



## Comparing Traditional and Blended Learning Methods for Teaching Chinese Vocabulary to Primary 2 Thai Students

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### Abstract

This experimental study compared two methods: blended learning and traditional. The first objective included determining which method would produce higher achievement in learning Chinese vocabulary among 80 Primary 2 Thai students over an 8-week period, and if there were significant differences between boys and girls. They were in their second year of learning Chinese vocabulary. The second objective was to learn if there was a significant difference between the two groups in attitudes towards learning Chinese vocabulary. The students were divided into two groups, a control group and an experimental group, each having 40 students, matched for gender and for prior knowledge of Chinese vocabulary. A pre-post test was used to gather learning achievement data. The findings revealed that the blended learning method was more effective than the traditional method in teaching Chinese vocabulary to Primary 2 Thai students. The post-test mean scores of the experimental group was 23.85 and the control group was 21.50. The difference in the two scores was statistically significant. The experimental group outperformed the control group. Girls outperformed the boys. An opinionnaire was administered at the end of each of the first four weeks of lessons to compare student attitudes between the two groups towards learning Chinese vocabulary. The data showed that there was no difference: the students in both groups were equally happy learning Chinese vocabulary.

**Keywords:** *Traditional method, Blended learning method, Chinese vocabulary learning, Primary 2 Thai students*

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### 1. Introduction

#### 1.1 Background of the study

According to historical records, Thailand established relations with China since the Sukhothai dynasty in the 13 century (Masuntisuk, 2009). With economic globalization, China has played, and is playing, a prominent role as one of the leading industrial nations, not only in Asia but also in the world. As a result, knowledge of the Chinese language is important for trade and for economic growth (Kanoksilpatham, 2011). This fact is a major reason why school systems are implementing Chinese language programs in their primary school. This is particularly true in the member countries of ASEAN, Association of Southeast Asian Nations, for example. Being competent in Chinese can benefit the career path of students in those nations, too.

As the teaching of Chinese has been developing rapidly in Thailand, an increasing number of Thai parents have realized the importance of their children learning Chinese. Courses are being added to the curriculum in many schools (Ourairat, 2011). However, teachers of Chinese face several problems, especially teaching Chinese vocabulary. Students who took tests of Chinese language have been receiving low scores possibly due to ineffective teaching methods. In addition, Thai students tend to be passive and they tend to be accepting of what teachers say and of their teaching methods, without questioning (Wiriyachitra, 2002). These cultural characteristics need to be understood by teachers of Chinese and need to adapt their teaching methods in order to assist students to obtain higher achievement levels in learning Chinese vocabulary. In addition, teachers need to find ways to develop positive attitudes towards the learning of Chinese as a second language.

While the computer and Internet are already widely used in the business and financial world, it is beginning to have an impact on second language teaching. Its role in education, especially in language teaching and learning, is a natural development in this electronic age. Teachers of Chinese can now use online learning methods in addition to traditional methods. This is called 'blended learning'. Blended



learning combines traditional face-to-face instruction with computer-mediated or online instruction (Bonk & Graham, 2005). It provides teachers of Chinese with another method for teaching vocabulary, for example, and a distinct change in the way students traditionally acquire vocabulary skills in Chinese.

However, can Thai students who were taught Chinese vocabulary using a blended learning method achieve higher scores than students who were taught using a traditional method? This present study attempted to answer that question in an 8-week experimental study that involved 80 Primary 2 students in a school located in a south coastal region of Thailand. The students had completed one year of a Chinese vocabulary study in the previous year.

### 1.2 Blended learning

The concept of blended learning is not a new concept, but it was not firmly established until the beginning of the 21st century. Blended learning has been defined in a number of ways. For example, blended learning is simply defined as a combination of conventional face-to-face classroom learning and online learning (Djiwandono, 2013). Blended learning offers teachers and learners asynchronous online learning and the personal contact of the classroom (Lloyd et al., 2012). Downes (2008) defines blended learning as traditional in-class learning that is supplemented by online activities and resources. Osgathorpe and Graham (2013) defined blended learning as the combination of face-to-face learning with distance delivery systems so that the benefits of face-to-face and online methods can be maximized. As the word indicates it is a blend of teacher- led instructional process in a face-to-face interactive session.

### 1.3 Traditional teaching

The traditional teaching method is generally considered as a teacher-centered and content-oriented pedagogical model. Traditional methods are considered to focus on the teacher and highly structured learning materials (Đurčević, 2014). Some researchers claim that traditional teaching methods are a combination of relationships between teacher and students: teachers serve as guiders who supervise the whole teaching activity, imparting systematic knowledge, while students sit in the same place at the same time in order to learn (Black, 2002; Liu & Long, 2014).

### 1.4 Literature review

#### 1.4.1 Blended learning methods: research evidence

Bañados (2006) argues three reasons for including blended learning as a pedagogical tool for teaching and learning in second language learning classes. One of these reasons is that students prefer traditional classes to online classes because they have more opportunity for face-to-face interactions with the teacher as well as peer interaction; another reason is that students have the possibility to use technology tools to practice and interact; and the last reason is that students not only learn English but they also achieve higher skill levels in the use of on-line resources. These reasons can also apply to the use of blended learning methods in learning Chinese vocabulary.

For instance, a recent case study involving two primary schools and two secondary schools, described Chinese language learning in which Web 2.0 technologies were used to facilitate and support the acquisition of Mandarin (Chinese) in schools in the state of Victoria, Australia. Four teachers and 80 students participated in the trial. The students comprised four classes – Year 5, Year 6, Year 7 and a mixed 9 and 10 Year class. The findings revealed that using blended learning can improve students' engagement, confidence and motivation, and increased interest in using Chinese to communicate with other learners and native speakers (Victoria Department of Education, 2012).

Al-Madan (2015) did research entitled "the effect of blended learning approach compared to the traditional learning approach on fifth grade students' achievement" using *My Beautiful Language Textbook*. The study consisted of 49 students. The experimental group (blended learning) consisted of 25 males; the control group (traditional) consisted of 24 females. The experimental group of male students outperformed the control group of female students. These findings revealed that the blended learning approach was more effective than the traditional method both in terms of achievement as well as the development of verbal



creative thinking skills. In light of those findings, the study authors recommended the adoption of blended approach in learning a second language.

A similar research was conducted by Peterson (2016). Four sixth-grade mathematics classrooms were chosen to use a blended learning model; the results showed increases in student achievement over two chapters of the textbook in daily lesson checks and quizzes. The blended learning strategy proved to increase students' achievement levels.

Ceylan and Kesici (2017) also demonstrated the effects of blended learning on academic achievement. This study was carried out with a total of 53 students enrolled in two groups: an experimental group and control group in 6th grade classrooms of a middle school in Turkey. The experimental group was taught using a blended learning 'environment' which included 'enriched web technologies (such as video-conference, Learning Management System, Discussion blogs, etc.)'. An academic achievement test and 'product evaluation scale' were used to collect the data. This study concluded that the blended learning environment had generated a significant difference in students' academic achievement between the two groups.

Looking at these studies, it is clear that there are advantages to using a blended learning teaching strategy. However, it would be useful to conduct similar studies in countries such as Thailand. Teaching strategies that are found to be effective in raising achievement levels of students in some countries may not be effective with children in other countries.

#### 1.4.2 Gender differences: research evidence

Research into the relationship between achievement in second language learning and gender has been the focus of many studies over the past three decades (Główka, 2014).

Gender differences have been confirmed in many aspects of cognitive development. Xiong (2010) points out that various factors such as motivation, aptitude, and intellect affect the students' language learning potential most. All in all, research evidence is clear that in the case of learning a second (or third) language, between boys and girls, girls outperform boys.

Gender differences have been found in many studies. For example, Dunn (2011) found that boys' brains develop differently from girls' and this affects how boys acquire language and use it. In mixed classes boys may be overshadowed by girls' natural ability to use language. Kissau (2006) suggested the root of the difference was cultural. Female students responded more favorably to the items that pertained to the desire to learn a second language. Koul et al. (2009) conducted research among Thai university students and discovered that females tend to be better language learners. Murphy (2010) carried out a study of Irish schools between 2003 and 2007 and reported that girls outperformed boys significantly in French (by 5.4%), German (by 6.4%) and Spanish (by 4.3%).

A possible explanation for the superiority of girls was given by Jacobs et al (2002) who conducted a longitudinal study of 761 students in schools in the United States. He found that both girls' and boys' competency beliefs varied based on domain and gender. Boys' and girls' perceptions of ability in the language arts were similar at the beginning of primary school, but boys' ability beliefs declined more rapidly starting in the late primary school. These differences in perception were thought to lead to girls placing a higher value than boys on activities such as reading, including second language learning.

Thus, based on these earlier studies, it would be useful to consider gender differences, especially among young learners in second language learning programs.

## 2. Objectives

1. To test 2 hypotheses using standard statistical tools: (1) The blended learning method is more effective than a traditional method in teaching Chinese vocabulary to Primary 2 Thai students; and (2) There are significant differences in the scores between boys and girls.

2. To learn the opinion of Primary Two Thai students about learning Chinese vocabulary: a comparison between the experimental group and the control group using a 'happy face opinionnaire'.



### 3. Materials and Methods

#### 3.1 Research location and population.

The study was carried out in a government school located in a coastal community in South Thailand. The research population consisted of two classes drawn from seven Primary 2 classes. Both classes were morning classes. Each class consisted of 40 students whose ages were between 7-8 years and gender balanced. The students were beginning their second year of Chinese language studies.

Students in each class were given a Chinese vocabulary pretest. The pretest scores showed that both classes were equal with respect to their current knowledge of Chinese vocabulary.

**Table 1** Research population

Control Group	Students ( total=40)		Experimental Group	Students ( total=40)	
	Boys	Girls		Boys	Girls
	20	20		19	21

#### 3.2 Research procedure

One class was randomly named the control group; the other class was named the experimental group. The experimental group was taught using a blended learning method while the control group was taught using a traditional method. Classes were one hour in length, one day per week, for 8 weeks in the first term of the school year. The researcher was the teacher of both groups.

#### 3.3 Research instruments

The following instruments were used in this study.

##### 3.3.1 Pre-post test

To measure the relative effectiveness of the two methods for teaching Chinese vocabulary, the researcher designed a pre-post test. The 30 words selected for the pre-post test were from the 36 words that the researcher planned to teach over the 8-week experimental period.

The 36 words to be taught had been selected from word lists one and two of an official Chinese language proficiency test: *Hanyu Shuipin Kaoshi (HSK)*. The researcher ensured that the words chosen for teaching Chinese vocabulary were age-appropriate and would be familiar to Primary 2 students from the south coastal region of Thailand.

The pre-post test consisted of 30 words randomly selected from the 36 words to be taught. The test consisted of 30 pictures. Under each picture were three Chinese words. Students were required to choose the one that they believed was correct the correct word. .

##### 3.3.1.1 Validity of the pre-post test

A university instructor and two teachers of the Chinese language were asked to validate the instrument using a content validity technique known as the IOC Index (Item Objectives Concurrence). The test validity was above 0.75.

##### 3.3.2 Picture scale opinionnaire

To measure the opinion of the students with respect to their learning Chinese vocabulary, a non-test instrument was used. There was no right or wrong responses. The instrument used a picture scale consisting of 3 faces: Happy, Okay, not Okay. Students were asked to indicate their opinion about learning Chinese vocabulary at the end of each lesson.

#### 3.4 Testing time frame

The pre-test was given in the first week, and the post-test was given in the eighth week. Both tests took approximately 40 minutes.



#### 4. Results and Discussion

The first objective of this study was to test two hypotheses: (1) which of two methods for learning Chinese vocabulary was the more effective; and (2) to discover if there were gender differences. The second objective was to find out the opinions of Primary 2 students about learning Chinese vocabulary. A comparative statistical analysis was done using paired sample t-test and an independent sample t-test, and the comparison used mean test scores, standard deviation and significance value.

##### 4.1 Pre-test scores

The first analysis is a comparison of pre-test scores of each group. Table 2 shows those scores.

**Table 2** Pre-test scores of girls and boys

Group	Size	Full score	Girls' mean	Boys' mean
Control	40	30	9.40	8.50
Experimental	40	30	9.33	8.21

The control group mean scores for boys was 8.50; the mean score for girls was 9.40. In the experimental group the mean score for boys was 8.21 and the mean score for girls was 9.33.

These data revealed that the mean pre-test scores for both groups were similar. The means scores for boys in both groups were similar, as was the mean scores for the girls in both groups. Comparing the boys' and the girls' mean scores, the girls' mean scores were significantly higher than the boys' mean scores in both groups.

##### 4.2 Post-test scores

The second analysis is a comparison of post-test scores for girls and boys in each group. Table 3 shows the post-test scores.

**Table 3** Post-test scores of girls and boys

Group	Size	Full score	Girls' mean	Boys' mean
Control	40	30	22.30	20.70
Experimental	40	30	24.38	23.26

The mean scores for boys in the control group was 20.70, while the mean for girls was 22.30. In the experimental group the mean score for boys was 23.26 and the mean for girls was 24.38.

The results of the data analysis revealed that the post-test score for the experimental group was higher than the post-test score for the control group. Comparing the boy's and girls' mean scores, the girls' mean score was significant higher than boys' mean score in both groups.

##### 4.3 Pre-post test score comparisons

Table 4 shows the result of the paired sample t-test of the pre-post test scores for both groups.

**Table 4** A comparison of pre-post test scores

Group	Experimental		Control	
Test	Pre-test	Post-test	Pre-test	Post-test
Mean	8.80	23.85	8.95	21.50
Standard Deviation	2.003	3.175	1.986	3.796
Mean Difference	23.85-8.80=15.05		21.50-8.95=12.55	

The pre-test score of the experimental group was 8.80 and standard deviation was 2.003. In the post-test, the mean was 23.85 and the standard deviation was 3.175. In the control group, the mean score of



pretest was 8.95 and the standard deviation was 1.986. The mean of post-test was 21.50 and the standard deviation was 3.796.

This analysis revealed the following: the paired sample t-test indicated that both groups' mean increased from pre-test to post-test, but the mean difference for the experimental group was significantly higher than that of the control group.

#### 4.4 Pre-test and post-test comparisons

Table 5 shows the result of paired sample t-test for both the pre-test and the post-test for both groups.

**Table 5** Pre-test, post-test comparisons

Group	Test	Mean	Mean Difference	Standard Difference	T-value	Sig(2-tailed)
Experimental	Pre-test	8.80	-0.15	2.003	0.374	0.711
control	Pre-test	8.95		1.986		
Experimental	Post-test	23.85	2.35	3.175	-3.185	0.003
Control	Post-test	21.50		3.796		

Significance level: >0.05 not significant <0.05 significant

The pre-test mean score of the experimental group was 8.80; the pre-test mean score of the control group was 8.95. The 2-tailed significance value was 0.711, which indicated that there was no significance difference between mean scores of two groups. Thus, the two groups were equal with respect to prior knowledge of Chinese vocabulary.

However, the post-test mean score of the experimental group was 23.85 while the mean score for the control group was 21.50. The 2-tailed test of significance was 0.003, which indicated that the mean score of the post-test of the experimental group was significantly higher than the mean of the post-test of the control group. Although the pre-test score of the control group was slightly higher than that of the experimental group, after 8 weeks of learning Chinese vocabulary, the experimental group significantly outperformed the control group.

##### 4.4.1 Students' opinions about learning Chinese

Another objective of the study was to seek the opinions of Primary 2 Thai students' concerning their learning Chinese vocabulary and if there were any differences between those in the control group and those in the experimental group.

However, half-way through the 8-week period, it became clear that the students in both groups enjoyed learning Chinese vocabulary. The students in the control group enjoyed the traditional method as did students in the experimental group who were taught using the blended learning method. Thus, use of the opinionnaire was discontinued. It is possible that because of their young age and their culture, Primary 2 Thai students were happy with their teacher and with learning in general.

## 5. Conclusion

### 5.1 Research objectives

The first objective was to test 2 hypotheses using standard statistical tools. The first hypothesis was: a blended learning method is more effective than a traditional method in teaching Chinese vocabulary to Primary 2 Thai students.

In this study, the results supported the first hypothesis. The blended learning method was more effective than the traditional method in teaching Chinese vocabulary to Primary 2 Thai students. The experimental group had a post-test mean score of 23.85 compared to the control group which had a post-test mean score of 21.50. This difference was significant.

Although the performance level of the control group was slightly higher than the experimental group before the experiment began, after the 8-weeks' period of instruction, the post-test mean score increased by 12.55 for the control group while the post-test mean score increased by 15.05 for the



experimental group. This difference was statistically significant. Students in the experimental group had significantly higher test scores than did students in the control group.

The second hypothesis objective was: there are significant differences in the scores between boys and girls. Based on the analysis of boys' and girls' mean scores, the girls in both the control group and in the experimental group outperformed the boys. Thus the hypothesis is supported. The girls' mean scores were higher than boys' both in the pre-test and in the post-test. The girls in this research population showed superior abilities in learning Chinese vocabulary than did the boys.

The second objective was to obtain the opinion of Primary Two Thai students about learning Chinese vocabulary. This was done through the use of non-test picture scale instruments where there was no right or wrong responses. The scale consisted of 3 faces: Happy, Okay, Not Okay. Students were to be asked at the end of each lesson to indicate their opinion about learning Chinese vocabulary. However half-way through the 8-week period, it became clear that the students in both groups enjoyed learning Chinese. The students in both groups rated learning Chinese vocabulary 'Happy' at the end of the first four lessons. It was decided that further use of the opinionnaire could be discontinued. The assumption that students might prefer one method over another method was not sustained. It appears that these Primary 2 Thai students enjoyed learning Chinese vocabulary and that they seemed unconcerned about the teaching method.

## 5.2 Recommendations

First, teachers of Chinese vocabulary are encouraged to use a blended learning method to teach their students. Second, researchers are encouraged to carry out similar studies but with students at different grade levels and, also, at other locations which differ from the one in which this study was carried out. Lastly, the methodology used to carry out this study could be a guide for a replication study.

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