FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

COOPERATIVE LEARNING IN SEVENTH GRADERS' VOCABULARY LEARNING IN CHINA

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by

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Florida International University, 2018

DEDICATION

I dedicate this work to my lovely family. They love, understand and support me unconditionally. I always feel lucky to have them as my family. I love them, and will love them forever.

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ABSTRACT OF THE DISSERTATION

COOPERATIVE LEARNING IN SEVENTH GRADERS' VOCABULARY LEARNING IN CHINA

by

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Florida International University, 2018

Miami, Florida

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This study investigated the effects of Cooperative Learning on seventh graders' vocabulary learning in China. This study was conducted because in China, students usually learn vocabulary via traditional learning method-rote memorization. However, this method has a lot of issues. For example, students only know how to write the words but they cannot use them in contexts. Students tend to forget new words they have newly learned.

The purpose of this study was to find out whether Chinese secondary school students can benefit from Cooperative Learning in vocabulary; whether Cooperative Learning can help students in applying new words and whether students can retain new words longer using Cooperative Learning.

This research followed a quasi-experimental design, with an experimental group and a control group. Data were collected in a secondary school in Beijing, China. The participants took three tests: a pretest, post-test and a delayed post-test. A one-way repeated ANOVA was used to analyze the data in SPSS (25.0). The findings showed that there was a significant difference across three time points in the two groups ($p < .001$). There was no significant difference in the students' vocabulary scores between the two groups ($p > .05$).

However, it was found that there was a significant interaction between time and group on students' vocabulary learning. An ANCOVA analysis showed that there was a significant difference between the two groups in the delayed post-test (p = .01).

These findings can be beneficial to the professionals who work as English teachers in secondary schools in China. My results suggest that Cooperative Learning may be helpful in improving students' vocabulary learning outcomes.

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CHAPTER I

PREFACE

English in China

I have chosen my pet peeve as my research topic.

I come from China where English is important. “More and more importance has been given to English after China carried out the policy of reform and opening-up to the outside world in the late 1970s.” (Bolton & Graddol, 2012) There were 415.95 million people learning one or more foreign languages in Mainland China, among them, 93.8 % (390.16 million) learn English as their foreign language (Wei & Su, 2012). Many companies have opened branches overseas, which makes English their work language. Therefore, when graduates want to find a good-paying job, English is always required. Particularly since the Olympics were held in Beijing in 2008, more and more foreign tourists have been traveling to China. In order to make life more convenient and easier for tourists in China, there are now bilingual signs everywhere in the country. If the tourists need to ask anything, they can communicate with a fair number of local people in English. All of this indicates that English is becoming more and more popular in China. As a result, English has become a required subject in school. In 2001, the Ministry of Education in China published the National English Curriculum Standard requiring that English instruction be introduced in elementary school, and it has set higher objectives for students’ vocabulary and comprehension achievement in secondary school.

Ways to Teach Vocabulary in China

I used to be an English teacher in China. I had many students who hated learning vocabulary, an activity totally different from the learning of Chinese

characters. In fact, learning vocabulary was always my students' pet peeve. It was mine, too. Our combined disdain for vocabulary study is the impetus for choosing this topic for my research. I can save my students' lives, as well as mine.

Many teachers are still using the same vocabulary teaching method they were taught by their teacher decades ago. First of all, the teacher reads the new words to the students several times, and the students repeat after the teacher. As a result, learning to read new words is the first step to be accomplished. Second, the teacher explains every word to the students. For example, if the new word is *cut*, the teacher will explain the part of speech of the word and the collocation of the word: *cut…off*, *cut…down*, and so forth. Lastly, the teacher makes up a few sample sentences using the new word. After all this is completed, the teacher has nothing to do with the learning process. The teacher lets the students go home and memorize the new vocabulary list. The methods are quite simple: oral repetition, written repetition, or writing while reading without fully understanding the new items. In other words, students learn vocabulary through rote memorization. As a consequence, students may not develop a large enough vocabulary, leading to failure in correctly spelling words and using the words out of the proper context.

Yang and Dai (2011) mentioned that most English teachers in China already proficient in English have not yet been exposed to theories about second/foreign language acquisition and methodologies, meaning that the teachers explain vocabulary usage in detail in class lectures and then let students go home and memorize the vocabulary by themselves. Teaching with memorization is related to the philosophy that has long existed in China's history, thereby explaining how a traditional vocabulary teaching approach—that is, rote memory-based word learning—is still practiced in Chinese schools. Yang and Dai's finding is in

agreement with Wu's finding with seven hundred primary school students in China in 2014, which indicated that many EFL teachers in China still emphasize learning English by rote memorization. They believed that English words should be memorized and repeated.

My Personal Story

Since I learned English in China quite a long time ago, I can recall the traditional method of teaching vocabulary:

English textbooks in secondary schools in China are divided into different modules. As a rule, in each module there are two or three texts, and there is a list of new words in each module. Those new words are included in the texts. Before explaining the new texts to the students, the teacher first reads and explains the words to the students in class. The explanation of the words includes the part of speech, the collocation of the words, and the derivations like past form and past participle form of the new verbs. After the teacher's explanation, the teacher asks students to go home and memorize the words by themselves. When the students go back home, they read the words again and again or write the words repeatedly.

In the next class, the teacher usually gives the students a test on the new words. The teacher says the words in Chinese, and students are to write their English equivalents. For example: the teacher says, "动力,动机," and then the students write *motivation*. The teacher then asks the students to write down the adjective form of the word motivation. Finally, the teacher will ask students to write the English equivalent of "被驱使做什么事," and the students are supposed to write *be motivated to do something*. In other words, the content mentioned above will be the

content in a subsequent vocabulary quiz when students come to English class the next time.

When I was young, we used to have tests quite often. And after every test, the teacher would go over the test and analyze the test for the whole class. If we made mistakes in the vocabulary part, no matter what the mistakes were, the teacher would always say,

> I am not responsible for the vocabulary part. That is your task. If you make mistakes in the grammar part, I take part of the responsibility.

I felt that the parents reflected and supported the teacher's approach. Thus, if the students did poorly on the vocabulary part, they would be judged as lazy. The message to me was clear: It was totally the students' responsibility to learn the new words with little guidance from the teacher.

CHAPTER II

INTRODUCTION

Herein I discuss the research background of my study, in which a brief introduction of the reasons for choosing this topic will be given. I also address gaps in the area. The main part of this chapter is the conceptual framework, upon which my research is derived. The conceptual framework introduces the theories related to my research. These theories combine to form the basis for my dissertation and interrelate with my literature review and the research questions.

Next, I will introduce the learning styles of the secondary school students in China. The learning styles are related to the Chinese culture that has existed for decades. I describe why Cooperative Learning is still something that is not popular in China. It also points toward implications of making it a new teaching approach in China.

The Influence of Confucius in China's Education

China is a country with thousands of years of civilization, and its tradition of education dates back to thousands of years ago. Over centuries, China has formed unique concepts with respect to education. Confucius, an ancient educator, is believed to have established the tradition of education in China. Ge and Xie (2013) mentioned that "Confucius was the greatest philosopher and educator in Chinese history" (p. 45). Confucius was like a messenger who transmits his knowledge to his students, and his students saw him as an authority. He seldom asked his students questions; instead, his students asked him a question and he responded with wisdom. Even when Confucius asked a question sometimes, he answered the question himself. Thus, the students

often expect teachers to answer their own questions (Lin, 2002). The teaching methods of Confucius have been inherited by schools in China. Teachers often occupy the bulk of class time, leaving very little time for students. In addition, compared with teachers in the United States, teachers in class ask students few questions.

The Chinese have a saying: “一日为师，终身为父”— *He who teaches me for even only one day will be my father for the whole life*. The saying tells us the importance of the teacher in one’s life, as well as the great respect a teacher could have in Chinese society. The image of a teacher is usually knowledgeable, serious, and authoritarian. A student who is obedient, mild, and self-controlled is considered a good student in China. No doubt, these concepts of education still have a strong influence on current EFL (English as a Foreign Language) language teaching and learning. According to the Varkey GEMS Foundation Global Teacher Status Index (2013), China was ranked highest in the world with respect to a country’s overall perceived social status of teachers. On a basis of this long-existing philosophy, Chinese classrooms have always been teacher-centered. The teacher will be the one who leads the whole class, and the students all trust the teacher rather than their peers. They believe that they can learn more from the teacher than from other students. In fact, researchers Tan and Lee (2007) found the proverb described teaching in Chinese classrooms, discovering that students did not like to learn together in groups because they were accustomed to learning passively from their teachers. Similarly, Woodrow and Sham (2001) investigated the learning preferences of Chinese students aged 11 and 18 and concluded that they preferred working independently rather than working with their peers. Thus, Chinese students, from a very young age, are educated and encouraged to work individually, aligning daily classroom practice long-standing to

cultural values of China. The teacher rarely, if ever, gives any group assignments to students.

Learning Styles and English Learning

As mentioned earlier, the learning style of the Chinese students is mainly individual learning, which creates some difficulties in language learning. Language is used to communicate with each other. For English, it is a language used to communicate, too.

Wang (1992) investigated 490 undergraduates of English majors ranging from freshmen to seniors, and results showed that students preferred the group style the least. Wang (2006) conducted a study with high school students in China as the participants. The results showed that individual learning styles were most correlated to English achievement, while group learning was negatively related to English achievement.

Oxford and Anderson (1995) reported that Chinese learners like an inductive learning approach whereas the learner "enjoys greater personal autonomy, deductive learning and does not readily accept other people's views before making a judgement." (p. 205)

Conceptual Framework

I now introduce theories related to my research. I first introduce Constructivist theory, which is closely related to Cooperative Learning theory. Then I introduce memorization, which includes rote memorization, including its definition and its role in learning. Next comes the secondary students' learning styles in China. Memory theory is then tackled because it explains how human beings memorize things. Finally, descriptions of vocabulary learning and Cooperative Learning are presented.

Figure 1 is provided here to show interrelationships between the concepts of my framework:

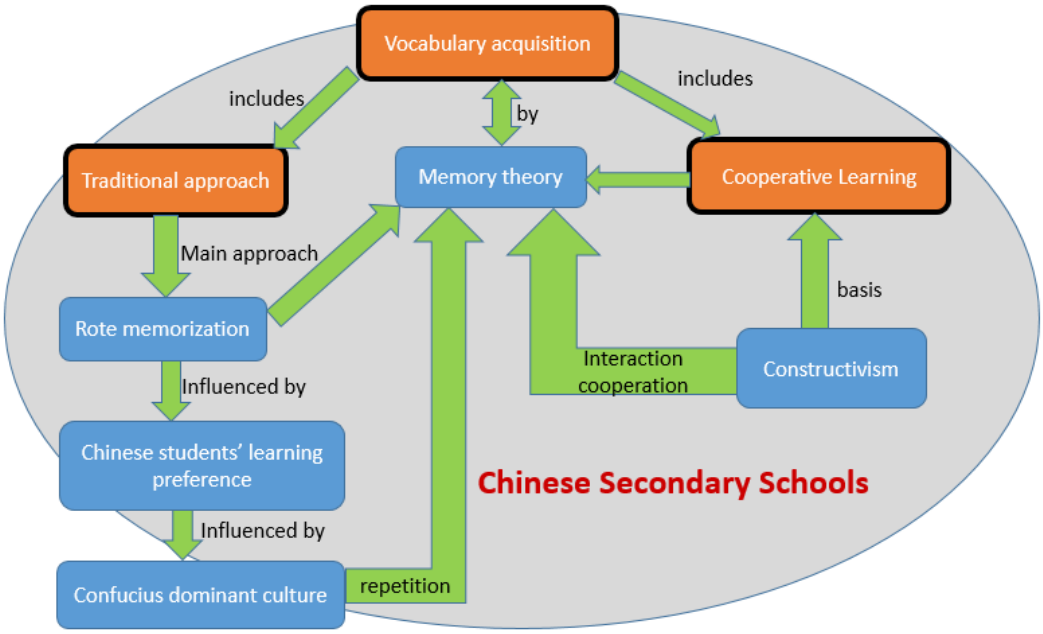


Figure 1. The Interrelationships among the elements for the Theoretical Framework

Constructivist Theory

Constructivism is a teaching/learning theory of educational psychology originated in western countries. Several theorists have contributed to the development of the Constructivism, including John Dewey, Lev Vygotsky, Jean Piaget, and Jerome Bruner.

In the early 20th century, Dewey believed that learning means something that a person does when he/she studies (Dewey, 1924). In other words, learning by doing can be an efficient way to acquire knowledge—a foundation of Constructivism. Dewey believed that teaching should be built on what learners already know and by getting learners involved in learning activities. Therefore, he held that teachers need

to design environments and interact with learners to foster inventive, creative, and critical learners.

Vygotsky emphasized the importance of social factors of knowledge, emphasizing that children are the center of learning. Interaction with surroundings—such as teachers, parents and peers contributing to the intellectual development—is considered important. Vygotsky put forward the "Zone of Proximal Development" (ZPD) theory, which promotes the concept that students can solve problems beyond their actual developmental level with someone else's help. The help must be just beyond the student's current knowledge level, within safe and easily obtainable reach. (Vygotsky, 1978).

In the 1960s, Constructivism was put forward by Piaget, who suggested that children construct knowledge of outside world by interacting with the surrounding world. In other words, "they draw their own mental map by reflecting on physical experiences which connect with outside world" (Wang, 2003, p. 118).

Bruner enriched and developed constructivist theory using character of cognitive structure, the effect of social environment on the psychological development and individual initiative. He believed that learners construct new concepts from existing experience and knowledge. He proposed that learners can be problem solvers and explore more difficult areas (Bruner, 1966).

Memory

Memory is the means by which we retain and draw on our experiences to use this information in the present (Tulving & Craik, 2000). It can be divided into two rather different types, usually called short-term memory (STM) and long-term memory (LTM).

Short-term memory system is considered to be limited in capacity, requiring conscious effort and control (Skehan, 1998). STM helps retrieve information stored already, as well as monitor our current thoughts and decisions. It also controls input, output, and current operations.

A key element of STM can be rehearsal. Rehearsal is the conscious repetition of information from time to time in order to increase the length of time information stays in memory. The process of maintaining an item in working memory by repetition is called rehearsal (Baddeley 1990). Krashen and Terrell (2000) argued that "memorized" or "drilled" vocabulary does not stick in mind. It is like the way when we memorize a series of numbers. We can only retain the information for a brief period of time, mainly in the STM as reported by Sultan (2018). If something or somebody interrupts, the information will be lost. Imagine you are trying to memorize a phone number. While you are repeating, someone comes to talk to you. For most of the cases, the phone number will be forgotten. Rehearsal will not make STM to LTM in vocabulary learning in that rehearsal only involves in repeating. However, it does not involving putting meanings or context. In other words, students do not construct the knowledge in a meaningful way. When students construct their memory in meaningful ways—for example, implementing context to memorize, they tend to remember it better. (Krashen & Terrell, 2000)

A long-term memory system, in contrast, is large in capacity, can operate in parallel fashion, and may not be always susceptible to conscious control (Skehan, 1998). An example of long-term memory would be we remember what our science teacher taught when we were in primary school. The memory has existed for years or even decades. Most importantly, STM seems to be the gateway to LTM, with the transfer of material from the former to the latter affected by process of rehearsal.

As a process, memory is described as the dynamic mechanisms associated with retaining and retrieving information from past experiences (Crowder, 1976). Melton (1963) distinguished three necessary stages in the learning and memory process: encoding, storage, and retrieval. Each one represents a stage in memory processing. Encoding is defined as the initial learning of information; storage refers to maintaining information over time; and retrieval is the ability to access information when it is needed (McDermott & Roediger, 2017). Encoding, storage, and retrieval often are viewed as sequential stages. They do not happen randomly. They happen in a specific order: first, the information is received; it is held in the brain for some time and later on, it will be recalled.

Rote Memorization

Rote learning entails learning "in order to be able to repeat it from memory rather than learning it in order to understand it" (Cambridge International Dictionary of English, 1995, p. 1235). Rote learning is a method involving repetition and memorization (Moore, 2000). From these two definitions, it is easy to see that rote memorization does not involve any processes that enable learners to understand or apply the knowledge learnt.

A large number of students memorize words by sheer repetition without developing any deep understanding of the words. As mentioned by Iqbal and Ahmad (2015), rote is generally not considered a preferred learning strategy as students find grasping and using a word practically impossible if students are lacking understanding of it. However, Nation (1982) claims that rote memorization is an effective way of learning a great deal of vocabulary in a short time. Rote-memorization is often associated with the surface learning approach, which refers to "the intention to be able

to reproduce content as required; passive acceptance of ideas and information; lack of recognition of guiding principles or patterns; and focusing learning on assessment requirements." (Harlen & James, 1997, p. 368). Relating this to vocabulary learning, it is possible that learners cannot use or apply the newly learned words learned by rote memorization, which can be regarded as a kind of "surface learning" recognized by Harlen and James.

Similarly, Klemm (2007) talked about this issue from the other side. "We learn best by associating the new with what we already know. Rote memory is the most inefficient kind of memory because no associations are made." (p. 68) That is to say, knowledge is learned in an isolated context.

As to how rote memorization works in the memory system, Klemm also had some findings in 2007. It was reported that, "The key role of rehearsal is most obvious with rote memory, because rote memory only works when the information is repeated, often numerous times" (p. 69). This indicated that if the knowledge is not repeated over time, maybe it cannot be transferred into the long-term memory system. Let's take our previous example of memorizing a telephone number as an example. The telephone number is memorized by the rote method. In order to store that information in the brain, one needs to repeat and enhance the memory to make it stay in the memory as long as possible. When it comes to retrieval, it means that when some day in the future, this person wants to call that number, she can retrieve the message from the long-term store. But, as mentioned previously, content memorized via rote memorization will not necessarily stay long in the brain.

Vocabulary Learning

In 2012, Shinaneti wrote of Burmese English as a Foreign Language (EFL) learners who used only rote learning to memorize collocations, proverbs, and idiomatic expressions, because these kinds of words have fixed forms. Schmitt (2014) in turn suggested that vocabulary learning is more than just attention to fixed forms. His research suggests, instead, that if students learn vocabulary through word lists in order to take a quiz the next day, such practice limits students to learning only something about the word form, something about the meaning, and some linkage between the form and meaning. His position complements his earlier work (2010), which pinpoints that the developing knowledge of a word includes the following:

- spoken form (how to pronounce the word),
- written form (how to write the word),
- meaning (what the word means),
- grammar (the part of the speech of the word, derivative forms),
- collocation (what word will be used together to form a phrase),
- register (whether a word is appropriate in a specific context),
- frequency (a word's conceptual meanings), and
- associations (semantic network of associations) (p. 38).

Following Schmitt's classifications, we know that written form and spoken form have fixed forms, which can be learned, in some way, through rote memorization. For example, if a teacher wants the students to learn to read a new word, she can just repeat the words time and time again so the students will pick up the pronunciation even if they do not understand why the word is pronounced like that. For the written form of a word, it is the same. The students can learn the spelling

of a word by sheer repetition. However, the remaining word aspects—for example, register, where speakers understand how words might be used in varying contexts—will less likely stay in LTM when rote memorization is implemented. The knowledge of using a word properly is not limited to knowing the pronunciation and spelling of the words. In other words, the students cannot retrieve the newly learned words when they need to in their daily life.

To Schmitt, the Burmese EFL class seemingly undervalues the value of vocabulary learning. As fundamental components of the language, English vocabulary, as well as its grammar, is of critical importance to language learners (Lewis, 1997; Zimmerman, 1997). If we do not have the vocabulary words, there is no possibility for us to perform basic skills like listening, speaking, reading, and writing. Underscoring the importance of vocabulary learning, Schmitt (2000) emphasized that "lexical knowledge is central to communicative competence and to the learning of a second language" (p. 55). Maximo (2000) stated many reasons for devoting attention to vocabulary:

> First, a large vocabulary is of course essential for mastery of a language. Second language acquirers know this: they carry dictionaries with them, not grammar books, and regularly report that the lack of vocabulary is a major problem. (p. 385)

From this statement, we can infer that many students feel that they need to enlarge their vocabulary. Meanwhile, Ghazal (2007) noted that vocabulary learning is one of the major challenges foreign language learners face during the process of learning a language.

Wang (2010), similar to Schmitt's classifications of vocabulary learning aspects, proposed that knowing a word means "knowing its pronunciation and stress, spelling and grammatical properties, word meaning, as well as how and when to use

it." (p. 118). In other words, Schmitt and Wang suggested that many students' approaches to vocabulary learning will likely be dissatisfying in that their orientation into doing so is only superficial. They held that students cannot transfer the new vocabulary into LTM or use the words in proper contexts. They indicated that applying new words is of great importance in the field of vocabulary learning.

Cooperative Learning

In previous sections, I discussed Constructivism, memory, and vocabulary. The current section juxtaposes these concepts with Cooperative Learning. The ideas of Cooperative Learning are somewhat correspondent with those of Constructivism. As mentioned earlier, Constructivism holds that students learn with help of others, which includes the peers in the classroom. Cooperative Learning is derived from this concept. When students learn cooperatively, they are helping each other.

Johnson and Johnson (1989) defined cooperation as "working together to accomplish shared goals" (p. 63). Slavin (1996) stated that students' learning outcomes are dependent upon one another's behavior, which is enough to motivate students to engage in behaviors which help the group to be rewarded. In the perspective of motivation, Johnson and Johnson (1989) concluded that cooperation offers learning benefits to individual psychological health and helps improve social interaction.

Johnson and Johnson believed that in an ideal classroom that all students would learn how to work cooperatively with others, compete for fun and enjoyment, and work autonomously on their own (Johnson & Johnson, 1984). Slavin considered Cooperative Learning a "teaching pattern" in which students learn in groups and are evaluated by the performance of the whole group (Slavin, 1990). In 1994, Johnson,

Johnson and Holubec mentioned that “Cooperative Learning is the instructional use of small groups through which students work together to maximize their own and each other’s learning” (p. 4). In 2002, Wang, described Cooperative Learning as a basic style of heterogeneous learning group to promote students’ learning achievement and group results using the evaluation criteria and achieved teaching objectives for common teaching activities.

In the definitions mentioned above, the importance of cooperation and collaboration are emphasized. Scholars (for example, Wang) regarded Cooperative Learning as a positive relationship between the learning group members, which facilitates and motivates students in achieving their academic goals.

We can formulate a definition of Cooperative Learning from the definitions mentioned above. Firstly, it seemingly includes teamwork in small groups and it is a teaching strategy, with which students work together to achieve common goals. During the process, students can benefit from sharing ideas rather than working alone. Secondly, they are independent members but also can help one another, so, to some extent, almost all students can achieve his or her goal. On the contrary, in traditional methods, students who work individually or competitively are generally concerned with how to improve their own grades. In the long run, the latter may be problematic for students’ learning.

As a summary of this review, Table 1 below poses differences between Cooperative Learning and Independent Learning from the perspective of the conceptual framework.

Table 1 *Differences between Cooperative Learning and Independent Learning*

	Cooperative Learning	**Independent Learning**
constructivism	Learning is based on constructivism.	Learning is not based on constructivism.
rote memory	Rote memory takes a smaller part in the learning process.	Rote memory takes a larger part in the learning process.
vocabulary	Students work together to learn the vocabulary.	Students go home and work on the vocabulary on their own.

Cooperative Learning and Vocabulary Development in Chinese Secondary Schools

In China, students aged 13 years old generally begin attending secondary school. The class size varies from place to place.

Some research has been conducted to examine pedagogical and instructional practices in Chinese secondary schools, including teachers' teaching styles and students' attitudes regarding how vocabulary is taught. For example, in 2014, Zheng and Borg conducted a study about the teachers' beliefs in task-based English learning and found that some of the teachers, especially older ones, prefer the grammar-translation method, while some complained of difficulties encountered in big classes. Of central concern is the fact that Chinese secondary school students are currently still using the traditional way (rote memorization) to learn vocabulary. New vocabulary words are taught in isolation when research has shown that children learn words more effectively when taught in the context of other words (Matsuoka & Hirsh, 2010). Both students and teachers, however, find the traditional method does not work well. It also reveals that for a long time in China, students have been working individually, not cooperatively, because the Confucius-dominant approach to learning dominates

Chinese high schools. Cooperative learning, then, may be a new approach to learn for the Chinese students. As a result, my research seeks to discover whether this new method might work or not with respect to vocabulary learning in a Chinese secondary classroom setting.

Purpose of This Study

By conducting this research, I determined if Cooperative Learning might improve students' vocabulary learning in China on the basis of findings from one secondary school in China. I also wanted to offer some pedagogical implications for the English teachers in China who try to adopt Cooperative Learning to the process of vocabulary interaction. The current study also aimed to determine if Cooperative Learning might help students master and apply new words after they words have been learned. Last but not least, I wanted to explore whether Cooperative Learning might be helpful in retaining words longer.

Significance of This Study

The significance of this study is both personal and academic.

I chose this topic as my research topic because I learned English in a Chinese setting. I was born in the 1980s. When I was born, English began to become important and I saw more and more people began to learn English and suffered a lot while learning vocabulary. After I earned my master's degree, I worked as an educator in Beijing, and I began to see my students were suffering from learning vocabulary, too. I want to change the way we teach to make life easier for the English learners in China than it is today.

Academically, the proposed study has both theoretical and practical significance with respect to vocabulary learning through the implementation of

Cooperative Learning. The study potentially serves as a starting point for future study in vocabulary teaching/learning using Cooperative Learning in China. First, as a basic tenet of the study, research in implementation of rote memorization has not been favorable with respect to vocabulary learning, even though doing so has seemingly been the classic approach to lexical development in China. Thus, one might consider alternative approaches to effective vocabulary development. One possible direction may be that of Cooperative Learning. Indeed, at the root of this study is the notion that Chinese students have little experience with Cooperative Learning. They do not enjoy participating in class discussions because teachers establish learning environments that limit class discussions and promote passive learning; Chinese high school students are passive learners; they prefer to learn through memorization and repetition; they value only the instructor's opinion, not the opinion of peers; and they highly value group harmony (Roberts & Tuleja, 2008, p. 476). Therefore, carrying out this method in Chinese classrooms may be a significant change.

Research Topics

In light of these considerations, this study will explore the following research topics:

1. Will Cooperative Learning help Chinese secondary students in learning vocabulary?
2. Will Cooperative Learning be helpful in maintaining the new vocabulary longer after two weeks?
3. How can Cooperative Learning improve students' ability in using the new vocabulary?

Overview of Methods

In my research, I will use a quantitative design. The data collection method will be tests: pretest, post-test, and delayed post-test. I will use a one-way ANOVA quasi-experimental design. I will use two groups: one is the experimental group and the other one is the control group. The study will be conducted in the secondary school in Beijing, China. The details can be found in Chapter III.

Assumptions

Rote memorization is currently the primary means of teaching and learning vocabulary in China. As mentioned before, the class size in Chinese secondary schools is usually much larger than that in the States, which makes it hard to implement other methods in class. Huang and Li (2016) reported that in China, there are usually more than 60 students in one class in secondary schools. In addition, the traditional teaching and learning method has existed for quite a long time, which is not easy to be changed.

I used the tests to collect the data for my dissertation, so I assume that the participants would try their best to take the test truthfully. My sample students will be the representatives for the larger population in China and English has been a very important subject and will still be important in Chinese secondary school curriculum.

Delimitations

In order to answer my research questions, I decided to carry out the research in a secondary school in China. Therefore, my participants are younger secondary school students in that senior high school students are excluded. Secondary school students outside of China are excluded, too.

I chose to use achievement tests as the instruments to collect data because the test scores are easy to decipher and easy to report. Besides, my study covered a short time and would not delve into long time effects. They can reflect whether the treatment is helpful or not.

Finally, the definitions involved in this dissertation are from different theories. For one term, there are usually different definitions from different authors at different time. I can only choose a few but not all. For example, when I talk about the memory system, basically I am using Baddeley's model.

Furthermore, this study does not include qualitative research regarding the motivation or change of attitudes of students participating in a Cooperative Learning setting.

Definition of Terms

In order to give readers a better understanding of the terms in this dissertation, I offer the following definitions of key terms that appear in this report:

Central executive: the central executive which acts as supervisory system and controls the flow of information from and to its slave systems: the phonological loop and the visuo-spatial sketchpad. (Baddeley & Hitch, 1974)

Chunk: A chunk is defined as a familiar collection of more elementary units that have been inter-associated and stored in memory repeatedly and act as a coherent, integrated group when retrieved. (Tulving & Craik, 2000)

Constructivism: Constructivism is a teaching/learning theory of educational psychology originated in the western countries. (Piaget, 1971)

EFL: English as a Foreign Language (Kachru, 1985)

Long-term memory (LTM): a memory structure that contains permanent knowledge. (Atkinson & Shiffrin, 1968)

Memory trace: A memory trace is a theoretical means by which memories are physically stored in the brain. (Karl, 1930)

Phonological loop: The phonological loop is one of the central concepts of the working memory model. It represents a brief store of mainly verbal information together with a rehearsal mechanism. (Baddeley & Hitch, 1974)

Rote memorization: Rote memorization is a memorization technique based on repetition. (Hilgard, Irvine, & Whipple, 1953)

Sensory memory: Sensory memory refers to memory taken by human beings' five traditional senses. (Coltheart, 1980)

Short-term memory (STM): is the capacity for holding, but not manipulating, a small amount of information in mind in an active, readily available state for a short period of time. (Atkinson & Shiffrin, 1968)

Visuo-Spatial Sketchpad: The visuo-spatial sketchpad is the section of one's normal mental facility which provides a virtual environment for physical simulation, calculation, visualization and optical memory recall (Baddeley & Hitch, 1974).

CHAPTER III

LITERATURE REVIEW

Overview of the Chapter

In this chapter, I provide a literature review on the related topics. I first explore human beings' memory systems. In China right now, for the most part, students are using rote memorization to learn vocabulary. By analyzing memory systems, we can better understand the nature of learning and pose the efficiency of rote memorization and vocabulary learning. Additionally, we can examine how Cooperative Learning affects vocabulary learning. To this end, I also discuss learning styles in Chinese secondary schools as these learning styles position rote memorization within long-standing traditions of teaching in China.

Chinese Students' Learning Styles

Nelson (2002) believed that traditional learning and teaching in China had been greatly influenced by the Confucian tradition. Confucianism stresses the benefits of fixed hierarchical relationships in which the teacher is an authority figure. Chinese students tend to think by beginning with the principle or the whole and then using logic to reason downward (Hu & Grove 1991). For example, Chinese tend to think of something big or something as a whole first, and the smaller concepts or details will come next. This can be illustrated by the language, too. In English, we say, "*There is a chair in the classroom.*" We know that a chair is a smaller part compared with the classroom. Its Chinese equivalent would be, "在教室有一把椅子," which can be literally translated to *In the classroom, there is a chair*. It can be seen from this

example that, in these two languages, the ways of saying the same thing are slightly different, a distinction which reflects differing cultural concepts in the two languages.

Reid (1987) administered a perceptual learning styles questionnaire to 1338 students of varying language backgrounds to investigate their preferred modalities. There were 90 Chinese students included in this investigation. She stated that Chinese students appeared to have multiple major learning style preferences, preferring a kinesthetic learning style most strongly, while not preferring group work. Nevertheless, she posited that Chinese students' English proficiency might be better than that of the students from other countries because Chinese students preferred more learning styles.

Melton (1990) investigated 331 Chinese students from several big cities in China, including postgraduates, undergraduates, and some high school students. He found that Chinese students did not prefer group work, thereby approximating Reid's results.

Wang (1992) similarly found the least favored style was group work. Wang also found there was a relationship between learning styles and the length of time at university. The higher grade subjects were in, the less they preferred group learning. Conversely, the higher grade they were in, the more they preferred individual learning.

Similar results were observed by Hu (1997). In Hu's observation, the participants were 236 English major students. The students were found to dislike the learning style of group work.

To summarize the above-mentioned scholars, under the influence of the long-existing philosophy, tradition and teaching pedagogy, Chinese students seem not to

like group learning styles. They prefer, instead, to work on their own to learn in school.

Rote Memorization in China

Rote memorization has an established position in the Chinese education system (Yang & Dai, 2011). Cultural educational background and traditional teaching practice in China are identified as factors that contribute to many students' heavy reliance on memorization as their sole approach to vocabulary learning (Dai, 2011). Aoki (2008) reminded us that "In contrast to Western education in which students are encouraged to engage in debate, Confucius education tends to emphasize rote learning and memorization" (p. 35). Indeed, most students are used to relying on rote memorization in order to remember some degree of knowledge for passing exams.

The heavy reliance on rote memorization also has some relationships with the exam system in China. The exam system is a substantial element of Chinese students' scholastic experiences. There are different high-stakes exams for Chinese students to take from the time they are very young. From elementary school to secondary school, from secondary school to senior high school and on to college, at every stage, students experience some kind of test that is critical. And at all stages of test taking, the teachers' message to the students is clear: they must spend exhaustive amounts of time conducting rote memorization if they are to perform well on these exams.

In Chinese, there is a saying which can show the importance attached to rote memorization. In the Tang Dynasty, there were numerous ancient poems. Up to now, people still love those poems. In fact, we always say, "If you can memorize 300 Tang Dynasty poems in your mind, you can make poems of your own even if you are not a

poet." Obviously, from this saying, it can be seen that rote memorization is considered a step to creation.

In language teaching area, Liu & Zhang (2014) wrote, "traditional beliefs involve focus on grammar and language form, drill and practice, rote memorization, and teacher authority." (p. 187) They reported in their research that secondary school teachers have been influenced by this philosophy a lot in China.

However, the effect of rote memorization, particularly in terms of learning vocabulary, has had a draining effect on many students. Zheng (2012) carried out research with 100 students with respect to their vocabulary learning in a Chinese university, finding that a large percentage of students (36%) felt learning English vocabulary was a headache, and an even larger percentage (45%) felt learning English vocabulary was boring. In other words, Zheng found that 81% of Chinese university students had a negative attitude regarding the studying of English vocabulary, which indicates that it is an issue for the Chinese students to learn vocabulary. Harlen and James (1997) would not have been surprised by these results, writing that rote memorization is the "passive acceptance of ideas and information; lack of recognition of guiding principles or patterns" (p. 368). When it comes to vocabulary learning, rote memorization leads only to passive learning of words; in other words, learners can recognize the words when they read but they cannot use them when they speak or write. Accordingly, Zhang (2011) found that many students, unfortunately, find vocabulary difficult to acquire.

Gu & Johnson (1996) reported in their study that participants did not really learn English well by rote memorization after learning English for seven years as a school subject. Nelson (2001) seemed to support that the rigid school system that emphasizes rote memorization has impaired students' learning abilities. Martinsons

and Martinsons (1996) attributed passive rote memorization to Confucian-based cultural influence and argued that rote memorization was an obstacle to creative learning.

Overall, the researchers mentioned above all held that rote memorization lead to ineffective learning or passive learners. This also explains why Chinese students find learning vocabulary boring and hard. Therefore, an alternative approach is needed for Chinese students.

Constructivism

Based on a Constructivist view of learning, students construct their knowledge by interacting with the surroundings, and their knowledge is thought to be organized more as a network (Novak, 1985). Constructivism theory holds that knowledge is not obtained by teaching, but by learners' realizing the process of meaning construction in virtue of some help through the interpersonal collaboration and discussion. There are four elements involved in construction learning environment—situation, collaboration, conversation, and meaning construction (Vygosky, 1978). Here the situation is regarded as an important element, and therefore, the situation should be beneficial for the learning environment. In practice, constructivism regards Cooperative Learning as an important learning strategy. The teacher will organize the students in a learning group, and students will exchange and discuss their ideas in their group. An efficient learning process can be achieved students' active discussion and participation. Under the teacher's guidance, students can reconstruct their knowledge by interaction. The goal of doing so is to let the students build a link between the knowledge to be learned and the knowledge learned already.

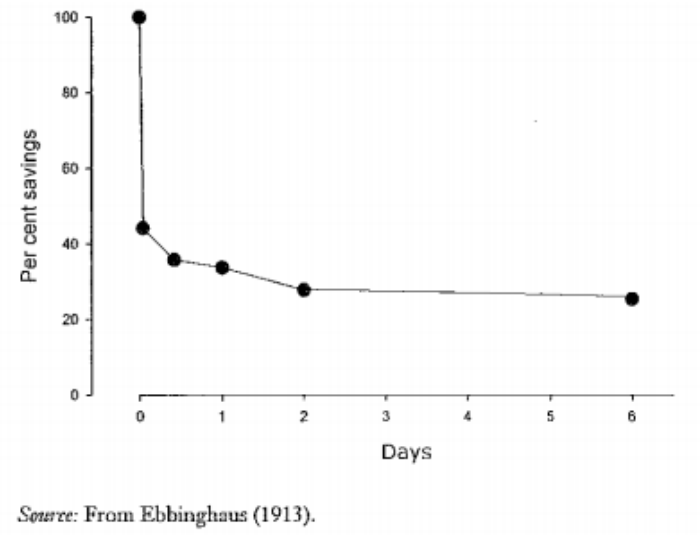
If we refer to earlier discussions, we can see that the idea of Cooperative Learning is in agreement with the idea of constructivist theory. In other words, during the process of learning cooperatively, students talk to each other and work with each other. They are the center of learning and they can learn from their peers. Knowledge may be built with the help from others. The teacher's role is to guide or lead the students to participate in the activities. In other words, simply, Cooperative Learning and Constructivism seemingly jive with each other closely.

Memory

In Chapter I, I discussed components of memory. In this section, I introduce the details of memory theory. By introducing memory theories, we embark on knowing how we learn words. However, the variety of learning theories point to differing ideas with respect to vocabulary learning.

Theories on Working Memory

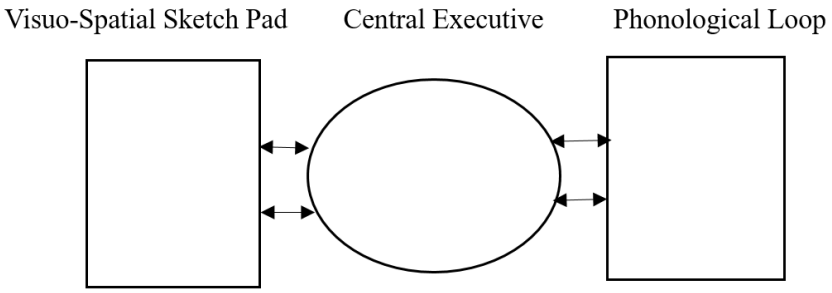
Ebbinghaus (1885) conducted research on amnesia from 1879 to 1884 and established the Ebbinghaus Forgetting Curve (See Figure 2 below). The curve shows that the speed of forgetting things for human beings is not always the same. From the curve, we can see that the beginning is when the forgetting happens most and with time passing by, the memory will continue or be only slightly lost. In a nutshell, if you learn something new, and if you do not further attend to, you will forget most of this *something new* within the first two days; beyond this time, if well attended to, information loss may be slowed.



Source: From Ebbinghaus (1913).

Figure 2. Forgetting Curve (Ebbinghaus, 1913).

In 1975, Baddeley and Hitch supplied their Working Memory Model, which indicated that the classification of types of memory came into agreement. It was first put forward in 1974 and revised a few times (Baddeley, 1975, 1986, 2002). The original model included three parts: the visuo-spatial Sketchpad, the central executive, and the phonological loop (See Figure 3.)



Source: Baddeley, 1986

Figure 3. Baddeley's Model of Working Memory (1986)

In this model, the central executive is the core of the model while the other two parts are sometimes referred to as "slave systems" to the central executive.

Working memory involves temporary storage and active manipulation of internal information, and is comprised of a central executive and two subsystems—the phonological buffer/loop and the visuo-spatial sketchpad (Baddeley, 2007). Dovis, Oord, Wiers, and Prins (2013) indicated that, "the central executive is a mental control system with limited attentional resources that is responsible for supervising, controlling and manipulating information in the short-term memory systems" (p. 902). As its name indicates, *central* means this part works as a "boss." For example, when we go to the Disneyland on a cold day in winter, while we are walking in the garden, we will encounter thousands of things from different sensations like sight, smell, or hearing. So what should we pay attention to? What do not we notice at all? This is a choice determined by the central executive-the "boss." The "boss" will assign different tasks to its subsystems: the phonological loop and the visuo-spatial sketchpad.

The phonological loop consists of the "phonological store" and the "articulatory rehearsal system." The phonological store holds phonological sounds for a brief period of time (usually within two seconds; Baddeley, 2009). The "articulatory rehearsal system" enables us to rehearse materials needed to be memorized, thereby lengthening the materials' stay in the phonological store. If the materials are not rehearsed from time to time, amnesia will occur.

This model assumes that there are phonological representations of both auditory and visual materials. In other words, when visual materials such as the printed letters are presented, people may convert them into phonological representations and they can be held in the phonological store (Carroll, 2008). The visuo-spatial sketchpad temporarily maintains and manipulates visual (like color) and spatial (like location and place) information. The visuo-spatial sketchpad allows

people to form visual images, process them in their mind, and transfer the images into words and so on. The assumption is that we are limited in terms of the number of items that can be accomplished at one time. Miller (1956) pointed out that the maximum number of items a person could hold in short-term memory at one time is "seven, plus or minus two" (p. 343) Thus, behavior was assumed to be controlled by the central executive (Baddeley, 2001, 2003).

Baddeley (2003) modified his model according to subsequent research findings in working memory and language learning research (See Figure 4 below).

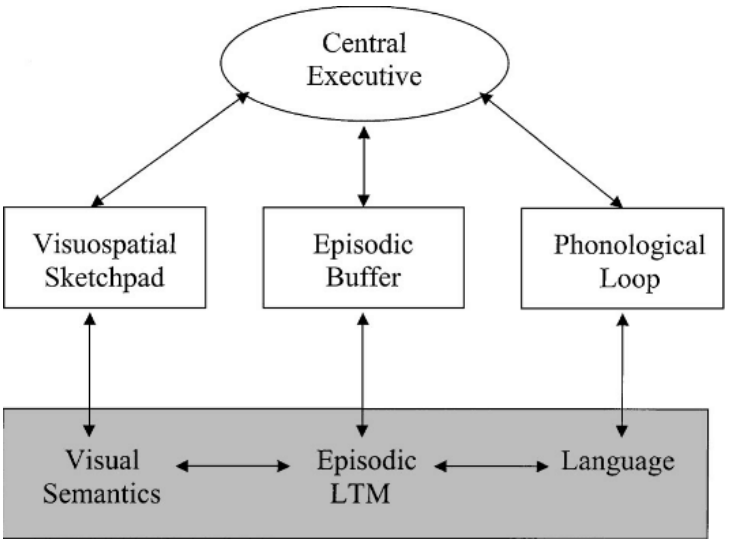


Figure 4. The Baddeley's Latest Working Memory Model (2003)

This model was put forward while Baddeley was examining the phonological loop and native language learning. He found that "as children get older, the relationship becomes much more reciprocal, with good phonological memory helping vocabulary learning, which in turn facilitates the repetition of unfamiliar pseudowords" (Baddeley, 2003, p. 195). Therefore, he added an additional component to reflect the phenomena from these experiments: the episodic buffer. The episodic

buffer seemingly works as a “backup” store which communicates with both long term memory and the components of working memory. The episodic buffer can bind together information from a number of different sources (visual or audial) into *chunks* or episodes. A chunk is defined as a familiar collection of more elementary units that have been inter-associated and stored in memory repeatedly and act as a coherent, integrated group when retrieved (Tulving & Craik, 2000). When we process the information in our mind, we often use the technique of *chunking*. Chunking is a process by which individual pieces of information are bound together into a meaningful whole (Neath & Surprenant, 2003). For example, if we are given a series of digits, say 89432134, to memorize, we probably feel it hard to do it. However, if we chunk this information into smaller parts—like 894-321-34—the three chunks are easier to memorize because they are short and catchy.

According to Brainerd, Stein and Reyna (1998), memory can be divided into conscious memory and unconscious memory.

> Conscious memory is said to involve vivid recollections of the occurrence of specific items as part of previously presented material…Unconscious memory is said to involve definite feelings that items resemble presented material, but those feelings are not anchored in specific recollection of prior occurrences. (p. 342)

According to the process of memory information processing and the length of memory retention time, memory can be divided into sensory memory, short-term memory (working memory), and long-term memory. (Atkinson & Shiffrin, 1969) Memorization, retention, and recall constitute the basic steps of memory.

Memorization is the first step of memory, then it comes to the second step of retention, and recall is the third step. These three steps closely linked, depend on and influence each other (Atkinson & Shiffrin, 1969).

Short-Term Memory and Vocabulary

The second step in information processing sequence is traditionally defined as short term memory (STM), and it can also be regarded as working memory. STM is regarded as a limited capacity store that can maintain unrehearsed information on the order of 20 to 30 seconds (Baddeley, 1999). It is believed to have a capacity of five to nine bits of information (Miller, 1956). In other words, STM is limited both in its duration and its capacity.

In this study, STM is a little different from its psychological counterpart. In psychology, STM is said to be only kept for 20 to 30 seconds (Baddeley, 1999). However, it is impossible to test each word within such a short time immediately after the presentation. Based on the studies of some researchers such as He (1998), Zhao (2007), and Liu & Qin (2014), the term STM refers to the result of testing immediately after all the target words have been presented.

Information stored in STM cannot stay for a little while and will be forgotten very soon. However, the information obtained can pass through STM, finally transferring into the next memory stage: long-term memory, which will be talked about in detail in the next part.

Long-Term Memory

According to recent memory theory, long-term memory is a memory structure that contains permanent knowledge. Tulving (1972) suggested that we should distinguish between two aspects of long-term memory: episodic memory and

semantic memory. Generally, episodic memory deals with personally experienced facts, and semantic memory deals with general facts (Carroll, 2008).

Episodic and Semantic Memory

The distinctive feature of episodic memory is the capacity to remember specific events. This system also involves three parts: 1) a system that will allow us to encode that particular experience distinguished from others; 2) a system that requires a permanent and durable way to store the event; and 3) a method of searching the system and retrieving that unique memory.

Semantic memory refers to our organized knowledge of words, concepts, symbols, and objects. It is composed of broad classes of information: motor skills, general knowledge, spatial knowledge, and social skills (Carroll, 2008). The organization of semantic memory is highly organized or structured, because numerous simple questions about semantic memory can be answered right away by most people. An example of semantic memory could be:

Q: Where does the sun rise from every day?

A: From the east.

Rote Memorization and Vocabulary Learning

There has been substantial research on rote memorization and vocabulary learning. Some of the research has shown that rote memorization is helpful in learning vocabulary. For example, in 2011, Rashidi and Omid conducted research on the beliefs of Iranian EFL learners on rote memorization and found that the 103 college students found rote memorization an efficient way to learn English, but not necessarily the best one.

Li's study (2004) indicated that Chinese EFL learners generally hold highly positive beliefs about rote memorization in English vocabulary learning.

Yang and Dai (2011) mentioned that in secondary school "the most frequently used methods are reading textbooks, listening to the teacher, taking notes, and focusing on memorization." (p. 62) The traditional features of the learning styles have carried over from secondary school to university.

Khoii and Sharififfar (2013) compared rote memorization and semantic mapping, and their results showed for the two different groups that there were no significant differences between their scores although teachers spent much more time in preparing the sematic mapping way to teach. From the experience of 100 Burmese, they concluded that due to the cultural and social conditions of their country, students and teachers will likely still use rote memorization as the main approach to teaching or learning English.

Furuhata (1999) carried out a study on Japanese EFL learners' perception toward the traditional way of learning and the new method like Total Physical Response. Data showed that that younger learners showed preference to the new approach. Sinhaneti and Kyaw (2012) also had the similar findings in their research, revealing that language learners liked the Total Physical Response approach when they learn the language.

Other researchers, however, found that rote memorization should be changed to gain better results. For example, Wang and Kelly's (2013) study was intended to uncover whether new approaches to learn vocabulary are more effective. They chose college volunteers as the participants and found that the newly-introduced methods (like learning vocabulary in contexts) to learn vocabulary were really helpful in acquiring vocabulary.

In 2012, Yang and Dai wanted to find out what methods in China (rote repetition, structural associations, semantic strategies, and mnemonic keyword techniques) participants liked most when they learned vocabulary. The results reported that students favored the structural association and semantic strategies approaches.

In sum, rote memorization has some role in some countries, especially in Asian countries. It is still very popular and many authors have found it helpful. On the other hand, some researchers have begun to find new methods gradually more appealing.

Vocabulary

Vocabulary Knowledge

Another important aspect with respect vocabulary is actual vocabulary knowledge. But what does knowing or mastering a word mean? Opinions on the answer to this question vary.

Qian (1999) stated that vocabulary knowledge consists of two aspects:

- *breadth*, referring to the vocabulary size or vocabulary number which means how many a person can recognize and use English words, and
- *depth*, referring to how much a person know about a particular word. (p. 283)

Wallace (1982) offered that there are at least nine kinds of vocabulary ability of mastering a word, such as recognizing a word in both spoken and written form, recalling the word in other material, connecting the word with a suitable object or concept, making use of it in a right grammatical form, pronouncing it appropriately,

spelling it correctly, using the appropriate word collocation, using it at the appropriate level of formality, knowing its intension and associations.

The two above-mentioned authors have made contributions to vocabulary teaching field in that they introduced what is knowing a word. Knowing the spelling of the words does not mean knowing the word completely. That is knowing the word partially.

Vocabulary Learning and Memory

Memory has become the core part of language information processing. Words stored in the LTM or working memory are not words mastered or learned. Instead, when we say a word is learned, we mean it can be retrieved from the long term memory.

Paired-Associate Learning

Paired-associate learning (PAL), created by the psychologist Mary Whiton Calkins in 1894, involves the pairing of two items (usually two words)—a stimulus and a response (Deese & Hulse, 1967). For example, two words such as *summer* (stimulus) and *complete* (response) may be paired, and when the learner is exposed to the stimulus, he/she will make retrieve the response word. In other words, a subject recalls complete when he/she sees summer. When learning a new word, one must pair the word itself with its meaning. This is the essential characteristic of PAL.

PAL has been studied frequently in 1950s and 1960s (e.g. Crothers & Suppes, 1967; Underwood & Schulz, 1960). The early PAL studies involved pairing two familiar L1 words, which aimed to explore the establishment of associate connections within a certain language. As Griffin and Harley (1996) suggested, the main theme of

the studies seemed to be the question of which element of the pairs plays a more important role.

There were limited studies conducted on paired-associate learning in China. Most of these studies were found in the field of general psychology, which took PAL as a measure to investigate human brain and memory.

Cao's study (1997) based on one paired-associate learning test and three recognition tests was in an attempt to find evidence for the formulation of the elder's memory scale.

Zheng et al.'s (2008) study attempted to examine the activated brain areas and the neuronal mechanism of Chinese paired-word associate learning. Sixteen volunteers participated in the study. They were required to learn and recall the Chinese characters using PAL, while the magnetic resonance imaging (MRI) data were recorded. The results revealed that extra brain areas had played a role in PAL.

Li et al.'s (2006) study investigated the role of paired-associate learning ability played in Chinese children's pre-reading activities. Ninety-three preschoolers participated in the research and took the paired-associate learning test. The tasks involved the PAL of pseudo-words, non-words, or symbols with pictures. The results of the study showed that the ability to use PAL strategy promoted children's vocabulary development in pre-reading.

This theory informs us to place emphasis on the presentation of new words when teaching new vocabulary so that learners can enhance memorization and retrieve items quickly when necessary.

Rote Memory in China

As mentioned previously, in China, rote memorization is considered a step to creation. Rote memorization is deeply-rooted in Chinese tradition and remains the predominant method for education and training across the rapidly developed economies of China (Martinsons & Martinsons, 1996).

However, the effect of rote memorization, particularly in terms of learning vocabulary, has had a draining effect on many students. Zheng (2012) carried out research with 100 students with respect to their vocabulary learning in a Chinese university, finding that a large percentage of students (36%) felt learning English vocabulary was a headache, and an even larger percentage (45%) felt learning English vocabulary was boring. In other words, Zheng found that 81% of Chinese university students had a negative attitude regarding the studying of English vocabulary, which indicates that it is an issue for the Chinese students to learn vocabulary. When it comes to vocabulary learning, rote memorization leads only to passive learning of words; in other words, learners can recognize the words when they read but they cannot use them when they speak or write. Accordingly, Zhang (2011) found that many students, unfortunately, find vocabulary difficult to learn.

Cooperative Learning

There are different descriptions of Cooperative Learning from different researchers. Cohen (1994) characterized Cooperative Learning as a social process in which knowledge is acquired through the successful interaction between the group members. Andrew (1994) found that Cooperative Learning groups set the stage for students to learn social skills. She pointed out that leadership, decision-making, trust-building, and communication are different skills that were developed in Cooperative

Learning. Finally, Johnson (1992) described Cooperative Learning as a division of labor undertaken to solve a problem. Students are given a shared learning goal, and the goals is divided into small parts for each single student to work on. After finishing each piece, all group members come together and present their findings. Everyone will make contribution to reach the final goal set by the teacher.

As it turns out, research has supported Cooperative Learning as an effective teaching strategy to both the teacher and learners. Sharan (1980) noted that Cooperative Learning seemingly makes students in one group work collaboratively and engagingly, indicating gains. As a result of Cooperative Learning, in academic achievement, social interaction skills, students' attitudes towards school and others, and self-improvement.

Slavin (1995) described the advantages of Cooperative Learning in a foreign language learning context, stating that it offers a comfortable learning environment which encourages EFL learners to overcome their apprehension in communicating and expressing their points of view in a foreign language. According to Jacobs & McCafferty (2006), Cooperative Learning encourages learning and allows the fostering of communication skills among learners. Cooperative Learning most often involves small groups of students who contribute to each other's learning. Student interactions lead to opportunities for improving communication skills, and more importantly, to collective problem-solving (Earl, 2009).

More specifically, with respect to vocabulary learning, Ghazal (2007) explained that Cooperative Learning may be achieved through instructing learners to apply vocabulary learning strategies as efficiently as possible. This was found even in Asia, where Chan (2014) conducted a study in a primary school in Hong Kong and found that students' perceptions of Cooperative Learning were generally positive.

Key Elements of Cooperative Learning

According to Jacobs (1997), Cooperative Learning is not simply managing students into group work, but rather a specific kind of group work. Group work is just an organization of students asked to work together without guidance, function, or purpose. As for Cooperative Learning, students are well grouped to cooperate for certain purposes. The students are organized into group in that students' level, personalities are taken into consideration when the teacher tries to put them into different groups. Before functioning, a group task is carefully designed and prepared. During the process of group work, students are appropriately guided or controlled by the teacher (Jacobs, 1997). Since a positive interactive environment has been created, cooperation can be more efficiently operationalized under a teacher's adaptation of the instructions (Abrami, 1995). In the 1960s, David and Roger presented their studies on Cooperative Learning, which made Cooperative Learning popular worldwide. At that time, Cooperative Learning was regarded as a positive way to realize child-centered learning style.

In order to make Cooperative Learning theories more comprehensive, the Johnsons (1999) raised five elements of Cooperative Learning:

a) Face-to-face interaction (students are closely getting together in one room or a classroom);

b) Positive interdependence (students need support, feedback, guidance from each group member or other groups);

c) Individual accountability (even though they work together, students must present their individual contributions);

d) Collaborative skills (all students need opportunities to learn from others, and practice using the ideas or skills of others through communication or collaboration); and

e) Group processing (students can learn what contributes to work effectively in advocating or promoting an individual idea) (pp. 9-11).

Group dynamics play an important role in leading to effective collaboration and positive interdependence as essential factors in achieving group goals, while "competitively structured groups" could be a hindrance to group goals (Johnson, 1976). Only when every member in the group believes that they can achieve the goal does positive interdependence exist (Johnson, 2007). For these five elements, they are related with each other and they work systematically.

Benefits of Cooperative Learning

The benefits of Cooperative Learning have been studied by many researchers in different areas. First, effects in improving students' academic performances can be observed: In fact, Johnson and Johnson (1986) found that cooperation

a) stimulates the providing of constructive or helpful feedback to other group members;

b) helps members become aware of the importance of individual effort associated with the group task and the shared responsibility for achieving goals;

c) motivates each one to endeavor for groups;

d) establishes mutual trust with one another; and

e) reduces the level of nervousness and anxiety.

Cooperative Learning has been considered the solution to “an astonishing array of educational problems” (Slavin, 1991, p.88). It is an effective way to promote students’ academic and social achievements and skills.

Nichols (1994) reported that an appropriate adoption of Cooperative Learning leads to development in students’ self-efficacy, striving for group goals, and intrinsic motivation.

According to Slavin (1996), Cooperative Learning is a kind of teaching method in which students study together in the form of small groups to help other members study academic content. It has been widely acknowledged that Cooperative Learning stimulates to establish promotive relationship between students, attitudes towards learning and students’ academic achievements. Shimazoe & Aldrich (2010) observed that since the 1980s, Cooperative Learning has been a widely-used form of active pedagogy in the world. It continues to be a valuable approach for learning in academic institutions today, as it deserves to be implemented for the benefits brought to students and instructors. Furthermore, it has also been believed that Cooperative Learning could be favorable toward stimulating social development as well as intellectual development (Cohen, 1984). In addition, it seemingly leads to psychological health, a sense of productivity, and interpersonal skills (Nilson, 1998).

Adams & Hamn (1994) provided a possible explanation for the success of Cooperative Learning, indicating that effective learning usually occurs when all participants are interacting well with each other. Cooperative Learning satisfies this requirement and creates certain environments for effective engagement and interaction. Interpersonal interactions in classrooms make students recognize their own roles, stimulating them to be responsible for class discussion and participation with group members. They are not on their own. Instead, everyone has a

responsibility to share the task. Cooperation contributes to create natural atmosphere for developing the general abilities of problem solving, decision making, and social interaction, as well (Rushatz, 1992). Webb (1985) suggested through this kind of team-based learning, students showed a more in-depth understanding of the new knowledge. As members in a group, they need to be taught by other members and, at the same time, they need to teach the group members what they have learned. They are in charge of teaching so they become more responsible and they have to understand the knowledge or concepts thoroughly to be able to teach it to his/her peers. Furthermore, after the student teaches his/her peers the knowledge, the student will have a better understanding about what has been taught.

Gokhale (1995) pointed out that Cooperative Learning offers more opportunities for students within one group to exchange and discuss ideas through collaboration. Similar to Webb's findings, Gokhale found that students had the opportunities to learn from peers on learning experiences, learning strategies, and social skills. Group work also stimulated students to deal with arguments when meeting with counter opinions and learn to respect diversity. Ideas can differ out of cultural reasons or family reasons. It encouraged students to actively think beyond their own perspectives (Slavin, 1983).

Research (for example, Johnson and Johnson, 1986; Totten, 1991) has shown that cooperative work helps students retain information longer and have better performances than individual work. The cooperation can help students engage in group discussion and also become critical thinkers in the future. This finding was supported by Totten (1991) that Cooperative Learning stimulates longer information retention and fosters students' actively taking responsibility for self-learning and group discussion.

Several research projects have provided support for the fact that Cooperative Learning can better the students' academic performance. Gokhale (1995) conducted an experiment in college and found that students worked in teams got higher scores in the achievement test than students learning individually, thereby indicating a positive impact of Cooperative Learning on academic achievement.

Slavin (1984) mentioned that team-based work can motivate students toward learning in a positive way. Students work together and support each other to fulfill a shared task. It is understandable that when students compete with each other, they will feel more pressure. On the contrary, if they work towards a common goal, they will work with each other like friends. This will make them less nervous.

Further studies by Nichols (1989) showed that cooperation can also alter the goal orientations of students. He reported that Cooperative Learning can help students develop strong learning goals. Once students have strong learning goals, they want to face challenges and they are persistent even if they encounter difficulties. While students without strong learning goals tend to avoid difficulties and challenges. Miller (1994) also provided supports for that Cooperative Learning has a positive impact on student learning goal orientations.

In regard to the vocabulary learning field, according to Zarei and Sahami Gilani (2013), Cooperative Learning contributes to the elaboration of vocabulary. When students work with each other in the group, the cooperation process actually helps students process the information, and during that process, students can explain their understanding of the knowledge that they are learning, pronounce, and spell the words correctly.

Techniques Fostering Cooperative Learning

There are many teaching methods of Cooperative Learning, such as Learning Together (LT), Jigsaw, Student Teams-Achievement Divisions (STAD), Teams-Games-Tournaments (TGT), Team Assisted Individualization (TAI), Group Investigation (GI), etc. (Kuntz & McLaughlin, 2001). There are several important factors that we should consider when using cooperative learning methods, including students' familiarity with working in groups, careful lesson planning, teachers' facilitation, and the formation of heterogeneous teams (Kagan, 1998). What follows is a brief introduction to some methods that have been widely used: Student Teams-Achievement Divisions (STAD), Teams-games-tournament, Jigsaw, Group Investigation, and Learning Together.

1. Students teams achievement divisions (STAD). This technique was developed by Slavin (1995). In STAD, teachers put students into groups of four. The group members should be diversified in academic scores, gender, abilities. When they work together, they seek help from the peers rather than referring to the textbooks or teachers. Before the activity, the teacher needs to make sure that students understand the information in the materials and know which group they are in. The teacher needs to observe and walk around the classroom to provide help when the students need to. After the learning activities are finished, a test will be given. No communication or discussion are allowed. The aim of this kind of cooperative leaning method is to improve individual's performance and enhance interpersonal relationship in groups.

2. Teams-games-tournament (TGT). TGT uses a style similar to that of STAD. In this activity, students are divided into groups of three. Small sized groups can increase every member's chances to make contributions to the group. After the activity, there will be a contest instead of a test. Students will compete with those who

have similar scores in the previous competition. Everyone has the opportunity to win. Finally, the group which gets the highest scores wins the competition.

3. Jigsaw (Aronson, 1978). In a Jigsaw, every group has four to six students. There will be a specific learning material. This material can be divided into several parts. Each member of the group gets one part of the material. The original group is called *home group*. They learn about what they have in their own home groups. After a period of time, when they have some knowledge about what they have learned from the materials, they go to a new group, in which every one learns the same part of the material. This new group is called *expert group*. In this expert group, the members can talk about what they have learned and what questions they have to other members so that they can talk and solve the issue before going back to their home groups. By doing so, every student has the same opportunity to act as an expert. Thus, this can increase their interest in assignments. For example, students are given *earthquake* as the topic. Student A in the group is assigned to learn what places are likely to have earthquake. He/she then works on that part and goes to talk to the ones who are in other groups but have the same part of the task. They have a discussion and then go back to their home group as experts who know more about what places are likely to have earthquakes. When they go back to the home group, each one teaches the group members what he/she knows from the expert group. The last thing shared is what everyone knows, thereby finishing the entire project. At last, everyone will know the whole material.

4. Learning Together (Johnson and Johnson, 1976). The Learning Together approach requires four or five members in each group. The group members study the same material and solve issue they might have. Students hand in their assignment when they finish the task. The teacher will need to evaluate the assignments and give

rewards to the group who has done the best. Similarly, teachers are supposed to observe the students while they are working with each other.

5. Group Investigation (Sharon, 1990). In this method, students make their own group consisting of two to six persons, and the groups can choose the topic out of all the topics that need to be learned by the whole class. After they get the task, the task will be divided into even smaller units. And each member in the groups has a responsibility to fulfill one part of the task. Students spare no efforts to overcome their difficulties and try their best to fulfill the tasks. They have to be fully prepared to present their own findings to others. At last, not only the teacher but also other students assess the learning outcomes. While doing this activity, students learn to respect each other; they will learn to be responsible because the group's success is dependent on each individual's accomplishments.

Cooperative Learning in China

Studies on Cooperative Learning in China began in the 1980s and have been more and more flourishing in recent years, the most outstanding of which are those conducted in Zhejiang and Shandong provinces. Both of the provinces are located in the eastern coast areas in China.

After the year 1989, researchers like Sheng indicated that group Cooperative Learning instruction could lead to gains in increasing academic achievement, promoting development of students' personality, and fostering cooperative spirit and interactive competence (Sheng & Zheng, 2006). Later, "Cooperative Instruction: Research and Experiment," a large project held by the Shandong Research Institute of Education Science, began in 1993 and underwent research in hundreds of schools from kindergarten to college level, covering 9 provinces over a period of 6 years. The

findings of this project demonstrated that cooperative instruction improved students' participation degree and academic achievement while promoting their development of creative spirit and practical competence (Wang, 2001).

What is more, proponents of Cooperative Learning in China also practiced Cooperative Learning in the field of teaching English, especially in vocabulary instruction, and their findings demonstrated that Cooperative Learning was an innovative vocabulary teaching and learning method, which was beneficial to the use and memorization of words (Guan & Lu, 2003; Guang, 2004; Li, 2006). Guan and Lu (2003) argued it is necessary to carry out group Cooperative Learning in English teaching was probably necessary; thus, they explored how group Cooperative Learning could be implemented in primary English teaching in China. Guan (2004) discussed the relationship between the theory of vocabulary learning and the practice of enlarging students' vocabulary size in Cooperative Learning; Li (2006) presented the theoretical foundation and specific methods of Cooperative Learning and introduced the application of Cooperative Learning in the teaching of English vocabulary.

Overall, numerous studies on Cooperative Learning have appeared in language teaching in China; additionally, Cooperative Learning has become a teaching approach within China's new curriculum reform. Still, to date, few researchers have conducted studies about Cooperative Learning in secondary school settings in China, let alone with respect to vocabulary learning in English language teaching.

Conclusion

As a result of this literature review, I found that research has been conducted on vocabulary learning, albeit with insufficient research conducted with secondary

school students. I also reviewed quite a few studies on the current learning styles that are popular in China, but none of the reviewed studies revealed how these kinds of learning styles are affecting secondary school students' learning performances. Although rote memorization plays a key traditional in teaching practice in China and is very popular, there is little literature showing any positive impact rote memorization may have upon students. Additionally, there is no literature regarding how Cooperative Learning might help students—particularly in China—retain vocabulary longer while improving students' ability in applying the new words in context, particularly at secondary school levels. By conducting this research, I attempt to fill in these gaps and make contributions to the vocabulary learning field in Chinese secondary schools by exploring the following research questions:

1. How can Cooperative Learning improve students' vocabulary learning?
2. Will Cooperative Learning retain the new words longer after a period of time?
3. Will Cooperative Learning improve students' ability in applying the new words in contexts?

CHAPTER IV

RESEARCH METHDOLOGY

Overview of the Methodology

In previous research on Cooperative Learning, the majority of the research is quantitative research (for example, Xu, 2013, Wang, 2005) or a mixed method (for example, Li, 2013, Liu, 2011). Creswell (2013) defined quantitative research as

> an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures (p. 35).

My research questions examine the effect of the treatment and aim to explore the differences between control and treatment groups. Creswell (2013) mentioned that if the research problems need "(a) the identification of factors that influence an outcome, (b) the utility of an intervention, or (c) understanding the best predictors of outcomes" (p. 38), a quantitative design will work best. This makes quantitative design an appropriate approach to answer these research questions.

Research Design

Repeated Measure Quasi-Experiment Design

The research design for this study was a repeated measure ANOVA mixed design quasi experiment. Creswell (2013) defined a quasi-experiment as, "a form of experimental research in which individuals are not randomly assigned to groups" (p. 206). This is different from a true experiment, in which individuals can be

randomly assigned to groups (Creswell, 2013). In the school that I used for my study, all the classes have fixed number of students who cannot be randomly assigned to different groups. They also have assigned teachers.

Research Questions and Hypotheses

The overarching question for my study is: Is there a significant difference in students' vocabulary learning between control and experimental groups across three time points, pre-, post-, and delayed post-tests?

Under the overarching question, there will be three sub-questions. These three sub-questions help answer the overarching question:

a) Is there a significant difference in students' vocabulary learning between control and experimental groups?
b) Is there a significant difference in students' vocabulary learning across three time points?
c) Is there a significant interaction between time and group on students' vocabulary learning?

Following from the research questions, my research hypotheses are the following:

H1. There is a significant difference in students' vocabulary learning acquisition between control and experimental groups.

H2. There is a significant difference in students' vocabulary learning across three time points.

H3. There is a significant interaction between time and group in students' vocabulary learning.

Methods

Setting

My research was conducted in Horizon (a shortened name is used here for privacy) Secondary School, Beijing, China. This is a public school, founded in July 1999. The school operates with 53 staff and faculty members, and 130 students are enrolled. The students in the school are mostly from middle-class families, and the parents have stable jobs. The school is one of the top-tier schools Daxing District.

Participants

Student Participants

The participants in this study were students from two classes in grade seven in a Horizon Secondary School in Beijing. For seventh graders in Horizon, students have English classes eight times a week and each period of class lasts for forty minutes. I chose two classes that are similar in their English level using the mid-term exam scores in November, 2017. These two classes were randomly selected as either the control group or the experimental group. There were 52 students in the two classes. The participants in the research began to learn English when they were in first grade in elementary school. Thus, by the time they reached seventh grade, they had learned English for more than six years and already garnered some knowledge of the English language.

Teacher Participants

I had the following three teachers in that school: Helen, Maria, and Lora. In order to protect their privacy, I implemented pseudonyms. Two teachers, Helen and

Maria, were selected as teachers who taught the two classes. The third teacher, Lora, observed the class with me.

Table 2. *Information of the Cooperating Teachers*

Name	Helen (teacher)	Maria (teacher)	Lora (observer)
major	English education	English education	English education
highest degree	Bachelor	Bachelor	Bachelor
gender	Female	Female	Female
age	31	29	24
years of teaching	4	3	1

I chose Helen and Maria for the following considerations. First, according to the scores of the mid-term exam in the fall semester 2017, these two teachers' classes ranked similar in average score in the English test. The scores were the raw scores. The full points were 100. I chose Lora to conduct an observation because she did not teach either of the groups: experimental or control. Additionally, her colleagues reported to me that "she is a really smart person and she learns content really fast."

Second, these two teachers have similar backgrounds. Having matched teachers can help reduce the variation associated with teachers from the teachers and improve the internal validity of the study. Fraenkel, Wallen, and Hyun (2011) noted that "When a study has internal validity, it means that any relationship observed between two or more variables should be unambiguous as to what it means rather than being due to something else" (p. 166) In my case, there were different variables (age, gender, ethnicity, and etc.) with respect to the teacher participants. If I did not choose teachers of the similar background, gender, degree, one might suspect a "subject

characteristics threat" (Fraenkel, Wallen, and Hyun 2011, p. 167). If the subject characteristics threat is not controlled, "these variables may explain away whatever differences between groups are found" (Fraenkel, Wallen, and Hyun 2011, p. 167)

Description of the Target Materials

The English text book used in my cooperative school is from Foreign Studies Press (2011), Beijing. The cover of the book is shown in Figure 5.

Figure 5. The English Textbook Used in the Study

It is a popular text book in China. It was published by Foreign Language Teaching and Research Press in Beijing (2012). The authors are Lin Chen, Simon Greenall and Ziwen Lu. The module I chose is Module 8 using the colleagues' teaching schedule. This module includes three units:

Unit one: I always like birthday parties.

Unit two: She often goes to concerts.

Unit three: Language in use.

The first two units are texts and the last unit is a set of exercises. The topics in this module appeared to be potentially interesting and exciting to the teenage students. Topics included birthday parties and concerts, both often of keen interest to teenagers. I ultimately developed tests (to be discussed in greater detail in the next part) closely related to the content here in the module. In fact, in this study, the cloze test part was about the birthday parties and the writing part is about the music or concert. All the target words were included in the text and there were no new words for the students. If there were, the Chinese equivalents would be put in the brackets behind the words for reference. The copy of Module 8 is attached in appendix A.

Timeline for the Research

The study consisted of the following events: pilot testing, a pretest, two teacher training workshops, a pilot teaching session, an intervention, a post-test, and a delayed post-test.

The study was conducted, using the following timeline in Table 3:

Table 3. *The Timeline for the Study*

time	**events**
Sep 16, 2017	communicating with the teacher and the principal to get the permission letter signed
Oct 24, 2017	permission from the principal
Oct 26, 2017	teaching content nailed down
Oct 30, 2017	teacher participants nailed down talking about the materials
Nov, 2, 2017	developing the test with the teachers and committee members
Nov 20, 2017	pilot testing
Dec 15, 2017	pretest
Dec 16, 2017	Pretest grading
Dec 21, 2017	1. teacher training workshop (the theoretical part) 2. introduce the research to the students 3. distribute the consent form to the parents
Dec 22, 2017	1. teacher training workshop (the practical part) 2. pilot teaching
Dec 23-25, 2017	1. intervention 2. observation of the control group
Dec 28, 2017	posttest
Dec 28-29, 2017	posttest grading
Jan 12, 2018	delayed post-test
Jan 12-14, 2018	delayed posttest grading
Jan 20, 2018	Second pilot testing
Jan 20-Jan 23, 2018	pilot testing analysis

Training of the Cooperating Teachers

Before I began the intervention, I met the teachers and discussed Cooperative Learning with them. I used two days to train the teachers with the use of Cooperative Learning in the Classroom (1994) by David Johnson, Roger Johnson and Edythe Holubec. I introduced to them what Cooperative Learning is, how we can divide students into different learning groups, and how we can provide help when students are learning in class.

The outline of my workshops PowerPoints included the following (Workshop PPT is attached in appendix B):

- Introducing Cooperative Learning
- Arranging the classroom
- Assigning students in to groups
- Assigning roles to students
- Explaining the academic tasks
- Monitoring students
- Assessing the quality and quantity of learning

I introduced the content in two workshops over two days. The first workshop was the theoretical part about Cooperative Learning, which is mainly the first part of the outline (definition of cooperative learning; the essential elements of cooperative learning; the benefits of cooperative learning; classroom arrangement). The second workshop included practical issues like arranging the classroom, monitoring students. There were two attendees at the workshop. I was the presenter. The two participants were Lora and Maria from the cooperative school. Maria was the teacher in the cooperative class and Lora was the observer who sat in the classroom with me, observing the experimental group. Helen did not participate in the training because

she was the teacher in the control group. I made up lesson plans based on the test and vocabulary for the experimental group.

Before the data-collection procedure began, I sent the lesson plans to the committee members and they provided feedback. When I was in the cooperative school, I showed the lesson plans to the experimental group teacher and the observer to check. The lesson plans are attached in the appendix CDE.

Instrumentation

Procedural Considerations

In order to conduct the study, I communicated with the cooperating teachers Helen and Maria. We agreed on a period of time when I could visit their classes. I would need 4 visits, the first visit lasted 15 minutes, and the rest of them lasted forty minutes, in order to conduct the study. After having agreed upon a timeframe, I asked Helen and Maria to provide me with the content of the material they would be covering with their class during that period. Helen and Maria both sent me copies of the textbook pages they were scheduled to cover.

I then focused on the language from these text examples in an effort to understand which textbook modules their students would be tackling during my visit. For the purpose of working with new vocabulary, I then conferred with Helen and Maria to determine and confirm (a) material not yet covered, and (b) precise material to be covered during the period of my visit.

Original tests were created for data collection in this study. Fraenkel, Wallen and Hyun (2010) suggested that “Achievement tests measure an individual’s knowledge or skill in a given area or subject. They are mostly used in schools to

measure learning or the effectiveness of instruction" (p. 127). For this project, I created two tests: a cloze test and a writing test.

The pretest, post-test, and delayed post-test procedure was established for this study, as seen in Figure 6.

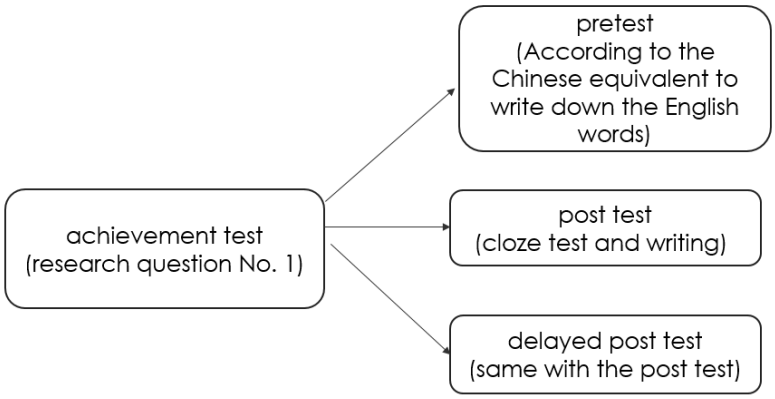


Figure 6. The Format of Data-collection

In previous research, Afshar, Marym, and Mojavezi (2017) conducted a study to examine the effect of aural and visual storytelling on vocabulary retention of Iranian EFL learners and they designed a pretest, post-test, and delayed post-test. The post-test is given right after the intervention and the delayed test is given two weeks after the post-test. Afshar et al found that participants in the intervention group outperformed participants in the control group. In addition, Zabidin (2015) designed a pretest, post-test, and delayed post-test to examine vocabulary learning and retention via humorous text teaching in Malaysia. The delayed post-test is given one week after the post-test. Ge (2015) carried out the research on the effect of embedding target words into the primary language on vocabulary retention with the Chinese adult English learners. The delayed post-test was given two weeks after the immediate post-test.

Content Considerations

I chose 34 words to be included in the tests. I made this decision based on previous studies. For instance, in 2005, Shapiro and Waters conducted a study using 25 Latin words to investigate the cognitive processes underlying the keyword method of foreign vocabulary learning. Franciosi, Junichi and Yuuki (2016) conducted a study about the effect of a simple simulation game on long-term vocabulary retention with 29 words and found that the game was an effective way to enhance long-term memory in vocabulary learning. Another reason for this choice is because the number of the new words in one module (a sample of a module is presented as appendix F at the end of the dissertation.) is around 30 words. The 34 words selected depended on the teaching schedule of my cooperative school because I don't want my study to interrupt their teaching plans. The 34 words are listed below in module 8 in Figure 7.

movie /'mu:vi/ *n.* 电影 (44)
* night /naɪt/ *n.* 夜晚 (44)
search /sɜ:tʃ/ *v.* 搜寻，搜索；查找 (44)
search for 搜寻；查找 (44)
information /ˌɪnfə'meɪʃn/ *n.* 信息 (44)
* email /'i:meɪl/ *n.* 电子邮件 (44)
send /send/ *v.* 发送 (44)
* game /geɪm/ *n.* 游戏 (44)
* sometimes /'sʌmtaɪmz/ *adv.* 有时候；不时 (44)
* cinema /'sɪnəmə/ *n.* 电影院 (45)
* clothes /kləʊðz/ *n.* 衣服（总称） (45)
* visit /'vɪzɪt/ *v.* 探望；参观 (45)
* holiday /'hɒlɪdeɪ/ *n.* 假日；节日 (47)

Module 8

* card /kɑ:d/ *n.* 卡片 (48)
* party /'pɑ:ti/ *n.* 晚会；聚会 (48)
present /'preznt/ *n.* 礼物 (48)
would /wʊd/ *v. aux.* 肯，会；愿意 (48)
* always /'ɔ:lweɪz/ *adv.* 总是；一直 (48)
* great /greɪt/ *adj.* 太好了；巨大的；超乎寻常的 (48)
* cake /keɪk/ *n.* 蛋糕 (48)
never /'nevə/ *adv.* 从不 (48)
special /'speʃl/ *adj.* 特别的，特殊的 (48)
cut /kʌt/ *v.* 切；剪 (48)
* give /gɪv/ *v.* 给，送 (48)
* sing /sɪŋ/ *v.* 唱，唱歌 (48)
* happy /'hæpi/ *adj.* 高兴的；幸福的 (48)
secret /'si:krət/ *n.* 秘密 (48)
ha ha /hɑ: 'hɑ:/ 哈哈（表笑声） (48)
CD /ˌsi: 'di:/ *n.* 激光唱片；光盘 (50)
concert /'kɒnsət/ *n.* 音乐会 (50)
magazine /ˌmægə'zi:n/ *n.* 杂志 (50)
scarf /skɑ:f/ *n.* 围巾 (50)
silk /sɪlk/ *n.* 丝绸 (50)
* dress /dres/ *n.* 连衣裙；礼服 (50)
T-shirt /'ti: ʃɜ:t/ *n.* T 恤衫 (50)
choose /tʃu:z/ *v.* 选择；挑选 (50)
* exercise /'eksəˌsaɪz/ *n.* 锻炼；练习 (50)
* wear /weə/ *v.* 穿；戴 (50)
expensive /ɪk'spensɪv/ *adj.* 昂贵的 (50)
* shoe /ʃu:/ *n.* 鞋，鞋子 (50)
spend /spend/ *v.* 花（钱）；花费 (50)
money /'mʌni/ *n.* 钱，金钱 (50)
* film /fɪlm/ *n.* 电影 (50)
* song /sɒŋ/ *n.* 歌曲 (50)
match /mætʃ/ *n.*（尤指体育方面的）比赛，竞赛 (50)
weekend /ˌwi:k'end/ *n.* 周末 (50)
at weekends 在周末 (50)
* dear /dɪə/ *adj.*（用于信开头某人的名字前）亲爱的 (53)
* hear /hɪə/ *v.* 听见 (53)
hear from 收到……的来信 (53)
* afraid /ə'freɪd/ *adj.* 担心的；害怕的 (53)
I'm afraid［口］恐怕（用于礼貌地拒绝） (53)
can't = cannot 不能 (53)

Module 9

postcard /'pəʊstˌkɑ:d/ *n.* 明信片 (54)
* call /kɔ:l/ *v.*（给……）打电话 (54)
lie /laɪ/ *v.* 躺；平躺 (54)
* sun /sʌn/ *n.* 太阳 (54)
line /laɪn/ *n.* 行，排，列 (54)
* take /teɪk/ *v.* 拿，取；花费（时间） (54)
take photos 拍照 (54)
* wait /weɪt/ *v.* 等待，等候 (54)
wait for 等待，等候 (54)
* walk /wɔ:k/ *v.* 行走；步行 (54)
trip /trɪp/ *n.* 旅行 (54)
few /fju:/ *adj.* 一些，几个；很少（的） (54)
a few 一些，几个 (54)
sale /seɪl/ *n.* 卖；出售 (54)
on sale 正在出售 (54)
enjoy /ɪn'dʒɔɪ/ *v.* 享受……的乐趣，喜爱 (54)
anyway /'eniˌweɪ/ *adv.* 尽管如此，无论如何 (54)

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Figure 7. The Target Words in the Study

Pretest

For the pretest, I gave students some Chinese characters or phrases and asked them to write down English equivalents. Because the teachers had not covered the linguistic elements presented in that module yet, I assumed that the students did not know many, if not any, of the new words. For example, if one of the target words is *happy*, I put “开心的, 幸福的” (The Chinese equivalent for *happy*) on the test. The students were supposed to write down *happy* to receive one point. The actual pretest distributed to the students is attached in the appendix G.

Post-test and delayed post-test

Both the post-test and delayed post-test were almost identical except for a few elements like order or the contexts. For both the tests, I used two types of items to assess students’ learning of vocabulary.

The first type was a cloze test. In 1953, Taylor introduced the cloze test. Richards and Schmidt (2010) defined the cloze test as “a technique for measuring reading comprehension as well as overall language ability” (p. 85). In a cloze test, “words are deleted from a reading passage at regular intervals, leaving blanks” (p. 85). Many researchers (Bachman, 1982, 1985) believed that cloze tests can examine students’ sentence level knowledge in second language learning. There is evidence that many language skills are evoked during cloze testing, such as word knowledge, grammar knowledge, discourse knowledge. (Brown, 2002). Based on the researchers’ findings above, I decided to use a cloze test because it can measure the students’ vocabulary proficiency. I provided a passage with a few blanks to fill in. For

each blank, there were four choices and one of them was the best answer. There were ten blanks in the whole passage.

For the second type, I let students write a paragraph using some of the target words listed in the test based on picture strips in Figures 6 and 7 below. Raimes (1983) stated that "pictures provide a shared experience for students in the classroom, a common base that leads to a variety of language activities" (p. 28). Another researcher, Wright (1990) affirms that pictures "contribute to: 1) interest and motivation; 2) a sense of the context of the language; and 3) a specific reference point or stimulus" (p. 2). Thus, picture-based writing was quite appropriate for my research goals. I drew these pictures based on the content of the textbook. The themes of the two picture-strips are in agreement with the target words.

There was a limit of the number of sentences for the passage. The students would have to include all the words below the picture and make up a passage. The cooperating teachers mentioned that the students liked the pictures very much. It was easy for them to understand the pictures. The pictures in the tests are shown in figures 8 and 9. Meanwhile, they thought picture-based writing was more interesting. The complete tests may be seen in Appendices F and G.

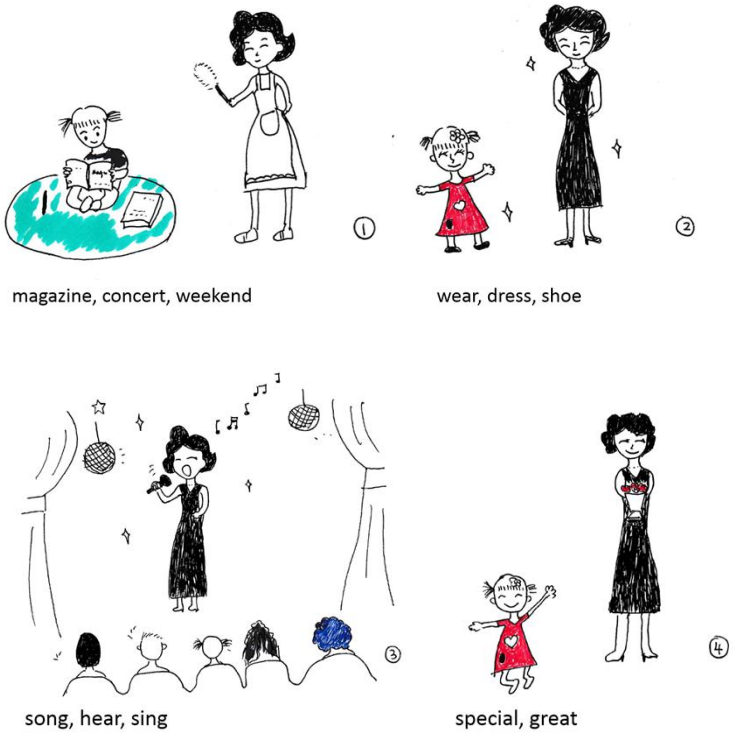

Figure 8. The Picture-strip in the Post-test

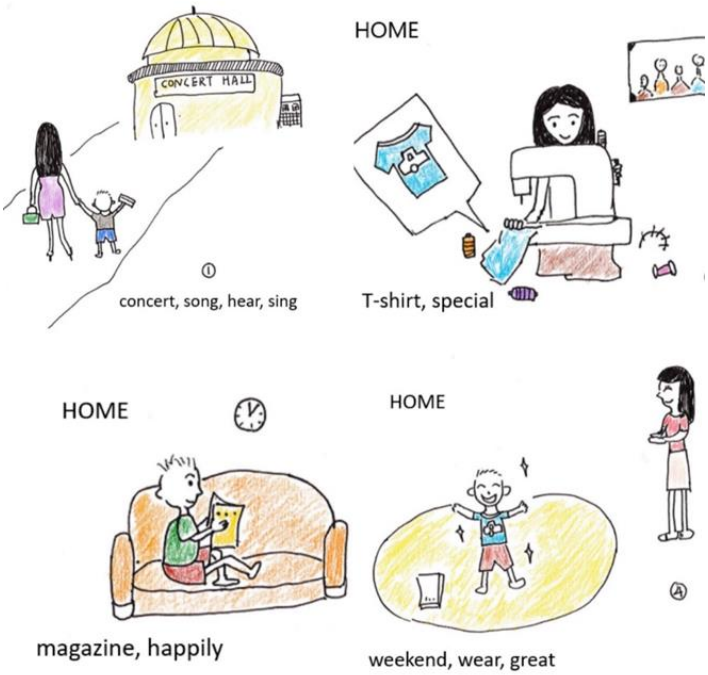

Figure 9. The Picture-strip in the Delayed Post-test

Procedure

Before conducting the research, I introduced myself to the students. I also previewed the project and discussed how students' confidentiality and privacy would be protected in the study. I then asked them to bring home the consent forms for their parents to sign after they agreed to participate. The consent form is presented in Appendix I. My intent was only to work with the students who agreed to participate. Maria and Helen contemplated Plan B scenarios should a student's parent opt out of the project or simply fail to provide the consent. Fortunately, everyone in the two classes brought consent forms back with the parents' permission.

The pretest was given before the intervention started and the post-test was given immediately after the intervention was finished. The two classes always had the tests at the same time. They took the post-test the next day. The delayed post- test was given two weeks after the immediate post-test. Their English teachers administered each test.

Validity and Reliability of the Instruments

In my research, I worked with the cooperating teachers to create my own instruments. I asked my colleagues in my cooperative school and my committee members to review the instruments because they are supposed to know enough about what is to be measured. The pretest was really simple. I just put the Chinese equivalents in the test for the students to write down the English words. Therefore, for this test, no one, including the teachers and the committee members had any questions or concerns. For the post-test and the delayed post-test, after I designed them, I sent them to the teachers and the committee members. I asked them to check the tests following the guidelines below:

a) Do the tests test the target words?

b) Do the tests have clear instructions?

c) Do the tests have any misleading wording?

d) Are the post-test and the delayed post-test similar in contents but a little bit different in the formats?

Validity

In order to ensure the teachers were following the principles of Cooperative Learning in their teaching, Lora and I observed and evaluated teaching sessions by using the Cooperative Learning Observation Protocol (CLOP) developed by Kern, Moore, & Akillioglu (2016). The five elements of CLOP are as follows:

Table 4. *The Five Elements of CLOP by Johnsons (1999)*

	element	characteristics	What the observers look for
P	Positive interdependence	Relationships Contribution of group members	I observed how the students interacted with the members in the group and check on the contributions each of them made.
I	Individual accountability	Individual participation Performance dependent on all group members	I observed how everyone was participating in the activity. Did anyone just stand them, watching?
G	Group processing	Functioning Clear goals, processing events	How did the whole group function? Did they talk about video games instead? How did they keep themselves in the right track?
S	Social skills	Communication Clarification, paraphrasing, praising	How did the students express themselves, especially they had difficulties in making themselves understood by others?
F	Promotive interaction	Encouragement Facilitated communication	Did they encourage each other? Were they nice to each other to keep the conversation going on?

The observers needed to observe the class at a ten-minute interval to fill out the forms below in Table 5. For their English class, they have 40 minutes per class. After class, I summarized what we had in the forms to give an overall evaluation on the teacher's teaching in the experimental group. The other observer and I sat together for some time to talk about what was going on in the class. If we had any questions, we would have a conversation. Then I scanned the copies of the forms and stored them in my computer. There were seven groups in the experimental class. I was responsible for three groups for the first class and Lora was responsible for the other four groups. When the teacher gave the lecture, we sat at back of the classroom and

when the students began to work in groups, we two would observe the groups we were assigned and filler out the forms or scribbled down the notes. For the second class, I was responsible for the four groups Lora had and she took mine. Table 5 was the actual form we used to observe in class. L, M, H and N mean low, medium, high and none respectively. The fact was that every group was using the Cooperative Principles at a medium or high level.

Table 5. *Cooperative Learning Observation Protocol*

Interval	Element	L	M	H	N	Notes
0-10	P					
	I					
	G					
	S					
	F					
Interval	Element	L	M	H	N	Notes
11-20	P					
	I					
	G					
	S					
	F					
Interval	Element	L	M	H	N	Notes

21-30	P					
	I					
	G					
	S					
	F					
Interval	Element	L	M	H	N	Notes
31-40	P					
	I					
	G					
	S					
	F					

I talked to my committee about what I was going to measure for my research. I brought along the instruments I intended to use to let them review to enhance the content-related evidence of validity. According to Fraenkel, Wallen and Hyun (2011), "Content-related evidence of validity refers to the content and format of the instrument" (p. 148). I asked my committee members to check the appropriateness of the content and the format. There are four members in my committee, including my supervisor. My supervisor provided the general direction. One of the committee members focuses her studies on task-based language learning. Therefore, she has plenty of experience in designing the tests. The third member is a TESOL professor. She has rich experience in teaching English as a second language. The last member's field is quantitative research designer. After the tests were designed, I sent them to all my committee members. They provided suggestions about wording, content and

scoring. For example, one of my committee members said that it would be better if I used both English and Chinese for the instructions. Another committee member suggested that I revise the tests based on the comments systematically and show them the final versions. The final versions were the tests that were administered to the participants in Beijing.

Due to the fact that the students did not use Cooperative Learning approach before, they did not know much about the rules of the activities. Thus, when the teacher actually taught the class, she used both English and Chinese to explain the rules of the activities for them to understand better. When the students started to do the activities, they were not allowed to use Chinese to talk to each other.

Reliability

In order to establish the test-retest reliability of my instruments, I performed a pilot test in the cooperative school. Fraenkel, Wallen and Hyun (2011) wrote "The test-retest method involves administering the same test twice to the same group after a certain time interval has elapsed. A reliability coefficient is then calculated to indicate the relationship between the two sets of scores obtained" (p. 156). Fifty-five students took this pilot test. The pilot tests are the tests I used for my experimental and control groups (Appendix G and Appendix H) The participants took the tests (post-test and delayed post-test) and I recorded their scores and then they re-took the test in four weeks and I recorded the scores again to make the comparison between the scores at two different times. When the participants took the tests, the conditions were fixed for the two times, including the time administered: 40 minutes. In this way, the test-retest reliability will be established.

For the interrater reliability of my study, after all three tests were completed, my colleague, who served as a rater, and I graded the tests in January, 2018. I added the second rater (my colleague at FIU) to the writing part in the instruments in order to establish inter-rater reliability. As Gwet (2014) pointed out that if an assessment has high inter-rater reliability, it means that the raters are changeable and the different raters give consistent estimates to the same set of objects or behaviors. We graded the tests based on the rubrics below separately. And then I put the two sets of scores obtained from the two raters and put the data in SPSS to determine the degree of the inter-rater agreement.

Table 6. *The Rubrics for Writing Part in Post-test and Delayed Post-test*

		conventions	**organization**	**content**	**Usage**
4	**advanced**	The student uses a variety of sentence structures. The student does not have any grammatical or spelling errors. The reader can understand the information quite well.	The student's writing is very organized. The transitions are properly used and the order of information makes good sense. The passage is easy to read and understand.	The student uses plenty of details to support the topic. The student understands the purpose for the writing the piece. You clearly understand the information.	The student has used every word required for the passage and the usage of the words are correct. The reader has no difficulties in understanding the piece.
3	**proficient**	The student uses a variety of sentence structures. The student has a few grammatical or spelling error but those errors do not impede the understanding of the passage.	The student's writing is organized well and most of the transitions are used correctly. The order of information does make sense. This passage can be read and understood with very few problems.	The student gives the appropriate amount of details to support the topic. The student understands the purpose for writing the piece. You understand the information.	The student has missed a few words required or a few words are used inappropriately. But the errors do not distract the reader from the content.

2	**basic**	The student does not use a variety of sentence structures and some sentences may be fragments. The student has some grammatical or spelling errors. These errors have caused some difficulties for the reader to understand the passage.	The student's writing is not very organized. Some of the transitions may be used correctly, but overall the errors make it difficult to understand the passage.	The student gives some details to support the topic but does not demonstrate a strong understanding of the piece. You may not fully understand the information written.	The student has missed some of the words required or there are some errors in usage. The errors cause some difficulties in understanding the piece for the reader.
1	**Below basic**	Many sentences are awkward or are fragments. The student has many grammatical or spelling errors and the reader cannot understand the information written.	There are no transitions in the passage or they are not correctly used. The information is not organized well and the reader cannot understand the passage.	The student gives very few details to support the topic and does not demonstrate understanding of the purpose for writing the piece. You do not quite understand the information written.	The student miss many words required or most of the words are used incorrectly. The reader finds it is very difficult to understand what the student has written.
Score					

The Reliability of the Tests

Since I created the tests, I conducted tests of reliability.

There are two parts in my designed tests, including the post-test and the delayed post-test. One part is a cloze test and the other is writing based on the picture strip.

For the cloze test, I used two classes in grade eight (My experimental and control groups were in grade seven) to establish the reliability. Students took the post-

test on December 10 and the delayed post-test one month later on January 11. I calculated a correlation between these two and in an effort to establish test-retest reliability. The two classes have 46 students altogether. I entered the data into SPSS (Version 25). Table 7 shows the correlation efficient, which is also the reliability index.

Table 7. *Correlations between the Cloze Test Scores in the Post-tests at Two Times*

		post1	post2
post1	Pearson Correlation	1	.67**
	Sig. (2-tailed)		.00
	N	46	46
post2	Pearson Correlation	.67**	1
	Sig. (2-tailed)	.00	
	N	46	46

**. Correlation is significant at the .01 level (2-tailed).

The first post-test and the second post-test were significantly correlated, $r = 0.67$, $p < .001$.

The reliability of the cloze test in the delayed post-test is shown below in Table 8.

Table 8. *Correlations between the Cloze Test Scores in the Delayed Post-tests at Two Times*

		delay1	delay2
delay1	Pearson Correlation	1	.83**
	Sig. (2-tailed)		.00
	N	46	46
delay2	Pearson Correlation	.83**	1
	Sig. (2-tailed)	.00	
	N	46	46

**. Correlation is significant at the .01 level (2-tailed).

Similarly, the correlation coefficient is 0.83, which is also significant at .01 level. This shows that the cloze test in the delayed post-test also has test-retest reliability.

For the reliability of the writing part, the data from the experimental and control group are reported. The results are shown below in Table 9. The first table is the correlation between the first and the second rater in the post-test. The second table shows the correlation of the first and the second rater in the delayed post-test.

Table 9. *Correlations between the Two Raters in the Writing Part of the Post-tests*

		postrater1	postrater2
postrater1	Pearson Correlation	1	.98**
	Sig. (2-tailed)		.00
	N	46	46
postrater2	Pearson Correlation	.98**	1
	Sig. (2-tailed)	.00	
	N	46	46

**. Correlation is significant at the .01 level (2-tailed).

As we can see from the tables above, the two graders have high agreement in grading the writing part in both the post-test and the delayed post-test. This indicates that the writing part in the tests has high reliability.

Analysis of the reliability of the writing part in the delayed post-test is indicated in Table 10.

Table 10. *Correlations between the Two Raters in the Writing Part of the Delayed Post-tests*

		delayrater1	delayrater2
delayrater1	Pearson Correlation	1	.97**
	Sig. (2-tailed)		.00
	N	46	46
delayrater2	Pearson Correlation	.97**	1
	Sig. (2-tailed)	.00	
	N	46	46

**. Correlation is significant at the .01 level (2-tailed).

In this case, the Pearson correlation is .97, which is significant at .01 level. This table implies that the delayed post-test has inter-rater reliability in the writing part.

Data analysis

This study was conducted to find the score difference between the control and experimental group. Additionally, I wanted to find a significant difference in the test scores within each group over three time points. Therefore, the data analysis method was a mixed design repeated measure ANOVA, chosen because it has two factors: The “between-subjects” factor is the control and experimental groups and the “within-subjects” factor is the time. The analysis was conducted in SPSS (version 25).

All quantitative data was entered into the SPSS database (version 25.0 for Windows) and examined for statistically significant differences ($p<.05$) between or within groups.

CHAPTER V

RESULTS

This chapter begins with a review of the research questions and hypotheses. The questions are then discussed with respect to SPSS output tables presented. The implications of these results are then interpreted and discussed.

Research Questions and Hypotheses

I have the following overarching research question for this study: Is there a significant difference in students' vocabulary learning between control and experimental groups across three time points, pre-, post-, and delayed post-tests?

The following three questions, emerging from this overarching questions reflect the impetus of the study:

a) Is there a significant difference in students' vocabulary learning between control and experimental groups?

b) Is there a significant difference in students' vocabulary learning across three time points?

c) Is there a significant interaction between time and group on students' vocabulary learning?

Based on the three research questions, my research hypotheses are:

H1. There is a significant difference in students' vocabulary learning acquisition between control and experimental group.

H2. There is a significant difference in students' vocabulary learning across three time points.

H3. There is a significant interaction between time and group on students' vocabulary learning.

Demographics of the Two Groups

The demographic profile of the two groups is presented in Table 11. There were 27 participants in the experimental group, and there were 25 participants in the control group. The majority of the participants aged from 13 to 14 years old. The participants were in grade seven at that time.

Table 11. *Demographics of the Participants*

	Experimental group	*Control group*
Number of participants	27	25
Number of female participants	9	8
Number of male participants	18	17
Average age	13.07	13.04

Total Scores

The descriptive statistics of the total scores of the two groups at three time points are shown in Table 12.

Table 12. *The Descriptive Statistics of the Two Groups at Three Time Points*

	Group	*Mean*	*SD*	*N*
Pretest	Experimental	19.79	25.96	27
	Control	18.38	24.73	25
	Total	19.11	25.13	52
Posttest	1	59.05	31.12	27
	2	50.62	30.22	25
	Total	54.99	30.69	52

Delayed	1	63.10	26.83	27
	2	47.08	32.26	25
	Total	55.40	30.37	52

In this table, the mean scores of the three time points were included. For the pretest, the experimental group and the control group had similar mean scores (The *SD* for the experimental group was 25.96 and for the control group was 24.73), which meant their levels were similar before the treatment. For the post-test and the mean difference was almost 9 points and for the delayed post-test, the difference was even larger (around 16 points).

I used mixed design one-way repeated measures ANOVA to answer the research questions. The following tables reveal the results of the SPSS output.

Table 13. *ANOVA Table of Total Score*s

Source	*SS*	*df*	*Mean Square*	*F*	*Sig.*	η^2
		within subjects				
Time	44554.05	1.44	30847.83	132.94	.00	.03
time*group	1386.70	1.44	960.10	4.14	.03	.08
Error	16757.52	72.22	232.05			
		between subjects				
Group	2896.991	1	2896.99	1.36	.25	.03
Error	106231.823	50	2124.64			

Note: Mauchly's test of Sphericity indicated that the assumption was violated, so the information from the Greenhouse-Geisser correction was used. The Greenhouse-Geisser is used to assess the change in a continuous outcome with three or more observations across time or within-subjects. Greenhouse-Geisser corrects the degree of freedom so that the degree of freedom is a decimal, not an integer.

Based on the data in Table 13, there was a significant difference across the three time points, F (1.44, 72.22) = 132.94, p<.001, η^2=.03, thereby indicating that students in both classes may make progress in the post- and delayed post-tests. The

value for η^2 was .03, which implies that across the three times, there was difference but the difference was not observable. This probably was because the sample was not large enough to make the difference observable. Another possible reason was there was difference across these three times, however, the difference was not big enough, meaning that the treatment did not lead to a big difference. A follow-up pairwise comparisons show that there was a significant difference between the pretest and post-test (p <.001) and the post-test was significantly higher than the pretest. There was also a significant difference between the pretest and the delayed post-test (The delayed test mean was significantly higher than the pretest mean.) (p<.001). However, there was no significant difference between the post- test and the delayed post-test. (p = 0.87). Possibly, it was because that the time interval between the post-test and the delayed post-test was short. This indicates that the students performed similarly in the post-test and the delayed post-test. For the between subjects results, F (1, 50) =1.36, p=.25, η^2=.03, thereby indicating that the difference between the two groups was nonsignificant for the total scores.

Table 13 also indicates that the interaction between time and group was significant F (1.44, 72.22) = 4.14, p=.03, η^2=.08. A pairwise analysis was performed for the interaction and found that only in the delayed test, there was a marginally significant difference between the experimental and control groups (p = .56), which means there is the potential of finding a significant difference between the two groups in future studies.

However, these results might also suggest that the Cooperative Learning method might be more appropriate for one part of the test. Maybe Cooperative Learning works better in the writing part, or the cloze test part. Based on this

assumption, I analyzed the test scores of cloze test and writing task separately to further understand the effect of the treatment on different parts of the test scores.

Results of the Cloze Test

Table 14 reflects the descriptive statistics of the cloze test in the experimental and control groups. It indicates that, in the pretest, the experimental group's mean score was 19.79 (*SD* = 25.98), while the control group's was 18.37 (*SD* = 24.72). The mean difference was very close. In the post- test, the experimental group's mean score in cloze test was 73.70 (*SD* = 22.04) while the control group's was 76 (*SD* = 21.80). Lastly, in the delayed post-test, the experimental group's mean score was 79.63 (*SD* = 17.42) while the control group's was 66.80 (*SD* = 31.05). For the delayed post-test, the experimental group scored higher.

Table 14. *Descriptive Statistics of the Cloze Test Scores*

	1. experimental *2. control*	*Mean*	*SD*	*N*
pretest	1	19.79	25.96	27
	2	18.38	24.73	25
	Total	19.11	25.13	52
post- test	1	73.70	22.04	27
	2	76.00	21.79	25
	Total	74.81	21.74	52
delayed test	1	79.63	17.43	27
	2	66.80	31.05	25
	Total	73.46	25.51	52

Table 15. *ANOVA Table for the Cloze Test Scores*

Source	*SS*	*df*	*Mean Square*	*F*	*Sig.*	η^2
		within subjects				
time	104583.46	1.96	53387.53	190.38	.00	.79
time *group	1613.27	1.96	823.54	2.94	.06	.06
error	27467.19	97.95	280.43			
		between subjects				
group	617.84	1	617.84	.52	.48	.01
error	59796.13	50	1195.92			

Note: Mauchly's test of Sphericity indicated that the assumption was violated, so the information from the Greenhouse-Geisser correction was used. The Greenhouse-Geisser is used to assess the change in a continuous outcome with three or more observations across time or within-subjects. Greenhouse-Geisser corrects the degree of freedom so that the degree of freedom is a decimal, not an integer.

Table 15 showed that there was a significant difference across the three time points, F (1.96, 97.95) =190.38, (p<.001). The pairwise comparison analysis indicated that there was a significant difference between the prestest and post-test, (p<.001). For the pretest and the delayed post-test, there was also a significant difference because the p<.001. However, for the post-test and the delayed post-test, there was no significant difference between the two group (p = .64). This implies that the treatment might not help maintain the students' vocabulary in the cloze test. The between subjects results reveal that there was no significant difference between the experimental group and the control group in the cloze test, F (1, 50) =.52, p=.48

The results further showed that there was no significant interaction across the three time points and between groups, F (1.96, 97.95) =2.94, p=.06, η^2=.06.

Results of the Writing Scores

Table 16. *Descriptive Statistics of the Writing Scores*

	1. experimental 2. control	*Mean*	*Std. Deviation*	*N*
Total score in pretest	1	19.79	25.98	27
	2	18.38	24.72	25
	Total	19.11	25.13	52
Writing score in the post-test	1	49.89	40.59	27
	2	34.75	39.93	25
	Total	42.61	40.60	52
writing score in the delayed post-test	1	52.78	35.24	27
	2	34.75	39.93	25
	Total	44.11	38.29	52

Table 16 indicated that the mean score of the pretest in the experimental group was 19.80 (SD = 25.96). The control group's mean score was 18.37 (SD = 24.73). The mean score of the writing part in the post-test in the experimental group was 49.89 (SD = 40.59) while in the control group, it was 34.75 (SD = 39.93). The mean difference between the two was 9.96. Finally, in the delayed test, the mean score in the experimental group was 52.78 (SD = 35.24); the mean score in the control class was 34.75 (SD = 39.93).

Table 17. *ANOVA Table for the Writing Scores*

source	*SS*	*df*	*Mean Square*	*F*	*Sig.*	η^2
		within subjects				
time	19922.22	1.33	14956.82	34.58	.00	.41
time * group	2044.61	1.33	1535.01	3.55	.05	.07
error	28809.40	66.60	432.58			
		between subjects				
group	5173.78	1	5173.78	1.67	.20	.03
error	155057.98	50	3101.16			

Note: Mauchly's test of Sphericity indicated that the assumption was violated, so the information from the Greenhouse-Geisser correction was used. The Greenhouse-Geisser is used to assess the change in a continuous outcome with three or more observations across time or within-subjects. Greenhouse-Geisser corrects the degree of freedom so that the degree of freedom is a decimal, not an integer.

The within subjects result in Table 17 shows that across the three time points, there was a significant effect, F (1.33, 66.60) = 34.58, p<.001, η^2=.41. It reveals that η^2 was very large, which was much larger than that in the total score. This indicated that the treatment was more effective for the writing part across the three time points. Again, a pairwise comparisons analysis was conducted and it was found that there was a significant difference between the pretest and the post-test (p<.001); there was a significant difference between the pretest and the delayed post-test (p<.001). There was no significant difference between the post-test and the delayed post-test (p=.43).

The result also shows that there was a marginally significant interaction between group and time, F (1.33, 66.60) =3.55, p=0.5, η^2=.07. The post hoc analysis shows that there was no significant difference between the two groups at the three time points. The between- subject result reveals that there was no significant

difference between the two groups, F (1, 50) =1.67, p=.20, η^2=.07. To sum up, for the split score analysis, the results were similar with the total scores.

Results of ANCOVA Analysis

The results of total scores and two sub-scores all showed similar patterns: there was a significant difference across the three time points, but there was no significant difference between the experimental and control groups. To be more specific, the significant differences were found between the pretest and post-test and between the pretest and delayed post-test. Because the pre-test is different from post- and delayed tests, controlling it as a covariance may yield different results. Therefore, ANCOVA analysis was also conducted, with pre-test being the covariance.

Table 18. *ANCOVA Table for the Total Scores*

Source	*ss*	*df*	*Mean Square*	*F*	*Sig.*	η^2
covariance	48272.30	1	48272.30	60.30	.00	.55
group	3140.73	1	3140.73	3.92	.05	.07
Error	39228.43	49	800.58			

As shown in Table 18, the pretest had a significant effect on the vocabulary learning outcomes, F (1, 49) =60.30, p<.001, η^2=.55. A larger η^2 can be found here to indicate that the pretest score explained much more variance in the outcomes than other factors. This suggests that the student' pretest score had a significant effect on how they would do in their post-test and delayed test. In other words, when a student does well in the pretest, he/she tends to do better in the post-test and the delayed post-test. For the factor, group, there is a marginally significant difference between the two groups. F (1, 49) =3.92, p=.05.

The interaction comparison was conducted to find out whether there was any difference between the two groups in the post-test or the delayed post-test. It reveals that there was a significant difference between the two groups in the delayed post-test. (p=.01). This results show that the experimental group performed better in the delayed test than the control group.

Summary of the Results

Altogether, I analyzed the data for three times with the use of ANOVA. In the first analysis, the total scores were analyzed by using mixed design repeated measures one-way ANOVA. The results show that there was a significant difference between the pretest and the post-test as well as between the pretest and the delayed post-test. However, there was no significant difference between the post-test and delayed post-test. In addition, there was statistically significant interaction between time and group between the two groups. The pairwise comparison shows that there was a marginally significant difference between the two groups in the delayed test. I then split the total score into two parts: the cloze test and the writing. For both of them, the results were the similar with the total score: there was no significant difference between the groups in each part of the tests. Therefore, the results were the same with those of the total scores.

After the three ANOVAs, ANVOVA was run with the pretest being the covariance to see if there was any significant difference between the two groups in the post-test and the delayed post-test. It was found that for the post-test, the difference between the two groups was not significant while for the delayed post-test, there was a statistically significant difference (p<.001). That is to say, after the pretest, within a

short period of time, in the post-test, there was no significant difference while within a longer period of time, in the delayed post, there was a significant difference.

To summarize, mixed design one-way repeated measure ANOVA was run to answer the first and the second research questions. For the first research question: Is there any significant difference across the three time points? There were significant differences between the pretest and the post-test as well as between the pretest and the delayed post-test. However, the difference between the post-test and the delayed post-test was nonsignificant. These patterns persist for total scores and two components of the test: cloze test and writing. This reflects that students could not maintain their vocabulary learning for both the groups.

For second research question: Is there any significant difference between the two groups? It was found that, as to the total scores, for the post-test, the difference was nonsignificant while for the delayed post, there was a significant difference between the two groups.

For research question 3: Is there a significant interaction between time and group on students' vocabulary learning? There was a significant interaction between time and group when the pretest was controlled a covariance. The significant difference was found in the delayed post-test between the two groups.

Conclusion

Chapter V introduced all the related tables and discussed the results and how the results were related to my research. In chapter VI, there will be a summary of the findings and the suggestions for future research will also be mentioned.

CHAPTER VI

DISCUSSION

Overview of the Chapter

In Chapter V, findings from data analyses will be discussed. In this final chapter, there will be a summary of the findings, contemplations of future research direction, and a discussion of limitations of this study.

I chose this topic because vocabulary learning has always been a substantial problem for Chinese students. Students find it is boring to learn vocabulary and downright ineffective.

In this research, I endeavored to seek any effects of Cooperative Learning on vocabulary learning in a Chinese secondary school. In order to accomplish this, I worked with two classes in a secondary school in Beijing, China. I designed a pretest, post-test and delayed post-test to test their vocabulary ability.

Reprise to Literature

Before going back to the literature review, I want to put my research questions here again:

a) Is there a significant difference across the three time points in the two groups? This question was designed to find out whether there is a significant difference across the three time points.

b) Is there a significant difference in students' vocabulary learning across the two groups? This questions were formulated in an effort to discover any actual effect of Cooperative Learning on students' vocabulary learning. In

other words, I wanted to learn whether the Cooperative Learning approach might help students learn vocabulary more effectively.

c) Is there a significant interaction between time and group on students' vocabulary learning? With this question, I wanted to investigate whether there is a significant interaction between time and group.

By conducting the research with 52 students, I found that Cooperative Learning had some effects on Chinese secondary school students' vocabulary learning. Initially, I was concerned because the students did not differ significantly in the post-tests across the experimental and the control groups. However, two weeks later, when the participants took the delayed post-test, and there ended up being a significant difference in the delayed post-test across the two groups ($p<.001$). In other words, the Cooperative Learning had a positive effect on students' vocabulary learning in Chinese secondary schools over time, albeit not initially observable. This result corresponds to the following researchers' findings: Johnson and Johnson (1986), as well as Totten (1991), who showed that cooperative work helps students retain information longer and attain greater achievements than individual work. As I was working in the classroom, walking around, I could see that students were talking to each other to accomplish the shared learning task. Surprisingly, I also found a few students refusing to talk. They just stood there, looking around. I asked the teachers after class about these students. One teacher explained that some of them had very low English proficiency and some of them were too shy to share their voice, corresponding with Reid's (1987) research showing that Chinese students not preferring group work. This indicates that there is a possibility of qualitative research, which can collect more data on how students really felt about the whole learning experience.

The study here also seemingly corresponds to Totten's (1991) research indicating that Cooperative Learning stimulates longer information retention and fosters students' actively taking responsibility for self-learning and group discussion. In this research, in the ANCOVA analysis result, the participants in the experimental group performed significantly better in the delayed post-test, which indicated that the participants in the experimental group retained the knowledge better one month after the post-test.

As shown in Ebbinghaus (1913) Forgetting Curve, human beings tend to forget the newly learned knowledge. Memory loss is rapid in the first few days and the rate of forgetting slows down after that. At the end, little will be lost. In my research, a post-test and a delayed post-test (one month after the post-test) were distributed. The results showed that there was no significant difference between the post-test and the delayed post-test between the two groups, which counteracted with the forgetting curve. Based on the forgetting curve, the scores of the delayed post-test should be lower than those of the post-test because the newly learned knowledge will be lost bit by bit if it is not reviewed from time to time. When the students finished learning module eight, they continued learning module nine. They reviewed what they had learned in module eight unconsciously. Therefore, the knowledge in module eight was strengthened and memorized, which led to a higher score in the delayed post-test.

According to Nation (2001), rote memorization can work well in language learning within a short period of time. In my research, the participants in the two groups performed similarly in the post-test. The post-test was given right after the lesson. This result corresponded with Nation's finding. Also Sultan (2018) found that oral repetition of the words will help in maintaining the words in the STM. However, Rodr ǵuez and Sadoski (2000) examined the effects of oral repetition, context,

keyword and context on vocabulary retention, and found the context strategy to be most effective in the LTM. Their findings explain why the participants in both groups scored similarly in the post-test while scored differently in the delayed post-test. Cooperative Learning puts vocabulary learning in the context, which agrees with Krashen and Terell's findings in 2000, when students construct their memory in meaningful ways—for example, implementing context to memorize, they tend to remember it better. For the experimental group, they learned the vocabulary in the context, so in the delayed post-test, they did significantly better. Schmitt (2000) also mentioned this point, register does not stay in LTM if the word is learned by rote memorization. Hooshang and Amin (2016) conducted a study on the effect of task-based instruction on vocabulary learning and found that task-based learning can help a lot in students' vocabulary learning. They found that jigsaw could improve long-term recalling of the words. My findings supported literature at this point.

Based on the theoretical framework diagram, I could add on more theories to previous system. According to my findings, Cooperative Learning contributes more to the long-term memory. When students used Cooperative Learning approach to learn vocabulary, they were using the words in the proper context by interacting with the peers. Macky and Goo (2007) had the similar findings: the interaction had a stronger effect in the delayed post-test than the immediate post-test between the two groups. As to Ebbinghaus forgetting curve, in the part of making short-term memory into long-term memory, Cooperative Learning or interaction might play a significant role in consolidating the memory. When students did the Cooperative Learning activities, they were talking to each other and interacting with each other. The new words were learned in some specific contexts, like making up a story, or jigsaw activities. They were actually using the new words. Later on, when they needed to recall the words,

they might think of what happened in class when they worked with their group members. Therefore, this makes sense that in my results, students in the experimental group did significantly better in the delayed post-test.

Implications for English Vocabulary Teaching Practice in China

My research has some implications for the English teaching materials in China. Cooperative Learning needs learners to work in groups. In order to incorporate this approach in vocabulary teaching practice, some changes can be made. In the teaching materials, there could be more group work activities or assignments for the students to do. For the current textbook, learning is more individualistic. For the most of the assignments, students can finish them on their own. Since my study has provided some evidence for the effectiveness of Cooperative Learning, the future textbooks or teaching materials could use more cooperative approach, including the teaching practice in the real classroom and the group projects and etc.

Meanwhile, this study also has some inspirations on professional development for the teachers in China. Since there are some principles to follow when the teacher divides the students into different learning groups, the teacher needs to pay attention to each individual student. Students differ in so many ways, academic level, personality, social skills and so forth. The teacher needs to have the ability to tell the students' characteristics, based on which, the learning groups could be formed. In doing so, first of all, the teacher needs to have a good knowledge of what kind of person a student is; and secondly, the teacher also needs to know how to put different students into effective groups to learn. At the same time, the teachers should learn some games, tricks or skills that help students work cooperatively in their studies. Many Cooperative Learning games have been talked about in chapter two and chapter

three. Those games could be included in the professional development. The teachers can use the games when it is necessary. This does not only include in-class activities; it also includes after-class activities. In this way, the teacher has some role to play even if when the students are at home, learning vocabulary. By doing this, the teacher can share some responsibilities in helping students learn English vocabulary, making learning more interesting and efficient.

For my study, there are almost 30 students in my experimental class and each class period lasts for 40 minutes. This class size is bigger than the class size in the United States. In a larger class, Cooperative Learning is more important because if they are seated in a classroom where the teacher is the center and with a teacher-fronted mode, students will have less chance to participate in the class activities. (Jacob, 1997) Attention needs to be paid to the preparation time, though. What's more, since there are more groups, it would be difficult for the teacher to monitor each group. It is extremely important for the teacher to develop the students' collaborative skills. Actually, the collaborative skills are required when they begin to work in the future.

It would also be great for the after-school class teachers to use in their classes because usually, the number of students in this kind of class will be much smaller. Linke (2011) reported in her book that the number of students in Chinese after-school class is usually less than 16. Relatively speaking, this class size is much smaller. This makes the Cooperative Learning a little bit easier because the preparation time would be less and the teacher will be able to monitor each group more often and help them more often.

As to cultural implication, Xie and Ge (2003) mentioned that Confucius had a great influence in Chinese education system. Teacher is always an authentic role in

the classroom. However, in Cooperative Learning activity, the teacher helps students learn. Students are the center. They learn from each other. As mentioned by Tan and Lee (2007), students did not like to learn together in groups because they were accustomed to learning passively from their teachers. Therefore, the teacher no longer works as an authentic figure. This has some implications for the culture in China. The teacher's leading role in the classroom needs to be emphasized less and students' role needs to be strengthened. In this way, the new learning approach will be encouraged. However, this history has rooted in China for thousands of years, it takes time to see the changes.

The next point to make is the feelings and attitudes of the teacher in the experimental class. The teacher was surprised that her students could make up creative stories using the new vocabulary. The students' stories were surprisingly creative. The teacher was really excited to see this achievement. She could see the application of the new words in class. The students could recognize the words and could use them in their stories.

The ANCOVA results showed that students in the experimental class scored significantly higher than students in the control class in the delayed post-test. In the post-test, there was no significant difference between these two classes, though. This indicates that if the teacher or students cannot see immediate results, there is no need to worry because there will be more gains in the long run.

The last point to be made is about the students' collaborative skills. Since participants did not have this experience before, they lacked the skills in group work. Some of them were not involved, and they just stood there, watching other members talking. They did not know what to do. Therefore, students' social skills and group work skills need to be developed in the future.

Limitations

This research does entail a number of key limitations. First, the sample size is small, only 52 students in total. The small sample size may lead to the nonsignificant differences across the two groups.

The students had never implemented this method for learning vocabulary before. The writing part requires a relatively higher level of English. I chose grade seven and discovered that their English proficiency was not advanced enough to be fully creative in composing impromptu paragraphs. In other words, I felt the students burdened as they attempted writing their passages. For example, when they wanted to write out something, they complained that they could not find appropriate vocabulary.

Another limitation is that: the pretest was different from the post-test and the delayed post-test. In the pretest, the students were required to write down the English equivalents for the Chinese words to check how many words they knew before the lectures were given. The post-test and the delayed post-test were given after the vocabulary was taught, they were cloze test and writing.

Lastly, when I and the other observer observed the class, if we found that in some groups, only one student was talking, we would help them a little bit in some way. This might cause “experimenter effect”. This effect implies that it is not a good idea for the experimental to do the observation on his/her own.

Suggestions of Future Studies

First of all, a larger sample size can help us find a significant difference across the two groups. In my research, I only had a sample of 52 students. Probably, this is not big enough for us to see a significant difference across the two groups.

Some types of English vocabulary test items seemingly are not appropriate for the Cooperative Learning method. For example, maybe Cooperative Learning is great in teaching writing but not that good in learning cloze test. Schmitt (2010) categorized vocabulary knowledge into different aspects like: spoken form, written form, grammar, collocation, association, frequency, meaning and register. Thus, in the future, this method might be tested in in terms of specific vocabulary aspects. Nation (2001) described what is knowing a word. He mentioned that knowing a word means knowing the following aspects of the word: spoken, written, word parts, form and meaning, concepts and referents, associations, grammatical functions, collocations, constraints on use. These two kinds of classifications might provide some implications for finding out which specific aspect Cooperative Learning would work best.

When the students were exposed to the treatment, I could feel the benefits of Cooperative Learning mentioned by the previous scholars. For example, Jacob and McCafferty 2006) reported that Cooperative Learning encourages learning and allows the fostering of communication skills among the learners. Slavin (1995) stated that Cooperative Learning offers a comfortable environment encouraging EFL learners to overcome their apprehension in communicating and expressing their point of view in a foreign language. Students' language proficiency levels need to be taken into account when the learning activities are designed. Jacobs, Gilbert, Lopriore，Goldstein and Thiragarajali mentioned in 1997 that, "Low proficiency students need preparation time and language support, e.g., model dialogues, vocabulary work, and accompanying listening activities with a written version of the text, before they begin interacting in their groups." (p. 58) They also mentioned that short activities should be used. Since the participants in this study did not have this kind of learning experience before, every time a task was assigned, the teacher would give an example to

demonstrate to the students how the process was. In this research, the comfort level of the student in Cooperative Learning activities was not investigated because it is beyond the scope of this study. Thus we see a possibility of future research here in this field. This literature is in agreement with what I found during the study. To find out how exactly the participants felt about the learning experience, future qualitative research could be conducted.

Finally, there were teacher participants in this research. They played an important part in this research. Both the observer and teacher felt it was a special experience. Qualitative research might be conducted to collect data on the attitudes and feelings of the teacher using Cooperative Learning in vocabulary teaching. The teachers can provide some ideas and thoughts on this new approach. One question of these could be: do they still feel that students need to go home and memorize the vocabulary on their own? This would be an interesting topic for the future studies.

Conclusion

Chinese students think it is hard to learn English vocabulary. As a researcher in language teaching field, I feel that still remains an issue. Based on the empirical data collected in this study, participants in the experimental group did significantly better than the participants in the control group. That indicates that the traditional method is not working well compared with the Cooperative Learning method. Although I am not learning English vocabulary now, I still feel it is my responsibility to make a change for our students. There have been many changes in modern classrooms. For example, there is multimedia in every classroom, which offers substantial help for students to learn. This provides the teachers and students with more audio or visual materials that can make learning interesting and effective.

However, students still have many difficulties in learning English vocabulary just as students did years ago. The cooperating teachers Mary and Helen said they did not spend much time teaching vocabulary in class because that was something students could accomplish after school. Therefore, I would say current vocabulary learning still remains an issue. Still, I perceived that both students and teachers want to make a change. When I first talked to one of the cooperating teachers in that school, she showed interest. Then she talked about this research with the principal and the principal gave her permission to have a try.

The key point here is how the teachers make the changes in the way they teach. More research needs to be conducted on language teaching materials and the teacher's professional development. I believe this research can provide some thoughts and reflections on English vocabulary teaching in China now and in the future.

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Appendix A. Module 8 in the English textbook used in the study

Module 8

Choosing presents

Module task: Planning a classmate's birthday party

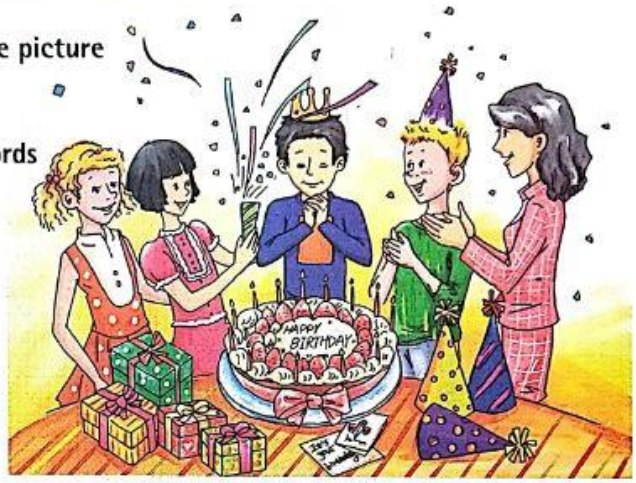
Unit 1 I always like birthday parties.

Listening and vocabulary

1 Work in pairs. Look at the picture and talk about it.

2 Listen and number the words as you hear them.

birthday	☐
card	☐
party	☐
present	☐



3 Listen and read.

Daming: Hi, would you like to come to my birthday party?
Betty: Yes, I'd love to. When is it?
Daming: This Saturday, at my house.
Tony: OK! I always like birthday parties.
Lingling: Great!
Betty: What do you usually do at a Chinese birthday party?
Daming: At the birthday dinner, we eat noodles. And we eat birthday cake too. But my mother never makes a birthday cake. She usually buys a special one and I cut it at the party.
Lingling: And we sometimes give birthday cards.
Tony: Do you usually sing *Happy Birthday*?
Daming: Yes, we always sing *Happy Birthday*.
Tony: Do you sing it in Chinese or in English?
Daming: We sing it in Chinese and English.
Betty: Do you get birthday presents in China?
Lingling: Sometimes. Daming always gets birthday presents!
Tony: So what would you like for your birthday, Daming?
Daming: It's a secret. Ha ha...

Everyday English

- Would you like to come to my birthday party?
- It's a secret.

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Now check (√) the true sentences.

1 It's Daming's birthday party on Saturday. ☐
2 Tony never likes birthday parties. ☐
3 Daming's mother sometimes makes a birthday cake. ☐
4 Daming's family always sings *Happy Birthday*. ☐
5 Daming never has birthday presents. ☐

4 Underline the correct words.

At my birthday party, my mother usually buys a (1) special / secret birthday cake. My friends sing *Happy Birthday*, and then I (2) cut / make it. My friends usually give me cards and (3) cakes / presents. I always love birthday parties!

5 Complete the sentences with the words from the box.

always never sometimes usually

1 Tony _____ likes birthday parties.
2 We _____ eat noodles at the birthday dinner.
3 Daming's mother _____ makes a birthday cake.
4 Lingling _____ gives birthday cards.

Pronunciation and speaking

6 Listen and repeat.

/k/ cake cut
/g/ big great
/θ/ birthday thanks
/ð/ that this
/ʃ/ sure
/ʒ/ usually

7 Work in pairs. Ask and answer.

A: *What do you often/usually/always/... do on your birthday?*
B: *I often/usually/always/... on my birthday.*
A: *What do you often/usually/always/... do on Teachers' Day?*
B: *I often/usually/always/... on Teachers' Day.*

Module 8

Choosing presents

Unit 2 She often goes to concerts.

Reading and vocabulary

1 Look at the pictures. Choose your birthday present.

a box of chocolates a CD a cinema ticket a concert ticket
a football a magazine a scarf a silk dress a T-shirt

2 Read the passage and match the people with what they like doing.

Choosing birthday presents

Daming's grandparents like to stay healthy, so every day they get some exercise in a park near their home. They sometimes wear T-shirts.

Daming's mother likes chocolate, but she doesn't often buy any because it isn't very healthy. She likes going shopping and always buys expensive clothes. She has got 11 silk scarves, 20 dresses and a lot of shoes. She spends a lot of money.

Betty's cousin likes reading and she reads lots of books and magazines. She also likes films and often goes to the cinema, but she never watches sport.

Tony's sister likes music. She likes going to concerts but it's often expensive. She buys CDs of her favourite songs.

Lingling's aunt and uncle like football, but they don't go to football matches. They usually watch football on television at weekends. They always like watching AC Milan, but they sometimes watch Manchester United.

Daming's grandparents	going to concerts
Daming's mother	going shopping
Betty's cousin	staying healthy
Tony's sister	watching films
Lingling's aunt and uncle	watching football matches

Now choose presents from the pictures in Activity 1 for them.

1 Daming's grandparents: _____
2 Daming's mother: _____
3 Betty's cousin: _____
4 Tony's sister: _____
5 Lingling's aunt and uncle: _____

Learning to learn

In English we often use two words for one idea or thing: *cinema ticket, concert ticket, football match, tennis match.* When you write them down, make sure you group them like this.

3 Complete the passage with the correct form of the words from the box.

choose concert expensive match money silk spend weekend

Daming's mother (1) _____ a lot of (2) _____ on clothes. She buys (3) _____ scarves, dresses and (4) _____ shoes. Tony's sister likes music and she often goes to (5) _____. Lingling's aunt and uncle like watching football on television at (6) _____, but never go to football (7) _____. Which birthday presents do you (8) _____ for them?

Writing

4 Look at these sentences.

1 Daming's grandparents sometimes wear T-shirts.
2 Betty's cousin likes to go to the cinema.
3 Tony's sister often buys CDs of her favourite songs.
4 Lingling's aunt and uncle don't go to football matches. They watch TV.
5 Daming's mother doesn't buy chocolate.

Now underline apostrophes (').

5 Look at Activity 1 and choose birthday presents for your family and friends.

6 Write a passage about choosing birthday presents for your family and friends.

My mother likes... She always goes to... I usually buy her...

Make sure you use apostrophes (') correctly.

Module 8

Choosing presents

Unit 3 Language in use

Language practice

Daming **always** gets birthday presents!
She **often** goes to the cinema.
What do you **usually** do at a Chinese birthday party?
We **sometimes** give birthday cards.
My mother **never** makes a birthday cake.

1 Work in pairs. Ask and answer questions about Grandpa.

Activity / People	Watch TV	Play football	Go to the cinema	Read books	Listen to music	Go shopping
Grandpa	*always*	*sometimes*	*never*	*usually*	*often*	*sometimes*
You						

— *Does Grandpa always watch TV?*

— *Yes, he does.*

2 Complete the table in Activity 1 about yourself.

Now work in pairs. Ask and answer.

3 Rewrite the sentences with the words in brackets.

1 I go to the cinema. (often) _____
2 He plays football on Saturday. (usually) _____
3 She gets up at 7:00 am. (always) _____
4 They eat chocolate at home. (never) _____

4 Complete the sentences with *Would you like* or *Let's*.

Would you like to go to the playground and play football?

1 _____ to go to the football match?
2 _____ go to a *taijiquan* class.
3 _____ stay at home.
4 _____ to go to the cinema? It's Jackie Chan.
5 _____ to watch TV?
6 _____ play basketball.

5 Read the emails and check (√) the true sentences.

Dear all,

My birthday party is at four o'clock on Saturday evening at my house. Would you like to come?

Mike

Hi Mike,

Thanks. I'd like to come. See you then.

Jane

It's great to hear from you Mike, but I'm afraid I can't come. I always watch my little sister play football on Saturday afternoon.

Jack

1 Mike's birthday party begins at 4:00 pm. ☐
2 Jane doesn't want to go to the party. ☐
3 Jack has got a little sister. ☐
4 Jack always does his homework on Saturday afternoon. ☐

Around the world

Birthday presents

In the UK and the US, people often give candy to children as birthday presents. They also give toys or clothes. The children always open their presents immediately.

Module task: Planning a classmate's birthday party

6 Work in pairs. Ask and answer questions about each other's birthday party.

When is your birthday?
Do you always have a birthday party?
What do you usually do at your birthday party?

7 Plan a birthday party for your partner.

- Choose the time and place.
- Choose the food.
- Choose what to do.

8 Work with the whole class. Describe your plans for your partner's birthday party.

- Don't say who your partner is.
- Ask the class to guess who your partner is.

movie /'mu:vi/ *n.* 电影 (44)
* night /naɪt/ *n.* 夜晚 (44)
search /sɜ:tʃ/ *v.* 搜寻；搜索；查找 (44)
search for 搜寻；查找 (44)
information /ˌɪnfə'meɪʃn/ *n.* 信息 (44)
* email /'i:meɪl/ *n.* 电子邮件 (44)
send /send/ *v.* 发送 (44)
* game /geɪm/ *n.* 游戏 (44)
* sometimes /'sʌmtaɪmz/ *adv.* 有时候；不时 (44)
* cinema /'sɪnəmə/ *n.* 电影院 (45)
* clothes /kləʊðz/ *n.* 衣服（总称） (45)
* visit /'vɪzɪt/ *v.* 探望；参观 (45)
* holiday /'hɒlɪdeɪ/ *n.* 假日；节日 (47)

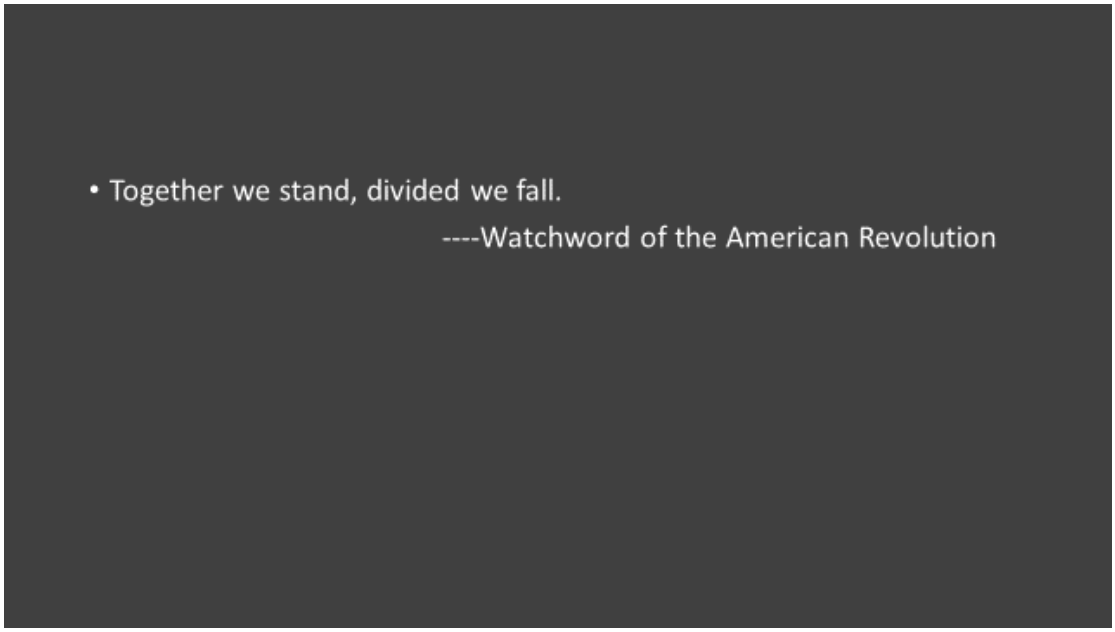
Module 8

* card /kɑ:d/ *n.* 卡片 (48)
* party /'pɑ:ti/ *n.* 晚会；聚会 (48)
present /'preznt/ *n.* 礼物 (48)
would /wʊd/ *v. aux.* 肯，会；愿意 (48)
* always /'ɔ:lweɪz/ *adv.* 总是；一直 (48)
* great /greɪt/ *adj.* 太好了；巨大的；超乎寻常的 (48)
* cake /keɪk/ *n.* 蛋糕 (48)
never /'nevə/ *adv.* 从不 (48)
special /'speʃl/ *adj.* 特别的，特殊的 (48)
cut /kʌt/ *v.* 切；剪 (48)
* give /gɪv/ *v.* 给，送 (48)
* sing /sɪŋ/ *v.* 唱，唱歌 (48)
* happy /'hæpi/ *adj.* 高兴的；幸福的 (48)
secret /'si:krət/ *n.* 秘密 (48)
ha ha /hɑ: 'hɑ:/ 哈哈（表笑声） (48)
CD /ˌsi: 'di:/ *n.* 激光唱片；光盘 (50)
concert /'kɒnsət/ *n.* 音乐会 (50)
magazine /ˌmægə'zi:n/ *n.* 杂志 (50)
scarf /skɑ:f/ *n.* 围巾 (50)
silk /sɪlk/ *n.* 丝绸 (50)
* dress /dres/ *n.* 连衣裙；礼服 (50)
T-shirt /'ti: ʃɜ:t/ *n.* T 恤衫 (50)
choose /tʃu:z/ *v.* 选择；挑选 (50)
* exercise /'eksəˌsaɪz/ *n.* 锻炼；练习 (50)
* wear /weə/ *v.* 穿；戴 (50)
expensive /ɪk'spensɪv/ *adj.* 昂贵的 (50)
* shoe /ʃu:/ *n.* 鞋，鞋子 (50)
spend /spend/ *v.* 花（钱）；花费 (50)
money /'mʌni/ *n.* 钱，金钱 (50)
* film /fɪlm/ *n.* 电影 (50)
* song /sɒŋ/ *n.* 歌曲 (50)
match /mætʃ/ *n.*（尤指体育方面的）比赛，竞赛 (50)
weekend /ˌwi:k'end/ *n.* 周末 (50)
at weekends 在周末 (50)
* dear /dɪə/ *adj.*（用于信开头某人的名字前）亲爱的 (53)
* hear /hɪə/ *v.* 听见 (53)
hear from 收到……的来信 (53)
* afraid /ə'freɪd/ *adj.* 担心的；害怕的 (53)
I'm afraid [口] 恐怕（用于礼貌地拒绝） (53)
can't = cannot 不能 (53)

Module 9

postcard /'pəʊstˌkɑ:d/ *n.* 明信片 (54)
* call /kɔ:l/ *v.*（给……）打电话 (54)
lie /laɪ/ *v.* 躺；平躺 (54)
* sun /sʌn/ *n.* 太阳 (54)
line /laɪn/ *n.* 行，排，列 (54)
* take /teɪk/ *v.* 拿，取；花费（时间） (54)
take photos 拍照 (54)
* wait /weɪt/ *v.* 等待，等候 (54)
wait for 等待，等候 (54)
* walk /wɔ:k/ *v.* 行走；步行 (54)
trip /trɪp/ *n.* 旅行 (54)
few /fju:/ *adj.* 一些；几个；很少（的） (54)
a few 一些；几个 (54)
sale /seɪl/ *n.* 卖；出售 (54)
on sale 正在出售 (54)
enjoy /ɪn'dʒɔɪ/ *v.* 享受……的乐趣；喜爱 (54)
anyway /'eniˌweɪ/ *adv.* 尽管如此；无论如何 (54)

Appendix B. Teacher Training Workshop PPT



Training outline

- Day 1. Theoretical part (2 hours)

a. The definition of cooperative learning
b. The essential elements of cooperative learning
c. The benefits of cooperative learning
d. Classroom arrangement

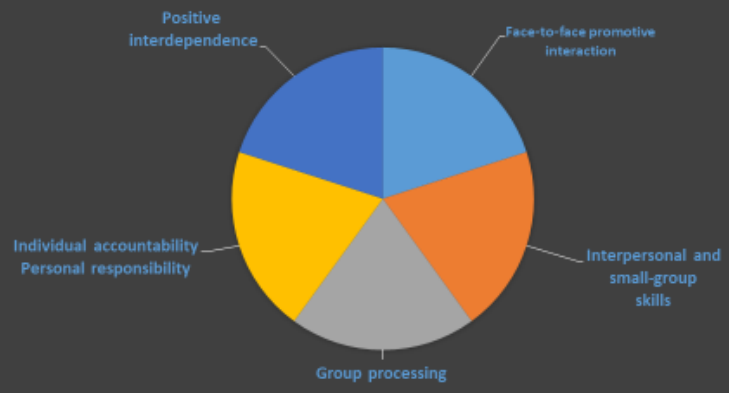
Training outline

- Day 2 Practical issues (3 hours)
- a. assign groups
- b. assign roles to students
- c. monitor and intervene
- d. Cooperative Learning activities
- d. observe

Definition of Cooperative Learning

- Cooperative Learning is the instructional use of small groups through which students work together to maximize their own and each other's learning.

Essential Components of Cooperative Learning



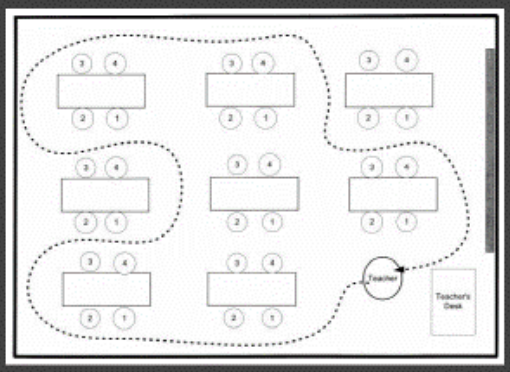
Benefits of cooperative learning

- Improved academic achievement
- More active involvement in learning by students, regardless of past achievement level or individual learning needs
- Increased motivation to learn
- Increased student responsibility for their own learning
- Improved interethnic relations and acceptance of academically
- challenged students
- Improved time on task
- Improved collaborative skills
- Increased liking for school
- Improved student attitudes toward learning, school, peers, and self
- Increased ability to appreciate and consider a variety of perspectives
- Greater opportunities for the teacher to observe and assess student learning

Comparison between classrooms encourage and discourage cooperation

Classrooms that discourage cooperation	**Cooperative classrooms**
Eyes on your own paper.	Look at what peers are doing in order to learn from them, help them and share ideas and materials.
No talking to your neighbor.	Talk to your neighbor in order to change ideas, debate, explain, suggest and question.
Do you own work and let others do theirs.	Share your work with others so that the work you do together becomes better than the sum of its parts.
If you need help, ask the teacher.	If you need help, ask groupmates and others before asking the teacher.
Compete for the teacher's attention.	Allow each student an opportunity to be spokesperson for the group
Compete for extrinsic rewards, eg. Grades.	Cooperate for both extrinsic and intrinsic rewards.

Classroom arrangement



Criteria for forming groups

- Achievement level
- Aptitude level
- Work attitude
- Personality
- Gender

Cooperative activities

- Jigsaw
- Hangman
- Write around
- Numbered Heads Together

Monitor and intervening

- Members seated closely together.
- Students who are assigned roles are doing them.
- Cooperative skills being used.
- Reluctant students involved.
- Members explaining to each other what they are learning and their reasoning processes.
- Equal participation.
- Groups working effectively.

Observe the classroom

	Element	Characteristic
P	Positive Interdependence	• Relationships • Contribution of group members
I	Individual Accountability	• Individual participation • Performance dependent on all group members
G	Group Processing	• Functioning • Clear goals, processing events
S	Social Skills	• Communication • Clarification, paraphrasing, praising
F	Promotive Interaction	• Encouragement • Facilitated communication

Kern. A. L, Moore. T. J, & Akillioglu. C. A. (2016)

Cooperative Learning Observation Protocol

Course/Level		**Date**	
Observer		**Instructor**	
Number of Students in Class		**Whole Class Demographic Information:**	
Instructional Context:			

Group Specifics

GROUP # /Name		Seating Arrangement			
Group Composition (heterogeneous/homogeneous)		Length of class			
Number of Students in Group		Female		Male	
Other:					

Cooperative Task(s)

Interval	Element	L	M	H	N	Notes
0-5	*P*					
	I					
	G					
	S					
	F					
5-10	*P*					*...Repeat spacing for length of cooperative activity*

Kern. A. L, Moore. T. J, & Akillioglu. C. A. (2016)

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Appendix C. Lesson Plan Section One

Lesson Plan Section One

Grade level: 7

Subject area: language arts

Materials: flash cards

Time: 40 min

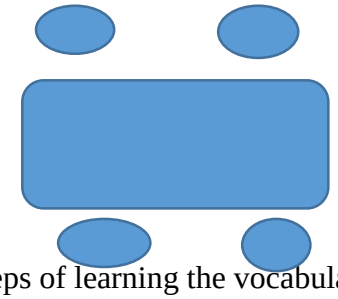
Objectives:

At the end of this lesson, students will be able to demonstrate acquisition of the following vocabulary, including the correct spelling and appropriate usage.

card, party, present, cake, secret, cut, give, great, special, always, happy.

Stages:

I. Arrange the classroom. Move the chairs and desks and group students into groups of 4. Students will be facing each other. See the graph below.



II. Steps of learning the vocabulary

a. Each group will be given eleven cards and there is one word on each card.

b. They discuss the words to know the meaning of the words. They can use Chinese if they feel more comfortable to do so.

c. Altogether, they make up a story that includes all the eleven words. The story has to be logical and contains 7-9 sentences. The target words should be put in the appropriate context. The students may follow the steps below:

Look through all the target words

- Think of a theme in a group
- Nail down the episodes in the story
- Make the episodes flow better
- Polish the whole story to make sure every target word is used appropriately

d. They write down their story.

e. They share the story with the whole class. One of the group members will come to the front and read the story to the whole class.

III. Closure

The teacher will observe the students and note down the mistakes they have in class and summarize the mistakes in class.

IV. Questions and answer part

If the students have any questions about this lesson, they can ask in this section.

Appendix D. Lesson Plan Section Two

Lesson Plan Section Two

Grade level: 7

Subject area: language arts

Materials: flash cards, handouts

Time: 40 min

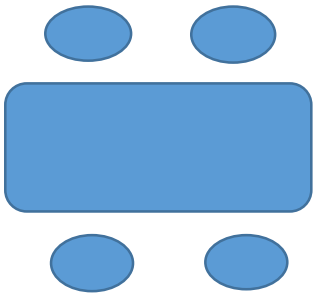
Objective:

At the end of this lesson, students will be able to demonstrate acquisition of the following vocabulary, including the correct spelling and appropriate usage.

Target words: sing, happy, concert, magazine, T-shirt, shoe, dress, scarf, silk, song.

Stages:

V. Arrange the classroom. Move the chairs and desks and group students into groups of 4. Students will be facing each other. See the graph below. The group will still uses the name previously determined.



VI. Steps of learning the vocabulary

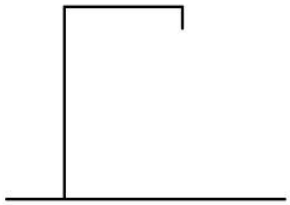
Part 1. Hangman activity

f. The teacher will show the students the four words by showing the items they represent. These four words are: *scarf, dress, t-shirt* and *shoe*.

g. Each student will be given a word. There are four words for each group.

h. The teacher will use *silk* as an example to show the strategy the students will be using for these words. The strategy is called Hangman.

i. Each of the four students begins to do their own Hangman game. One student has the word, and he/she draws the hangman like below. After giving other three members some hints, they begin to give their answers until the game completes.



j. After all the four words are done. They discuss with each other about these four words about the spelling and the meaning. They can use Chinese if they feel more comfortable to do so.

Part 2. Jigsaw activity

a. The teacher will give an example with the word *magazine* to the whole class to let the students know what to do next.

b. Each member of the group will be given a picture with a short paragraph below the picture. The target words will be embedded in the text. The four target words in this part are: *sing, song, concert, happy, magazine.*

c. After each one reads their passage, they go to the expert group.

d. The students talk about what they have learned and share in the experiment group.

e. The students go back to their original groups and teach other members of the group what they have learned in the expert groups.

f. They put all the target words together to recall what they have learned in this part.

VII. Closure

The teacher will observe the students and note down the mistakes they have in class and summarize the mistakes in class.

VIII. Questions and answer part

If the students have any questions about this lesson, they can ask in this section.

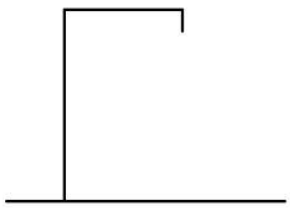
Student Handout

Part 1. Hangman

a. Each student will be given a word. There are four words for each group. These four words are: *scarf, dress, t-shirt* and *shoe*. 每个学生将拿到一个单词，每组 4 个单词：*scarf, dress, t-shirt* and *shoe.*

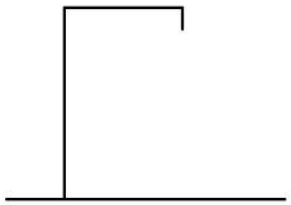
b. The teacher will use *silk* as an example to show the strategy the students will be using for these words. The strategy is called Hangman. 老师将用 *silk* 这个单词作为例子来给大家示范这个方法。

c. Each of the four students begins to do their own Hangman game. One student has the word, and he/she draws the hangman. After giving other three members some hints, they begin to give their answers until the game completes. 每个学生都跟自己的组员一起 hangman, 一个学生手里拿着单词，画图如下。给自己的组员一些提示，自己的组员来猜这个单词。



d. After all the four words are done. They discuss with each other about these four words about the spelling and the meaning. They can use Chinese if they feel more comfortable to do so.

Word No. 1



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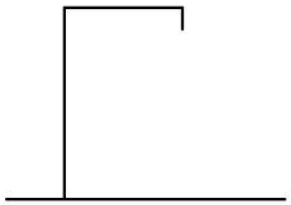
Word No. 2



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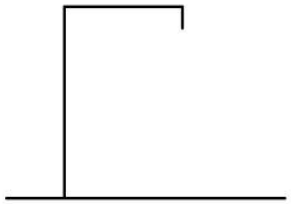
Word No. 3



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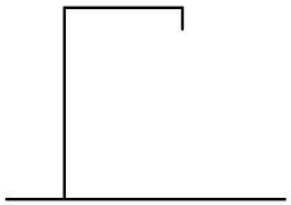
Word No. 4



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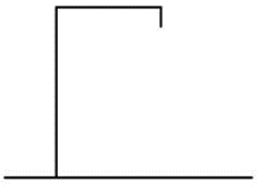
The procedures of Hangman:

1. A person is chosen as the “host” and the host has to know how to spell the word correctly or the game will for sure fail. 第一个同学是主人，主人必须学会自己手里的单词的拼写。

2. The host draw a hook like below: 主人画如下的一个图。



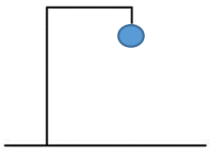
3. The host draw some short lines to let the letters fill in. For example, if the word has 5 letters, then there needs to be 5 short lines. 主人在上图的下面，画一些短横线，横线的数量跟单词内字母的数量一致，比如你的单词有 5 个字母，那就画 5 条短线。

4. The host is given a secret word and other players in the team need to guess what letters are in the secret word. 组员开始猜主人手里的单词是什么。

5. The players guess the letters in the words by asking the host, “Is there an *e* (or any letters in the alphabet) in the word?” 组员可以问主人：“你的单词里有 E 么？”

6. If the answer is yes, the host need to put the letter in the right position. If not, the host needs to put the letter down below to let other members know that letter is not included in that word. 如果组员猜对了，主人就把那个字母写在对应的位置，如果错了，就把那个字母写在下面，这样就不用重复再猜。

7. If the players give a wrong letter, the host needs to draw a circle, which represents the head of a person on the hook. See below: 如果猜错了，主人就要画个头，再猜错，就要画个身子。



8. The players win if the man is not finished. The host wins if the host is hanged up. 如果人没吊死，那就是组员赢了，如果人画完了，组员输。

Part 2. Jigsaw activity

a. Each member of the group will be given a picture with a short paragraph below the picture. The target words will be embedded in the text. The target words in this part are: *sing, song, concert, happy, magazine.* 每个学生会得到一个图片还有一小段文章，要学习的单词在段落里，单词分别为：*sing, song, concert, happy, magazine.*

b. After each one reads their passage, they go to the expert group. 在自己小组内，每个人阅读自己的小段落，然后去跟别的组，跟拿着相同话题的同学一起讨论。

c. The students talk about what they have learned and share in the experiment group. 每个学生跟自己新组的学生一起分享自己所学的内容。然后综合一下所有的内容。

d. The students go back to their original groups and teach other members of the group what they have learned in the expert groups. 讨论结束后，回到自己的组，跟组员分享自己所学到的内容。

e. They put all the target words together to recall what they have learned in this part. 全组一起回忆一下在这一部分学到的单词。

Magazine

Magazine is something between newspaper and books. The earliest magazine was in German in 1663. People love reading magazines because magazines can bring us a lot of news. Today, there are thousands of magazines in the world and the two most popular magazines are *Awake* and *The Watchtower*.


THE ILLUSTRATED
LONDON NEWS.

No. 2789.—vol. ci. SATURDAY, OCTOBER 1, 1892. SIXPENCE

Front cover of October, 1st, 1892 issue of The Illustrated London News

Concert

It always makes us happy to go to a concert. At concert, people can enjoy different things, like listening to the piano or to the songs. Many singers like to have concerts because concerts can bring them a lot of money. You can watch the concert on TV. You do not need to buy the ticket then. But many people love to go to the concert because it is more exciting.

Match

There are many kinds of matches in the world, especially in sports. For example, we have football match. In a football match, there are usually two teams. In each team, there are 10 players and 1 goalkeeper. Altogether, there are 22 people. Many people love to watch the football match because it is really exciting. Do you love it?

Sing, song

Music come to people's life thousands of years ago. At that time, there was no internet. If you sang songs, there would not be many listeners. Today, everything is different. If a singer sings a good song, soon the whole country or even the whole world will hear that song. Young people usually love pop songs. For example, in China, Lu Han is the most popular singers among middle school students. For American singers, they love Taylor Swift very much.

Teacher Handout

Please specify two errors each group make during the class. When the group do their work or present their work, the teacher need to note down the errors they have.

Group	Error (two errors for each group)

Student Handout

Target words 单词:

card（卡片）party（聚会）, present（礼物，现在）, cake（蛋糕）, secret（秘密）, cut （切、割）, give（给）, great（伟大的，很棒的）, special（特殊的）, always（总是）

Please write a make up a logical story including ALL the above words with your group members. The story has to be 7-9 sentences long. Please write down the story below and you will need to share the story with the class later on.

If you like, you can follow the steps here:

- Look through all the target words
- Think of a theme in a group
- Nail down the episodes in the story
- Make the episodes flow better
- Polish the whole story to make sure every target word is used appropriately

请跟组员合作，用上面**所有**单词编写一个符合逻辑的故事，7-9 句话。把编好的故事写在下面横线上，稍后跟大家分享你们的故事。

可参考下面的步骤：

- 浏览所有单词
- 组员一起想一个故事主题
- 思考故事细节 将所有单词囊括
- 使故事情节流畅自然
- 润色你们的故事 确保每个单词都用的准确无误

Teacher Handout

Please specify two errors each group makes during the class. When the groups do their work or when they present their work, the teacher needs to note down the errors they have. Please use the chart below.

Group	Error (two errors for each group)

Appendix E. Lesson Plan Section Three

Lesson Plan Section Three

Grade level: 7

Subject area: language arts

Materials: flash cards, handouts

Time: 40 min

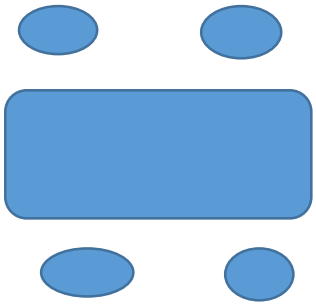
Objectives:

At the end of this lesson, students will be able to demonstrate acquisition of the following vocabulary, including the correct spelling and appropriate usage.

Target words: never, choose, exercise, wear, expensive, spend, money, film, weekend, dear, hear, afraid.

Stages:

I. Arrange the classroom. Move the chairs and desks and put students into groups of 4. Students will be facing each other. See the graph below. The groups will use the name determined before.



II. Steps of learning the vocabulary

Part 1. Numbered heads together.

a. The class is divided into groups of four. Every member in the group will be called by a number like No. 1, No. 2, No. 3 and No. 4.

b. Each group will be given a list of words. The list includes: never, film, exercise, weekend.

c. After looking through the words, the teacher will ask questions.

What will you never do in your life?

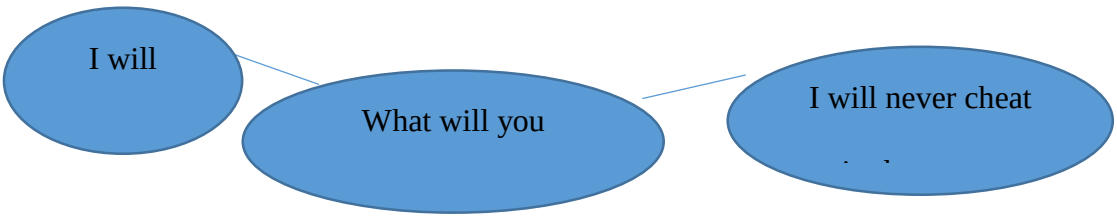
Please think of a film you like and tell us why you like it. It is ok that you say the name of the film in Chinese.

When you have time, what exercises do you do?

What do you usually do at weekends?

d. The teacher asks one question at a time and then let the class talk to each other about their answer. When the students finish the discussion, the teacher will just call the number. For example, the teacher calls No.1, the all No.1 students need to stand up and share their ideas.

e. The teacher then summarizes what the students say and share with the whole class by writing the answers down on the blackboard. The graph below will be used:



f. This procedure is repeated until all the questions are asked.

Part 2. Write around

a. Students are organized in groups of four.

b. Each group will be given a piece of paper. On the paper, there will be a given

sentence as the start of a passage and a list of words (choose, wear, expensive, spend, money, dear, hear, afraid.).

c. The first person gets 30 seconds to think and one minute to write down what he/she thinks to make up a story. He/she has to use two of the words listed on the paper. Everyone has 2 minutes to write.

d. When time is up, the paper needs to be passed to the second person. The procedure continues until all four members finish.

e. The group check the whole passage to make sure everyone in the group has used two of the words and all the eight words are used in the passage.

f. One person stands up and share the passage with the whole class.

g. The teacher needs to write down the errors if the students have some.

III. Closure

The teacher will observe the students and note down the mistakes they have in class and summarize the mistakes in class.

IV. Questions and answer part

If the students have any questions about this lesson, they can ask in this section.

Student handout

Please write a passage with your group members. The first sentence is given already. When everyone writes the passage, please use two words below. Each of you has 30 seconds to think and 2 minute to write down your part.

Choose (选择), wear （穿、戴）, expensive（昂贵的）, spend（花费时间或者金钱）, money（钱）, dear（亲爱的）, hear（听见）, afraid（恐怕）.

Please note, everyone HAS TO use two of them, cannot be more or less. You will need to cross out the words you use so your group members know that they can not use them again.

You can write the passage here.

请跟组员合作，完成一段文章，第一句已经给出。每个组员必须使用以下单词中的 2 个，Choose (选择), wear （穿、戴）, expensive（昂贵的）, spend（花费时间或者金钱）, money（钱）, dear（亲爱的）, hear（听见）, afraid（恐怕）。你有 30 秒的时间思考，有 1 分钟的时间写，时间结束后，文章需要传给下一位同学。注意，必须是 2 个单词，请将短文写在下面横线处。用过的词，请划掉，这样其他组员就不会再重复用了。

Well, I always love to lie on the bed all the time.

_____

_____

_____

_____

_____

_____

Teacher Handout

Please specify two errors each group make during the class. When the group do their work or present their work, the teacher need to note down the errors they have.

Group	Error (two errors for each group)

Appendix F. Pretest

Pretest

Name_____ Score_____

Please write the English equivalents for the Chinese words. The initial letter is provided.

请写出下面汉语对应的英语单词, 首字母已经给出

卡片 贺卡 c

聚会 p

礼物 现在 出席 p

总是 a

太好了 很棒 伟大的 g

蛋糕 c

永远不 从来不 n

特殊的 s

切 割 c

给 g

唱歌 s

高兴的 幸福的 h

秘密 s

杂志 m

丝巾 围巾 s

真丝 丝绸 s

连衣裙 d

T 恤衫 t-

选择 c

练习 锻炼 e

穿 戴 w

昂贵的 e

鞋 s

花费时间或金钱 s

钱 m

电影 f

歌曲 s

比赛 m

周末 w

亲爱的 d

听见 h

恐怕 a

Appendix G. Post-test

Post-test

Name:_____Score:_____

Cloze test 完型填空

Please read the following passage and choose one answer that is the most appropriate for each blank.

请阅读下面一段文章，选择最合适的答案。

Almost everyone likes gifts. Especially, little kids ___1__ feel they do not get enough gifts. They love to go to the birthday __2__ because they can get many gifts there.

Gift can be big or small. A little child may give his mother a leaf from a tree as a gift. Although this present is small, it is __3__.

People __4__ different ways to send gifts in different countries. In the US, people often send gifts to each other. Sometimes, they will just write a __5__ for the ones they love. That is enough to make a person __6__. In Sweden, doing something for someone is a __7__ gift. People do not need to __8__ too much money. Instead, making a __9__ is something that is very nice. In China, people like to send gifts to people who have been helpful. The gifts usually cost a lot of money and are __10__.

1. A. always B. never C. should
2. A. day B. party C. film
3. A. big B. special C. afraid
4. A. choose B. cut C. give
5. A. money B. present C. card

6. A. sad B. silly C. happy

7. A. bad B. great C. dear

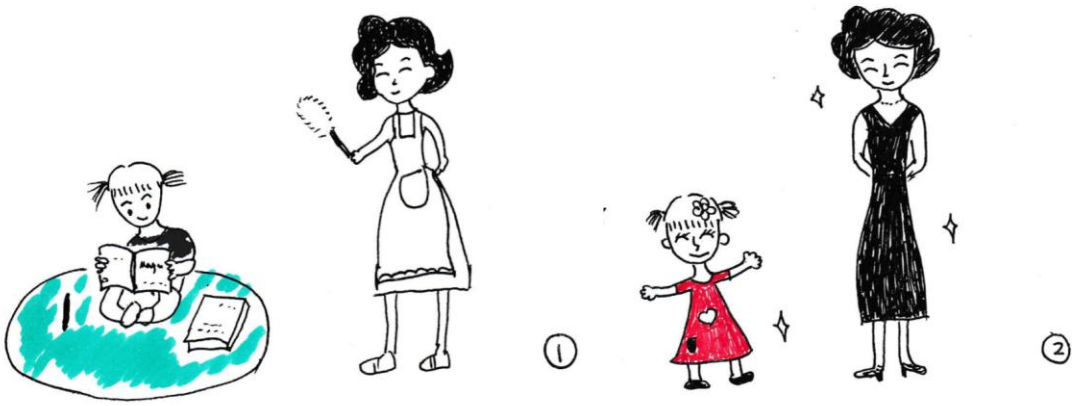
8. A. cost B. take C. spend

9. A. silk B. cake C. weekend

10. A. expensive B. cheap C. poor

Please write a short passage of 8 to 10 sentences in English based on the picture strip. Please note that your passage has to include all the key words provided. 看图作文

请根据下图-写一段 8-10 句的短文，短文须包含提供的所有关键词。



magazine, concert, weekend

wear, dress, shoe

song, hear, sing

special, great

Appendix H. Delayed Post-test

Delayed post-test

Name:_____Score_____ date:_____

Cloze test. 完型填空

Please read the following passage and choose one answer that is the most appropriate for each blank.

请阅读下面一段文章，选择最合适的答案。

I would say, almost everyone likes gifts. People_1_ feel they want to get more gifts.

People can get gifts at different times. For example, they can get gifts at the birthday _2_. You can _3_ a silk scarf for a lady as the gift. Some people love to send special gift like making a birthday _4_ , writing a _5_ or buying a _6_ticket for the birthday person. This kind of gift is good enough make people feel _7_. Therefore, you do not need to spend much money buying _8_ gifts. Also, when someone has helped you, you can _9_ a gift to him/her. It is always a _10_idea to do so.

1. A. always B. never C. should
2. A. day B. party C. film
3. A. cut B. choose C. sing
4. A. exercise B. match C. cake
5. A. money B. present C. card

6. A. film B. dress C. present

7. A. sad B. happy C. silly

8. A. expensive B. cheap C. poor

9. A. get B. give C. hear

10. A. great B. secret C. bad

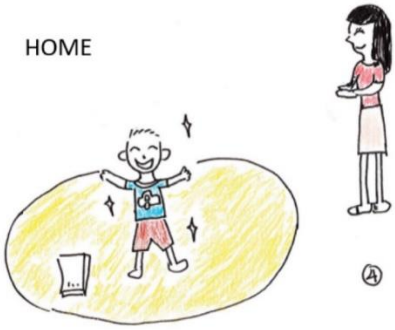
I. Please write a short passage of 8 to 10 sentences in English based on the picture strip. Please note that your passage has to include all the key words provided. 看图作文。

请根据下图-写一段 8-10 句的短文，短文须包含提供的所有关键词。

① concert, song, hear, sing

T-shirt, special

magazine, happily



Ⓐ weekend, wear, great

Appendix I. Consent Form for Parents

Consent Forms (Chinese and English)

参与科研同意书

合作学习在中国七年级学生英语词汇学习中的作用

研究目的：

请允许您的孩子参与这个教学研究，本研究是为了考察合作学习在中国七年级学生英语单词学习中的作用，看合作学习是否有助于学生使用新学的单词且记忆保存更长久。

参与人数：

如果您同意您的孩子参加，他/她将会是 55 名参加者其中的一员。

研究时间：

实验持续 3-4 节课，总计 5 小时。

过程：

如果您的孩子参加这个研究，他们需要做以下事情：

1. 用合作学习的方法来学习 34 个英语单词。
2. 在研究期间，参加 3 个考试。
3.

风险：

本研究不存在风险。

好处：

参加这个研究带来的益处有：学生可能发现一种新的学习英语单词的方式，且这个方式比较有趣有效从而解决单词无聊或者不会使用或者反复遗忘的问题。合作学习也可以延伸到其它科目，像数学等。

保密性：

研究相关的一切记录都是保密的，在任何发表的文档中，我们都不会包含您孩子的任何信息。研究记录只有研究人员可见，且会被安全保存。授权的大学可以查看您孩子的研究记录（即：考试成绩）。

中止或退出研究的权利：

此次研究是自愿原则参加。您的孩子可以随时中止或者退出研究，这对他/她不会产生任何不利影响。研究人员也有权衡利弊，随时中止您孩子参加研究的权利。

研究者联系信息：

如果您对该研究有任何疑问，包括：研究目的、过程等，请联系段银虹（佛罗里达国际大学），手机号：13601078797； 邮箱：yduan003@fiu.edu。

IRB 联系信息：

如果您对孩子参加此类研究有疑问，请联系佛罗里达国际大学 IBR 办公室，电话：3053482494，邮箱：ori@fiu.edu。

参加者协议：

我已阅读上面内容且同意我的孩子参加。我的问题都得到了解答，这份协议将被上交保存。

_____ _____

父母或监护人签字 日期

_____

父母或监护人的印刷名

_____

孩子的印刷名

_____ _____

Signature of Person Obtaining Consent Date

FIU | FLORIDA INTERNATIONAL UNIVERSITY

PARENTAL CONSENT TO PARTICIPATE IN A RESEARCH STUDY

The Effect of Cooperative Learning in Chinese Seventh Graders' Vocabulary Learning

PURPOSE OF THE STUDY

You are being asked to give your permission for your child to be in a research study. The purpose of this study is to find out the effects of Cooperative Learning in Chinese seventh graders' vocabulary learning.

NUMBER OF STUDY PARTICIPANTS

If you agree to allow your child to participate in this study, he/she will be one of 55 people in this research study.

DURATION OF THE STUDY

Your child's participation will require 5 hours during a three-week time span.

PROCEDURES

If your child participates in this study, we will ask your child to do the following things:

1. To learn 34 words in Cooperative Learning approach.
2. Take three tests about the vocabulary.

RISKS AND/OR DISCOMFORTS

For this study, we do not think there is any risk.

BENEFITS

The following benefits may be associated with your child's participation in this study: The participants may find the new approach to learn vocabulary is beneficial and interesting. It can also be applied in other subject areas, like math or science to make teaching and learning fun.

CONFIDENTIALITY

The records of this study will be kept private and will be protected to the fullest extent provided by law. In any sort of report we might publish, we will not include any information that will make it possible to identify your child as a subject. Research records will be stored securely and only the researcher team will have access to the records. However, your child's records may be reviewed for audit purposes by authorized University or other agents who will be bound by the same provisions of confidentiality.

RIGHT TO DECLINE OR WITHDRAW

Your child's participation in this study is voluntary. Your child is free to participate in the study or withdraw his/her consent at any time during the study. Your child's withdrawal or lack of participation will not affect any benefits to which he/she is otherwise entitled. The investigator reserves the right to remove your child from the study without your consent at such time that they feel it is in the best interest.

RESEARCHER CONTACT INFORMATION

If you have any questions about the purpose, procedures, or any other issues relating to this research study you may contact Yinhong Duan at Florida International University, 13601078797, yduan003@fiu.edu.

IRB CONTACT INFORMATION

If you would like to talk with someone about your child's rights of being a subject in this research study or about ethical issues with this research study, you may contact the FIU Office of Research Integrity by phone at 305-348-2494 or by email at ori@fiu.edu.

PARTICIPANT AGREEMENT

I have read the information in this consent form and agree to allow my child to participate in this study. I have had a chance to ask any questions I have about this study, and they have been answered for me. I understand that I will be given a copy of this form for my records.

_____ _____

Signature of Parent/Guardian Date

_____

Printed Name of Parent/ Guardian

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Printed Name of Child Participant

_____ _____

Signature of Person Obtaining Consent Date

VITA

YINHONG DUAN

EDUCATION & WORKING EXPERIENCES

2004-2008	B. E., English Education Linyi University Linyi, China
2008-2011	M. S., Linguistics and Applied Linguistics in Foreign Languages Beijing Language and Cultural University Beijing, China
2012-2018	Ph. D., Curriculum and Instruction Florida International University Miami, Florida
2008-2011	(English Teacher)Yuan Hang English School Beijing, China
2008-2011	(English Teacher) New Channel Education Beijing, China
2011-2012	(Director of Online English Teaching) Huatu Education Beijing, China
2012-2018	(Teaching Assistant) Florida International University Miami, Florida

PUBLICATIONS AND PRESENTATIONS

Y. Duan., & X. Yang. (2016). *The language difficulties encountered by the Chinese students at Florida International University*. Paper presented at 2016 Annual Scholarly Forum. Miami, FL: Florida International University.

Y. Duan., & X. Yang. (2016). *The language difficulties encountered by the Chinese students at Florida International University*. Paper presented at the 15th Annual South Florida Education Research Conference 2016. Miami, FL: Florida International University.