

## THE APPLICATION OF GAME-BASED LEARNING FOR CHINESE VOCABULARY SKILL OF GRADE 8 THAI STUDENTS

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#### **Abstract**

The mixed methods study was conducted to examine the effectiveness of using game-based learning for improving grade 8 Thai students' learning achievement in Chinese vocabulary skill and to investigate grade 8 Thai students' opinion towards the use of games in Chinese classes. The experiment was conducted in one of Bangkok bilingual schools with 20 students for over four weeks. The quantitative data was collected by the researcher through learning achievement tests, including pretest and posttest. The qualitative data was collected from the semi-structured interview and classroom observation.

The results of the learning achievement were analyzed by Wilcoxon signed rank test, which showed that all the students had improved their scores in posttest as compared to pretest. The mean difference of 6.70 between posttest (13.45) and pretest (6.75) proved that the use of game-based learning improved the scores of students. In addition, the data collected from the interview and the classroom observation showed that the students had positive attitudes and opinion in using games to learn Chinese vocabulary. The findings revealed that the students were engaged in and satisfied to use games in Chinese vocabulary classes. Besides, it had also increased their interest in Chinese learning. Therefore, this study recommended using game-based learning to learn Chinese vocabulary and enhance students' opinion in Chinese classes.

(Total 124 pages)

Keywords: Game-based learning, Chinese vocabulary, Grade 8 Thai Students

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#### **Abbreviations**

Abbreviation	Meaning
GDP	Gross domestic product
WTO	World Trade Organization
BRI	Belt Road Initiative
CAFTA	China-ASEAN Free Trade Agreement
TAT	The Tourism Authority of Thailand
MOE	The Minister of Education
Hanban	Kuder-Richardson Formula 20
GBL	Game-Based Learning
OBOR	The One Belt One Road
SLA	Second Language Acquisition
TCSL	Teaching Chinese as A Second Language
CVT	Chinese Vocabulary Teaching
TTM	Traditional Teaching Methods
Hanban	Confucius Institute Headquarters
LA SMEI JAEI	रिश्तिण Rangsit University

#### **CHAPTER 1**

#### **INTRODUCTION**

This chapter includes the background, the rationale, the scope and the objectives of the study, as well as the research questions and the operational definitions related to the study, followed by some expected outcomes of the study.

#### 1.1 Background and Rationale of the Study

When it comes to 'language', it is unverifiable of any language's origins based on the current state of the evidence (Hauser et al., 2014). Human language, as one of the most important wealth of human being, is probably at least 150,000 to 200,000 years old (Henshilwood et al., 2002). Human language is spoken from generation to generation to keep and record the development in a community, even the fall of a nationality, which still be injected fresh vitality and tenacious vitality. Language is the tool of communication to understand different cultures in different areas of lives. With the help of language, a profound enrichment of experience in human society can be obtained (High & Lavoie, 2006).

Nowadays, 7,117 living human languages are catalogued in the whole world (Campbell & Grondona, 2008). Mandarin Chinese language belongs to Sino-Tibetan languages (Comire, 2009). It also is the largest language with the most native speakers. China has over 5,000 years of history, and Chinese characters are developed from the original pictograms to simple Chinese characters (Norman, 1988). Later, for the teaching and learning purposes, Hanyu Pinyin, from the Roman spelling system that is a convenient phonetic transcription system, emerged as a common standard in the Chinese language with Latin alphabet (Chang & Wu, 1988).

Recently, it is evident that the economy of China has grown rapidly. With the Gross Domestic Product (GDP) of China approaching to 14.55 trillion dollars, it bore great significance to the world. (Xia, 2020). Since the reform and opening-up policy be implemented in 1978, China has made solid progress in economy, education, science, technology and so on (Lu et al., 2019). China became the largest exporter and the second largest importer after a decade of the accession to the World Trade Organization (WTO) in 2001. China also plays an important role in the whole world (Meléndez-Ortiz et al., 2011).

With the deepening of economic globalization, all countries are brought together more closely than ever before. In 2013, Xi Jinping, the president of China, introduced The Silk Road Economic Belt when he visited Kazakhstan (Shao, 2015). The Belt Road Initiative (BRI) being carried out involved in more than 60 countries along these routes (Kuo & Kommenda, 2018). For a boost of prosperity, growing economic cooperation between China and other countries is overwhelming. BRI aims at common development through win-win cooperation while shelving differences (Gao, 2020).

In the 21st century, China explored overseas businesses operating in the markets of Southeast Asia. China-ASEAN Free Trade Agreement (CAFTA) was proposed and established by eleven heads of government in 2002, and it turned out that the trade volume growth rapidly (ASEAN, 2002). The trade ties have been steady over the years between China and Thailand and buoyed a common region culture and long friendly cooperation. China has become a major source of investment to Thailand in recent years under BRI (Mei, 2019).

Thailand, the 'Land of Smiles', is one of the richest countries in Asia in terms of natural beauty due to its historical places and eco-attractions, beautiful beaches and latitudinal variation. The tourism industry was an economic contributor to Thailand, accounting for 6-7% of its GDP (Netherlands Embassy in Bangkok, 2017). Chinese tourist market has been the most to Thailand since 2012, and the Tourism Authority of Thailand (TAT) is still seeking to penetrate the high-end through a series of policy.

Demand for Chinese-speaking Thai guide has increased as same as the development of tourism (TAT NEWS, 2018a).

Undoubtedly, the cooperation between Thailand and China refers to many areas. The cultural exchange also plays an important role in the common ground to understand each historical background and respect for people. According to TAT, Chinese activities, such as "Happy New Year" were promoted in popular shopping malls in Bangkok. In addition, the airports of Thailand offer more Chinese signs and services in Chinese. Moreover, Thai shop assistants who can speak Chinese have more priority to access a job (TAT NEWS, 2018b).

Learning Mandarin is a good way to break the stereotype of China and a bridge media to set up a friendship among countries. Though the trade once has been hampered due to the Cold War, the cultural exchange still has an important place in Thailand, with no sign of stopping. The situation of Chinese language development today cannot achieve remarkable results without the contributions of ethnic Chinese and Thai Royal Family. H.R.H Princess Maha Chakri Sirindhorn was bestowed With Friendship Medal, which is the highest honor given by the Chinese government to foreigners (Bangkok Post, 2019). The common concept, "China and Thailand are kith and Kin" ( $\psi$ (Zhōng)  $\phi$ (tài) — ( $\psi$ ( $\psi$ )  $\phi$ (jiā)  $\psi$ ( $\psi$ ( $\psi$ ) is not only recognized by both Chinese and Thai officials, but also epitomized the promising prospect of Sino-Thailand friendship (Embassy of The People's Republic of China in The Kingdom of Thailand, 2017).

Along with the economic power still growing on, the number of people learning Chinese keeps increasing more as well. In 2018, the foreign students from 196 countries studied different domain in 1004 universities in China. According to Hanban News, the Confucius Institutes has established from 142 countries that include 51 countries along the BRI. More than 6 million participants took in the Chinese language level tests around the world in 2016 (Hanban, 2017). To promote Chinese culture work to the world, Hanban launched the Chinese native-speaker volunteers' program to present a mutual understanding between Chinese and other countries.

While the cultural exchange increasingly strengthened, the higher education from universities and colleges between the two countries has promoted frequent communication and cooperation. Chinese language learning in Thailand can be traced to the beginning of the 20th century. In 2005, the Thai Minister of Education (MOE) signed the cooperation framework with the Chinese National Office (Hanban) to explore the teaching and learning the Chinese language in Thailand. So far, there have been 15 Confucius Institutes (CIs) and 20 Confucius classrooms (CCs) in Thailand (Peterson, 2017).

Chinese teaching has barely covered primary and secondary schools. Due to the difference in cultural background and language limitation, Chinese teachers have faced challenges while teaching Chinese in the classroom. Normally, Thai students consider Chinese as a difficult subject and they cannot do well when taught in a spoon-feeding teaching style. Despite the shift from the traditional method teaching to the effective method in the 1990s, yet the former still is most influential and far-reaching in most schools, such as the grammar-translation method (Howatt & Richard, 2014). The traditional approach requires the students to go for rote learning and memorize the difficult Chinese characters, which might limit their learning interesting and engaging.

In addition, the Chinese language contains Pinyin with four basic tones to go with the Chinese characters, which made it harder for non-native speakers to write down and recognize the correct pronunciation without Pinyin. Students in Thailand have found Chinese language challenging because of difficulty in memorizing and using the vocabulary in real life.

To improve Thai students' Chinese vocabulary skills, Chinese teachers might come up with different teaching methods and techniques that would enhance students' learning achievement, engagement and interest. One of the strategies to engage students' attitude and enthusiasm in learning Chinese could be the use of games in the classroom (Nisbet & Williams, 2009).

Game-based-learning is gaining learning popularity in primary school as a favorite teaching method in the classroom due to its effective motivation and engagement in teaching (Zuo, 2015). The use of games is regarded as a tool to engage students in understanding the abstract vocabulary which cannot use translation or pictures as media directly. It could be used in learning from brainstorming, to inspire familiar words and set up the potential vocabulary (Qin, 2015).

Using games to improve students' Chinese vocabulary learning interest was supported by a lot of researchers. According to Zhu (2019), game-based learning method not only helps students have more interest in learning Chinese but also help them to connect and receive vocabulary easily compare to the traditional teaching approach. Games also switch the learner's attitude in learning Chinese, which helps students to eliminate the fear of difficulties gradually (Nan, 2018). It enhances students' attention and involvement to review and recall the learned vocabulary (Zheng, 2019).

To create a congenial studying atmosphere in the classroom, games allow adequate real-time interaction amongst teachers and students (Zhang, 2009). Lu (2014) used games to improve students' learning outcomes engagement, motivation and interests. According to Ni (2018), it is important to choose a suitable game for learners. When the game was used in the secondary classroom, the teaching goal should be settled and the lesson should be more focused, at the same time, it should be filled with enjoyable, challenging and rewarding activities. The students could acquire important information from games. Further, game-based learning stirs intellectual curiosity to students, to keep students' mind active and be full of creativity.

In summary, the researcher aimed to use games as a medium for teaching Chinese vocabulary for Thai students since there were several aforementioned benefits such as to help students memorize the vocabulary more easily and they are likely to master the vocabulary skill by using games. The games also could get the students engaged in the class and influence students' attitude. The students had a better achievement after the use of games and they can learn without being bored. The researcher expected that using games in the Chinese vocabulary class for grade 8 Thai

students would prove fruitful and contribute to a more effective way of teaching Chinese vocabulary as well as yield better learning outcomes and positive engagement respectively.

#### 1.2 Research Objectives

- 1.2.1 To examine the effectiveness of using game-based learning for improving grade 8 Thai students' learning achievement in Chinese vocabulary skill
- 1.2.2 To investigate grade 8 Thai students' opinion towards using game-based learning in learning Chinese vocabulary

#### 1.3 Research Questions

- 1.3.1 Would the use of game-based learning improve grade 8 Thai students' learning achievement in Chinese vocabulary skill?
- 1.3.2 What would be grade 8 Thai students' opinion towards using game-based learning in learning Chinese vocabulary?

#### 1.4 Research Hypothesis

1.4.1 The use of game-based learning would improve grade 8 Thai students' learning achievement in Chinese vocabulary skill.

#### 1.5 Scope of the Study

#### 1.5.1 Participants

The research participants included a class of 20 Thai students with mixed genders and mixed ability in Chinese language. They studied the Chinese course in the

first semester of 2020 academic year. They were all grade 8 students with 7 females and 13 males.

#### 1.5.2 Location of the Study

The study carried out in one of the bilingual schools in Bangkok, Thailand. The school included 13 grades from kindergarten to high school. The school offered two Chinese language classes per week, and the teaching frame of time was 50 minutes each.

#### 1.5.3 Content of the Study

The theme of the lesson was on "Using games to introduce the vocabulary about time in Chinese" from the standardized textbook of grade 8 Thai students. The games were developed based on the content of the text. The students were to play games to acquire the vocabulary and took the tests of related vocabulary. A total of 26 basic words of Chinese vocabulary regarding time expressions and activities would be taught.

Table 1.1 Content of the lesson plans

T D1		D 1
Lesson Plans	Topics: Lesson 4 & lesson 5	Periods
	TELO .	
Lesson Plan 1:	Learning Objectives:	2
Vocabulary about	By the end of the lesson, each student were able	
the clock.	to:	
	1. Identify them with Chinese Pinyin	
	2. Connect the Pinyin with Chinese	
	characters	
	3. Introduce the time in Chinese.	

Table 1.1 Content of the lesson plans (Cont.)

Lesson Plans	Topics: 1	Lesson 4 & lesson 5	Periods
	Vocabulary 三点 三点六分 三点半	3 o'clock Six minutes past three At half-past three	
	三点一刻 差一刻四点 两点 现在	A quarter past three A quarter to four 2 o'clock Now	
Lesson Plan 2	Learning Objective		2
Vocabulary about	By the end of the le	sson, each student were able	
time range.	to:		
Ly,	<ol> <li>Identify them with Chinese Pinyin</li> <li>Connect the Pinyin with Chinese characters</li> <li>Recognize the meaning of them</li> <li>Connect the time range to clock.</li> </ol>		
	Vocabulary  zoo chén 早晨  shàng wǔ	Rangsit (Early Moring) (Moring)	
	上午 zhōng wǔ 中午	(Noon)	
	xià wǐ 下午	(Afternoon)	
	wǎn shàng 晚上	(Evening)	
	, 、 、 、 、 、 、 、 、 、 、 、 、 、	(What time)	
	màn gử 曼谷	(Bangkok)	
	niù yuē 纽约	(New York)	

Table 1.1 Content of the lesson plans (Cont.)

Lesson Plans	Topics: Lesson 4 & lesson 5	Periods
Lesson Plan 3	Learning Objectives:	2
Vocabulary about activities	By the end of the lesson, students were able to:	
detivities	1. Identify them with Chinese Pinyin	
	2. Connect the Pinyin with Chinese	
	characters	
	3. Recognize the meaning of them	
	4. Connect the time to activities	
	Vocabulary as follows;	
	ei chudng 起床 (Get up)	
4	吃早饭 (Have a breakfast)	
	shòng kè (Have a class)	
	xi0 kè (Class over)	
	下课 (Watch TV)	
هم ا	看 电 视 (Do homework)	
3	写作业 (Go to bed)	
of the state of th	shul jiào 睡 觉	
Lesson Plan 4	Learning Objectives:	2
Vocabulary about	By the end of the lesson, students were able to:	
activities	1. Identify them with Chinese Pinyin	
	2. Connect the Pinyin with Chinese	
	characters	
	3. Recognize the meaning of vocabulary	
	4. Using the sentence pattern "Time range +	
	clock +activities" to express what they do	
	at different times.	

Table 1.1 Content of the lesson plans (Cont.)

Lesson Plans	Topics	Periods	
	Vocabulary as fol		
	fàng xuế 放 学	After school	
	huí jiā 回 家	Go home	
	duàn liàn 锻 炼	Do exercise	
	shàng wàng 上 网	Go online	
	洗澡	Take a bath	
	gòi 访	It is time to	

The vocabulary was selected from Experiencing Chinese (Compilation of the International Centre for Language Research and Development, published in 2010), the grade 8 students' Chinese textbooks. It is the second book in the series for the secondary students. The scope of the study includes lesson 4 to lesson 5.

#### 1.5.4 Time Frame

This study was carried out in four weeks, with two periods in each week in August 2020 in the first semester of the academic year in Thailand. Four lesson plans of 100 minutes each were applied and taught during the time frame.

Table 1.2 Table of Time Frame

Activities	Apr	May	June	July	Aug	Sep	Oct	Nov
Literature review								
Research Proposal								
Data Collection								
Data Analysis								
Final Defense								

#### 1.5.5 Conceptual Framework

This study consisted of two kinds of variables, independent and dependent variables. Game-based learning, as the independent variable, was an instructional approach The learning achievement and students' opinion were the dependent variables; the details of which are shown in Figure 1.1.

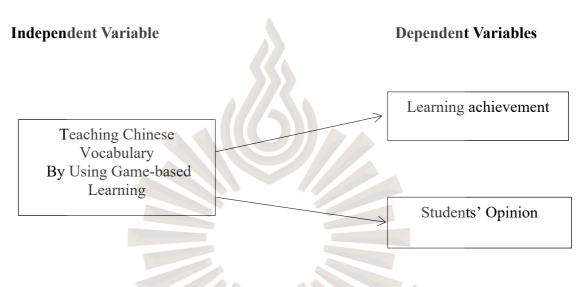


Figure 1.1 Independent and dependent Variables

#### 1.6 Limitations of the Study

- 1.6.1 The study was conducted with only one section of grade 8 students studying in one of the schools in Bangkok, Thailand. Therefore, the findings could not be generalized to all grade 8 students of Bangkok.
- 1.6.2 The content of the study included two lessons from Experiencing Chinese textbook of grade 8 in Thailand version. Therefore, the findings could not be generalized to the content of other topics or subjects.

1.6.3 The research included only 8 periods to learn Chinese language using games, which was not enough for students to practice and participate in the class. More time could have been provided for students to take part in game-based learning.

#### 1.7 Operational Definitions

Game-Based Learning (GBL) refers to a teaching approach, which removes the monotonous linguistic phenomenon during the learning process but involves varied game forms presented with interesting techniques, to help students learn by playing, using and experiencing in the real and effective language situation. Game-based learning in Chinese classroom requires students' ability to absorb Chinese vocabulary through game-based learning. The games include:

- 1) "时钟表演" (To be a clock)
- 2) "老狼, 老狼, 几点了?" (Mr. Wolf, Mr. Wolf, What time is it?)
- 3) "你来比划我来猜" (You perform, I will guess)
- 4)"传声筒"(Chinese whisper).

Chinese Vocabulary Skills refers to the ability of grade 8 Thai students in Thailand to talk about time-related vocabulary correctly and express them suitably in the real situation and communication. This was measured by pretest and posttest.

**Learning Achievement** refers to an improvement of scores in the posttest as compared to pretest of grade 8 Thai students' Chinese vocabulary skill after using a series of game-based learning. This was measured by the students' achievement of pretest and posttest.

**Students' Opinion** refers to grade 8 Thai students' attitude towards learning Chinese vocabulary by using game-based learning, and the reason of investigating their opinions is to measure students' engagement of participation in the lesson. The engagement includes emotional, behavior and cognition.

**Grade 8 Thai students** refer to the students of a Thai private school in Bangkok, Thailand. They are the research participants who are able to speak English as well Chinese in this study.

#### 1.8 Significance of the Study

- 1.8.1 The use of game-based learning would show positive responses in students' achievement and engagement in learning Chinese vocabulary.
- 1.8.2 The study would exhibit students' better learning outcomes in shown in higher scores of Chinese vocabulary in the tests.
- 1.8.3 This study would provide Chinese teachers with an alternative to use different games to teach Chinese vocabulary.



#### **CHAPTER 2**

#### LITERATURE REVIEW

This chapter presents the review of teaching and learning Chinese as a second language, the background of learning and teaching Chinese in Thailand, especially in learning Chinese vocabulary for secondary students. It discusses the definition, types and advantages of Game-based learning. Further, it presents the learning theories and literature related to teaching and learning of the Chinese language in school.

#### 2.1 Teaching and Learning Chinese as a Second Language

The Chinese language is a branch of the Sino-Tibetan language family (Gil, 2008), which exists in the world for at least six thousand years (Roberts, 2011). Nowadays, the Chinese language includes Simplified Characters, Traditional Chinese, Informal Slang and Pinyin, and a Roman spelling form of Chinese (Chen & Ping, 1999). The Standard Chinese, one form of Chinese Mandarin as well as named Putonghua, has become one of the official languages of China since the 1950s (Zhou & Sun, 2006).

Learning Mandarin is a study of Chinese by non-native speakers. Westerners started to learn the Chinese language back in the 16th century (Odinye, 2019). In 1950, Chinese as a second language class began with 33 students from different countries in China. The number of learning Chinese grew slowly before 1978 (MOE of China, 2010).

One primary task of China in the following decade was to develop the economy. Over the next decade, China not only had an impetuous development of economy but science and technology, with the increasing international trade and

cultural communication between China and other countries. Then, more and more people started to learn Chinese as a global trend (Scrimgeour, 2010).

Chinese Language Learning was promoted by Confucius institutes, the volunteer, state-sponsored teachers through many different way, also the Chinese Bridge of TV show-Chinese Proficiency Competition attracted many participator from all over the world (Gil, 2008).

## 2.2 Background on Chinese Language Learning Education of Thailand

Economic trade and cooperation between Thailand and China have been developing in many directions, such as agriculture, goods, investment, tourist, financial coordination, etc (Manarungsan, 2009). Xi Jinping, the President of China, proposed The One Belt One Road (OBOR) initiative in 2013 to expand trade and cooperation and promote common development and prosperity (Ferdinand, 2016).

The other side, Chinese visitor arrivals comprised the biggest market share of all visitors (TAT NEWS, 2018a). Mr. Yuthasak Supasorn, the director of the TAT (Tourism Authority of Thailand) maintained the Chinese-Thai bilateral tourism relationship mirrored the long-standing and strong ties between the two countries (TAT NEWS, 2018b).

In brief, it is a trend that an increasing development between two countries. Cooperation has helped both of countries to expand the common interests and achieve mutually benefit.

#### 2.2.1 The Development of Chinese Language Learning

The history of cultural exchanges between China and Thailand was long-standing. The first Chinese school was opened in Thailand during the Bangkok Dynasty. After World War II, the number of Chinese schools was limited to as low as

13 because of the policy shift in Thailand. Since the establishment of diplomatic ties in 1975, both countries had actively conducted in various areas, increased personnel exchanges and deepened mutual political trust (Zhang, 2011).

In recent times, Chinese now has become one of the most popular languages in Thailand, with more and more mutilate cooperation between China and Thailand. In 2006, the Thailand Ministry of Education (MOE) started to collaborate with Hanban (Confucius Institute Headquarters) in Thai higher education institutions, for developing Chinese language teaching and learning in Bangkok (Bureau of International Cooperation, n.d). Until 2008, Thailand had set the strategic goal of basically achieving that every secondary school has Chinese classes (Zhang, 2011).

Up to now, there are 16 Confucius institutes and 20 Confucius classrooms, with more than 17,000 volunteers as Chinese language teachers teaching in over 1,000 universities, primary and secondary schools in 73 provinces in Thailand. Therefore, in 2018, the number of Thai students studying Chinese rose to reach 1,000,000 (Hanban Official News, 2018).

### 2.2.2 The Education System in Secondary School of Thailand

Education in Thailand is provided mainly by the Thai government through the MOE from pre-elementary to senior high school. The whole elementary and secondary education system (Table, 2.1) of Thailand is divided into four stages; 1) The first stage is lower primary; 2) "Prathom" is also called primary education from Grade 1 to Grade 6; 3) Lower-secondary education, secondary means "Mattayom" in Thai, includes in Grade 7 to Grade 9; 4) Upper-secondary education refers to Grade 10 to Grade 12 (Michael et al., 2018)

Matthayom 4 through 5

Education	Level	Grades	Age	Years	Notes
Primary	Lower Elementary	1-3	6-8	3	Prathom 1 through 3
Primary	Upper Elementary	4-6	9-11	3	Prathom 4 through 6
Secondary	Lower Secondary	7-9	12-14	3	Matthayom 1 through 3
	I				

Table 2.1 Thai Elementary and Secondary Education System

Upper Secondary

Secondary

The Thai education system (Figure, 2.1) provides 9 years of compulsory education, with 12 years of free basic education guaranteed by the Constitution

15-17

10-11

Aprox.	Aprox. grade	Education Level Doctoral degree study		Degree Ph.D. or advanced professional degree	
24	19+				
23	18	Master's degree study		Master'	degree
22	17				
21	16	Undergraduate	Higher	Bachelor	's degree
20	15	program	vocational		
19	14		education	Dipl	oma
18	13				
17	12	Upper secondary	Vocational		
16	11	education	secondary	_	
15	10		school	1/	
14	9			5	
213	8	Lower secondary	y education	\$	
120	7		Six.		5
19	6		1),		žį.
10	125		Jis.	5	Ď
9	13/6/	Dan	Os,	Sati	7
8	3	V Primary edu	ication	Basic Education	Compulsory education
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4		Pre-primary education			
3					

Figure 2.1 Thai Education System

Source: Office of the Council of State, 2014

## 2.3 The Importance of Vocabulary Acquisition Teaching in Second Language Classroom

Vocabulary is a list or collection of words or words and phrases usually alphabetically arranged and explained or defined (Merriam-webster, 2020). Vocabulary is an essential component of any language, and thus it is a critical part of the second language acquisition (Willis & Ohashi, 2012).

McCarthy (1990) explained that vocabulary forms were the biggest part of the meaning of any language, and also were the biggest problem for most learners. So the first step of learners is to build up a big vocabulary as efficiently as possible (Nagy & Townsend, 2003).

Zimmerman (1997) has claimed that vocabulary teaching was always undervalued in the field of SLA (Second Language Acquisition). Richards (1976) pointed out vocabulary learning was typically neglected in second language instruction. Levenston (1979) also criticized applied linguistics for its general neglect of vocabulary acquisition in favour of syntactic development. According to Zimmerman's survey, most second language learners had been taught by traditionally methods that gave minimal attention to vocabulary.

Communication, sometimes, can be completed in a second language environment if one of them lacks grammatical knowledge; however, absence of vocabulary often impedes the transmission of meaning completely (Wikins, 1972). Vocabulary acquisition plays an important role in learning a second language (Lewis, 1993).

In brief, vocabulary acquisition is the cornerstone of language learning. A successful communication could be completed with some major vocabulary in a second language situation. In addition, it is a rapid way to acquire a second language.

## 2.4 The Research of Vocabulary of Vocabulary Acquisition Teaching in TCSL Classroom

Si (2009) indicated that if the non-native speaker students could master lots of vocabulary, the Chinese language skill obtains improved faster. Yang (2003) proposed that vocabulary teaching had to put in the main state of linguistic elements in the TCSL classroom (Teaching Chinese as a second language). With regard to CVT (Chinese Vocabulary Teaching) in secondary TCSL classroom, much research has achieved results.

Foreigners usually find it is a hassle to master the meaning of Chinese vocabulary and the difficulty of rote-learning thousands of words overcome all but the most diligent. Li (2011) presented using Mind Map Approach in Chinese classes to help students master a series of vocabulary related to studied words. Mind mapping is a visual tool of a procedure for integrating the results of studies. It emphasized Mata-analysis of the learner who utilized the existing knowledge, However, which limited interaction between teachers and students (Sung et al., 2016).

During the CVT classroom, students are aware of difficulties in learning vocabulary, especially fail to grasp the meaning of the same word in a different situation. According to Fan (2013), students could practice Chinese vocabulary in a real scenario. Additionally, the vocabulary the learners could master was the result of interaction from their surroundings, which caused an issue that students would be unable to consistently concentrate on the learning objectives (Lan et al., 2016).

Halici and Mede (2018) had mentioned that teachers used theme-based learning to improve student vocabulary acquisition skills and increase engagement. However, it requires the higher quality of students to complete the learning goal. For the student who had low-level Chinese language skills (Zheng, 2019), by contrast, they would fail to connect the exciting Chinese character to the other vocabulary in the different theme topics.

Qiu (2015) researched on popular songs in the CVT to improve the pronunciation, enrich Chinese vocabulary and provide multiple contexts for vocabulary. There are some limitations to learn Chinese by singing as a fellow: 1) Not every song has a goal vocabulary; 2) Not every rhythm is able to teach; 3) Not every student is good at singing. In other words, singing-based learning emphasizes entertainment and is unable to engage students if they don't like singing.

Drawing effectively is a communication tool for transmitting ideas to others (Anning, 1997). Aiming to the beginning level, Cheng (2019) pointed out using drawing-based learning to teach Chinese vocabulary. There are many abstracts vocabulary unable to draw as a picture. For example, "想 (miss)" is a kind of feeling and it requires students to think of it.

It seems that many researchers tried all kinds of ways to help students learn and memory Chinese vocabulary in the CVT classroom. While these approaches have an important role in CVT classroom I found that it is not fit for every student.

#### 2.5 The Problem with CVT of the Secondary School in Thailand

Shen (2012) pointed out that Thai schools usually set up one or two Chinese classes for middle students throughout the research. According to the data of teaching methods, she found that almost all Chinese teachers prefer to use the translation method, which is the oldest method in SLA, into the classroom to teach vocabulary. Even if it is a direct way to transmit the meaning to students, yet not enhance the interests of students.

Tang (2013) investigated the situation of CVT in Chonburi province, taken eight schools as a case, and analyzed by questionnaires the reason of students lacking motivation as follows: 1) the method mainly focuses on teacher-central teaching that makes students always have to listen and write; 2) One of the methods is following

teachers and reading, which cause many students to lose motivation and engagement in Chinese class; 3) It is difficult for students to remember the character of the Chinese.

According to Duan (2017) did an investigation on Chinese elective in Kalasin province, most Chinese teachers from China used to teacher-central learning that could not work in the Thai-Chinese classroom. Teachers were supposed to understand Thai educational culture, find out the topic students are interested in, reduce the difficulty of Chinese vocabulary learning and create a comfortable environment in order to improve the student learning interest and engage them in Chinese classes.

With the reform of the new curriculum going on, the Chinese language went into the classroom in primary and middle school of Thailand. Zhu (2013) analyzed that the main problems of teaching the Chinese language, with 114 public middle schools of Thailand through the questionnaire, is an obstacle to improving students' Chinese language learning skills. It is found that the deficiency of a cohesive Chinese language teaching mainly influences the education system. The details as follows: 1) the lack of unified Teaching syllabus. The current Chinese teaching system in secondary school is set up based on the English teaching syllabus; 2) No conjunction with different courses. In the secondary stage, the content of the Chinese language did not ensure conformance to requirements that MOE of Thailand published so that student's ability of Chinese language cannot be progressed so that student still in the beginning stages.

Hao (2015) observed the situation of Chinese language learning in the northern city Chiangrai in Thailand and dug out most of the students had more appetite for a relaxed atmosphere of a classroom than what teachers always teaching and giving orders, such as "Be quiet" or "Keep silence" etc. The other one is that the Chinese teacher does not speak Thai. Almost all teachers used Chinese or English to teach Chinese, which lead to most students confused about some meanings of some Chinese vocabulary because of the difference of transmitting among English, Chinese and Thai.

Chen (2016) introduced the concepts of Thailand education and found happiness as a necessary educational content in the elementary CVT in Nonthaburi

province of Thailand. If a teacher always teaching and speaking throughout the whole class, it would be extremely tedious for students. Considering this, Chen summed up that students would rather play and learn with a humorous teacher in class than spoonfeed teaching and learning via contrasted some different methods.

In short, due to the difference in education culture and students' characteristics between Chinese and Thai, many researchers summarized the problem after they did the experiment and provided some reasonable suggestions. There are some challenges for teachers to teach vocabulary in the Chinese class; 1). To select an effective teaching method for Thai students based on a martial book; 2). Help students to utilize existing words with new words; 3). To improve students' engagement in class and cultivate their ability for creative potential.

#### 2.6 Student Attitude

In this section, student attitude includes students' behavior engagement, emotional engagement and cognitive engagement. Regarding problems and challenges of engagement, while learning by using GBL teaching strategies, I picked two Chinese teaching pedagogies to motivate students to learn Chinese vocabulary.

# 2.6.1 Student Engagement Rongsit

A number of educators argue with the premise that student attitude is an important influence on learning. In this research, student attitude specific aims at student engagement. A motivated and engaged student might be identified by having several characteristics such as "vigour, intensity, vitality, zest, and enthusiasm" (Skinner & Pitzer, 2012). Generally, a student engaged in learning achieves highly valued outcomes (Ladd & Dinella, 2009). The concept of engagement is usually divided into three categories: behavioral, cognitive, and emotional engagement (Mango, 2015).

Astin (1984) drew considerable attention to the role of student engagement in literature as early as 1984. Newman (1992) has argued that student engagement is related to learning outcomes. Wang and Holcombe (2010) confirm that engagement is a media connection to the learning environment, academic and graduated. Stewart (2008) has mentioned that students who are engaged in the study will gain a positive outcome. Li (2011) presented that positive engagement cold cut down the crime rate of students, blow away the depression and reduce drug abuse problems.

Marks (2000) student engagement was reflected in the teaching method. Jang (2010) discusses that student engagement is dependent on teachers. Teachers are the heads who set a clear teaching plan and expectation of student outcomes. Students seek to learn more if they are engaged in a class. At the same time, teachers who have rich experiences and wisdom in teaching could guide students to swim in the sea of knowledge.

Yazzie-Mintz (2010) has discussed early the relationship of student engagement such as the students and the school community; the students and adults at school; the student and peers; the student and instruction, and the student and the curriculum (Figure, 2.2)

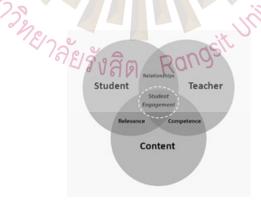


Figure 2.2 Student Engagement Model

Source: Matthew et al., 2014

Engagement is more than involvement or participation-it requires feelings and sense-making as well as activity (Haper & Quaye, 2009). Although the meaning of engagement is viewed from several perspectives, Fredricks, Blumenfeld and Paris (2004) usually classified three dimensions to student engagement, as discussed below:

- 1) Behavioral engagement Students who are behaviorally engaged would typically follow the school rules, involved in learning tasks and extra school-related activities.
- 2) Emotional engagement It refers to students' effective reactions in the classroom, such as positive and negative reactions to teachers, classmates, academics and school.
- 3) Cognitive engagement As a psychological investment, it not only requires students to comprehend and master knowledge, but also promotes the skills of learning explicitly taught in schools.

Harris (2008) developed that student engagement could be classified from six parts as follows:

- 1) Behaving-following basic classroom norms;
- 2) Enjoying-being interested in what happens in the classroom;
- 3) Being motivated- students will feel more comfortable and confident to engage in the classroom;
  - 4) Thinking- Students are seen as wanting to accept more things;
  - 5) Seeing purpose-establishing a study purpose or goal for learning;
  - 6) Owning- considering the ties of person and learning.

Moreover, Reeve and Tseng (2011) suggested agentic engagement should be added as a new aspect. Gunuc and Kuzu (2014) developed this study on a multidimensional scale. The higher student engagement was examined in two main components, which includes campus engagement and class engagement.

#### 2.6.2 Student Engagement in Chinese Language Learning Classroom

For a non-native speaker, functional purposes have impacts on students' engagement in learning a second language (Deci & Ryan, 1985). Learners have different Chinese learning motivation irrespective of origin. Students who are ethnic Chinese tended to be more engaged in the learning process (Comanaru & Noel, 2009)

Qiu (2013) undertook research using a case study to measure a teacher's effect on students' engagement. She found that a teacher's knowledge did contribute to the student's engagement in a class.

Li (2015) researched the factors of classroom engagement, including cognitive, emotion, teachers and teaching methods in learning Chinese. Teaching approaches have a profound effect on students' learning engagement and students' attitude towards Chinese learning.

Wu (2017) summarized that if non-speaker students persisted in learning for a longer term, they will like to engage in any activity related to Chinese language learning. The active engagement in Chinese classes helps students to learn Chinese and culture.

Allwright (1991) suggests that there are two different types of classroom engagement: observable and unobservable activity. Observably, engaged behaviours was exhibited by engaged students who performed well to gain the reward (e.g. the praise from the teacher or good grades). On the other hand, some of students engagement activity be described not, instead, it is the progress of psychology.

All in all, successful Chinese classes cannot be divorced from student engagement. Learning activity built on the erudite and well informed teachers, which not only help to expand the knowledge also how to draw student interest.

#### 2.7 GBL (Game-Based Learning)

A game defined as, "a physical or mental competition conducted according to rules with the participants in direct opposition to each other" (Merriam-Webster, 2020). In Oxford Dictionaries, Game is explained as, "an activity that you do to have fun, often one that has rules and that you can win or lose" (Oxford Learner's Dictionaries, 2020). The Game is filled with fun and engagement.

#### 2.7.1 The Definition of GBL

Earlier on many researchers defined GBL mostly focus on that it is a type of gameplay with defined learning outcomes (Shaffer et al., 2005). In most cases, it is assumed that GBL belongs to a digital game, such as computer game, video game, VR game and so on, but this is not always the state.

With further improvement and development of GBL, Zeng (2006) pointed out that GBL from the macro is a teaching activity in the second language classroom in an organized way. Freitas (2004) believed that GBL can engage, stimulate and motivate students in learning the second language.

Hence, GBL is a student-centered teaching approach. It offers an ideal way to attract students to learn more (Burguillo, 2010). In addition, Hasio et al. (2012) carried out GBL not only plays a more active role in the second language learning process, but it makes students learn in happiness.

Compared to the traditional teaching methods, GBL requires teachers to create more opportunities for students to learn more in fun.

# 2.7.2 Using GBL in Chinese Language Teaching and Learning

Zeng (2006) has emphasized that GBL makes teaching circumstances full of freedom, relaxation and happiness in a second language classroom. For students, they are seeking more interesting learning experiences than sitting in the traditional class.

An increasing number of Chinese researchers have been discussing the role of Game-based Learning (GBL) in Chinese language learning in Thailand. A review of literature expounded many games that could be effectively used in Chinese language learning.

To begin with, Feng (2008) found that once a positive way of engaging Chinese learner was by using the GBL. Avoiding the feeling that Mandarin is difficult for learning, GBL is mostly used in speaking class. Hu (2014) added that using GBL could improve students' intelligence and emotion to practice the Chinese language. Chen (2010) presented that using GBL in learning could improve students' creativity and inspire learning passion. Moreover, Wang (2011) pointed out GBL also is an effective way to involve adults in learning Chinese.

Peng (2015) designed eight games for secondary school students to learn basic words by linking to actions and performance. She stated that learning Chinese in a relaxed environment is an ideal way to engage students studying and practicing consistency, for example by performing it in a game. It aimed at helping students practice memory Chinese vocabulary, review and enhance more vocabulary, and explore their knowledge of Chinese as well.

Teachers selected same reasonable games for foreign learners who have a different cultural background, which allowed the student to reinforce self-confidence on Chinese language learning (Ma, 2011). Zhu (2019) pointed out many games based on different language knowledge cases. Some pf the games showed that it not only can increase students' knowledge of vocabulary through group activities, such as judgment and confidence, they also have the potential to promote engagement and creativity.

GBL not only increases their interest in learning Chinese but enhances their memory of the Chinese vocabulary (Han, 2009). Tan (2012) mentioned that when teachers use GBL in the class, it is important to place the teaching goal in the first step. Zhu (2017) designed fifteen learning games with cards based on language knowledge in order to help students learn Chinese pronunciation, vocabulary and sentences. His research was an attempt to address student engagement problems through different games and focuses on recognizing and speaking correct Chinese characters by developing students' ability of second language learning skills.

In conclusion, in the past few years, GBL has been used in the Chinese language learning classroom by a range of scholars and teachers in order to promote interesting among Thai school students. It is found that most GBL strategies are to be used to improve primary student Chinese language ability, while others tended to focus on using GBL in Chinese language teaching. Meanwhile, many researchers reckoned that GBL can be used to motivate students to learn Chinese and also increase students learning interest. However, according to all researches done by previous literature, there is a limited investigation on using GBL methods in Chinese vocabulary acquisition under Thailand context. With all benefits of GBL mentioned above, and since the students in this study are all Thai students who have limited Chinese background, the researcher would like to conduct the research by using GBL. It is expected that this will help improve Thai students' Chinese vocabulary learning achievement as well as enhance their learning engagement.

### 2.7.3 Types of GBL in Chinese Language Learning

There are multiple types of GBL in Chinese language classes. In this section, the types of GBL in Chinese language teaching and learning are elaborated.

Zhou (2009) has classified games in six parts based on language knowledge such as pronunciation (40 cases), vocabulary (58 cases), Grammar (61 cases), Chinese characters (57 cases), sentence (15 cases) and communication (73 cases). As a guidebook of novice teachers, his research contains many types of teaching games and

skills, aiming to help teachers who work abroad and are almost involved in scripts of Chinese language learning.

According to Yang's research, she has designed 72 games from the process of the class such as warm-up, teaching period and outcomes. She holds that at warm-up step teachers have to combine the knowledge points they have already learned, to lead students to a new topic with different games. Secondly, to avoid spoon-feed education, teachers have to teach in a fun way to inspire students' interests. Finally, students are able to communicate with others in Chinese what they learned through games (Yang, 2009).

Ding (2006) focused on the difficulty and importance of Chinese language learning and pointed out the key of Chinese language learning research should be on how to make foreign learners master the rule of Chinese language, enhance practice in real social intercourse. So that he separates it into three parts according to the level of learners such as primary, intermediate and advanced.

Regarding the main course in Chinese teaching, Feng (2008) has provided that teaching games that are divided into comprehensive class and skills courses. The teachers who have rich experiences use GBL to run through one class by listening, reading, speaking, writing and others.

Due to the different subjects of games, Zhu and Liang separated them as action, speech, performance (Singing, witty skits, comedy, etc.), take a guess, memory, investigate, chart, puzzle and sports balls (Zhu & Liang, 2008).

Wang (2008) proposed GBL including puzzle game, knowledge game, physical game and non-physical game, Racing game, cooperative games and so on.

Among these studies, the researcher will select four original games and updating, then using them in this study.

# 2.7.4 Types of GBL in this study

Zeng (2015) designed "时钟表演 (to be a clock)" to help students understand and remember the time range in Chinese. Students were split into two groups and there were 20 students in each team. Two students from each group take part in the game at each round and they will get a note with time in a 24 hour time system. Then they will act as the hour hand and minute hand respectively so that their group will take a guess what time it is. The winner will be the first group who will give the correct answer. According to the feedback, "时钟表演" indeed brings students a lot of energy and helps them to cooperate and study from each other. By the way contrast, Ren (2018) divided students into four groups to play this game. Also, she added different rewards and punishment, such as one group will lose one point if they do the wrong actions. Bai (2019) found that this game not only recalls students' exciting knowledge but also enhances cooperation among students.

According to Lin (2010), "老稂, 老稂几点了? (What time is it, Mr. Wolf?), is one favorite game for students to learn Time in Chinese class. Li (2013) has added some animal masks into this game in order to help primary students to practice time in Chinese. Instead of playing in the classroom, Xu (2013) carried out this game on the ground, and also separated two groups to play this game. Ren (2017) updated this game by adding more vocabulary.

你来比划, 我来猜 (You perform and I will guess)" to help students master the vocabulary. Tan (2015) mentioned that this game emphasizes body language and vocabulary. Moreover, it received good value from students in improving student vocabulary learning. Chen (2017) used this game to help students learn the vocabulary of sports, and had positive feedback and outcome from students. Li (2017) found that students have become more active in engaging in the classroom through this game. Moreover, Zhao (2017) selected four theme topics to help students review the vocabulary and also let students as a host during the process of the game. Additionally,

Ren (2018) connected "你来比划, 我来猜" to "传话游戏(Game messenger)" to help students master and enrich the vocabulary. Wang (2018) developed that students could draw a picture on board according to the given words and the other take a guess.

"悄悄话游戏 or 传声简游戏 (Chinese whisper)" is a game in which players form a line. The first student comes up with a message from the teacher and whispers it to the ear of the second students in the line. Then the second one repeats the message to the next one, and so on. The last one announced the message after they heard from the entire group. Liu (2018) mentioned that using this game to help students to pronounce the vocabulary of fruits fluently. Yuan (2015) noted that students could practice the listening of vocabulary exactly. Cao (2015) developed that the first student has to recognize the character of vocabulary and repeat it to the next one through games, which enrich student memory and thinking. Zhao (2017) carried out the last student had to write drown Pinyin, character and meaning on board after the game.

Thus, many researchers used four games, such as "老狼,老狼几点了?""时钟表演", "你来比划我来猜" and "传声筒", to learn the vocabulary of different themes. Due to its effectiveness, the four games will be used in Chinese vocabulary learning class.

### 2.8 Related Theories

Generally, constructivism has emerged as a dominant paradigm in education over the years. It is important for teachers to understand learning theories in education and to meet students' needs. Learning theories not only give a deeper insight into students' prior knowledge but also guide teachers to use appropriate approaches to further enhance learning.

#### 2.8.1 Constructivism

Constructivism as a learning theory that describes how learners acquire knowledge and it has been written about by many researchers and given several different interpretations.

To date, many researchers developed Vygotsky's theory, the one foundation of constructivism. He defined the ZPD (Zone of Proximal Development, figure, 2.4).



Figure 2.3 Zone of Proximal Development
Source: Vygotsky, 1978

The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in collaboration with more capable peers (Vygotsky, 1978, p.86)

Moreover, the definition of constructivism was come up with by Watts, constructivist learning is always an interpretative process involving an individual's constructions of meaning relating to specific occurrences and phenomena. New constructions are built through their relation to prior knowledge (Watts, 1994, p.32).

It explains how language is constructed actively by the experiences of the learner (Elliott et al., 2000). It can be traced back to the cognitive theory of Jean Piaget

referring constructivism theory. Piaget the father of the theory of constructivism, he was one of the first to put forward the notion that each student constructs the new knowledge individually built on their involvement (Gould, 2012). According to Von Glasersfeld (1995), knowledge cannot be passively received but built up by learners who engaged in a meaningful learning process. So that the constructivist focuses more on the process of knowledge learning (Jones & Brader-Araje, 2002). The constructivism theory has had an impact on the development of pedagogy, rooted in the cognitive-developmental of Piaget and the sociocultural theory of Vygotsky, and also on the linguistic investigation into literacy.

Bruner (1985) explored that constructivism theory is an interactionist approach to develop language skills and increase linguistic expression. During early childhood, parental input plays an important role in the acquisition of linguistic forms. Kolb defined there are various factors influencing a person's development with three stages such as Acquisition, Specialization and Integration (Tang, 2016). Schank's Theories (1980) addressed the structure of knowledge, with a particular interest in language understanding and critical things.

Wolff (1997) has outlined the features of foreign language teaching on constructivist lines. Moreover, he claimed that learning can only be influenced by teaching in a very restricted way. Constructivist, student-centered learning, allows learners to decide the fragments and sections of the materials provided by teachers. Sengupta-Irving and Enyedy (2015) showed that students can construct additional knowledge by engaging the students with the collaborative writing task they made noticeable progress.

Constructivism considers four components in a learning environment with the situation, cooperation, communication and meaning construction. When students fill in GBL classes, they will seek clarification from teachers or other students. They have to reconstruct what vocabulary they learned and create more meaningful knowledge to finish the teaching goals (Xing, 2019).

# 2.8.2 Stephen Krashen's Theory of The Second Language Acquisition

Second language acquisition theory explains how people who already have one mother language learn another language. Up to now, linguists and psychologists developed many theories related to SLA. It is one well-accepted theory of SLA by Krashen, which has had an impact on the area of second language research and teaching. His theory focuses on how language knowledge is received, organized, stored and retrieved by learners (Wang, 2006). There are five main hypotheses in Krashen's theory as follows;

1) The Acquisition-Learning hypothesis; 2) the Monitor hypothesis; 3) the Input hypothesis; 4) and the Affective Filter hypothesis; 5) the Natural Order hypothesis (Krashen, 2002).

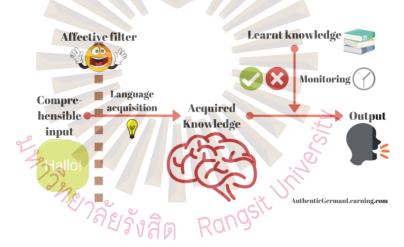


Figure 2.4 A simplified graphic of how language acquisition works

Source: Mark, 2021

According to Krashen, "learning" and "acquisition" are totally different systems. Language acquisition is defined as progress in second language learning subconsciously without teaching on purpose. It requires that learners focus on language performance, not forms (Song & Guo, 2010). Besides, it will improve the SL ability of learners directly by acquisition while learning as a helper to understand the language structure (Wang, 2010). A deductive approach in a teacher-centered setting produces "learning", while an inductive approach in a student-centered setting leads to

"acquisition" (Hattie & Jaeger, 1998). Therefore, teachers should put the teaching points on language expressions based on the needs of students and help them to learn Chinese in a real language environment and meaningful games (Zhu, 2018).

The Monitor hypothesis describes a way to connect with a monitor which corrects the form we accept the knowledge of a new language. It helps learners to scan the errors and increase their acquisition ability. Gass and Selinker (1994) mentioned that three conditions composed of the monitor hypothesis as follow: 1) Teachers have to leave rich time for learners to remember learned knowledge and let them apply it in real communication; 2) Considering the language form when learners expressing it is correct or not; 3) Teachers have to lead learners to know the rules of the target language and make sure they have effective communication. GBL has a direct link to the monitor hypothesis. Teachers as a monitor are able to guide students to practice the Chinese language correctly when they design the GBL in the class.

The third is the Input hypothesis that Krashen is an attempt to explain how SLA be acquired by learners. According to Input hypothesis, Wen (2020) separate it from four components as follows: 1) the number of input. Teachers have to set a reasonable number of teaching plans in a class after knowing the schedule of teaching, student's age and Chinese language level. 2) The quality of input. The input quality is important for teachers to teach students. On the one hand, teachers have to follow the model of 'i+1' input. For example, if a student is at stage 'i', then teachers will set a step by step challenge for him in order to improve his language acquisition ability. The other side teachers have to make sure of a Comprehensible Input, which means learners could understand the new input that is one step beyond their current stage of linguistic competence. 3) The approach of input. To make sure learner's input, teachers have to create an interesting class environment so that students acquire knowledge with happiness. 4) The condition of input. Teachers have to take account of manifold elements that infect the learner's emotions. This view is supported by Peng (2015) that the use of GBL helps students to organize their thinking about the previous knowledge and games to acquire new knowledge. Using GBL also increases students' motivation and engagement.

The Affective Filter hypothesis embodies that language input could be intake only through an effective filter (Wang, 2006). Krashen (1982) claimed that learners, who have high motivation, a good self-image, self-confidence and such positive emotion, are better equipped for success in an SLA class. GBL supports that teaching and learning are infected by motivation, self-confidence and anxiety. Due to Mandarin being called the hardest language to learn, it is one foundation of games to reduce students' anxiety and evoke learners' confidence (Zhou, 2018). To the contrary, if the learner is influenced by emotion during the learning progress, then the language output will be less than the input (Liu, 2000). GBL helps students to engage in the joy of playing, to forget the anxiety briefly, to motivate students' study initiative, to enhance learning autonomy and then achieve the goal of teaching target (Tao, 2019).

Finally, the Natural Order hypothesis assumes that the acquisition of grammatical structures follows a predictable order (Fathman, 1975). Whoever learns mother tongue or second language, they normally will acquire some grammatical structures first while others were late (Lightbown & Spada, 1998). As a teacher, it is an obligation to help students acquire language gradually in due order, avoiding a rush for quick results.

Based on Krashen' theory, using GBL in a second language class not only reduces the distance between teachers and students but also increases students' interest in the subjects. For teachers, it is an effective way to design the teaching plan for the student if they understand Krashen'theory.

In summary, it helpful for students to master learning content by using GBL and engage them while studying individual, in peer, groups or as a whole class. Throughout the processes of learning, students construct their meaning of the vocabulary effectively by playing the game. GBL not only enhance students' understanding of vocabulary but also in its retention.

#### 2.9 Related Research and Studies

GBL has been used by a large number of researchers all over the world in various subjects like English, Physical Education, Chemistry and Science. Most studies have similar findings which highlight that the use of game-based Learning has adverse effects on students' interest, engagement and achievement in the classes. Some of the researchers who studied Chinese language learning are discussed below.

Zheng (2019) conducted a study by 80 questionnaires from students and teachers in Bamrung Wittaya School to investigate the effect of GBL in primary school. To students, pre-primary students have more interests in GBL, and most students prefer team competition in-game activities. Due to reducing the scale of "Chinese is too hard to learn", GBL plays a major role in Chinese language learning classroom. According to the results of analysed questionnaires, most teachers use games as review and practice tools to improve students' Chinese ability into the class. It was also found that GBL was most effective for students to pay more attention to the class.

Quasi-experimental research with pretest and posttest was conducted by Zhu (2019) to analyse the effect of GBL on pronouncing learning, word learning, vocabulary learning, grammar learning, syntax learning and culture learning in Chinese comprehensive classes. The participants of this study were Mattyom students from 16 to 18 ages. The experiment group was instructed on a series of Chinese language knowledge by using GBL, and the control group was taught using the normally teacher-centered method. The research indicated that using GBL not only improved vocabulary recognition and meaning knowledge but also increased students' scores.

Nan (2018) carried out a study to investigate the attitude of secondary school students in Chinese language learning classes. There were two groups in this study, one experimental group was using Thai native games in the Chinese vocabulary classes, and the other control group was used by traditional teaching methods

(TTM). After three months, the finding indicated that the students exposed to GBL had higher scores than those taught through TTM.

Ni (2018) carried out a study to examine what nature of games students like more in the secondary Chinese classroom. By observing five cases in Grade 7, Grade 8 and Grade 9 classes for nine weeks, the researcher found out students prefer the game with interesting, principle and challenge. According to the characteristics of Thai students, the game is a key to engaging them in the class activity. All grade students paid more attention to studying when they were involved in a game and chose to join one's own accord.

Zhu (2017) carried out using games in teaching Chinese to Thai students at a basic Chinese level. A total of 56 students from Aksornsiri high school participated in the study. The instruments used were pre-questionnaires, post-questionnaires, pretest, posttest, classroom observations and interviews. Pre-questionnaires and Post-questionnaires were analysed to determine the acceptance of using GBL over traditional teaching methods in the classroom. Pretest and posttest scores assessed students' grasp of what they are being taught. The result showed that GBL had positive effects on students with increasing scores and interests. The students were found interested in the comprehensive course writing and speaking. Even the students who never or rarely volunteered to learn the Chinese Language also started considering taking the Chinese language as a major when they move to university.

Liu (2016) conducted quasi-experimental research to find out different types of GBL have a different effect on Chinese vocabulary learning. The study samples were divided into two groups. The experimental group was taught Chinese vocabulary using GBL methods and the control group was taught using the traditional approach. The questionnaires on interest in learning Chinese were used after Chinese classes. It showed that GBL significantly engaged students' involvement and increased their learning interest.

In 2015, Wu conducted question-experimental research to find out whether foreign students' Chinese language level taught through GBL performed better in vocabulary learning assessments. The samples were separated 40 students into two levels, the primary level divided into GBL class and Non-GBL class; on the other hand, the intermediate level also has two classes the same as the primary level.GBL classes were taught with the use of four games (Pinyin code, Retention in a flash, Word stone poker and Take a guess by given meaning), and Non-GBL classes served as traditional teaching methods. As a result, the students in GBL classes, whether at primary level or intermediate level, received not only better scores but also engaged in learning activities, and have more interest in Chinese class.

Qin (2015) carried out that to examine the effects of GBL on students' achievement in Chinese vocabulary acquisition. During sixteen weeks, the researcher added ten games into the experimental class after the normal teaching such as the graphical method, translation method and expository method while only TTM were used in control classes. All students' Chinese vocabulary level is at the same stage before the experiment with their baseline data collection. With the use of GBL, the students achieved a huge increase with the ability to master vocabulary better throughout comparing the pretest and posttest.

To sum up, the use of GBL appears to have a major impact on student's learning engagement, interest and achievement. The aforementioned related studies and research prove that using GBL in learning the Chinese language is an effective teaching pedagogy. It not only makes students engage in in-class activities but also develops their spoken Chinese language, writing skills, memory ability of Chinese vocabulary, cooperation among students and critical thinking of students. GBL serves as tools by which every student is involved while working in groups during the process of teaching and learning the Chinese language. Therefore, teachers should consider integrating GBL in the class.

#### **CHAPTER 3**

#### RESEARCH METHODOLOGY

This chapter describes the research design, the population and the sample of the study, the research instruments, data collection procedures and analysis. It also explains the validity and reliability of the research instruments in the chapter.

# 3.1 Research Design

This study design used mixed methods that allowed the researcher to figure out the learning outcomes and learning engagement in order to find the effectiveness of Game-based learning in Grade 8 students. Mixed methods research combines elements of qualitative and quantitative research approaches in a single research study (Johnson, 2017). Besides, one benefit of mixed methods was the flexibility that supported researchers to promise educational ideas (Conrad et al., 2014). Moreover, Creswell (2011) explained that the mixed methods afforded an expanding understanding to address the research issues through utilizing data.

Quantitative data was collected through learning achievement tests. The qualitative was collected by semi-structured interviews and classroom observation. The learning achievement tests included pretest and posttest which were conducted to compare students' learning achievement before and after the treatment. The semi-interview and classroom observation were conducted to figure out students' opinion by using games to learn Chinese vocabulary. Further, the game was incorporated into the lesson plans and implemented for the treatment purpose.

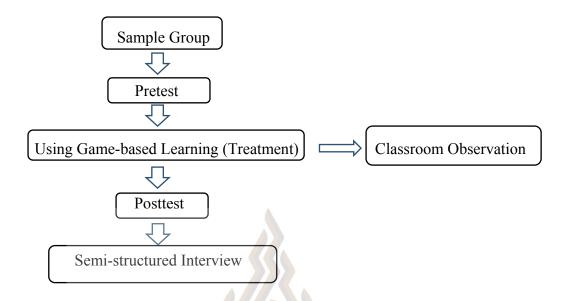


Figure 3.1 Research Design

# 3.2 Population of the Study

The study was carried out in one of the schools in Bangkok, the central part of Thailand. The school had only one section of Grade 8 with 20 students in the academic year 2020. The researcher took all 20 students in one classroom as research participants. The age range of the participants were 13-14 years old with mixed gender and Chinese ability.

# 3.3 Research Instruments

The researcher used four instruments to collect the data. These included four lesson plans, a learning achievement test (pretest and posttest), semi-structured interview and classroom observation.

### 3.3.1 Lesson Plans (An Intervention Instrument)

The researcher designed 4 lesson plans of 50 minutes each for this study, to teach "Lesson 4 and Lesson 5" from Grade 8 Chinese textbook. The topic was divided

into 4 sub-topics and was taught for over four weeks. The research participants attended two sessions in one week. Each class lasted 50 minutes.

The researcher chose four different games from many types of games due to the time frame of just one month and the suitability with students' level of .Chinese competency The lesson plans details are as follows:

Table 3.1 List of topics

Time	Topics	Games	Minutes
Week 1	Vocabulary about clock	时钟表演	(50mins/per class)
		(To be a clock)	
Week 2	Vocabulary about Time	老狼老狼, 几点了?	(50mins/per class)
	Range	(What time is it, Mr. Wolf?)	
Week 3	Vocabulary about	你来比划, 我来猜	(50mins/per class)
	Activities at school one	(You perform and I will guess)	
	day		
Week 4	Vocabulary about	传声筒	(50mins/per class)
	Activities after school	(Chinese whisper)	

The games were applied before, during and after instructions to teach Chinese vocabulary to students as shown in Table 3.2.

Table 3.2 Integration of Games to Teach Chinese Vocabulary

Lesson Plan Components	Game		
Lesson Introduction	Before instructions- to review the known vocabulary		
Lesson Development	During instructions- to teach concept  Round one- original game  Round two- updating game  Round three-updating game		
Lesson Closure	After instructions to summarize and evaluate the students' learning.		

In the beginning of the lesson, the researcher used exchange greetings to warm up and evoked the students' prior vocabulary. Then the game was used during the lesson development to enhance students' memory and engage students into the Chinese vocabulary learning activity. There were four games that were used in this study. So whenever a new game was introduced in the study, the researcher followed the three cycles of learning. Finally, it was for lesson closure to summarize and evaluate the students' learning outcome of the lesson (see Appendix C for Lesson Plans).

### 3.3.2 Quantitative Data Collection Instruments

The quantitative data was collected through learning achievement tests, including pretest and posttest.

### 3.3.2.1 Vocabulary Skill Tests

Learning achievement test consisted of pretest and protest, comparing the learning achievement of the students, before and after the treatment. Pretest was collected before giving the treatment and posttest was collected after the treatment to the participants (see Appendix D for protest and posttest). Pretest and posttest consisted of three sections: The first section was multiple choices about Pinyin, meanings and Chinese Characters. The second section was the blank-filling test and the last was writing. The test topics were based on Lesson 4 and 5 from the "体验汉语 Experiencing Chinese" book of Grade 8 (Compilation of the international Centre for language research and development, Thai version published in 2010).

#### 3.3.3 Qualitative Data Collection Instruments

#### 3.3.3.1 Classroom Observation

Classroom observation had been regarded as a tool to identify instructional problems since the 1970s (Bossert, 1979). Furthermore, Walberg (1999) insisted that a number of classroom observation significantly relates to students' learning achievement (Walberg, 1991). It was also used to evaluate the teaching

performance (Samra & Azamat, 2014), and improve teachers' teaching ability (Allright, 1988).

In this study, a peer teacher observed students' behavior and took observation notes during the games time. The aim of classroom observation was to help students engage in the game and improve students' vocabulary acquisition. The classroom observation date details are as follows:

Table 3.3 Observation Schedule

GAMES	SCHEDULE	
"时钟表演"	Class 1	
"老狼,老狼,几点了?"	Class 2	
"你比划,我来猜"	Class 3	
"传声筒"	Class 4	

# 3.3.3.2 Semi-structured Interview

The researcher conducted semi-structured interview with each student at the end of the treatment. The semi-structured interview consisted of five items which are open- ended questions to figure out the students' opinions about the attitude of the learning Chinese vocabulary by using games.

# 3.4 Validity and Reliability of the Instruments

# 3.4.1 Content Validity

Content validity was also judged on the basis of the extent to which statements or questions represent the issue they are supposed to measure, as judged by you as a researcher, your readership and experts in the field (Kumar, 1996).

To ensure the instruments conform to the standards, Item-Objective Congruence Index (IOC) was used to evaluate the validity of the instruments. The outcomes of the items of the lesson plans were based on the score range from -1 to +1.

+1 indicated that the item can meet the objective.

0 indicated that it is unclear or uncertain whether the items can meet the research objectives or not.

-1 reveal that the item is irrelevant to the objectives.

Considering the accuracy and acceptability of the test, the value of IOC should be between 0.67 and 1.00. Namely, the items need to be revised if the value below 0.67.

All the instruments for this study were rated above 0.67 by the experts which indicated that the items were valid. The IOC for lesson plans and achievement test, were rated +1,. the semi-structured interview questions was +0.87, and the classroom observation was +0.67. (These IOC for lesson plans, achievement test, semi-structured interview and classroom observation are attached in appendix B)

### 3.4.2 Reliability

To check the reliability of the achievement test, the researcher conducted pilot test with 30 students in other school as a sample group. Pretest and posttest would be given to the students. Kuder-Richardon formula (KR-20) applied to examine the reliability of the learning achievement test. According to the KR-20, it is reliable if the coefficient is equal to or greater than 0.70 for the instruments.

The Cronbach's Alpha for the learning achievement test was 0.930 greater than 0.70. Thus, the instrument was reliable and acceptable to be used in the study (See Appendix G for the Reliability Test Report).

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#### 3.5 Data Collection Procedures

#### 3 5 1 Ethical Consideration

Considering the participants were 13 or 14 years old, the researcher informed their parents about the study, and sent the consent letter to each parent of the participant.

Besides, the researcher ensured that the of the information of the students would be anonymous and confidential at all times. (See Appendix H for informed consent)

# 3.6 Data Analysis

The data, including quantitative data and qualitative data, was analyzed in two parts. The quantitative data was collected with the learning achievement test scores of pretest and posttest, and qualitative data was conducted by classroom observation and semi-structured interview.

#### 3.6.1 Quantitative Data Analysis

The quantitative data was collected through Pretest and Posttest. The data obtained from the pretest and posttest scores was accessed to compare the learning achievements of the participants before and after the use of games. The pretest and posttest included two parts 11 questions that comprised a mixture of multiple choices, matching, filling in the blanks and short-answer questions. Wilcoson signed-rank test was applied for data analysis.

# 3.6.2 Qualitative Data Analysis

Qualitative data refers to non-numeric information such as class observation. While analyzing qualitative data, the researcher used content analysis method to analyze the data collected from semi-structured interview and classroom observation.

### **CHAPTER 4**

### **RESULT AND DATA ANALYSIS**

This chapter presents the quantitative and qualitative results of the data collected from pretest and posttest, semi-structured interviews and peer classroom observations to answer the research objectives of the study.

# 4.1 Quantitative of Data Analysis

Quantitative data collected from students' learning achievement in Chinese vocabulary included pretest and posttest.

# 4.1.1 Data Analysis of Pretest and Posttest

The prime objective of the research was to compare the learning achievement of grade 8 students in Chinese vocabulary before and after using game-based learning. The quantitative data were analyzed using the Wilcoxon signed-rank test with a total of 20 students who took part in the study.

Table 4.1 Pretest and Posttest Raw Scores

Student	Pretest	D 11	D:00	D 1 CW/I
Number		Posttest	Difference	Rank of Wilcoxon
1	5	9	4	6.5
2	5	8	3	3.5
3	5	14	9	14.5
4	7	11	4	6.5
5	6	9	3	3.5

Table 4.1 Pretest and Posttest Raw Scores (Cont.)

Student Number	Pretest	Posttest	Difference	Rank of Wilcoxon
6	5	10	5	8.5
7	6	12	6	10.0
8	2	5	3	3.5
9	6	11	5	8.5
10	0	3	3	3.5
11	11	20	9	14.5
12	12	20	8	11.5
13	5	15	10	17.0
14	11	20	9	14.5
15	6	8	2	1.0
16	10	18	8	11.5
17	9	18	9	14.5
18	228	20	12	20.0
19	9/78	20	11 giř	18.5
20	7	18	11	18.5

According to Table 4.1, it shows the raw scores received from students in pretest and posttest, along with the Wilcoxon difference in scores.

In the pretest, the highest score of the students was 12 and the lowest score was 0, whereas in the posttest the highest score of the students was 20 with the lowest score of 3. Student No.18 showed the highest difference of 12 points, while student No.10 showed the lowest but increase of 3 points in the posttest. The result scores showed that all students' posttest scores were higher than their pretest scores.

Table 4.2 Wilcoxon Signed Rank Test Result

Ranks of	Wilcoxon	N	Mean Rank	Mean Rank	Sig. (2-tailed)
	Negative Ranks	O <sup>a</sup>	.00	.00	
Posttest- Pretest	Positive Ranks	20b	10.50	210.00	
	Ties	0°			.000
	Total	20			

- a. Posttest < Pretest
- b. Posttest > Pretest
- c. Posttest = Pretest

Table 4.2 shows the Wilcoxon signed rank test analysis of the data from pretest and posttest. None of any participants had negative rank (N=0). The Positive rank showed N=20, which indicated that every student had improved their scores in the posttest as compared to pretest. The Sig. value was .01, which proved the result was statistically significant.

Table 4.3 The Mean Comparison Between Pretest and Posttest

Test	N	Mean	Mean Difference	Standard Deviation
Pretest	20	6.75		3.007
Posttest	20	13.45	13.45-6.75=6.70	5.549

Significance level (P) < 0.05-Significant\*

Table 4.3 shows the mean and SD of the pretest and posttest score before and after the use of game-based learning. The pretest mean score was 6.75 and the posttest mean score was 13.45, with the mean difference of 6.70. The standard deviations were 3.007 of pretest and 5.549 of the posttest respectively.

# Comparison of Pretest and Posttest Means

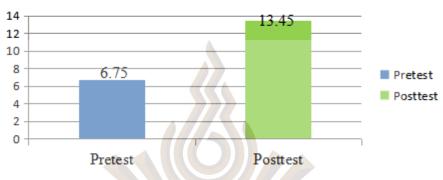


Figure 4.1 Pretest and Posttest Means Comparison

Figure 4.1 further illustrates a comparison of pretest and posttest mean scores. According to the data analysis, it can be interpreted that the posttest means score was much higher than the pretest which signifies that game-based learning in Chinese vocabulary class evidently had a positive impact on the learning achievement of Grade 8 Thai students.

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# 4.2 Qualitative Data Analysis

The qualitative data were collected through the semi-structured interview and peer observation. Semi-structured interview data were collected at the end of the experiment. And peer classroom observation data gathered from peer Chinese teachers during the classes through filling in the form provided by the researcher.

### 4.2.1 Analysis of Semi-Structured Interview

The interview was carried out at the end of the study with the sample group, consisting 20 Grade 8 Thai students. For protecting the privacy of the research participants, they were numbered as student 1 (S1), student 2(S1), student 3(S1) and so on. The students were allowed to speak in the language they felt comfortable to share their opinions on the study. The data were analyzed by using thematic analysis where each participant was interviewed 5 open-ended questions. The response of students was audio recorded and translated into English. The results of the analysis were described below.

Question 1: How did you feel about learning Chinese vocabulary by using games?

It was found that almost all participants preferred to learn Chinese vocabulary by using games. Interest was the predominant emotion which actuated students to learn Chinese vocabulary more enthusiastically. They were not humdrum and enjoyed the classes through games. Moreover, game-based learning made learning easy, which encouraged them to learn and be engaged in the games. Some of the responses by the interviewees are shown as follows;

- S4: "I felt happy because it was very interesting. I used to find Chinese a bit wearing and couldn't focus on study very well but this time I did enjoy Chinese classes."
- S7: "I felt great. I enjoyed the games, in particular, and I found play games are helpful for me to practice the vocabulary I learned."
- S18: "I felt it is pretty fun. I used to be afraid of my friends might laugh at me when I speak in Chinese but this time my friends not only aid me in speaking but also encourage me, which give me more confidence."
- S12: "I am used to reading Chinese vocabulary with Pinyin but this time I tried to recognize Chinese character without Pinyin. It is a challenge but I like it."

Question 2: Did you enjoy the lesson by using games to learn Chinese vocabulary with the teamwork?

All participants stated that they enjoyed the Chinese vocabulary class through game-based learning. All students confirmed that it helped them to enhance their vocabulary skill and speaking ability. Some students enjoyed playing and learning with friends because they felt happy, relaxed and comfortable; some felt cheerful because they had effective cooperation, and others felt it was worth spending time on learning with friends to make it fun and memorable. Some responses regarding the enjoyment are presented below.

S1: "Yes, I enjoyed it a lot. Especially, I found the different strengths from others, which made me learn a lot from my friends. Besides, my friends helped me how to pronounce and remember some vocabulary."

S6: "Yes, I enjoyed group discussions and learning together with my friends. Above all, we did good cooperation and had the best score compare to others."

S17: "Yes, I enjoyed and make the most of the time when we played games together and it would be a good memory. I think we become more close to each other and."

Question 3: Which game in the class did you like the most? Please explain.

There were four games in this study as follow: 1) "To be a clock" - 身体时钟 2) "Mr. Wolf, Mr. Wolf, What time is it?" -老狼老狼,几点了?; 3) "You perform and I will guess" - 你来比划,我来猜; 4) "Chinese whisper"-传声筒. It was found "Mr. Wolf, Mr. Wolf, What time is it?" and "You perform and I will guess" were well-loved games, which made some students laugh a lot and given others a sense of achievement. Two students thought "To be a clock" was fun because it helped them to practice their listening skill and to master vocabulary about the time exactly. Four students thought Chinese whisper was a challenge for them, which was hard to recognize the correct words but still full of fun. Although all students enjoyed playing games in class, two students said they preferred to play games on Apps or online, such as Kahoot.

Games	Mr. Wolf, Mr. Wolf, What time is it?	To be a clock	You perform and I will guess	Chinese whisper	Others
Number	6	2	6	4	2

Table 4.4 Distribution of Participants' Responses of Favorite Games

- S2: "The game (To be a clock) helped me to understand the vocabulary of Time in Chinese and it is impressive."
  - S7: "The game (Chinese whisper) was easy to play and made us a lot of fun."
- S9: "The game (You perform and I will guess) helped me do the performance in public bravely and practiced the vocabulary about the school-day activities."
- S11: "The game (Mr. Wolf, Mr. Wolf, What time is it?) brought laughter to us. It requires good listening and fast reactions."

Question 4: Did you think it was helpful for your Chinese vocabulary learning by using games? How?

Most students during the interview shared the use of games helped them improve their vocabulary and speaking skills in Chinese. According to students' opinions, if games were constantly used, it would improve their listening and speaking in Chinese classes. Game-based learning created an active classroom atmosphere, so that it invoked the students learning initiative and led them to have a better understanding of Chinese vocabulary. The interesting responses by the interviewees are shown as below.

- S10: "Yes. Before I didn't participate in many in-class activities, but up to now, by using games I can easily remember the numbers, clock, minutes and second."
- S5: "Yes, it's helpful. I understand and memory the activities vocabulary in Chinese better than repeat after the teacher."
- S18: "Yes, it helped me to focus on study easier. Furthermore, I can recognize some Chinese character without Pinyin, which is a big progress."

Question 5: Did you expect the next Chinese lesson learning by games? Why?

The results from the interview indicated that the four type games were favoured by students in Chinese vocabulary classes so that they were expecting more games in the next classes. During learning of Chinese language classes, the students enjoyed immensely in games that aroused their interests. Games connected the association between learning a language from the books and the use in the real situation. This was the main purpose for students to acquire a language through a taste of games. Some responses concerning this matter are presented as follows.

- S13: "Yes. Playing games in classes are different from other normal classes, which make the Chinese classes full of fun."
- S15: "Yes. It is no doubt that games provide a relaxing, engage and interesting learning environment for me to practice Chinese."
- S20: "Yes. Playing games in Chinese classes is a better method to help me understand Chinese vocabulary and remember them profoundly."

### 4.2.2 Analysis of classroom observation

Observation data were collected from peer teacher concerning four key categories below:

- 1) The lesson objectives of observation;
- 2) Instructor observed notes;
- 3) Students' attitude observed notes;
- 4) Suggestions and recommendations.

### 4.2.2.1 The teaching objectives of observation

By the vocabulary of lesson 4 and lesson 5 from Experiencing Chinese of secondary series 2, the peer teacher observed the lesson objectives of each class as the first thing. Furthermore, it was also observed whether the game was related to the lesson objectives or not.

The lesson objectives of observation form 1: Review Numbers and Learning Chinese vocabulary with time. The Game "To be clock- 时钟表演" followed up with the learning objectives.

The lesson objectives of observation form 2: Review the vocabulary of time and learning time range. The Game "Mr. Wolf, Mr. Wolf, What time is it?-老狼老狼,几点了?" corresponded to the learning objectives.

The lesson objectives of observation form 3: Review the vocabulary of time range and learning vocabulary with activities. The Game "You perform and I will guess.-你来比划我来猜?" was satisfactory.

The lesson objectives of observation form 4: Review the previous vocabulary and learning vocabulary with extra activities. The Game "Chinese whisper.-传声筒?" was connected to the learning objectives.

#### 4.2.2.2 Instructor observed notes

At this part, the peer teacher had to observe the teachers' behavior and teaching ability in the classroom, for example conveying information to students clearly or not. Students' behavior was observed as well. One aim of observation was to promote the quality of teachers' teaching and develop the learning ability of students. To meet students' needs, it also was helpful for teachers to shift gears immediately when students proved more or less proficient at the game time than expected.

Instructor observed notes form 1:

(1) The teaching materials were well prepared, including power-point and flashcards; (2) Teacher communicated clearly with students; (3) Reinforced purpose of games in the context of learning goals; and (4) Teacher managed time well.

### Instructor observed notes form 2:

(1) Teacher invited all students to take part in; (2) Teacher enforced class policies as needed; (3) Teacher used appropriate gestures and expressions to explain the rule of games; and (4) Teacher fostered a lively, interesting and inclusive learning environment.

#### Instructor observed notes form 3:

(1) Teacher listened to students' reflection and suggestions; (2) Teacher used examples to convey principles; (3) Teacher promoted students to use prior knowledge to interpret new lesson; and (4) Teacher organized the group randomly.

Instructor observed notes form 4:

(1) Teacher asked complex questions to inspire critical thinking; (2) Teacher left time for students to discuss questions and strategy in the group; (3) Teachers handled disruptive student behavior appropriately; and (4) Teachers gave the right assignments to students.

#### 4.2.2.3 Students' attitude observed notes

### (1) Behavioral Engagement

Form 1: a) Every student followed the teacher and opened their book; b) Some student did not focus on study.

Form 2: a) Almost students followed the classroom norms; b) Students tried their best to memorize the vocabulary.

Form 3: a) Almost all students made full use of the advantage of teamwork to train spelling ability; b) Students started to ask the company for help to pronounce the vocabulary; c) Students asked questions initiatively during the games.

Form 4: a) Almost all students paid good attention to listen the Chinese vocabulary; b) Students practiced vocabulary a lot in order to complete the games and gain the scores.

# (2) Emotional Engagement

Form 1: a) Students had active interaction with their friends. b) Students had more interest joining in playing the games.

Form 2: a) Students were engaged in the games positively. b) Some students showed their hyper-excited feeling to take part in the games.

Form 3: a) Some students found their right place in the team. b) Students cheered up together for their success in games.

Form 4: a) Students had more excitement to play games in the class. b) Students showed their happy voice and joyful action during the process of games.

#### (3) Cognitive Engagement

Form 1: a) Almost all students were able to speak and recognize through listening to the vocabulary of time correctly. b) Some students had a problem with the previous vocabulary they learned.

Form 2: a) Some students were able to create a new vocabulary and phrase according to the learned knowledge. b) Few students had difficulty in listening to Chinese vocabulary with time.

Form 3: a) Some students were able to read the Chinese character without Pinyin. b) Some of the students had problems to speak out the vocabulary correctly.

Form 4: a) Students gained a sense of achievement after finish the workbook. b) Student had more confidence to do the posttest.

### 4.2.2.4 Suggestions and recommendations

Classroom observation was never devoid of suggestions and recommendations that were much more conducive to develop the Chinese vocabulary through games.

Suggestions and recommendations form 1:

Few of students did not pay attention and talked off the topics during playing games. It could be better to implement a reduce scores system to the disruption of the team. Considering doing so at the beginning of class.

Suggestions and recommendations form 2:

It seemed that few of students were confused about the rule of games. It could be better to check students' understanding of games rule occasionally.

Suggestions and recommendations form 3:

When one of the teams had a problem on speaking the vocabulary correctly, it would be better to reduce the difficulty and set a goal for them to make sure they could complete it.

Suggestions and recommendations form 4:

The time limitation of playing games in the class that was spent made students rarely satisfied. The teacher must plan more time for students to play the games, in particular, for the poor students on learning Chinese vocabulary.

The effects of suggestions and recommendations were analyzed to find out the issues of teaching and promote teachers' quality and to facilitate an excellent teaching atmosphere for students. Last but not least, games helped promote students' learning achievement..

# 4.3 Summary

The findings from the semi-structured interview showed that all the students were satisfied with leaning Chinese vocabulary by using the games. Furthermore, game-based learning had a positive influence on students' learning, including students' behavior, emotion and cognitive engagement in the class. It also involved all the students in the class to recall and memorize prior or new vocabulary, to encourage every student in listening and speaking vocabulary until they were able to use it. In the meantime, students not only received the improvement of learning achievement but also had an enjoyable time with their friends in the class. The students expressed positive attitude towards using games to learn Chinese vocabulary and expected more games in the future classes.

The next chapter will present a conclusion and discussion of the results regarding the major findings of the study along with recommendations and suggestions for further research.

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#### **CHAPTER 5**

# CONCLUSION, DISCUSSION AND RECOMMENDATIONS

This part contains the conclusions to the findings of the research presented in chapter 4. It is followed by discussions of the findings and recommendations for future studies and research.

#### **5.1 Conclusion**

In this study, two research questions were proposed as follow;

- 1) Would the use of GBL improve grade 8 Thai students' learning achievement in Chinese vocabulary skill?
- 2) What would be grade 8 Thai students' opinion towards using GBL in learning Chinese vocabulary?

The quantitative data were collected through pretest and posttest, as well as the qualitative data were collected with the semi-structured interview and classroom observation to answer the research questions above.

### 5.1.1 The Result of Test Score Analysis

The researcher used the scores of learning achievement tests (pretest and posttest) to respond to the first research question. The scores were analyzed by using the Wilcoxon signed rank test with a comparison of mean and standard deviation. The data displayed clearly that all the students had increased posttest scores when compared to their pretest scores.

According to the Wilcoxon signed rank test, 20 students had positive rank, none of them got a negative rank, which signified that every student improved their vocabulary ability after the experiment with GBL. The mean score in the pretest was 6.75 and the posttest was 13.45, with the mean of difference of 6.7. The data of mean difference indicated that students performed vocabulary ability better in the posttest than the pretest. The significance value was .000 that indicated a significant increase in the scores of the students in the posttest.

Hence, the researcher concluded that there was significant progress in the learning achievement of grade 8 Thai students when GBL was implemented in Chinese vocabulary class. Thus GBL was found to be effective in learning Chinese vocabulary. Hence, the first research question and the hypothesis (H-The use of GBL will improve grade 8 Thai students' learning achievement in Chinese vocabulary skill) was ascertained.

### 5.1.2 The Results of Semi-Structured Interview Analysis

The semi-structured interview was implemented at the end of the study to figure out students' opinion towards the use of games in teaching and learning Chinese vocabulary. There were 20 students being interviewed with five open-ended questions. Thematic analysis was used to analyze the interview data.

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The result of the interview indicated that most students preferred to have GBL in Chinese vocabulary class than the traditional style of teacher's instruction and rote learning. GBL promoted learning with fun, which motivated students to learn Chinese vocabulary and remarkably increased their learning ability. Students pointed out that GBL drew them to the class and they felt motivated in learning Chinese vocabulary.

Most students expected next class with GBL, and two of them suggested playing the online games such as Kahoot in the future. They expressed that games reduced the difficulty of learning Chinese vocabulary and they could also work with in terms to each other. Among the four games, most of them liked "What time is it, Mr.

Wolf? -老狼, 老狼, 几点了?" and "You perform and I will guess. 你来比划, 我来猜。" Because they could speak Chinese together and they felt interested to do the acting during the games.

Thus, the researcher concluded from the result of the semi-structured interview that GBL gets the students engaged into the class and motivated them to learn Chinese vocabulary more effectively. All of the data were interpreted in the research question 2.

### 5.1.3 The Results of the Classroom Observation Data Analysis

Thematic analysis was used to analyze classroom observation responses. The whole class was observed, including the teachers' teaching progress and students' behavior, emotional and cognitive engagement. Most of the students were observed that they were enjoying in the class; some of the students had a good performance in listening and speaking Chinese vocabulary, and only a few were distracted by others.

However, according to the data obtained from the classroom observation, the use of GBL was evidently effective in learning Chinese vocabulary by grade 8 Thai students.

# 5.2 Discussion

There were two major findings by following the research objectives in this study.

5.2.1 Research Objective 1 - To examine the effectiveness of using GBL for improving grade 8 Thai students' learning achievement in Chinese vocabulary skill.

Form the learning achievement data, the pretest was collected before the experiment. On the contrary, posttest was conducted after the use of GBL in Chinese vocabulary class of grade 8 Thai students. The results of the findings revealed that the mean difference between pretest and posttest was 6.70. The mean score of the posttest

was 13.45 which was higher than the pretest mean score of 6.75. The significance value was 0.000. The data indicated that students had a statistically significant improvement in learning achievement in Chinese vocabulary ability after using games.

It showed that all students increased their scores in posttest more than pretest. Besides, the students had a positive opinion on GBL that helped them to master the vocabulary more easily. These findings were in accord with the findings by Peng (2015) that GBL was most effective for foreigner students to memory Chinese vocabulary. Zhu (2017) also pointed out GBL was used to practice students' vocabulary ability skill.

The study supported that using games could help increase students' outcome on academic achievement in Chinese vocabulary. These findings corresponded with the findings of Qin (2014). The research reported that the scores of the students who were taught using GBL were better than the students who were taught in the traditional method. Zhu (2019) mentioned that GBL could be used by high school students to improve Chinese language learning skill. Through GBL, students not only reduced the difficulty of learning the Chinese language but also paid extra attention to the class so that they obtained the better score (Zheng, 2019).

It is necessary for students to connect prior knowledge to the new vocabulary during GBL. The game "To be a clock-时钟表演" helped students to recall the vocabulary of numbers and memory the new vocabulary of time (Zeng, 2015). "What time is it, Mr. Wolf? -老稂, 老稂, 几点了?" helped to practice the vocabulary of time, and use them into the sentence and dialogue (Li, 2013). The third one "You perform and I will guess- 你来比划,我来猜" is a type of game with communication, which emphasized body language and vocabulary. It helped students to review and gasp vocabulary (Chen, 2017). Liu (2017) reported that "Chinese whisper- 悄悄话游戏" helped students to find out the place of articulation and improve their pronunciation ability. Therefore, the four games used by the researcher in Chinese vocabulary class had positive effects on students' academic outcome.

5.2.2 To investigate grade 8 Thai students' opinion towards using GBL in learning Chinese vocabulary.

Semi-structured interview and classroom observation were the instruments used to get the data of the second objective of the study.

The semi-structured interview was implemented at the end of the study to find out the students' opinion towards using GBL in Chinese vocabulary class. The data showed that GBL had a positive impact on students' motivation, interesting, engagement, interaction and learning achievement.

Almost of them were interested in learning Chinese vocabulary through GBL and all the students expected the next class with GBL. This finding was to meet Han's findings (2009). Ni (2018) reported that the interest of games was the key to attract student to join in and receive knowledge. Feng (2008) also pointed out that GBL not only reduced the difficult feeling in Chinese language learning, but also increased the interesting in learning.

The classroom observation was conducted by a peer teacher at the end of the study to explore the performance and behavior of students in the class. The data were mainly analyzed for the students' attitude using three criteria, including student behavior, emotional and cognitive engagement. It showed that students took an active part in the class and had a positive attitude in the Chinese vocabulary class of grade 8 Thai students.

These findings were consistent with the finding of Freitas (2013). It stated that GBL was a good way to engage the students in learning in the second language. According to the interview, all the students found that they could memorize the vocabulary when they were in a happy and relaxed environment. GBL required the students to engage in the class and focus on the vocabulary to complete the game. This finding was also supported by Ni (2018) indicated the use of GBL involved student into the class activity.

Cooperation was a vital component that contributed to a successful class with student engagement and better learning outcome. Most of the students confirmed that they preferred to play games and study with their friends. Also, they found that sharing and discussing the questions were the basis of learning with fun as well as helping each other and participating in the class with friends. The finding was in line with the finding by Bai (2019), which pointed out that the students could raise their confidence when they worked in a team.

Since the students felt GBL was helpful for them to learn Chinese vocabulary, they were not afraid of the error of speaking even if they could not remember vocabulary properly. It proved that the finding was similar with the Monitor hypothesis of Gass and Selinker (1994). GBL helped teachers to guide the student to practice Chinese vocabulary and led them to use into communication. Besides, GBL helped the student to reconstruct the vocabulary system they had and created more meaningful knowledge when they had to use (Xing, 2019).

Through the interview, students confirmed that GBL was an effective way to learn Chinese vocabulary. Similarly, Lin (2010) mentioned that "Mr. Wolf, Mr. Wolf, What time is it?—老狼,老狼,几点了?" was related to the prior vocabulary of time and the dialogue pattern when asking the time, which was helpful for students to speak and listen. Ren (2017) also reported that "You perform and I will guess- 你来比划,我来猜" helped students to master and enrich the vocabulary effectively.

According to the classroom observation, students were involved in an initiative learning, which was supported by the findings of Fredricks, Blumenfeld and Pairs (2004). GBL could change the behavior of learners who rejected to learn at first because of its difficult but turned out be easier for them when they started learning with games. Ren (2018) reported that GBL was useful to manage students' behavior in the class.

It was found that all the students felt happy when they played games in the class. Students' positive emotions helped influence learning. They kept on learning as they felt comfortable. The finding was similar to the discovery of Zeng (2006). When

observing the student reactions in the class, it was clearly seen that they were interested to play those games. Likewise, another study also reported the same result of students having an interest to learn Chinese (Zhu, 2017).

## 5.3 Recommendations

#### 5.3.1 Recommendation for Practice

This study was implemented to find out GBL in Chinese vocabulary learning of grade 8 Thai students. Following recommendations have been made for the benefits of Chinese teachers and educators from all over the world.

- 1) GBL should be used in the classes to improve students' learning achievement and motivation, and Chinese language teachers are recommended to use the four games with the same topics.
- 2) Teachers also can use the same pattern as the four games to other subjects and other vocabulary topics (e.g. Jobs, sports, place, and weather).
- 3) When using these four games to teach or practice Chinese vocabulary, teachers should make the students understand Pinyin and review the previous vocabulary before playing the games, so that students could easily understand, recall and speak out the vocabulary more effectively.

#### 5.3.2 Recommendation for Future Studies

1) This study was limited to 20 students in grade 8. For further research, researchers with different grade levels and a larger sample size could be helpful to get more information.

- 2) GBL was found to be effective in the listening skills and spoken skills, then, this study could be brought into the listening class or speaking class as well.
- 3) Since the study connected the vocabulary of time with the two different games, so further research could explore other types of games to learn the vocabulary of the time.
- 4) The study was carried out with grade 8 Thai students. Some of them understood Chinese Pinyin so it may not be possible to generalize the findings reported with other Thai students who never studied Chinese. Hence, further study is required for the teacher to know the students' level so that he/she can choose suitable games for teaching and learning.

Chinese vocabulary learning is based on Chinese Pinyin. It will be difficult for Thai students to memorize the words if they do not understand Pinyin well enough. At first, the use of traditional teaching methods makes learning boring. However, GBL is found efficient in helping students learn from peers and speak Chinese vocabulary in a good mood. When the first game played in the class, some students were passive, then, at the second and third class, they not only took an active part in, but also tried their best to speak and memorize more vocabulary.

In summary, the use of GBL appears to be an alternative and effective teaching approach that is necessary for today's classroom, in particular, in the Chinese language class. This helps the students have more effective outcome and positive opinion towards learning. All of this could contribute to satisfactory achievement.

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# APPENDIX A LETTER OF APPROVAL Rangsit University Rangest Rangest University Rangest Rangest

DPE, No. RSUERB2020-059



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

DPE. No. RSUERB2020-059

Protocol Title The Application of Game-based Learning for Chinese Vocabulary

Skill of Grade Eight Thai Students

Principle Investigator Fengjuan Li

Co-Investigator Dr. Nipaporn Chalermnirundorn

Affiliation Suryadhep Teachers College, Rangsit University

How to review Exemption Review

This protocol complies with a "Research with Exemption"

Date of Approval: 16 / 09 / 2020

Date of Expiration: 16/09/2022

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

(Supachai Kunaratnpruk, W.D.)

Chairman, Ethics Review Board for Human Research

# APPENDIX B

# VALIDITY TEST RESULT OF THE RESEARCH INSTRUMENTS



# **Details of three expertise who validated the instruments**

# **Three Experts are:**

SL.	Name	<b>Position Title</b>	Institutes
No			
1	Dr. Ratchaporn Rattanaphumma	Associate Professor	Rangsit University, Thailand
2	Chen Jiang	Master of Arts	University of York, UK
3	Zijie Zhu	Master of Arts	Assumption University, Thailand

# Instruments

- 1) Four Lesson Plans
- 2) Learning Achievement Test3) Semi-Structured Interview Questions
- 4) Classroom Observation Form

# IOC for the Lesson Plans

Statements	Expert 1	Expert 1	Expert 1	ЮС	Remarks
Lesson Plan 1	+1	+1	+1	+1	Accepted
Lesson Plan 2	+1	+1	+1	+1	Accepted
Lesson Plan 3	+1	+1	+1	+1	Accepted
Lesson Plan 4	+1	+1	+1	+1	Accepted
Average	+1	+1	+1	+1	Accepted

# IOC for Pretest and Posttest

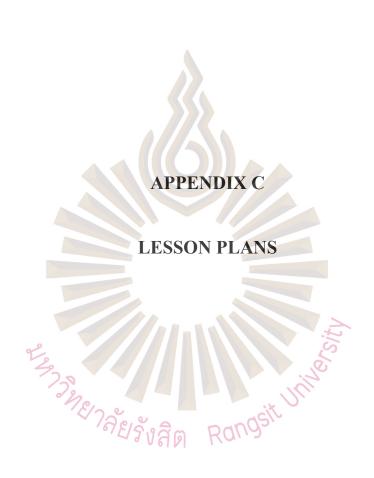
Items	Expert 1	Expert 2	Expert 3	IOC	Remarks
Question 1	+1	+1	+1	+1	Accepted
Question 2	+1	+1	+1	S/th	Accepted
Question 3	25 +1	+1	+1	+1	Accepted
Question 4	43/20	+1	+1	+1	Accepted
Question 5	+1 '67	धरिशतील	Ranti	+1	Accepted
Question 6	+1	+1	+1	+1	Accepted
Question 7	+1	+1	+1	+1	Accepted
Question 8	+1	+1	+1	+1	Accepted
Question 9	+1	+1	+1	+1	Accepted
Question 10	+1	+1	+1	+1	Accepted

# IOC for Semi-Structured Interview Questions

Items	Expert 1	Expert 2	Expert 3	IOC	Remarks
Question 1  How did you feel about learning Chinese vocabulary by using games?	0	+1	+1	+0.67	Accepted
Question 2  Did you enjoy the lesson by using game to learn Chinese vocabulary with team work?	+1	+1	+1	+1	Accepted
Question 3 Which game in the class did you like the most? Explain please.	+1	+1	+1	+1	Accepted
Question 4  Did you think it is helpful for your Chinese vocabulary learning by using games? How?	+1	+1	+1 Nision	+1	Accepted
Question 5  Did you expect the next Chinese lesson learning by games?	ังสิต	Raħţsi <sup>†</sup>	+1	+0.67	Accepted
Average	+0.6	+1	+1	+0.87	Accepted

# IOC for the Classroom Observation

Items	Expert 1	Expert 2	Expert 3	IOC	Remarks
Question 1.					
The teaching Objectives of Observation.	0	+1	+1	+0.67	Accepted
Question 2					
Instructor Observed Notes.					
	0	+1	+1	+0.67	Accepted
Question 3	<b>//</b> A				
Student's Attitude Observed Notes.  ( Behavioral engagement, emotional engagement and Cognitive Engagement)	0	+1	+1	+0.67	Accepted
Question 4					
Suggestions and Recommendations	0	+1	+1/5	+0.67	Accepted
Average		+1 sit	J/il/ +1	+0.67	Accepted



## **LESSON PLAN 1**

Grade Level: Grade 8 Subjects: Chinese No. of student: 20

**Time:** 100 minutes (50 minutes/1 session) **Topic:** Vocabulary about clock

Teaching and Learning Strategy: Using Game "时钟表演"

Teaching and Learning Materials: Power point, LCD projector

**Lesson Objectives:** By the end of the lesson, each student should be able to

a. Review the Numbers

b. Identify them with Chinese Pinyin

c. Connect the Pinyin with Chinese characters

d. Introduce the time in Chinese

Major Vocabulary				
Chinese Characters	Pinyin	English		
三点	sān diǎn	3 o'clock		
三点六分	sān diǎn liù fēn	Six minutes past three		
三点半	sān diǎn bàn	At half past three		
三点一刻 多	sān diǎn yī kè	A quarter past three		
差一刻四点	chà yī kè sì diăn	A quarter to four		
两点 约2	liăng diăn	2 o'clock		

## Session 1 (50 minutes)

## **LESSON INTRODUCTION-5 minutes**

Greeting to each other in Chinese. Make a comfortable teaching and learning environment.

- Asking the following question to inquire about prior Chinese language knowledge.
- Do you know what the number from one to twenty-four is in Chinese?
- Do you know how to express the time in Chinese?
- Have you ever used the same game before in the class?

#### LESSON DEVELOPMRNT- 40 minutes.

## Activity 1: Spelling and speaking -15 minutes

- Use the PowerPoints presentation and let the students to spell the Pinyin of the vocabulary.
- Ask students to read the vocabulary fluently from the PowerPoint.
- Ask students to recognize the clock in Chinese fluently from the giving clock picture.
- As students' answer, teacher will correct the students' pronunciation of the vocabulary in time.

# Activity 2: Playgroup Cycle One "时钟表演" - 25 minutes

- Students will be divided into four groups with five members each (odd number or even roll number).
- Teacher will prepare four sheets (5 vocabulary each sheet) and let each group select one randomly when they play the game.
- Ask students to play this game by working together in group.
- Show a clock dial on the whiteboard by the PowerPoint.
- Students will use the pattern of hour hand, minutes hand and second hand to show the time according the giving vocabulary.
- Record the points of students' performance.
- Teacher will help students and let every student engage in this game.

## Activity 3: Do the assignment -10 minutes

• Open the workbook on the page No. 25 and finish Part 4.

## Session 2 (50 minutes)

## Activity 4: Review- 10 minutes

• Review the vocabulary of the time range.

## Activity 5: Playgroup "时钟表演" Round Two and Three - 25 minutes

#### Round Two

- 1. Students will be divided into four groups with five members each (odd number or even roll number).
- 2. Each group will write down five words one sheet and let other groups select it randomly when they play the game.
- 3. Leave the time for students to discuss their different working in the game.
- 4. Show a clock dial on the whiteboard by the PowerPoint
- 5. Students will use the pattern of hour hand, minutes hand and second hand to show the time according the giving vocabulary.
- 6. Record the points of students' performance.

#### **Round Three**

- Students will be divided into two groups with ten members each (odd number or even roll number).
- Teacher will prepare two sheets with ten vocabulary and let each group select it randomly when they play the game.
- Show a clock dial on the whiteboard by the PowerPoint.
- Students will use the pattern of hour hand, minutes hand and second hand to show the time according the giving vocabulary.
- Record the scores basing on how much vocabulary they can finish it in 2 minutes.

## **LESSON CLOSURE- 15 minutes**

## After activity

- Checking the pronunciation and meaning of the vocabulary
- Summarizing the vocabulary that has just been learned
- Students will do Part 7 of the workbook on page NO.27.

# Evaluation

SI No.	Items	Yes	No	Remarks
1	Students are able to spell the vocabulary.			
2	Students are able to explain the meaning of the			
	vocabulary.			
3	Students are able to recognize the character of the			
	vocabulary.			
4	Students are able to finish the assignment by			
	themselves.			



# **LESSON PLAN 2**

Grade Level: Grade 8 Subjects: Chinese No. of student: 20

**Time:** 100 minutes (50 minutes/1 session) **Topic:** Vocabulary about time rage

Teaching and Learning Strategy: Using Game "老狼, 老狼, 几点了?"

Teaching and Learning Materials: Power point, LCD projector, word cards

**Lesson Objectives:** By the end of the lesson, each student will be able to:

1. Identify them with Chinese Pinyin

2. Connect the Pinyin with Chinese characters

3. Connect the time range to clock.

4. Use a dialogue Pattern

"A: 现在几点? B: 现在是。。。。。。。" to ask about the time.

Major Vocabulary				
Chinese Characters	Pinyin	English		
早晨	zǎo chén	Early Moring		
上午	shàng wǔ	Moring		
中午	zhōng/wùan Rangs	Noon		
下午	xià wŭ	Afternoon		
晚上	wăn shàng	Evening		
现在	xiàn zài	Now		
曼 谷 màn gǔ		Bangkok		
纽 约 niǔ yuē		New York		
早上五点	zăo shang wŭ diăn	5: 00 AM		
上午十点	上午十点 shàng wǔ shí diǎn			

Major Vocabulary				
Chinese Characters Pinyin English				
中午十二点	zhōng wǔ shí èr diǎn	12: 00 AM		
下午六点	xià wǔ liù diǎn	18: 00PM		
晚上九点	wăn shang jiŭ diăn	9: 00PM		

# Session 1 (50 minutes)

## **LESSON INTRODUCTION- 10 minutes**

- Exchange greetings and review the prior knowledge about the vocabulary of clock.
- Ask students to finish the book on page NO.42, part 1.
- Brainstorm on prior vocabulary by asking following questions.
  - 1. What would you say in polite if you need ask Chinese people for a help?
  - 2. Do you know what time it is in China when it's 3 clock in Thailand?

## LESSON DEVELOPMENT- 40 minutes.

# Activity 1: Spelling and speaking -10 minutes

- Introduce the topic of 'time range' and let students to spell the Pinyin of the vocabulary.
- Teacher will ask students to open the book on page No. 41. Teacher will selects students to spell the Pinyin of the new vocabulary.
- Introduce the game rules through the PowerPoint.

# Activity 2: Using Game"老狼, 老狼, 几点了?"-25 minutes

- Use the PowerPoints presentation to explain how to play the game.
- Divide the class into two groups with 10 members each (based on roll number).
- The game will be displayed in the class.
- Teacher will prepare the vocabulary sheet (five vocabulary per time) for each group. Ask the "Mr. Wolf" to read the vocabulary correctly with giving Pinyin on vocabulary sheet.
- Record the points of winner group.

## Activity 3: Do the assignment -5 minutes

• Open the workbook on the page No. 26 and finish the Part 6.

# Session 2 (50 minutes)

# Activity 4: Review- 10 minutes

• Review the vocabulary of the clock.

# Activity 5: Using Game"老狼, 老狼, 几点了?"-25 minutes

- Divide the class into two groups with 10 members each (based on roll number).
- Round one: Ask the "Mr. Wolf" to read the vocabulary in Chinese correctly giving English on vocabulary sheet.
- Round two: Students will set the Time vocabulary sheet without Pinyin and English (5 vocabulary per time) for the other group. Ask the "Mr. Wolf" to read the vocabulary in Chinese correctly with giving Chinese character on vocabulary sheet.
- Round three: Teacher could add the "上午,下午,晚上" into the dialogue pattern as well as the different city to ask about the time.
- Record the points of winner group.

#### **LESSON CLOSURE- 15 minutes**

## After activity

- Checking the pronunciation and meaning of the vocabulary
- Summarizing the vocabulary that has just been learned
- Students will do Part 8 of the workbook on page NO.27.

# **Evaluation**

SI	Items Pran Rang	Yes	No	Remarks
No.				
1	Students are able to spell the vocabulary.			
2	Students are able to explain the meaning of the vocabulary.			
3	Students are able to recognize the character of the vocabulary.			
4	Students are able to finish the assignment by themselves.			

# **LESSON PLAN 3**

Grade Level: Grade 8 Subjects: Chinese No. of student: 20

**Time:** 100 minutes (50 minutes/1 session) **Topic:** Vocabulary about activities

Teaching and Learning Strategy: Using Game "你来比划股来清"

Teaching and Learning Materials: Power point, LCD projector, word cards

**Lesson Objectives:** By the end of the lesson, each student will be able to:

1. Identify them with Chinese Pinyin

2. Connect the Pinyin with Chinese characters.

3. Recognize the meaning of them

4. Connect the time to activities

Major Vocabulary				
Chinese Character	Pinyin	English		
起床	qǐ chuáng	Get up		
吃早饭	chī zǎo fàn	Have a breakfast		
上课	shàng kè	Have a class		
下课~7~~	Yayaa Rongsii	Class over		
看电视	kàn diàn shì	Watch TV		
写作业	xiě zuò yè	Do homework		
睡觉	shuì jiào	Go to bed		

# Session 1 (50 minutes)

## **LESSON INTRODUCTION-5 minutes**

- Exchange greetings and review the prior knowledge about the vocabulary of time.
- Brainstorm on prior vocabulary by asking following questions.
  - 1. What time do you have a breakfast?

2. What do you usually do when it is 8:00 AM?

#### **LESSON DEVELOPMENT- 40 minutes.**

# Activity 1: Spelling and Speaking-5 minutes

- Let students to spell the Pinyin of the vocabulary.
- Introduce the game rules through the PowerPoint.

# Activity 2: "你来比划我来猜"- 25 minutes.

#### Round one

- Students will be divided into four groups with five members randomly.
- Teacher will prepare four sheets (5 different vocabulary with Pinyin on each sheet) and let each group select one randomly.
- Let each group decide that one student from the group will do the performance and the others will guess the meaning of that action in Chinese.

#### Round two

- Student will be divided into four groups with five members randomly.
- Teacher will prepare four sheets (5 different pictures about vocabulary on each sheet) and let each group select one randomly.
- Let each group decide that one student from the group will do the performance and the others will guess the meaning of that action in Chinese.
- Set a same time for each group to finish the game.

# Activity 3: Do the assignment- 5 minutes

• Page No. 33 part 4 and part 5 on workbook.

## Session 2 (50 minutes)

## Activity 4: Review-10 minutes

• Review the vocabulary of the daily activities.

# Activity 5: "你来比划我来猜"-25 Minutes

# **Round three**

- Students will be divided into four groups with five members each randomly.
- Each group will write down five words on sheet and let other group select it randomly when they play this game.
- Leave the time for students to discuss their different working in the cooperation.

• Record the points of students' performance.

#### Round four

- Students will be divided into four groups with five members randomly.
- Each group will write down five words on sheet for other groups.
- Two student from one group will do the performance together, the others from the same group will guess the meaning, as well as, three students from the other group will guess it at the same time. The score will depend on which group have more correct answer.
- Record students' behavior and engagement.

# **LESSON CLOSURE- 15 minutes**

# After activity

- Checking the pronunciation and meaning of the vocabulary
- Summarizing the vocabulary that has just been learned
- Students will express the vocabulary with fluently pronunciation.

## **Evaluation**

SI No.	Items	Yes	No	Remarks
1	Students are able to spell the vocabulary.	TA.		
2	Students are able to explain the meaning of the vocabulary.	18/2		
3	Students are able to recognize the character of the vocabulary.			
4	Students are able to finish the assignment by themselves.			

# **LESSON PLAN 4**

Grade Level: Grade 8 Subjects: Chinese No. of student: 20

**Time:** 100 minutes (50 minutes/1 session) **Topic:** Vocabulary about activities

Teaching and Learning Strategy: Using Game "传声筒"

Teaching and Learning Materials: Power point, LCD projector, word cards

**Lesson Objectives:** By the end of the lesson, each student will be able to:

1. Identify them with Chinese Pinyin

2. Connect the Pinyin with Chinese characters

3. Recognize the meaning of them

4. Using the sentence pattern "Time range + clock + activities" to express what they do at different times.

Major Vocabulary			
Chinese Character	Pinyin	Meaning	
放学	fàng xué	Afterschool	
回家	huí jiā	Go home	
锻炼 烧	duàn liàn	Do exercise	
上 网	shàng wăng	Go online	
洗 澡 	xǐ zǎo	Take a bath	
该	gāi	It time to	

Session 1 (50 minutes)

## **LESSON INTRODUCTION- 5 minutes**

- Exchange greetings and review the prior knowledge.
- Teacher will then introduce the topic.
- Introduce the game rules through the PowerPoint.
- Spell the Pinyin of the vocabulary.

#### **LESSON DEVELOPMENT - 40 minutes.**

Activity 1: "传声筒"- 25 minutes.

#### Round one

- Students will be divided into four groups with five members randomly.
- Teacher will prepare four sheets (5 different vocabulary with Pinyin on each sheet), as well as, add the vocabulary learned inside, and let each group select one randomly.
- Let each group discuss and decide that their ordinal position.
- Students who stand at the first place will pass the vocabulary quietly to others one by one. The last one will speak that vocabulary out.
- Record the points for each group.

#### Round two

- Student will be divided into four groups with five members randomly.
- Teacher will prepare four sheets (5 different pictures about vocabulary on each sheet), as well as, including the vocabulary learned, and let each group select one randomly.
- Let each group discuss and decide that their ordinal position.
- Set a certain time for each group to finish the game.
- Students who stand at the first place will pass the vocabulary quietly to others one by one. The last one will speak that vocabulary out<sub>o</sub>
- Record the points for each group.

# **Activity 2: Do the assignment- 10 minutes**

• Page No. 33 part 3 on the workbook.

## Session 2 (50 minutes)

## Activity 3: Review-5 minutes

• Review the vocabulary of time and daily activities.

# Activity 5: "传声筒"-25 minutes

## **Round three**

- Student will be divided into four groups with five members randomly.
- Each group will write down 5 different vocabulary without Pinyin but Chinese Character on a sheet.

- Let each group select others vocabulary sheet.
- Let each group discuss and decide that their ordinal position.
- Set a certain time for each group to finish the game.
- Students who stand at the first place will pass the vocabulary quietly to others one by one. The last one will speak that vocabulary out<sub>o</sub>
- Record the points for each group.

## **Round four**

- Students will be divided into four groups with five members randomly.
- Each group will write down five words on sheet for other groups.
- Let each group select others vocabulary sheet.
- Let each group discuss and decide that their ordinal position.
- Student, who stand at the first place, have to pass an action quietly to the
  others
- Record students' behavior and engagement.

# **Activity 2: Do the assignment- 5 minutes**

• Page No. 33 part 7, part 9 and part 10 on the workbook

# **LESSON CLOSURE- 15 minutes**

## After activity

- Checking the pronunciation and meaning of the vocabulary.
- Summarizing the vocabulary that has just been learned.
- Students will express the vocabulary with fluently pronunciation.
- Students will recognize the Chinese character.

# **Evaluation**

SI No.	Items	Yes	No	Remarks
1	Students are able to spell the vocabulary.			
2	Students are able to explain the meaning of the			
	vocabulary.			
3	Students are able to recognize the character of the			
	vocabulary.			
4	Students are able to finish the assignment by			
	themselves.			



# APPENDIX D

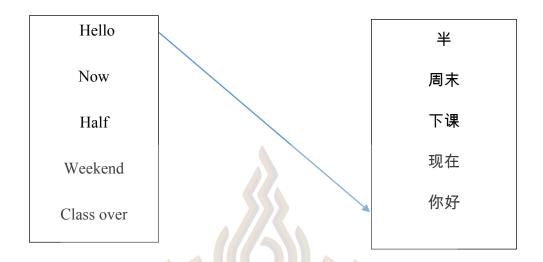
ACHIEVEMENT TEST (PRETEST & POSTEST)

Para Rangsit University

# PRETEST & POSTEST

Class: Grade 8		<b>Subject: Chinese Vocabulary</b>
Topic: Lesson 4 to Lesson 5		Total: 20 marks
		Part A
<b>Direct</b> Marks		and write it in the space provided. $(1 \times 5 = 5)$
1.	The Pinyin of "十一点"	( )
	A. jiŭ diăn	C. shí yì diǎn
	B. shí diǎn	D. shí èr diăn
2.	The Pinyin of"两点一刻"	
	A. liăng diăn yí kè	C. èr diăn yí kè
	B. liăng diăn yì fen	D. liăng diăn yì miăo
3.	The Pinyin of "上午"	
	A. zǎo shang	C. xià wǔ
	B. shàng wù	D. wăn shang
4	The state of the s	andsit,
4.	0.1911	wáng" ( )
	A. 上课	C.起床
	B. 回家	D.洗澡
5.	The Chinese character of "chī z	
	A. 看电视	C. 吃午饭
	B. 写作业	D. 吃早饭

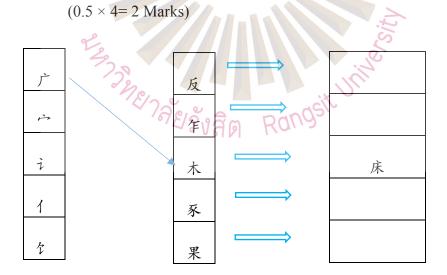
**Question 6** Draw lines to connect the English Phrases and Chinese Character.  $(0.5 \times 4= 2 \text{ Marks})$ 



# Part B

Direction: Answer all the following questions

**Question 7** Choose the parts to form characters according to the radicals.



**Question 8** Choose the given vocabulary according to the Picture and write down in the correct blank.  $(1 \times 4 = 4 \text{ Marks})$ 

回家

两点半

差五分九点

上课

a).  Source: https://images.app.goo.gl/BB89SoDq9w Z8Nxs67   c).  d).  Source: https://images.app.goo.gl/mFe5HqxBzD1jV YDu5  b).  Source: https://images.app.goo.gl/6yskfQcnoYP AZice8  Source: https://images.app.goo.gl/jhjRoEpLCi4 y4V8w5		
Source: https://images.app.goo.gl/mFe5HqxBzD1jV https://images.app.goo.gl/jhjRoEpLCi4	Source: https://images.app.goo.gl/BB89SoDq9w	Source: https://images.app.goo.gl/6yskfQcnoYP
Source: https://images.app.goo.gl/mFe5HqxBzD1jV https://images.app.goo.gl/jhjRoEpLCi4		
of the state of th	Source: https://images.app.goo.gl/mFe5HqxBzD1jV	Soure: https://images.app.goo.gl/jhjRoEpLCi4
	2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	ILITES .

**Question 9** Translate the following times.  $(1 \times 4 = 4 \text{ Marks})$ 

a) 12:05 AM	
w, 12000 1101	
b) 4: 45 PM	
c) 9: 30 PM	九点半
d) 7: 26'45" AM	

**Question 10** Complete the dialogues with proper Chinese Characters.  $(1\times3=3 \text{ Marks})$ 

a).  10 11 12 1 2 9 3 8 7 6 5	b).  AM  BANGKOK
Source:	Source:
https://images.app.goo.gl/rKj1TWfsUh8	https://images.app.goo.gl/ZHv1v1dhqRv
7MtEN9	HzTuf8
A: 请问,现在几点? B: <u>现在八点</u> 。	A: 请问, 曼谷现在几点? B: 曼谷。
c).  11 12 1 2	d).  10 9 3 8 7 6 5  https://images.app.goo.gl/oCC8SVDBx2  VDyFtu9
https://images.app.goo.gl/kdTS3WSgBV	https://images.app.goo.gl/4M6Bz5RTdX
FUJcM9A	mWqBy37
A: 请问, 你几点起床?	A: 请问, 你几点看电视?
B: 我。	B: 我。

# APPENDIX E

# SEMI-STRUCTURED INTERVIEW

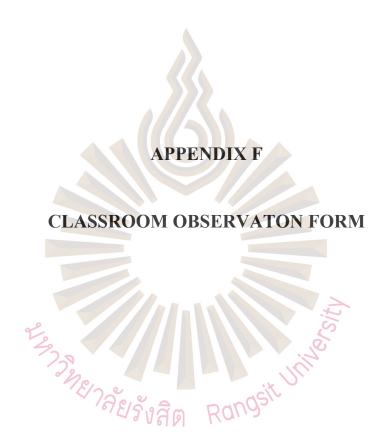


## **Semi-structured Interview**

**Direction:** Please answer the questions by giving as much information as you can.

- 1. How did you feel about learning Chinese vocabulary by using games?
- 2. Did you enjoy the lesson by using game to learn Chinese vocabulary with team work?
- 3. Which game in the class did you like the most? Explain please.
- 4. Did you think it is helpful for your Chinese vocabulary learning by using games? How?
- 5. Did you expect the next Chinese lesson learning by games?





# **Classroom Observation Form**

Subjects:	Grade:	Time:
Teacher:	Observer:	Date://
The l	Leaching Objectives of Observ	ation
	Instructor Observed Nots	
St	udent's Attitude Observed No	tes
Behavioral Engagement	Emotional Engagement	Cognitive Engagement
37 SMEN S	ริยรังสิต Rangsit	
Su	ggestions and Recommendation	ons

# APPENDIX G

# RESULTS OF RELIABILITY LEARNING ACHIEVEMENT TEST



# **Reliability Statistics**

Cronbach's Alpha	N of Items
.930	20

# **Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
Q1	12.45	30.787	.000	.932
Q2	12.70	27.800	.595	.927
Q3	12.75	26.934	.744	.923
Q4	12.65	27.924	.621	.926
Q5	12.60	29.937	.179	.934
Q6	12.50	30.895	064	.935
Q7	12.50	29.737	.410	.930
Q8	12.85	27.082	.660	.925
Q9	12.85	26.555	.768	.923
Q10	12.55	29.313	.414	.930
Q11	12.70	27.589	.643	.926
Q12	12.55	28.892	.544	.928
Q13	12.60	28.568	.532	.928
Q14	13.05	26.155	.852	.921
Q15	13.05	26.471	.786	.922
Q16	13.05	27.524	.571	.927
Q17	12.95	25.945	.876	.920
Q18	12.95	25.945	.876	.920
Q19	13.10	26.621	.778	.923
Q20	13.15	27.082	.712	.924

# **Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
13.45	30.787	5.549	20





# RSU-ERR.011 หนังสือแสดงเจตนาธินยอมฯ สำหรับตัดอายุ 13 ปีบริบูรณ์ - 17 ปี (ผู้ปกครอง+เด็กองนามร่วมกัน)



	วันที่	เคียน	и,п
ข้าพเจ้าอาดุ	ดำบล	ອຳເກອ	
รังหวัด วหัสไปวนพิธ์ โร	ทวศัพท์		

ข้างเข้าและเพ็กในปกลวองของข้างเข้าขอแสดงเจตนาธินธอมเข้าว่ามโครงการวิจัธเรื่อง The Application of Gamebased Learning For Chinese Vocabulary Skill of Grade 8 Thai Students, โดยข้างเข้าและเด็กในปกครองของ ข้างเข้าให้รับทราบรายอะเอียดเกี่ยวกับที่มา และจุดมุ่งหมายในการทำวิจัยรายอะเอียดขึ้นตอนต่างๆ ที่จะต้องปฏิบัติหรือได้รับการปฏิบัติ ประโยชน์ที่คาดว่าจะได้รับของการวิจัยและความเชื่องที่อาจจะเกิดขึ้นจากการเข้าว่ามการวิจัย รวมทั้งแนวทาง ป้องกันและแก้ไขทากเกิดอันดรายขึ้น ค่าขดเขยการเสียกงาที่จะได้รับโดยได้อ่นข้อความที่มีรายละเอียดอยู่ในเอกสารขึ้นจง ผู้ข้าร่วมการวิจัยโดยดอยด อีกทั้งอังได้รับคำอรินายและตอยข้อสงธิสขากทัวหน้าโครงการวิจัยเป็นที่เรียบร้อยแล้ว โดยไม่มีสิ่ง ใดปิดนังจ่อนเว้า

จ้างเจ้าและเด็กในปกลวองของจับหจ้าจึงขนัควใจเจ้าร่วยใครงการวังชนี้

หากข้างหล้าและเด็กในปกกรองของข้างเข้ามีอาการผิดปกติ รู้ลึกให้ถนายภาย หรือมีผลกระทบต่ออิดใจของข้างเข้าและ เด็กในปกกรองของข้างหล้าเกิดขึ้นระหว่างการวิจัย ข้างหล้าและเด็กในปกกรองของข้างหล้าจะแล้งผู้วิจัยโกยเร็วที่สุด และหาก ข้างเข้าและเด็กในปกกรองของข้างเข้ามีข้อข้องใจเกี่ยวกับขั้นตอนของการวิจัย หรือหากเกิดการบาดเข็นเงินปีวย หรือหากเกิด เหตุการณ์ที่ไม่ทึ่งประสงค์จากการวิจัยขึ้นกับข้างของและเด็กในปกกรองของข้างเข้า ข้างแจ้าและเด็กในปกกรองของข้างเข้า สามารถติดต่อกับ Fenguan 11 ได้ที่ 8809037522 (ตองค.24 ข้าโมง)

จ้างเจ้าและเล็กในปกลวองหลังช้างเข้าได้ทวานถึงสิทธิ์ที่จ้างเจ้าและเล็กในปกลวองจองจ้างเจ้าจะได้รับข้อมูลเพิ่มเดิม ทั้งทางด้านประโอชน์และใหมจากการเจ้าร้ามการวิจัย และสามารถออนตัวหรืองคะจับรับมการวิจัยได้ทุกเมื่อ โดยจะไม่มี ผลกระทนใดๆ ต่อการเรื่อนายคิดการคิดตัวเจ้าร่ามการแข่งขันก็หาของข้างเจ้าและเล็กในปกลวองของจ้างเจ้าและให้ครั้งขึ้งขึ้งอมูลสำนัดวิทะจัง เหตุ เล็กในปกลวองของจับที่จ้าที่ได้รับจากการวิจัย แต่จะไม่เผยแพร่ต่อ สามารณะเป็นรายบุลลอ โดยจะนำเสนอเป็นจัดผู้อยู่ใดอาวุทจากการรัฐแท่งนั้น

/หากข้าพเจ้าและเด็กในปกควองของจ้าพเจ้าได้รับการปฏิบัติ....



# RSU-ERB.011 หนังสือแสดงเจตนายินยอมฯ สำหรับเด็กอายุ 13 ปีบริบูรณ์ - 17 ปี (ผู้ปกครอง+เด็กลงนามร่วมกัน)



หากข้าพเจ้าและเด็กในปกควองของข้าพเจ้าได้วับการปฏิบัติไม่ควงตามที่ได้ระบุไว้ในเอกสารขึ้นจงผู้ข้า ร่วมการวิจัย ข้าพเจ้าและเด็กในปกควองของข้าพเจ้าจะสามารถติดต่อกับประธานคณะกรรมการฯ หรือเลขาบุการฯ ได้ที่สำนักงาน คณะกรรมการจริยธรรมการวิจัยในคน อาคารอาทิตธ์ อุไรรัตน์ (อาคาร 1) ขั้น 5 ห้อง 504 มหาวิทยาลัยรังสิต 52/347 หมู่ บ้านเมืองเอก อ.พหลไซริน ต.หลักหก อ.เมือง จ.ปทุมธานี 12/000 หมายเลขไทรศัพท์ อ-2791-5688 ไทรสาร อ-2791-5689

ข้าพเจ้าและเพ็กในปกควองของข้าพเจ้าเข้าใจข้อความในเอกสาวที่แจงผู้เข้าว่ามการวิจัย และหนังสือแสดงเจตนาอินขอม นี้โดยตองผแก้ว จึงองถายมือชื่อไว้

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2	Line State of the
ทัพน้าใช้เลาทัพน	Rangsit Urit

# **Biography**

Name Fengjuan Li

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