recording and this type of data is non-numeric in nature. It was collected through observation and face-to-face interview (Surendran, 2019).

Content analysis: It is used to analyze recorded texts information, media, even physical items, and is also one of the most commonly used methods to analyze qualitative data (Surendran, 2019).

In this study, the Qualitative data were mainly collected from Classroom Observation (CO) Form and Semi-structured interview. The researcher used content analysis to understand students' views on the inclusion of pictographic teaching in Chinese character learning.



CHAPTER 4

DATA ANALYSIS

This chapter describes the steps of data analysis. Quantitative data and qualitative data were analyzed by a computer program, and the necessary Tables and Figures were presented to demonstrate the final results and findings. The data analysis was divided into three parts:

- 1) Analysis of Students' Learning Achievement test.
- 2) Analysis of Semi-structured Interview.
- 3) Analysis of Classroom Observation Form.

4.1 QUANTITATIVE DATA ANALYSIS

4.1.1 Data Analysis of Students' Learning Achievement test

In this paper, the pre-test and post-test questions were the same, and the data analysis results from the achievement test answered the first research question on this paper –"would the use of pictograph enhance grade four Thai student Chinese characters learning achievement?"

4.1.1.1 Individual student' pre-test and post-test analysis and results

Table 4.1 Individual student' pre-test and post-test scores

Student Number	Pre-test Scores	Post-test Scores	Improvement of Scores
NO.1	7	12	+5
NO.2	8	20	+12
NO.3	6	18	+12
NO.4	7	22	+15
NO.5	2	14	+12
NO.6	3	14	+11
NO.7	13	20	+7
NO.8	9	17	+8
NO.9	14	20	+6
NO.10	5	22	+17
NO.11	6	18	+12
NO.12	14	19	+5
NO.13	3	10	+7
NO.14	9	20	+11
NO.15	10	19	+9
NO.16	7	12	+5
NO.17	0	3	+3
NO.18	10	19	+9
NO.19	8	14	+6
NO.20	4	17	+13
NO.21	5	15	+10
NO.22	7	13	+6

Pre-test was conducted before the treatment and post-test was conducted after the treatment. The test consists of 24 questions, with a total score of 24 points. As the table 4.1 shows the test results of 22 students and all students improved their scores of different degrees, with scores ranging from 3-17. In the pre-test the highest score of the students was 14 and the lowest score was 0, in the post-test the highest score of the

students was 22 with the lowest score of 3. Among them, student with number10 had the biggest improvement of 17 points.

4.1.1.2 Pre-test and post-test Comparisons

Table 4.2 compares the mean and standard deviation of the pre-test and post-test.

Table 4.2 the comparisons of the Pre-test and post-test

Pre-test		Post-test		Mean Difference
Mean	SD	Mean	SD	
7.14	3.694	16.27	4.527	16.27-7.14=9.13

As shown in Table 4.2. In the pre-test, the mean score was 7.14 and the standard deviation was 3.694. In the post-test, the mean score was 16.27 and the standard deviation was 4.527. The mean difference was 9.13; in terms of mean difference students' scores were improved. In terms of standard deviation, the dispersion of students' scores was a greater post-test than pre-test.

4.1.2 Analysis of pre-test and post-test by Wilcoxon signed-rank Test

Table 4.3 Wilcoxon signed-rank Test result

Ranks

	N	Mean Ranks	Sun of Ranks
Posttest-pretest Negative Ranks	0 ^a	.00	.00
Positive Ranks	22 ^b	11.50	253.00
Ties	0 ^c		
Total	22		

Table 4.3 Wilcoxon signed-rank Test result (Cont.)

Test Statistics

	Posttest-pretest
Z	- 4.113 ^b
Asymp.Sig (2-tailed)	.000

Wilcoxon's symbolic rank test was used to analyze the students' pre-test and post-test scores, and the mean value, standard deviation (SD), z-value and significance were compared. From the above table, it can be seen that the average score of pre-test and post-test was 7.14 and 16.27. Respectively, and the significance value is 0.000, lower than 0.05, which is statistically significant.

Comparison of pre-test and post-test Mean

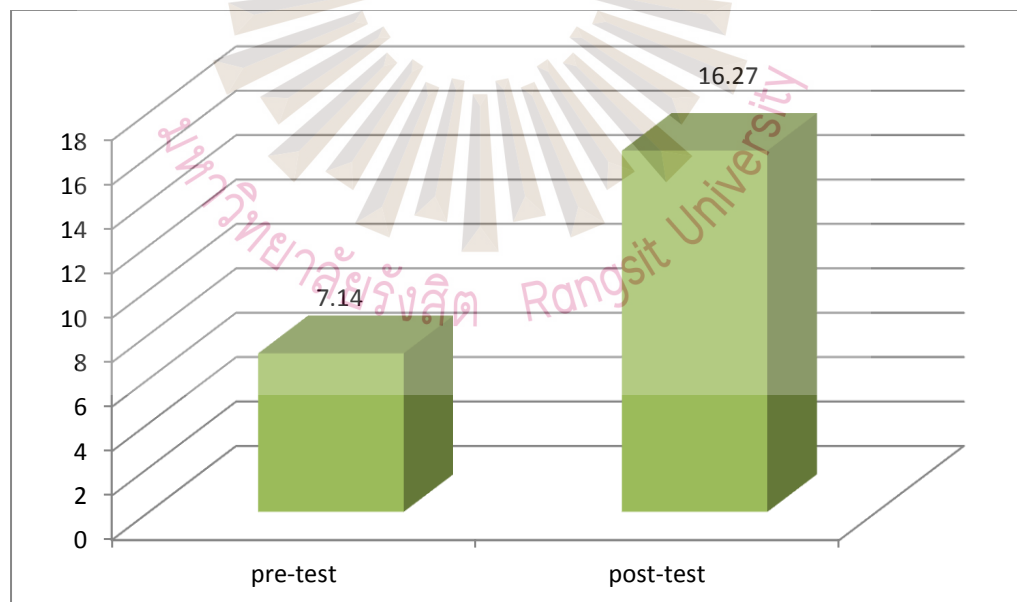


Figure 4.1 Comparison of pre-test and post-test Mean

It can be seen from Figure 4.1, the mean of the pre-test was 7.14, and the mean of the post-test was 16.27, post-test was higher than that of the pre-test. Therefore, the results

showed that after the intervention of pictographic characters, the scores of the student improved.

4.2 QUALITATIVE DATA ANALYSIS

In this paper, the data analysis results of the classroom observation (CO) would support the first question of this study. And the results of semi-structured would answer the second research question in this paper –"will there be any satisfaction with the use of pictographic in learning Chinese character by grade four Thai students? "

4.2.1 Analysis of Semi-structured Interview

The interviews were conducted at the after of the teaching was over, with 22 graders fourth students (9 males and 13 females), including 8 questions. To protect the privacy of study participants, they would be numbered 1 to 22. Content analysis was used to analyze qualitative information from each participant's interview. Students' answers were recorded and translated into English for data analysis.

Question 1: Did you like learning Chinese? How?

It was found that most participants enjoyed learning Chinese. The reasons included the following two aspects: First, many Chinese characters learned Chinese because it could be used in daily and future life. Secondly, the process of learning Chinese characters was simple and interesting, which would not be boring. Here were some of the participants' statements to confirm their ideas:

"Like, because I can learn Chinese characters in the process of learning and it's very interesting." (Student 3)

"Like, because the learning process is interesting and the knowledge acquired can be used in daily and future life." (Student 9)

"Like, because I can use this knowledge in my life to understand what the Chinese are saying." (Student 14)

Question 2: How did you found the learning process of this course interesting?

It was found that the majority of respondents find learning Chinese interesting mainly for the following two reasons: first, the top reason for most students was that they were keen to participate in class activities and enjoy the feeling of games and competition. Secondly, after using pictograph in the teaching process, the learning difficulty was reduced and easy to understand. The addition of CARDS, picture and pictograph enriched the classroom atmosphere. Here were some of the participants' statements to confirm their ideas:

"Classroom activities make me feel happy, and I enjoy the process of learning to participate in the activities." (Student 1)

"I like to participate in class activities. It's fun, and the content is easy to understand." (Student 2)

"The use of CARDS, pictograph and picture makes study easier and more interesting for us to understand Chinese characters." (Student 8)

Question 3: How did you feel about using word CARDS to explain pictograph?

It was found that all the respondents' feelings included the following two aspects:

1) Interesting

"Feeling interesting, because through learning I know the Chinese characters come from pictures and I can understand the evolution process of Chinese characters." (Student 4)

"Feeling interesting, because using the CARDS, picture and pictographic can attract me to learn and makes the class more efficient." (Student 11)

2) Easy

"Feeling easy, because Chinese characters come from a pictograph, and they are very similar to each other. The use of pictographs and word CARDS deepened memory and reduced the difficulty of memorizing Chinese characters." (Student 3)

"Feeling easy, because the use of word CARDS makes me better understand and master the shape of Chinese characters." (Student 6)

Question 4: How did pictographic teaching make it easy to learn Chinese characters?

It was found that all the students thought that using pictographic to learn Chinese characters made learning easier. Chinese characters originated from pictures, and there was a high degree of similarity between pictures, pictograph and Chinese characters. Therefore, students understood the evolution of Chinese characters by learning pictograph, and this evolution process also helped students understand and learn Chinese characters better. Here were some of the participants' statements to confirm their ideas:

"By learning, I can know the evolution process of Chinese characters and understand Chinese characters better." (Student 5)

Question 5: How did pictograph help you to remember Chinese character better? (Student 15)

It was found that all the respondents believed that pictograph characters helped them remember Chinese characters better. The reasons included two aspects: first, the similarity between pictographic and Chinese characters, so pictograph would be used

as an auxiliary means to help students establish the connection between pictures and Chinese characters. Secondly, the ability of younger students to remember pictures and figures was higher than that of Chinese characters. Here are some of the participants' statements to confirm their ideas:

"Easy because when I see pictures or pictograph, I can recall Chinese characters in my mind." (Student 12)

Question 6: Have you improved your Chinese character writing ability after this course? How?

It was found that most of the students believed that their ability to write Chinese characters had improved only a little, because most students just improved their ability to remember the shape of Chinese characters during the learning process, and they still make mistakes when they write Chinese characters, in most cases, students write fewer or more strokes. Moreover, few students thought their writing skills have improved much. Here were some of the participants' statements to confirm their ideas:

"Improved a little, because Chinese character was hard to write, I can remember the shape and means of Chinese character, but when I wrote was always wrong." (Student 1)

"I can write simple words, I still make mistakes when I write complex words." (Student 5)

"Improved a lot, because every class has writing exercises, I can remember and wrote most of the words." (Student 9)

Question 7: Did you like to participate in class activities? Why?

It was found that all the interviewees expressed their like to participate in class activities, mainly for two reasons: 1. Classroom activities can helped you learn more about Chinese characters including listening, speaking, reading, writing and memory.

2. It enhanced the interest in learning. Here were some of the participants' statements to confirm their ideas:

"Like, because class activities make me feeling interesting." (Student 4)

"I can know more about Chinese character through the activities." (Student 20)

Question 8: Did you like to continue learning Chinese characters using pictograph? Why?

It was found that most of the students (20 students) were willing to continue using pictographic to learn Chinese characters because it was fun, simple and easy to understand. A small number of students (2 students) were unwilling to continue using pictographic to continue learning Chinese characters because they thought that pictograph would not be used in a modern society. And the learning of pictograph increased the burden of memory. Here are some of the participants' statements to confirm their ideas:

"Like, because Learning Chinese characters using pictograph made learning more fun and easy."

"Don't like, because pictograph are no longer used in modern life."

"Don't like, because I don't like to memory of Chinese character and pictograph, There were too many of them."

4.2.2 Analysis of Classroom Observation Form

The classroom observation (CO) data were collected by a peer teacher, in a total of three sessions (2st, 4th and 6th), including eight questions.

Table 4.4 Classroom Observation

SI.NO	Statements	The first class observation (the second session)		
		Yes	No	Remarks
1	The students are engaged in the Chinese characters activities.	✓		
2	Through pictographic teaching, students' learning enthusiasm can be improved.	✓		
3	Students feel comfortable asking questions/requesting assistance.		✓	Only a few students asked questions
4	Students are willing to answer questions positively.		✓	Only some students answered the question
5	Pictographic characters make the learning of Chinese characters more lively and interesting.	✓		
6	Pictographic characters make the learning of Chinese characters more effective.	✓		
7	The students can memorize Chinese character at end of the class.	✓		
8	The students can write Chinese character better at end of the class.		✓	Not all students can write Chinese well

Table 4.4 Classroom Observation (Cont.)

SI.NO	Statements	The second class observation (the fourth session)		
		Yes	No	Remarks
1	The students are engaged in the Chinese characters activities.	✓		Good activities
2	Through pictographic teaching, students' learning enthusiasm can be improved.	✓		
3	Students feel comfortable asking questions/requesting assistance.		✓	Some students
4	Students are willing to answer questions positively.	✓		Better than the first time
5	Pictographic characters make the learning of Chinese characters more lively and interesting.	✓		
6	Pictographic characters make the learning of Chinese characters more effective.	✓		
7	The students can memorize Chinese character at end of the class.	✓		
8	The students can write Chinese character better at end of the class.		✓	Not all students can write Chinese well

Table 4.4 Classroom Observation (Cont.)

SI.NO	Statements	The third class observation (the last session)		
		Yes	No	Remarks
1	The students are engaged in the Chinese characters activities.	✓		The atmosphere of class activities is very good
2	Through pictographic teaching, students' learning enthusiasm can be improved.	✓		
3	Students feel comfortable asking questions/requesting assistance.	✓		
4	Students are willing to answer questions positively.	✓		
5	Pictographic characters make the learning of Chinese characters more lively and interesting.	✓		
6	Pictographic characters make the learning of Chinese characters more effective.	✓		
7	The students can memorize Chinese character at end of the class.	✓		
8	The students can write Chinese character better at end of the class.		✓	It's better than before but it still makes mistakes

The data in Table 4.4 shows that, firstly, with the development of teaching activities, the students' participation and enthusiasm in class were getting higher and higher, and the number of students who asked and answered questions increased. In addition, the use of pictographic CARDS attracted students' attention, enriched the classroom atmosphere and improves the efficiency. Finally, the use of pictographic character CARDS was indeed helpful for students to learn Chinese characters.

However, through observation, we also found that although the use pictographic was beneficial for students to memorize Chinese characters, it did not mean that they could write Chinese characters well. Thai students still had problems with writing: in most cases, students often wrote more or fewer strokes, and they had a memory bias



CHAPTER 5

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

Based on the analysis of the data, this chapter would draw conclusions and put forward some discussions and suggestions.

5.1 Conclusion of the study

The research objectives of this thesis were: 1) To compare grade four Thai students' Chinese character learning achievement before and after using pictograph. 2) To find out grade four Thai students' satisfaction on the use of pictograph in learning Chinese character. The study was conducted at a private school in Ayutthaya and involved 22 students in grade fourth. The study collected both quantitative and qualitative data. The quantitative data was an achievement test (pre-test and post-test), and the qualitative data included classroom observation and semi-structured interview. After analyzing the data, the following conclusions were drawn.

5.1.1 The Result of Achievement Test Data Analysis

The first objective of the study was to compare grade four Thai students' Chinese character learning achievement before and after using pictographic. Pre-test (before the treatment) and Post-test (after the treatment) were conducted in the sample group to examine the outcome. The scores were analyzed using Wilcoxon signed rank test with comparison of mean and standard deviation. The Wilcoxon sign rank test was used for data analysis.

The results of Wilson analysis showed that the mean of the pre-test was 7.14 and the mean of the post-test was 16.27. The mean difference between the pre-test and the post-test was 9.13. The standard deviation (SD) of the pre-test was

3.694; the standard deviation (SD) of the post-test was 4.527. The analysis showed that all the students (9 male and 13 female) improved their learning achievement. Improvement scores range from a low of 3 to a high of 17. Of those, no. 10 saw the biggest improvement of 17 points; no.17 made a smaller improvement of 3 points. And also confirmed the first hypothesis of this paper: the use of pictographs can improve the learning achievement of fourth grade students in Thailand.

5.1.2 The Result of the Classroom Observation Data Analysis

Classroom observation was a method of directly observing the teacher's teaching. At the same time, it also enriched and supplemented the quantitative data.

The results of the data analysis showed that the participants were well engaged in the study and were keen to participate in classroom activities. The use of pictographic teaching can improve Thai students' understanding and memory of Chinese characters, but there were still had problems in the writing process, such as the lack of or redundant components and radicals. This also confirmed that "using pictograph learning Chinese characters offered the satisfaction among the Grade 4 students."

5.1.3 The Result of Semi-structured Interview

Semi-structured interview included open-ended questions, not simple questions and answers. This researcher used content analysis to analyze eight questions.

The interview results showed that all participants believed that the use of pictographic characters in teaching could help them understand the process of Chinese characters' evolution and reduce the difficulty of learning; deepen the students' memory of Chinese characters. And the design of classroom activities also increased the interest of the classroom and enhanced the interest of students in learning.

This result confirms the second hypothesis of this study: "using pictographs learning Chinese characters gave Thai Grade Four students satisfaction" In addition, pictographic teaching also provided new ideas for future Thai students to learn Chinese characters and stimulated their interest in learning Chinese characters.

5.2 Discussion of the study

There were two main findings in this study. The first one was that using pictographic learning Chinese characters can improved the learning achievement of grade fourth Thai students. The other one was that grade four Thai students were satisfied with the use of pictograph to learn Chinese characters.

5.2.1 Improving Chinese learning achievement

The research results showed that all students (22 students) had increased in their post-test scores compared to their pre-test scores. Improvement scores were in a range from 3 points as the lowest to 17 points as the highest. In addition, the mean of the pre-test and post-test were 7.14 and 16.27, respectively, with a difference of 9.13; the results show that there was a significant difference between pre-test and post-test scores. The significance value (p-values) was 0.000 ($p < 0.01$) which was statistically significant, as shown in Table 4.2 and Table 4.3.

It can be seen from the classroom observation of peer teachers that learning Chinese characters with pictograph can helped students understand the origin of Chinese characters, grasped the Chinese character glyph better, established the connection between pictographic and picture, and enhanced the richness and interest of the class. At the same time, students' ability to write Chinese characters has been gradually improved in the learning process, but problems still exist.

The findings of this study showed that the use of pictographic increased students' scores on the achievement test. It also supported the findings by Shu (2015)

which indicated that explaining the evolution between Chinese characters, old characters and pictures, students better understood the strokes of Chinese characters and improved their writing skills and abilities. Low et al. (2008) also found that use pictograph was conducive to improving the efficiency of Chinese character learning.

Pictograph had a simple structure, few strokes and strong character-building ability. Using word cards and multimedia to help teaching was conducive in helping young students to feel involved with Chinese characters. This reduced the difficulties in learning Chinese characters, strengthening memory and giving a new understanding of Chinese characters (Qin, 2016). Based on the pictograph, students saw the evolution of Chinese characters and found out the rules of forms of Chinese characters. This subsequently improved the overall identification and understanding of Chinese characters by foreign students (Liu, 2011).

5.2.2 Students' satisfaction

In this research, the instruments used for the second objective of the study were semi-structured interview and classroom observation. The interview results and the classroom observation results were complementary to each other. The results revealed that students had a positive view of using pictographic to learn Chinese characters. This was in line with the studies by Abrough (2000) and by Harvey et al. (2002) who claimed that the increase in learning satisfaction is due to the fact that students enjoy participating in curriculum design activities.

Semi-structured interviews were used to collect students' learning opinions after the end of the study. The interview was guided by eight questions. The students expressed their opinions in the interview. According to the feedback of the participants, pictograph character teaching has a positive impact on the aspects of interest, interactivity and classroom participation, and has a good performance in Chinese character memory.

The second finding was that grade fourth Thai students had a positive learning attitude after learning Chinese characters using pictograph. It was in line with the finding of Shu (2015) who conducted a study on "The importance of teaching Chinese character formation elements of Thailand student" The research showed that students' ability with pictographic teaching would develop more interest in Chinese characters and improve the stereotype that Chinese characters are difficult to learn.

The study also found that teachers were able to continuously improve their teaching; Pictographic CARDS could be used to organize some interesting classroom activities, to activate the classroom atmosphere and increase learning interest. This would help students absorb the classroom content better, and develop a positive attitude towards learning.

5.3 Recommendation of the study

In this part, some suggestions would be put forward in the hope of providing some help to the teaching of Thai Chinese characters and teaching Chinese as a foreign language (TCSL).

5.3.1 Recommendation for Chinese teachers

1) It was suggested that teachers of Chinese as a foreign language (TCSL) use pictographs to learn Chinese characters in Chinese classes, so as to improve students' ability and interest in learning Chinese characters.

2) Teachers of Chinese as a foreign language can also try to use pictograph to improve students' understanding meaning of Chinese characters.

3) Pictograph character teaching requires teachers to have a certain understanding of pictograph characters, so teachers should constantly improve their knowledge reserve before class, and prepare teaching plans and teaching AIDS in advance.

4) Pictograph teaching can indeed help students learn more efficiently and interesting, but teachers also need to consider the course content, students' level and students' age, in the process of use, the teaching plan was constantly adjusted according to the situation.

5.3.2 Recommendation for future study

1) The study was limited to 22 students in grade four in Thailand. For further research, students with large sample size and different grades can be selected.

2) The duration of this study was one and a half months. In order to obtain more reliable and significant results, it was necessary to increase the duration in future studies.

3) This study only focuses on the study satisfaction survey of students. Therefore, it was suggested that in future research, the focus can be changed.



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DPE. No. RSUERB2020-034



**Documentary Proof of Exemption
By
Ethics Review Board of Rangsit University**

DPE. No.	RSUERB2020-034
Protocol Title	Using Pictograph in Learning Chinese Characters of Grade Four Thai Students
Principle Investigator	Dr. Nipaporn Chalermirundorn
Co-Investigator	Sun Fanqi
Affiliation	Suryadhep Teachers College, Rangsit University, Rangsit University
How to review	Exemption Review

This protocol complies with a "Research with Exemption"

Date of Approval: 05 / 04 / 2020

Date of Expiration: 05 / 04 / 2022

The aforementioned project have been reviewed and approved according to the Standard Operating Procedures by Ethical Committee of Research Institute of Rangsit University based on the Declaration of Helsinki and Good Clinical Practice

Signature.....
(Supachai Kunaratpruk, M.D.)

Chairman, Ethics Review Board for Health Research





APPENDIX B

PARENTAL CONSENT LETTER

มหาวิทยาลัยรังสิต Rangsit University



RSU-ERB.006 เอกสารชี้แจงสำหรับผู้ปกครองของเด็กอายุต่ำกว่า 7-12 ปี (สำหรับผู้ปกครอง)

(Participant's Legal Guardian Information Sheet)



ค้นฉบับ

การปรับเปลี่ยนครั้งที่.....

วันที่.....

ในเอกสารนี้อาจมีข้อความที่ท่านอ่านแล้วยังไม่เข้าใจ โปรดสอบถามหัวหน้าโครงการวิจัย หรือผู้คนที่ช่วยอธิบายจนกว่าจะเข้าใจดี ท่านจะได้รับเอกสารนี้ 1 ฉบับ นำกลับไปอ่านที่บ้านเพื่อปรึกษาหารือกับญาติพี่น้อง เพื่อนสนิท หรือสมาชิกในครอบครัวของท่าน แพทย์ท่านอื่น หรือผู้ที่ท่านต้องการปรึกษา เพื่อช่วยในการตัดสินใจเข้าร่วมการวิจัย

ชื่อโครงการ Using Pictograph In Learning Chinese Characters Of Grade Four Thai Students.

ชื่อผู้วิจัย Fanqi Sun.

สถานที่วิจัย Trirajvitthaya school.

สถานที่ทำงาน Mai Tra, Bang Sai District, Phra Nakhon Si Ayutthaya 133290.

โครงการวิจัยนี้ทำขึ้นเพื่อ

1. To compare grade four Thai students' Chinese characters learning achievement before and after using pictograph.

2. To find out grade four Thai students' satisfaction on the use of pictograph in learning Chinese characters.

เด็กในปกครองของท่านได้รับเชิญให้เข้าร่วมการวิจัยนี้เพราะ เด็กในปกครองของท่าน.....

จะมีผู้เข้าร่วมการวิจัยนี้ทั้งสิ้นประมาณ 22 คน ระยะเวลาที่จะทำวิจัยทั้งสิ้นประมาณ 1.5 เดือน

หากท่านตัดสินใจให้เด็กในปกครองของท่านเข้าร่วมการวิจัย จะมีขั้นตอนการวิจัยดังต่อไปนี้คือ

1 Complete pre -test.

2 Participate in classroom teaching activities and use pictographs to learn Chinese characters.

3 Complete post-test and participate in semi-structured interviews.

ความเสี่ยงที่อาจเกิดขึ้นเมื่อเข้าร่วมการวิจัย คือ.....

หากท่านไม่อนุญาตให้เด็กในปกครองของท่านเข้าร่วมในโครงการวิจัยนี้ เด็กในปกครองของท่านก็จะได้รับ.....

การเข้าร่วมการวิจัยนี้เด็กในปกครองของท่านจะ ไม่ได้รับค่าตอบแทนใดๆ แต่ต้องเสียค่าใช้จ่ายในการรักษาพยาบาลตามปกติ

หากท่านมีข้อสงสัยที่จะสอบถามเกี่ยวกับการวิจัย หรือเกิดเหตุการณ์ไม่พึงประสงค์จากการวิจัยขึ้นกับเด็กในปกครองของท่าน ท่านสามารถติดต่อ Fanqi Sun ได้ที่ Trirajvitthaya school หมายเลขโทรศัพท์: 0655317896.



RSU-ERB.006 เอกสารชี้แจงสำหรับผู้ปกครองของเด็กอายุต่ำกว่า 7-12 ปี (สำหรับผู้ปกครอง)

(Participant's Legal Guardian Information Sheet)



หากมีข้อมูลเพิ่มเติมทั้งด้านประโยชน์และโทษที่เกี่ยวข้องกับการวิจัยนี้ ผู้วิจัยจะแจ้งให้ทราบโดยตลอด ไม่ปิดบัง

ข้อมูลส่วนตัวของเด็กในปกครองของท่านจะถูกเก็บรักษาไว้ ไม่เปิดเผยต่อสาธารณะเป็นรายบุคคล ผลการวิจัยเป็นข้อมูลส่วนรวม ข้อมูลของผู้เข้าร่วมการวิจัยเป็นรายบุคคลอาจมีคณะบุคคลบางกลุ่มเข้ามาตรวจสอบได้ เช่น ผู้ให้ทุนวิจัย, สถาบัน หรือองค์กรของรัฐที่มีหน้าที่ตรวจสอบ, คณะกรรมการจริยธรรมฯ เป็นต้น

ท่านมีสิทธิ์ถอนตัวเด็กในปกครองของท่านออกจากโครงการวิจัยเมื่อใดก็ได้ โดยไม่ต้องแจ้งให้ทราบล่วงหน้า และการไม่เข้าร่วมการวิจัยหรือถอนตัวออกจากโครงการวิจัยนี้ จะไม่มีผลกระทบใดๆ ต่อการบริการและการรักษาที่เด็กในปกครองของท่านสมควรจะได้รับแต่ประการใด

โครงการวิจัยนี้ได้รับการพิจารณารับรอง จากคณะกรรมการจริยธรรมการวิจัยในคนของมหาวิทยาลัยรังสิต ซึ่งมีสำนักงานอยู่ที่ อาคารอาทิตย์ อุไรรัตน์ (อาคาร 1) ชั้น 5 ห้อง 504 มหาวิทยาลัยรังสิต 52/347 หมู่บ้านเมืองเอก จ.พหลโยธิน ต.หลักหก อ.เมือง จ.ปทุมธานี 12000 หมายเลขโทรศัพท์ 0-2791-5688 โทรสาร 0-2791-5689 หากท่านได้รับการปฏิบัติไม่ตรงตามที่ระบุไว้ ท่านสามารถติดต่อกับประธานคณะกรรมการฯ หรือเลขานุการฯ ได้ตามสถานที่และหมายเลขโทรศัพท์ข้างต้น

ข้าพเจ้าได้อ่านรายละเอียดในเอกสารนี้ครบถ้วนแล้ว

ลงชื่อ.....ผู้ปกครอง

(.....)

วันที่.....

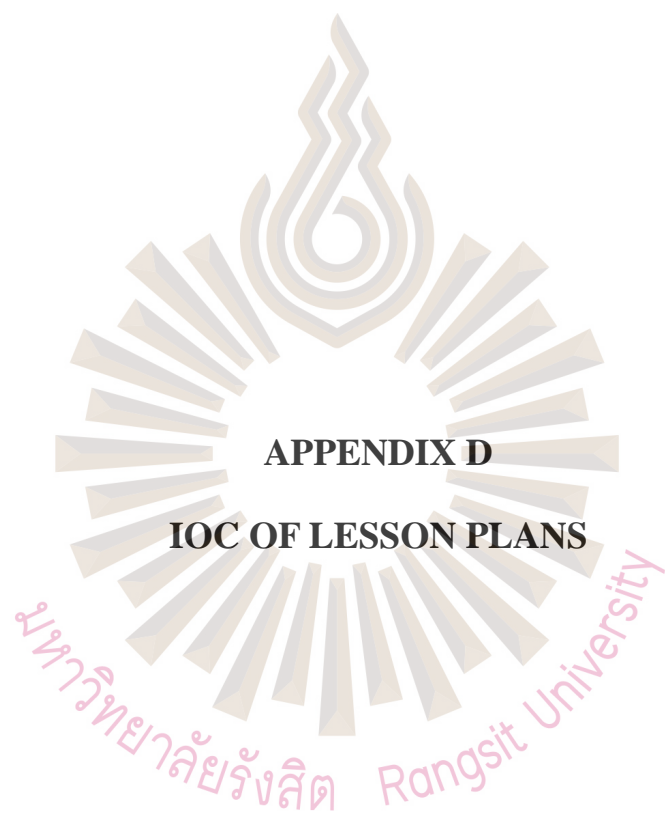
มหาวิทยาลัยรังสิต Rangsit University



Experts Who Validated the Instruments

SI NO.	Name	Position tile	Institution
1	DR.Kowit Rapeepisarn	Associate Professor	Rangsit university, Thailand
2	Shuncaï Yang	Teacher	Burapha University, Thailand
3	Ya Ma	Teacher	Assumption College Rayong, Thailand





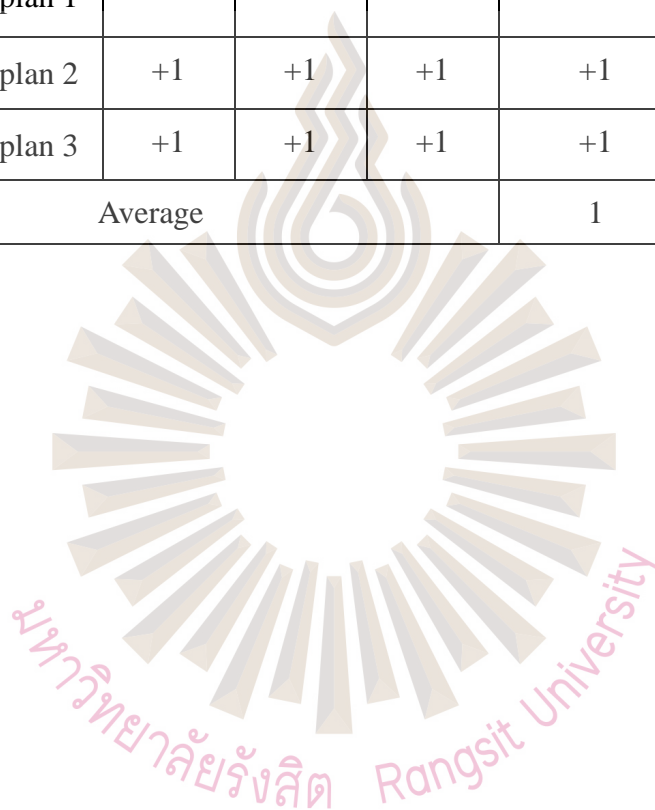
APPENDIX D

IOC OF LESSON PLANS

มหาวิทยาลัยรังสิต Rangsit University

Item Objective Congruence for 3 lesson plan by the Experts

Sl. No	Attributes	Rating by Experts			IOC Average	Remarks
		Expert 1	Expert 2	Expert 3		
1	Lesson plan 1	+1	+1	+1	+1	Accepted
2	Lesson plan 2	+1	+1	+1	+1	Accepted
3	Lesson plan 3	+1	+1	+1	+1	Accepted
Average					1	Accepted





APPENDIX E

LESSON PLANS

มหาวิทยาลัยรังสิต Rangsit University

Lesson plan 1 (session: 1&2)

Subject: Chinese

Topic: nature

Grade: 4

Class strengths: 22 students

Time: 100 minutes (50 minutes/ 1 session)

Pupil's background knowledge: Students have been learning Chinese for more than three and a half years and have basic listening, speaking, reading and writing skills.

Teaching and learning strategy: Pictographic, question and answer, writing exercises.



Teaching and learning materials: Textbook, exercise book, whiteboard, pictograph card (word CARDS), pen.

Lesson objectives: After the course, students can:

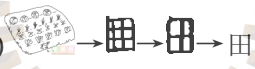

1. Know the Pronunciation and meaning of: 月(moon) 日(sun) 田(field) 火(fire)
2. Can write Chinese characters.

Session 1

Stage & duration	Teacher' activities	Student' activities
Greeting and Checking (2 minutes)	1. Greet student. 2. Check that students have prepared their textbooks and exercise books.	1. Greet teacher. 2. Prepared their textbooks and exercise books.
Introduction of the lessons (3 minutes)	1. Teacher show pictures related to pictograph through word CARDS. 2. Do you know what these characters stand for? Now let's learn the new characters.	1. Answer yes or no.

Stage & duration	Teacher' activities	Student' activities
Teaching reading of characters (10 minutes)	1. Teachers use word CARDS to show the evolution of a set of pictograph. 月(moon) 日(sun) 2. What is the meaning of Chinese characters? 3. The teacher marks pinyin and teaches reading. 4. Randomly selection of student Numbers to check the reading of Chinese characters.	1. Answer the meaning of Chinese characters 2. Reading new Chinese characters
Interpretation of Chinese characters (15 minutes)	1. With word cards teaching, detailed explanation of pictograph. 月(moon)  → 月 日(sun)  → 日 2. Let the students understand that the glyph of pictograph is very similar to the real thing. Then teach the students how to write words of the day and the month.	1. Evolution process of memory pictograph.
Class activities (5 minutes)	1. Choose the student number randomly and ask the students to sort the word CARDS in the following order: (Real thing- pictograph- Chinese characters).	1. Sort in the correct order

Stage & duration	Teacher' activities	Student' activities
Classroom practice (10 minutes)	1. According to the teacher's presentation process, draw the real thing; write the correct pictographic characters and Chinese characters.	2. Draw and write, complete the class assignment.
Evaluation (5 minutes)	1. The teacher selects students at random and asks them to read Chinese characters. 2. The teacher selects the students at random. Let the students choose the correct Chinese character according to the teacher's pronunciation. 3. The teacher selects the students at random. Let the students choose the correct Chinese character according to the pictographic characters.	
Session 2		
Greeting and Checking (2 minutes)	1. Greet student. 2. Check that students have prepared their textbooks and exercise books.	1. Greet teacher. 2. Prepared their textbooks and exercise books.
Introduction of the lessons (3 minutes)	1. Teachers show pictures related to pictograph through word CARDS. 2. Do you know what these characters stand for? Now let's learn the new characters.	1. Answer yes or no.

Stage & duration	Teacher' activities	Student' activities
Teaching reading of characters (10 minutes)	1. Teachers use word CARDS to show the evolution of a set of pictograph. 田(field) 火(fire) 2. What is the meaning of Chinese characters? 3. The teacher marks pinyin and teaches reading. 4. Random selection of student Numbers to check the reading of Chinese characters.	1. Answer the meaning of Chinese characters 2. Reading new Chinese characters
Interpretation of Chinese characters (15 minutes)	1. With word cards teaching, detailed explanation of pictograph. 田(field)  → 田 → 田 → 田 火(fire)  → 火 → 火 → 火 2. Let the students understand that the glyph of pictograph is very similar to the real thing. Then teach the students how to write words of the day and the month.	1. Evolution process of memory pictograph.
Class activities (5 minutes)	1. Choose the student number randomly and ask the students to sort word CARDS in the following order: (Real thing- pictograph- Chinese characters).	1. Sort in the correct order

Stage & duration	Teacher' activities	Student' activities
Classroom practice (10 minutes)	1. According to the teacher's presentation process, draw the real thing; write the correct pictographic characters and Chinese characters.	1. Draw and write, Complete the class assignment.
Evaluation (5 minutes)	1. The teacher selects students at random and asks them to read Chinese characters. 2. The teacher selects the students at random. Let the students choose the correct Chinese character according to the teacher's pronunciation. 3. The teacher selects the students at random. Let the students choose the correct Chinese character according to the pictographic characters.	

Lesson plan 2 (session: 3&4)

Subject: Chinese

Topic: animal

Grade: 4

Class strengths: 22 students

Time: 100 minutes (50 minutes/ 1 session)

Pupil's background knowledge: Students have been learning Chinese for more than three and a half years and have basic listening, speaking, reading and writing skills.

Teaching and learning strategy: Pictographic, question and answer, writing exercises.







Teaching and learning materials: Textbook, exercise book, whiteboard, pictograph card (word CARDS), pen.

Lesson objectives: After the course, students can:

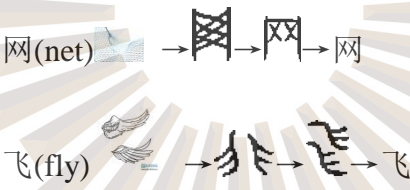
1. Know the Pronunciation and meaning of: 马(horse) 鸟(bird) 网(net) 飞(fly)
2. Can write Chinese characters.

Session 3

Stage & duration	Teacher' activities	Student' activities
Greeting and Checking (2 minutes)	<ol style="list-style-type: none"> 1. Greet student. 2. Check that students have prepared their textbooks and exercise books. 	<ol style="list-style-type: none"> 1. Greet teacher. 2. Prepared their textbooks and exercise books.
Introduction of the lessons (3 minutes)	<ol style="list-style-type: none"> 1. Teacher show pictures related to pictograph through word CARDS. 2. Do you know what these characters stand for? Now let's learn the new characters. 	<ol style="list-style-type: none"> 1. Answer yes or no.

Stage & duration	Teacher' activities	Student' activities
Teaching reading of characters (10 minutes)	1. Teachers use word CARDS to show the evolution of a set of pictograph. 马(horse) 鸟(bird) 2. What is the meaning of Chinese characters? 3. The teacher marks pinyin and teaches reading. 4. Randomly selection of student Numbers to check the reading of Chinese characters.	1. Answer the meaning of Chinese characters 2. Reading new Chinese characters
Interpretation of Chinese characters (15 minutes)	1. With word cards teaching, detailed explanation of pictographs. 马(horse)  →  →  → 馬 → 马 鸟(bird)  →  →  → 鳥 → 鸟 2. Let the students understand that the glyph of pictograph is very similar to the real thing. Then teach the students how to write words of the day and the month.	1. Evolution process of memory pictograph.
Class activities (5 minutes)	1. Choose the student number randomly and ask the students to sort the word CARDS in the following order: (Real thing- pictograph- Chinese characters).	1. Sort in the correct order

Stage & duration	Teacher' activities	Student' activities
Classroom practice (10 minutes)	2. According to the teacher's presentation process, draw the real thing; write the correct pictographic characters and Chinese characters.	2. Draw and write, complete the class assignment.
Evaluation (5 minutes)	<p>1. The teacher selects students at random and asks them to read Chinese characters.</p> <p>2. The teacher selects the students at random. Let the students choose the correct Chinese character according to the teacher's pronunciation.</p> <p>3. The teacher selects the students at random. Let the students choose the correct Chinese character according to the pictographic characters.</p>	
Session 4		
Stage & duration	Teacher' activities	Student' activities
Greeting and Checking (2 minutes)	<p>1. Greet student.</p> <p>2. Check that students have prepared their textbooks and exercise books.</p>	<p>1. Greet teacher.</p> <p>2. Prepared their textbooks and exercise books.</p>
Introduction of the lessons (3 minutes)	<p>1. Teachers show pictures related to pictograph through word CARDS.</p> <p>2. Do you know what these characters stand for? Now let's learn the new characters.</p>	<p>1. Answer yes or no.</p>

Stage & duration	Teacher' activities	Student' activities
Teaching reading of characters (10 minutes)	1. Teachers use word CARDS to show the evolution of a set of pictograph. 网(net) 飞(fly). 2. What is the meaning of Chinese characters? 3. The teacher marks pinyin and teaches reading. 4. Random selection of student Numbers to check the reading of Chinese characters.	1. Answer the meaning of Chinese characters 2. Reading new Chinese characters
Interpretation of Chinese characters (15 minutes)	1. With word cards teaching, detailed explanation of pictograph.  2. Let the students understand that the glyph of pictograph is very similar to the real thing. Then teach the students how to write words of the day and the month.	1. Evolution process of memory pictograph.
Class activities (5 minutes)	1. Choose the student number randomly and ask the students to sort word CARDS in the following order: (Real thing- pictograph- Chinese characters).	1. Sort in the correct order

Stage & duration	Teacher' activities	Student' activities
<p>Classroom practice (10 minutes)</p>	<p>1. According to the teacher's presentation process, draw the real thing; write the correct pictographic characters and Chinese characters.</p>	<p>1. Draw and write, Complete the class assignment.</p>
<p>Evaluation (5 minutes)</p>	<p>1. The teacher selects students at random and asks them to read Chinese characters.</p> <p>2. The teacher selects the students at random. Let the students choose the correct Chinese character according to the teacher's pronunciation.</p> <p>3. The teacher selects the students at random. Let the students choose the correct Chinese character according to the pictographic characters.</p>	

Lesson plan 3 (session: 5&6)

Subject: Chinese

Topic: human body

Grade: 4

Class strengths: 22 students

Time: 100 minutes (50 minutes/ 1 session)

Pupil's background knowledge: Students have been learning Chinese for more than three and a half years and have basic listening, speaking, reading and writing skills.

Teaching and learning strategy: Pictographic, question and answer, writing exercises.

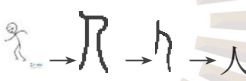

Teaching and learning materials: Textbook, exercise book, whiteboard, pictograph card (word CARDS), pen.

Lesson objectives: After the course, students can:



1. Know the Pronunciation and meaning of: 人(people) 目(eye) 口(mouth) 女 (woman)
2. Can write Chinese characters.

Session 5

Stage & duration	Teacher' activities	Student' activities
Greeting and Checking (2 minutes)	<ol style="list-style-type: none"> 1. Greet student. 2. Check that students have prepared their textbooks and exercise books. 	<ol style="list-style-type: none"> 1. Greet teacher. 2. Prepared their textbooks and exercise books.
Introduction of the lessons (3 minutes)	<ol style="list-style-type: none"> 1. Teacher show pictures related to pictograph through word CARDS. 2. Do you know what these characters stand for? Now let's learn the new characters. 	<ol style="list-style-type: none"> 1. Answer yes or no.

Stage & duration	Teacher' activities	Student' activities
Teaching reading of characters (10 minutes)	1. Teachers use word CARDS to show the evolution of a set of pictograph. 人(people) 目(eye) 2. What is the meaning of Chinese characters? 3. The teacher marks pinyin and teaches reading. 4. Randomly selection of student Numbers to check the reading of Chinese characters.	1. Answer the meaning of Chinese characters 2. Reading new Chinese characters
Interpretation of Chinese characters (15 minutes)	1. With word cards teaching, detailed explanation of pictographs. 人(people)  → 人 目(eye)  → 目 2. Let the students understand that the glyph of pictograph is very similar to the real thing. Then teach the students how to write words of the day and the month.	1. Evolution process of memory pictograph.
Class activities (5 minutes)	2. Choose the student number randomly and ask the students to sort the word CARDS in the following order: (Real thing- pictograph- Chinese characters).	1. Sort in the correct order

Stage & duration	Teacher' activities	Student' activities
Classroom practice (10 minutes)	2. According to the teacher's presentation process, draw the real thing; write the correct pictographic characters and Chinese characters.	2. Draw and write, complete the class assignment.
Evaluation (5 minutes)	1. The teacher selects students at random and asks them to read Chinese characters. 2. The teacher selects the students at random. Let the students choose the correct Chinese character according to the teacher's pronunciation. 3. The teacher selects the students at random. Let the students choose the correct Chinese character according to the pictographic characters.	
Session 6		
Greeting and Checking (2 minutes)	1. Greet student. 2. Check that students have prepared their textbooks and exercise books.	1. Greet teacher. 2. Prepared their textbooks and exercise books.
Introduction of the lessons (3 minutes)	1. Teachers show pictures related to pictograph through word CARDS. 2. Do you know what these characters stand for? Now let's learn the new characters.	1. Answer yes or no.

Stage & duration	Teacher' activities	Student' activities
Teaching reading of characters (10 minutes)	1. Teachers use word CARDS to show the evolution of a set of pictograph. □ (mouth) 女(woman) 2. What is the meaning of Chinese characters? 3. The teacher marks pinyin and teaches reading. 4. Random selection of student Numbers to check the reading of Chinese characters.	1. Answer the meaning of Chinese characters 2. Reading new Chinese characters
Interpretation of Chinese characters (15 minutes)	1. With word cards teaching, detailed explanation of pictograph. □(mouth)  → □ 女(woman)  → 女 2. Let the students understand that the glyph of pictograph is very similar to the real thing. Then teach the students how to write words of the day and the month.	1. Evolution process of memory pictograph.
Class activities (5 minutes)	1. Choose the student number randomly and ask the students to sort word CARDS in the following order: (Real thing- pictograph- Chinese characters).	1. Sort in the correct order

Stage & duration	Teacher' activities	Student' activities
<p>Classroom practice (10 minutes)</p>	<p>1. According to the teacher's presentation process, draw the real thing; write the correct pictographic characters and Chinese characters.</p>	<p>1. Draw and write, Complete the class assignment.</p>
<p>Evaluation (5 minutes)</p>	<p>1. The teacher selects students at random and asks them to read Chinese characters.</p> <p>2. The teacher selects the students at random. Let the students choose the correct Chinese character according to the teacher's pronunciation.</p> <p>3. The teacher selects the students at random. Let the students choose the correct Chinese character according to the pictographic characters.</p>	

Lesson Plan Format Adapted From: Seldon (2016)





APPENDIX F

IOC OF SEMI-STRUCTURED INTERVIEW

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Item Objective Congruence for Semi-structured interview by the Experts

SL. No	Items	Rating by Experts			IOC Average	Remarks
		Expert 1	Expert 2	Expert 3		
1.	Did you like learning Chinese? How?	+1	+1	+1	+1	Accepted
2.	How did you find the learning process of this course interesting?	+1	+1	+1	+1	Accepted
3.	How did you feel about using word CARDS to explain pictograph?	+1	+1	+1	+1	Accepted
4.	How did pictographic teaching make it easy to learn Chinese characters?	+1	+1	+1	+1	Accepted
5.	How did pictographic help you to remember Chinese characters better?	+1	+1	+1	+1	Accepted

SL. No	Items	Rating by Experts			IOC Average	Remarks
		Expert 1	Expert 2	Expert 3		
6.	Have you improved your Chinese character writing ability after this course? How?	+1	+1	+1	+1	Accepted
7.	Did you like to participate in class activities? Why?	+1	+1	+1	+1	Accepted
8.	Did you like to continue learning Chinese characters using pictograph? Why?	+1	+1	+1	+1	Accepted
Average					1	Accepted



APPENDIX G

SEMI-STRUCTURED INTERVIEW

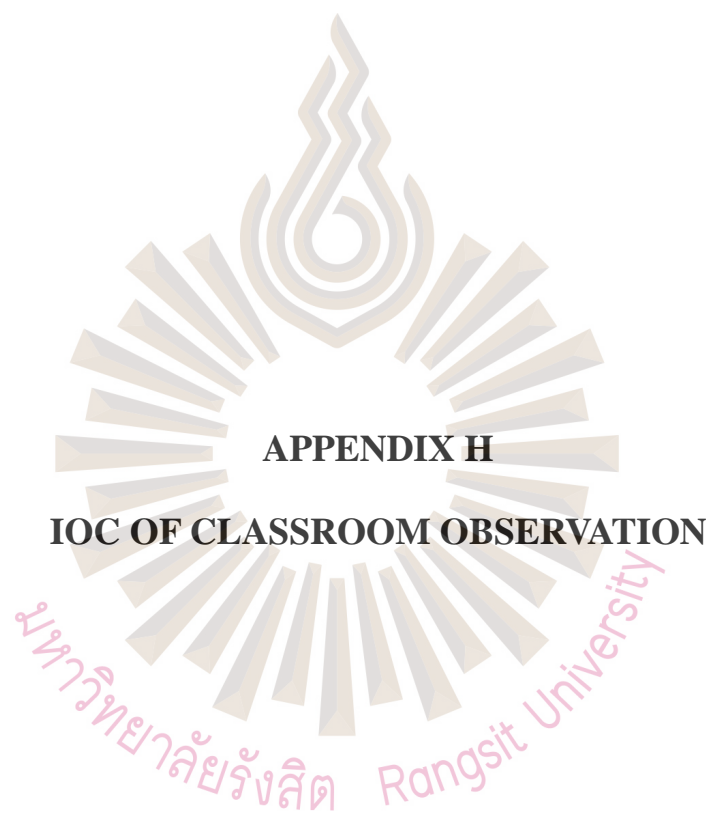
มหาวิทยาลัยรังสิต Rangsit University

Semi-structured Interview questions

The semi-structured interview includes 8 questions that will be used to investigate student satisfaction.

1. Did you like learning Chinese? How?
2. How did you find the learning process of this course interesting?
3. How did you feel about using word CARDS to explain pictograph?
4. How did pictographic teaching make it easy to learn Chinese characters?
5. How did pictographic help you to remember Chinese characters better?
6. Have you improved your Chinese character writing ability after this course? How?
7. Did you like to participate in class activities? Why?
8. Did you like to continue learning Chinese characters using pictograph? Why?





Item Objective Congruence for Classroom observation by the Experts

SL. No	Items	Rating by Experts			IOC Average	Remarks
		Expert 1	Expert 2	Expert 3		
1.	The students are engaged in the Chinese characters activities.	+1	+1	+1	+1	Accepted
2.	Through pictographic teaching, students' learning enthusiasm can be improved.	+1	+1	+1	+1	Accepted
3.	Students feel comfortable asking questions/requesting assistance.	+1	+1	+1	+1	Accepted
4.	Students are willing to answer questions positively.	+1	+1	+1	+1	Accepted

SL. No	Items	Rating by Experts			IOC Average	Remarks
		Expert 1	Expert 2	Expert 3		
5.	Pictographic characters make the learning of Chinese characters more lively and interesting.	+1	+1	+1	+1	Accepted
7.	The students can memorize Chinese character at end of the class.	+1	+1	+1	+1	Accepted
8.	The students can write Chinese character better at end of the class.	+1	+1	+1	+1	Accepted
Average					1	Accepted

Adapted form: Zidouni (2015)



Classroom Observation Form

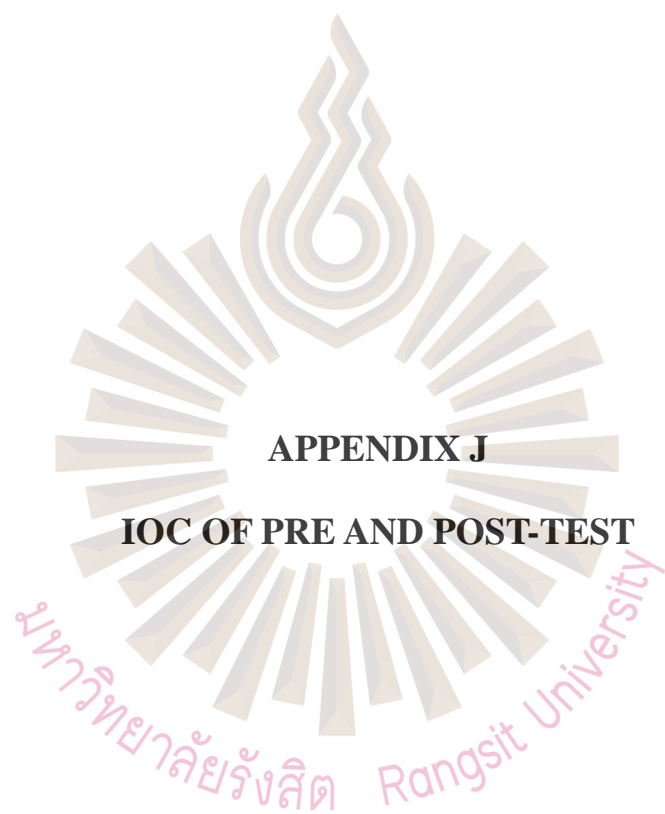
Subjects: _____ Grade: _____ Time: _____

Teacher: _____ Observer: _____ Date: ____/____/____

Sl. NO	Statements	Yes	No	Remarks
1	The students are engaged in the Chinese characters activities.			
2	Through pictographic teaching, students' learning enthusiasm can be improved.			
3	Students feel comfortable asking questions/requesting assistance.			
4	Students are willing to answer questions positively.			
5	Pictographic characters make the learning of Chinese characters more lively and interesting.			
6	Pictographic characters make the learning of Chinese characters more effective.			
7	The students can memorize Chinese character at end of the class.			
8	The students can write Chinese character better at end of the class.			

Comments: _____

Adapted form: Adapted from Zidouni (2015)



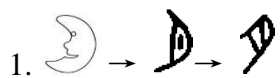
**Item Objective Congruence for achievement tests (pre-test and post-test) plan by
the Experts**

SL. No	Items	Rating by Experts			IOC Average	Remarks
		Expert 1	Expert 2	Expert 3		
1.	Question 1	+1	+1	+1	+1	Accepted
2.	Question 2	+1	+1	+1	+1	Accepted
3.	Question 3	+1	+1	+1	+1	Accepted
4.	Question 4	+1	+1	+1	+1	Accepted
5.	Question 5	+1	+1	+1	+1	Accepted
6.	Question 6	+1	+1	+1	+1	Accepted
7.	Question 7	+1	+1	+1	+1	Accepted
8.	Question 8	+1	+1	+1	+1	Accepted
9.	Question 9	+1	+1	+1	+1	Accepted
10.	Question 10	+1	+1	+1	+1	Accepted
11.	Question 11	+1	+1	+1	+1	Accepted
12.	Question 12	+1	+1	+1	+1	Accepted
13.	Question 13	+1	+1	+1	+1	Accepted
14.	Question 14	+1	+1	+1	+1	Accepted
15.	Question 15	+1	+1	+1	+1	Accepted
16.	Question 16	+1	+1	+1	+1	Accepted
17.	Question 17	+1	+1	+1	+1	Accepted
18.	Question 18	+1	+1	+1	+1	Accepted

SL. No	Items	Rating by Experts			IOC Average	Remarks
		Expert 1	Expert 2	Expert 3		
19.	Question 19	+1	+1	+1	+1	Accepted
20.	Question 20	+1	+1	+1	+1	Accepted
21.	Question 21	+1	+1	+1	+1	Accepted
22.	Question 22	+1	+1	+1	+1	Accepted
23.	Question 23	+1	+1	+1	+1	Accepted
24.	Question 24	+1	+1	+1	+1	Accepted
Average					1	Accepted



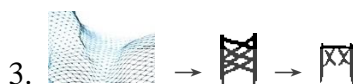
一. Match the correct Chinese characters according to the picture.



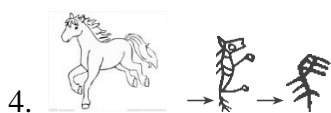
马



飞



月



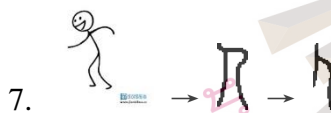
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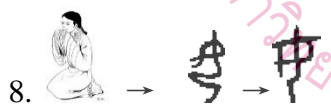
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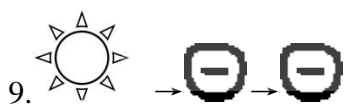
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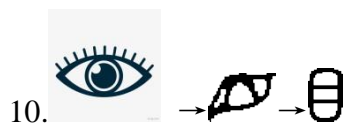
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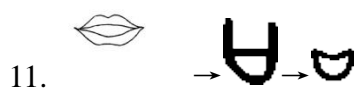
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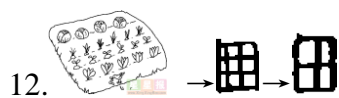
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人

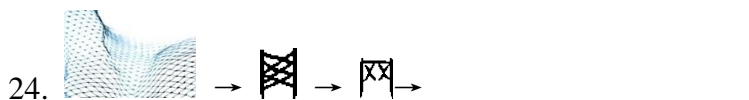
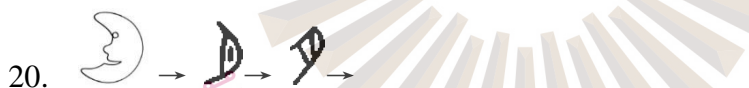
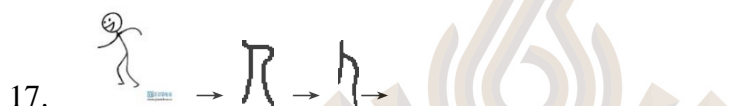
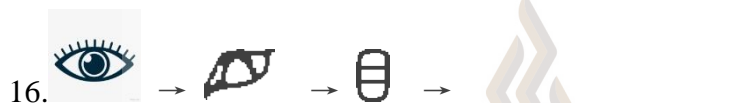
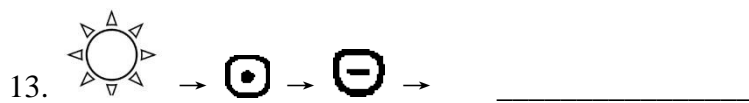


日



女

二. Write the correct Chinese characters according to the pictures.



BIOGRAPHY

Name	FanQi Sun
Date of Birth	April 12, 1995
Place of Birth	Yunnan, China
Institution Attended	ChuXiong Normal University, China Bachelor of Thai language, 2018 Rangsit University, Thailand Master of Educational in Curriculum and instruction, 2020
Address	Yaoan, Yunnan, China
Email address	310169016@qq.com

