THE IMPACT OF EXPLICIT VOCABULARY INSTRUCTION ON L2 ADVANCED CHINESE LEARNERS' VOCABULARY RETENTION

by

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CHINESE LEARNERS' VOCABULARY RETENTION

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This classroom study of Chinese as a foreign language investigates the impact of explicit vocabulary instruction on students' vocabulary growth and knowledge as measured by translation and speaking test. Eight students in a college-level Advanced Chinese course participated in the study. Students received systematic and robust vocabulary instruction on 45 words, 15 words from each of the three thematic units of study over the course of nine weeks. The findings show that in post-tests on all 45 words, all students improved in the translation assessment and were able to use the majority of the target words in the prompted picture description assessment and in the unprompted recall assessment. Further analysis of the translation assessment results revealed that the correctness rate was higher if the words were more imageable and the conceptual fields of the Chinese and English words were close. A survey was conducted to explore how students changed their approach to studying vocabulary and their opinions on various vocabulary activities they experienced in class. The study showed that students changed their orientation to vocabulary study and now study words in sentences related to a meaningful context rather than as discrete items in a word list. The pedagogical implications of the study are presented in the last section of dissertation in practice.

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PREFACE

I would like to express my gratitude to many people who have supported me along the journey of my pursuit of the doctoral degree.

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Lastly, I want to dedicate this dissertation to my grandmother, Shen Shen-Wei (魏沈慎). She is a superwoman in every aspect of her life. She was also one of a few women in her generation to receive education and was the one who led me to value the power of education. Thank you, grandma, for your encouragement and for being my #1 cheerleader. This dissertation is for you.

"If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language, that goes to his heart." Nelson Mandela

1.0   INTRODUCTION

Advanced foreign language speakers not only need to be able to communicate effectively on topics related to daily life, but also converse on concrete and abstract subjects about community, national, and international issues. The ability to talk about these topics is important because this ability is an indication of advanced level proficiency, which is indispensable if students want to use the target language in professional settings. For example, teacher certification programs (e.g., University of Pittsburgh) require applicants to obtain at least Advanced-Low proficiency on ACTFL Oral Proficiency Interview (OPI). College foreign language majors who are interested in working in government agencies (e.g., CIA, FBI, and NSA) will need to undergo even more difficult and stricter language tests, which require students to demonstrate that they have advanced-mid to high or even superior profcieincy. Furthermore, examining the websites of foreign language departments in the United States, the common career paths include international company employee, international student advisor, interpreter, translator, and lawyer. According to ACTFL's (2018) analysis and chart on *Oral Proficiency Levels in the Workplace*, the minimal proficiency requirement for a financial advisor or broker is Advanced-High, and the lawyer is Superior. The examples above illustrate the prominence of oral communication and the value of being able to communicative effectively in a socially and culturally appropriate manner.

Vocabulary is a key factor in obtaining advanced proficiency. Research indicated that vocabulary size is correlated with language production (Laufer & Nation, 1995). Due to the incremental nature of vocabulary learning, advanced foreign language learners are expected to keep expanding their vocabulary knowledge and be able to use the words they know freely in speaking as they move to a higher level. However, students' performance often does not reflect the expectation. Advanced learners still rely heavily on basic vocabulary and do not actively use the vocabulary they learn at the current level during communication (Donato & Brooks, 2004; Hernández, 2010; Kline, 1989; Lutcavage, 1990; Paesani & Allen, 2012).

The reason relates to the vocabulary pedagogy and language curriculum. Foreign language courses at the advanced level mostly focus on reading literature pieces (Schechtman & Koser, 2008). The main aim is to facilitate students' understanding of the content and cultural significance of the reading. Helping students expand vocabulary knowledge and develop advanced language skills are seldom the primary objectives of the course. As a result, foreign language majors do not consciously monitor their use of vocabulary, which impedes their development of advanced proficiency upon completing their undergraduate education (Swender, 2003). As an long-time L2 English learner, I had the same experience when I was an undergraduate English major in Taiwan. We read masterpieces in British and American literature, analyzed and discussed the story. We made hypotheses and supposition and needed to perform the higher order thinking skills. However, sometimes I felt frustrated since I did not have enough sophisticated vocabulary to carry out the task. As I reflected on my own learning experiences, I can relate to my students who lacked the advanced vocabulary to interact with native speakers when conversing about topics beyond daily necessity. In the next section, I will

present my problem of practice in my professional setting and propose the reasons that may cause the problem.

1.1   PROBLEM OF PRACTICE

From my experiences teaching college-level advanced Chinese L2 learners, I have noticed that my students did not actively apply new vocabulary during task and class discussion or in the assignment if I did not explicitly instruct them to use the new words. This observation is an indication that students did not cultivate active control of the newly-learned vocabulary. There could be different reasons. One reason may be that there were too many words to learn in a very limited time. My students usually needed to memorize 35-40 new words in each lesson covered in five to six class hours. In addition, although I explicitly taught some vocabulary items, I did not implement the instruction systematically and provide enough opportunities for students to use and recycle the words. I would teach vocabulary in the first class period and then just focus on reading afterward. It was because part of me believed that students would pick up the words as they read more and as the class progressed. Furthermore, foreign language education has not systematically approached the teaching of vocabulary in textbook materials and curriculum. For example, in the current textbook used in the advanced Chinese course in my program, a 619-words text is accompanied by a glossary of 90 words. 14% of words in the text are considered new for students by the authors. The percetange far exceeds the number suggested by Nation (2013) that only 3-5% of words in a text should be new to the reader. Lastly, we see occasional exercises in materials that require identifying vocabulary words, matching to picture, and filling in blanks, but often not more than one or two exercises. A teacher needs to constantly reflect on

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his or her teaching and implement research-based effective methods in the classroom. Therefore, the reasons mentioned above motivate my study by introducing the concept of systematic treatment of advanced vocabulary and examining the effects of the instruction and tasks on the students' acquisition of vocabulary in a variety of discrete and global tasks.

1.2 SIGNIFICANCE OF THE PROBLEM

Studies have suggested that vocabulary knowledge is related to speaking proficiency (de Jong, Steinel, Florijn, Schoonen, & Hulstijn, 2012; Iwashita, Brown, McNamara, & O'Hagan, 2007; Koizumi & In'nami, 2013a; I. S. P. Nation, 2013; Schmitt, 2010). For example, De Jong et al. (2012) found that the knowledge of vocabulary and grammar was a strong indicator of speaking proficiency in their study of L2 adult Dutch learners. Koizumi & In'nami's (2013) study supports the same claim. They examined the relationship between vocabulary knowledge and speaking proficiency among native Japanese speakers who were Novice and Intermediate high school L2 English learners. The result indicated that students' vocabulary knowledge, size, depth, and speed is highly correlated with their speaking proficiency. Iwashita et al.'s (2008) investigation yielded the similar result. They discovered that vocabulary and fluency were reliable predictors of the rating in a holistic English-speaking proficiency test. The research mentioned above highlight the importance of vocabulary in foreign language learning at all levels.

When talking about vocabulary instruction, the most commonly discussed issue is incidental and intentional learning (Hulstijn, 2001). However, some researchers do advocate that vocabulary acquisition requires both incidental and intentional learning and teaching (Laufer &

Nation, 1995; Nation, 2001; Schmitt, 2007). Their justifications include the shortage of time, the large number of vocabulary items, and lack of target language environment. Therefore, there is a need to teach high-frequency words explicitly. For Nation (2013), he viewed intentional and incidental learning activities complement and strengthen each other and urged the teachers to design a vocabulary component in a language curriculum. Hulstijn (2001), for example, argued that "the labels incidental and intentional learning no longer reflect a major theoretical distinction" (p. 276). In his opinion, it is the "quality and frequency of the information processing activity (i.e., elaboration on aspects of a word's form and meaning, plus rehearsal) which determine retention of new information" (p. 276). He suggested that teachers should provide learning environments to foster rich and elaborate processing, deliberate rehearsal activities to reactivate the vocabulary knowledge, and opportunities to achieve automaticity. This position has been supported by empirical studies (Barcroft, 2015; Kitajima, 2001; Sonbul & Schmitt, 2010).

1.3   SCOPE OF INQUIRY

The problem of practice embeded in my current professional setting led me to design the curernt study. The purposes of the current study were: (1) to examine the impact of explicit vocabulary instruction on students' knowledge and control of vocabulary; and (2) to gain an understanding of students' perspective and experiences of vocabulary learning and instruction. The study was conducted in a university on the east coast of the United State. I have been an instructor in the school for the past eight years. The language and literature department where I work offers Chinese major and minor. There are four levels of Chinese language and a variety of modern and

classical Chinese courses available for students. Chinese language learners come from different fields of study. Some of them double major in Chinese and Political Science, History, or Finance. Almost every Chinese major has at least one minor in another discipline. Most students who take Chinese language courses are motivated to do well in class and strive to be proficient in the language. From my conversations with students, many of them were aspired to use Chinese at work and were eager to seek opportunities to work, study or travel to China or Taiwan. Therefore, they all had high expectations for the Chinese language classes.

To answer my inquiary, a mixed-method within-subjects design was employed. The study was conducted in an advanced (the seventh semester) Chinese course, which I have taught five times in the past eight years. Data collection spanned nine weeks, from the middle to the end of fall semester in 2017. During this period, students received explicit vocabulary instruction on 45 lexical items in three texts, 15 words from each text. They were given a vocabulary baseline test (Chinese to English translation test) before the data collection began. At the end of the semester, three post-tests were given to measure students' vocabulary gain: (1) the same translation test given previously, (2) oral picture description task, and (3) a text recall task. In addition, students completed a survey at the end of the semester to reflect on their learning experiences and provide feedback to the instructor on vocabulary activities and reflection on their vocabulary learning experiences.

1.4   RESEARCH QUESTIONS

The following research questions are designed to answer my inquiry into the impact of explicit vocuablary:

1. What is the impact of explicit vocabulary instruction on students' vocabulary knowledge as measured in the following three tests: translation task, picture description task, and text recall task?

2. Based on the results of the vocabulary measures,

    1) do students learn a particular part of speech more easily than others?

    2) do any semantic patterns emerge?

3. What is students' opinion of the explicit vocabulary instruction?

4. Do students change the way they learn the vocabulary after taking this course?

2.0   LITERATURE REVIEW

In this section, I will review literature related to the current study. First, I will discuss the importance of vocabulary in foreign language learning, and then the explicit vocabulary instruction and deliberate vocabulary learning. Next, Nation's (2013) language program design model will be presented. Laufer and Hulstijn's Involvement Load Hypothesis will follow. Lastly, I will present activities I plan to use for class instruction in the current study. I am fully aware that there is a debate in the field regarding incidental learning and explicit vocabulary teaching and learning; however, since this study focuses on the explicit teaching of vocabulary, I will not review the incidental learning of vocabulary.

2.1   VOCABULARY AND LANGAUGE SKILLS

Study of L2 vocabulary learning and teaching have received more and more attention since 1990 (Folse, 2010; Milton & Alexiou, 2012). Scholars in the field of foreign language education and second language acquisition have recognized the pivotal role that vocabulary plays in foreign language learning and teaching (Milton & Alexiou, 2012). For example, the *Language Learning Journal* dedicated two issues in 2008 and 2012 respectively to vocabulary research. Empirical and classroom-based studies have emerged to investigate the effectiveness of teaching strategies and the relationship between vocabulary and four language skills (Cheng & Matthews, 2016;

Ferris, 1994; Hsueh-Chao & Nation, 2000; Markham, 1999). Data showed that vocabulary size is a strong predictor of language proficiency (Stæhr, 2008). The depth and breadth of vocabulary knowledge correlate with listening, reading and writing (Chang, 2007; Lee, 2003; Nation, 2006; Qian, 2002; Stæhr, 2009; van Gelderen et al., 2004).

Compared to three other language skills, studies that focus on speaking have lagged behind. This delay is a surprising fact as the primary function of language is to communicate. Without vocabulary, the message cannot be conveyed (Wilkins, 1972). Recent studies have suggested that vocabulary knowledge is related to speaking proficiency. (De Jong, Steinel, Florijn, Schoonen, & Hulstijn, 2012; Harrington & Roche, 2014; Noriko Iwashita, Brown, Mcnamara, & O 'hagan, 2008; Koizumi & In'nami, 2013b; Nation, 2001; Roche & Harrington, 2013; Schmitt, 2010). For example, De Jong et al. (2012) found that the knowledge of vocabulary and grammar was a strong indicator of speaking proficiency in their study of L2 adult Dutch learners. Koizumi and In'nami's (2013) study supported the same claim. They examined the relationship between vocabulary knowledge and speaking proficiency among native Japanese speakers who were Novice and Intermediate high school L2 English learners. The result indicated that students' vocabulary knowledge, size, depth, and speed were highly correlated with their speaking proficiency. Iwashita et al.'s (2008) investigation yielded the similar result. They discovered that vocabulary and fluency were strong predictors of the rating in a holistic English-speaking proficiency test. The research mentioned above highlight the importance of vocabulary in foreign language learning at all levels.

Despite the agreement on the importance of vocabulary, vocabulary still does not receive the same status and treatment as grammar (Folse, 2010). In his case study, Folse (2010) investigated the amount of time spent on explicit vocabulary instruction in upper intermediate

English as a second language courses in an intensive English program (IEP) at a university. He observed five different types of classes of the same level daily for a week, which included composition, grammar, listening, reading, and speaking. He was surprised to find that the attention to vocabulary in each class during his 25 hours of observation was notably low. It is worth noting that his study showed that the course instructor was the most influential predictor of vocabulary focused instruction regardless of the types of classes. He strongly suggested that instructors should design a vocabulary component in a course, draw students' attention to vocabulary learning, and systematically teach vocabulary instead of relying on "impromptu teachable moments" (p.153).

2.2   EXPLICIT VOCABULARY TEACHING AND DELIBERATE VOCABUARLY LEARNING

The research has demonstrated that explicit vocabulary instruction is effective and necessary (Schmitt, 2008). Learners cannot learn L2 the way they learn their first language due to the shortage of time, a large amount of vocabulary items, and lack of target language environment (Nation, 2013). For example, many Chinese L2 learners in my institution started to learn Chinese in college. In the beginning level, the class meets seven hours a week. Students are not in the country where the target language is spoken and may not have friends who speak the target language to practice speaking with outside of the class. Under these circumstances, in order to gain vocabulary knowledge and rapid progress in proficiency, they must learn the vocabulary and grammar intensively in a short time. Chinese L2 learners do not have the luxury as L1

speakers, who can acquire words, formulaic phrases, pragmatic usages, and grammatical features by exposing to a large amount of input.

The proponents of conscious learning of L2 vocabulary argue that we learn what we focus on and use the commonsense justification that if we want to learn something, we must spend time doing it (Nation, 2007). Laufer (2003) provided substantial evidence to support this position. She found that students retained the meanings of the target words better when engaging in word-focused activities compared to learning words through reading. The word-focused activities in her experiments included writing isolated sentences, writing a composition, and completing sentences provided by the researcher with the target words after looking up their meaning. Students' vocabulary receptive knowledge tests scores were higher in the experimental groups in both immediate and delay post-tests. Laufer explained that she did not intend to undervalue the importance of reading, vocabulary learning through reading or reading activities but suggested that teachers needed to accept the benefits of direct teaching and learning and try to balance implicit and explicit teaching.

One learning condition that helps vocabulary learning is noticing. Noticing can be activated at any time and by different techniques such as learning a word list, asking students to discuss the meaning of the words, teaching explaining the words or writing the words down (Nation, 2013). In other words, learners have to be aware of the items being learned, or the instructors have to draw students' attention to the items being taught. Studies have been done to investigate the effectiveness of noticing on learning. For example, Laufer & Shmueli' (1997) found that long-term and short-term vocabulary retention were correlated with the modes of vocabulary presentation and the language of vocabulary glossing. In the study of a group of native Hebrew speakers learning English in high school, they discovered that the learners who

learned new vocabulary presented in a word list and sentence performed better on the vocabulary tests than those who learned new words in the text and elaborated text. Students who were exposed to L1 gloss received a higher score than those who learned the words in L2. What stands out in this study is that students who receive no treatment scored the lowest in the tests. It proves the importance of noticing and mental elaboration in learning vocabulary.

Similarly, Ramachandran & Rahim (2004) found that using L1 gloss to teach new words resulted in higher vocabulary retention compared to using the target language only. In addition, the study by Boers, Eyckmans, Kappel, Stengers, and Demecheleer (2006) supported the same position. They investigated the effect of noticing of formulaic expressions on oral proficiency. The participants were 32 college English majors who are L2 English learners. The instructor explicitly invited students to examine and analyze the grammatical features of formulaic phrases in the experiment group. The researchers found that students in the experimental group used more formulaic expressions in their oral interview and their oral proficiency ratings were higher than the control group.

This research has demonstrated the indispensable role of explicit instruction in vocabulary acquisition. Incorporating explicit vocabulary instruction in a language program has been a focus of discussion among some scholars. In the next section, I will review Nation's four-strand framework for a holistic vocabulary curriculum with a focus on language-focused learning.

2.3   FOUR-STRAND FRAMEWORK

A few scholars have been advocating to incorporate explicit vocabulary instruction into foreign language courses (Nation, 2013; Schmitt 2008). Nation (2013) provided a comprehensive and useful framework for vocabulary curriculum design. He proposed that a well-balanced and well-designed language program should compose of four strands: (1) meaning-focused input, (2) language-focused learning, (3) meaning-focused output, and (4) fluency development. I will focus the discussion on language-focused learning, which deals with direct teaching and deliberate learning of vocabulary. Language-focused learning involves deliberate attention to language features such as pronunciation, spelling, grammar, parts of speech, collocates, and discourse (Nation & Yamamoto, 2012). It is also the most crucial component among all four strands because without vocabulary knowledge, learners may not process meaning-focused input effectively. As a result, they will not be able to produce meaning-focused output and ultimately to develop fluency.

Nation (2013) suggested that each strand should receive an equal amount of time in a language program. In other words, each strand should receive roughly 25 percent of the course or program time. Applying this principle in each class period, in a 75-minute class, the instructor can spend at most 18.75 minutes on direct teaching of vocabulary.

Every learning activity must have a goal. Nation (2013) stated that "a vocabulary learning activity is used to reach a particular goal" (p.95) and encouraged instructors to consider learning goals when designing activities. The learning goal can refer to what we expect the learner to know about a word. In other words, in Nation's term, we can operationalize learning goals by identifying aspects of what it involves in knowing a word. If one knows a word, one knows the form, meaning, and use of the word. The form can be spoken, written or word parts (e.g., prefix,

part of the word); the meaning refers to the definition, concepts or association of the word; the use relates to the grammatical and pragmatic function of the word. Nation provided some guiding questions in his book so the teacher and learner can ask themselves whether the specific goal is achieved. The table below provides an overview of Nation's idea of what is involved in knowing a word.

Table 1. What is involved in knowing a word (Nation, 2013, p.49)

Form	*spoken	R	What does the word sound like?
		P	How is the word pronounced?
	written	R	What does the word look like？
		P	How is the word written and spelled?
	*word parts	R	What parts are recognizable in this word?
		P	What word parts are needed to express the meaning?
Meaning	*form and meaning	R	What meaning does this word form signal？
		P	What word form can be used to express this meaning?
	*concept and referents	R	What is included in the concept?
		P	What items can the concept refer to？
	*associations	R	What other words does this make us think of?
		P	What other words could we use instead of this one?
Use	grammatical functions	R	In what patterns does the word occur?
		P	In what patterns must we use this word?
	collocations	R	What words or types of words occur with this one?
		P	What words or types of words must we use with this one?
	constrains on use (register, frequency..)	R	Where, when, and how often would we expect to meet this word?
		P	Where, when, and how often can we use this word?

Note: R=receptive knowledge, P= productive knowledge

The aspects with asterisk marks (*) are the goals selected for my instruction in the current study. Nation (2013) provided a wide range of vocabulary activity ideas in each aspect. The vocabulary activities of the current study were designed based on his suggestions. In addition, some activities were adapted from the Menu of Instructional Activities in *Bringing Words to Life*

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by Beck, McKeown, and Kucan (2013). Before discussing the activities, I will review Laufer and Hulstijns' Involvement Load Hypothesis will be used as the conceptual framework for the activity design.

2.4   THE INVOLVEMENT LOAD HYPOTHESIS

As mentioned previously, any vocabulary teaching activity needs to have a goal. Only an effective activity has higher chance to help students learn the target aspects of the words. Therefore, the quality of activity is crucial to students' attainment of vocabulary knowledge. Laufer and Hulstijn's (2001) Involvement Load Hypothesis provides a useful framework to evaluate the vocabulary activities. Although this hypothesis was originally proposed to supplement incidental learning, it can be applied to assess any type of learning activities.

According to Laufer and Hulstijn (2001), the deeper the mental elaboration is required in a task, the more likely that students will retain the words. Therefore, when analyzing a task, we can look for the following three aspects: need, search, and evaluation. "Need" refers to learner's motivation. A learner needs to feel the "need" to search a vocabulary to complete the task. For example, a teacher gives students a list of words without gloss and asks the student to fill in the blanks using the target words. Since students do not know the meanings of the target words, they will have the drive look up the meanings in order to complete the task.

Students can look up the meanings using different methods such as a dictionary, talking to peers, or asking the teacher. The process of finding the meaning of the words is "search." In the searching process, students learn not only the definition but also the concepts that relate to the words.

After students know the meaning of the words, students will complete the fill-in-the-blank task. They will read the sentences provided by the teacher, interpret the meaning of the sentence, and decide which of the target word fits the context of the sentence. This process is called "evaluation." Students evaluate the fitness of different words based on its meaning, collocations, and pragmatic and grammatical appropriateness.

Need, search, and evaluation are three involvement factors in a task. Each involvement factor can have varying involvement load: no involvement load (-), moderate involvement load (+), and strong involvement load (++). The difference between moderate and strong depends on the level of cognitive engagement. In the instance of need, the load is moderate if the need is externally imposed such as a teacher asking students to use a word in a sentence. The load is strong if the need is self-imposed such as when working on a communicative task, students need a specific word to convey the message. In the instance of evaluation, the load is moderate if what students need to do is differentiating the meanings of different words or different meanings of the same word such as in a fill-in-the-blank activity. The load is strong if students need to decide what words can be used with the target word in a sentence that students create themselves.

A few studies have been designed to test the Involvement Load Hypothesis and provided some positive results on vocabulary retention (Hulstijn & Laufer, 2001; Keating, 2008; Kim, 2008). I will use this framework to evaluate the activities in this study to monitor the rich vocabulary instruction (Beck, McKeown, & Kucan, 2013).

2.5   VOCABULARY ACTIVITIES

In this section, I will review vocabulary activities used in the current study. They include pronouncing the word, answering questions involving target words, fill-in-the-blank, word association, filling part of the speech table, classifying words, and making a word map. Some activities (pronouncing the word, answering questions involving target words, and word association) were used to introduce new words. The other activities were used to review the learned vocabulary.

Next, I will describe the activities and how I used them in the current study. Lastly, I will present the involvement load of each activity by applying the Laufer and Hulstijn's (2001) framework.

2.5.1   Pronouncing the word

This procedure is to draw learners' attention to the spoken form of the word so they can match the sound with the meaning and orthography. This practice is a good way to draw students' attention to the words. The objective is for learners to be able to recognize the word when they hear it and to pronounce the word correctly. When encountering an unfamiliar word, the teacher can demonstrate how to pronounce it, and learners repeat after the teacher. In the current study, I used thirty seconds of the explicit vocabulary instruction time to focus on pronouncing the word. I put the target words on the PowerPoint and asked students to pronounce the word before I provided the corrective feedback. Due to the short exposure of this procedure, I did not include this activity in the survey.

2.5.2 Answering questions involving target words

This activity is to help the student learn the uses of the target words and understand the underlying meaning of the words. The teacher can ask students questions containing the target word, and students answer with the target word. Students can learn about the usages and grammatical contexts to use the word. For example, the target word is "jogging." The teacher can ask questions such as "Do you like *jogging*?" and "Where do you normally go *jogging*?" The other way of asking questions involving target words is to help student instantiate the word. For example, What are *bold* actions? Have you taken any *bold* actions recently?

In the current study, I asked questions using the target words either to instantiate the words or to help students understand the context and usage of the words.

2.5.3 Fill-in-the-blank

Fill-in-the-blank is an exercise widely used in foreign language instructors (Folse, 2006). In this type of exercise, the target word is removed from the sentence. Learners have to comprehend the sentence, guess what the target word might be from the context. This exercise will be easier if a word bank is provided. To increase the difficulty level, extra words can be added to the work bank as distractors. Folse (2006) evaluated the effectiveness of three types vocabulary practices by measuring students' vocabulary retention. He found that under three different conditions, one fill-in-the-blank exercise, three fill-in-the-blank exercise, and one sentence creation exercise, students who completed three fill-in-the-blank exercise performed better in an unannounced written vocabulary posttest. He argued that the repeated fill-in-the-blank exercise meant more retrieval times, which contributed to the vocabulary retention.

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In the current study, I provided a word bank of all the target words learned previously and created the sentence for each word. Students worked in a pair to do this exercise.

2.5.4 Word association

Nation (2013) provided many ways to enact association, such as finding substitutes, suggestions cause or effect, and finding examples. Beck et al. (2013) suggested that word association activities require students to express their understanding of the meaning and concept of the words in a more colloquial way. This type of task requires higher mental functioning since learners have to provide their own interpretations. I used Beck et al.'s prompt for word association activity. Students had to come up with an association to the target words. The association can be a "person, a movie, a common, [and] a common experience" (p.187). Next, students had to give a reason why they made such association. The example that Beck et al. provided was the word "eloquent." It was associated with President Kennedy. The explanation is that "Kennedy was an excellent speaker, People still talk about his speeches." In the explanation, students, in a way, provide a context and definition for the target word.

2.5.5 Filling part of speech table

This activity is to draw learners' attention to the word form. The knowledge of part of speech of a word can increase students' vocabulary size and production of complex words. For example, in English, adding -ly to an adjective (happy) makes an adverb (happily). The more aspects of a word the learner know, the more resources one can use.

To carry out this activity, the teacher can give learners a part of speech table and ask students to put words in the table according to their parts of speech. In the current study, this activity was conducted in the review session. I gave students all 15 target words. They had to categorize the words according to their parts of speech: verb, noun, and adjective. The understanding of adjective in Chinese is especially important. There are three basic ways of using an adjective. First, it works a stative verb. For example, 漂亮 (piàoliang; pretty) is an adjective. 她很漂亮 (tā hěn piàoliang) means she is pretty. Second, it can be used an attribute to describe a noun. When used as an attribute, the attribute marker 的 (de) is sometimes attached to the end of the adjective. For example, 她穿了一件漂亮的裙子 (tā chuānle yíjiàn piàoliangde qúnzi) means 'she wears/is wearing a beautiful skirt'. Third, some adjective can become an adverb to describe a verb when adding the adverbial marker 地 (de) after the adjective. For example, 优雅 (yōu yǎ) means elegant. One can say 她优雅地走进这个房间 (tā yōu yǎ de zǒu jìn zhè ge fáng jiān; she walked into the room elegantly). There are also some limitations in using adjectives. For example, not every adjective can be used in the adverbial position by adding 地 (de). Some adjectives can only be used as stative verbs but not in other positions. Students of Chinese will need to learn the part of speech and usages of individual adjective so they can use it correctly in speaking and writing.

2.5.6   Classifying words

Students are given a list of words and classify them into different categories based on the criteria assigned by the instructors or by themselves. Words can be categorized into connotations (negative or positive); parts of speech; living or non-living, mammal or insects; habitats (land or

ocean). I used this activity in the review session and provided students different categorical ideas the first time they did it. After students classify the words, I asked students the reason for such classification. This activity was designed to inspire students' creativity when they go through need, search, and evaluation process.

2.5.7 Making a word map

I have used this activity consistently in one advanced Chinese speaking course for two different purposes. The first was to use the word map as the visual organizer to summarize the text they read. This activity is an alternative of making the traditional bullet point outline. Students prepared the word map at home and presented the summary to their peers in class in pairs. They were asked to write down key words or new words on the map and drew lines among words to connect ideas. From my observation, students were able to make use the map to remind them of the new words encountered in the text. The other purpose was to review vocabulary and ideas in the text.

In the current study, word map activity was done in the class in the review session. I provided a prompt related to the content of the text and asked students to respond to the prompt based on the reading learned in the unit. After the map was created, students had to present their response as a group.

2.6   ACTIVITY INVOLVEMENT LOAD

The table below presents the involvement load of each vocabulary activity using Laufer and Hulstijn's (2001) task involvement framework. Every vocabulary activity involves the student in the process of need, search and evaluation except pronouncing the word activity, which does not require students to apply the word in a context. Among all six activities, making a word map shows the strongest involvement load. The need is strong because students themselves decide what words to be used in their responses and what words be written on the word map. The instructor does not require students to use certain words. Therefore, if students need to use certain words and do not know them, they would go search words by either referring to the text or vocabulary glossary or looking up the words in the dictionary. After students find a word, they have to evaluate whether the chosen word is adequate for the context in terms of formality, collocation, grammar, or meaning. Thus, the evaluation is strong. In conclusion, the language-focused learning activities chosen in the current study afford opportunities for deeper processing and cognitive involvement in processing the word according to the involvement load framework.

Table 2. Involvement load of vocabulary activities

Activity	Need	Search	Evaluation
Pronouncing the word	+	+	--
Answering questions involving target word	+	+	+
Word association	+	+	+
Fill-in-the-blank	+	+	+
Filling part of speech table	+	+	+

Classifying words	+	+	+
Making a word map	++	+	++

Note. "+" = moderate involvement; "++" = strong involvement; "--" = no involvement

3.0   METHODOLOGY

The current study used the mixed-method within-subjects design to investigate students' vocabulary gain and retention after systematic vocabulary instruction and explore students' attitude toward vocabulary learning and instruction. This chapter will describe the participants, text selection, target words chosen for the explicit instruction, implementation procedure, vocabulary presentation and activity, and instruments used to measure students' improvement and to explore students' orientation toward learning of new words.

3.1   PARTICIPANTS

The study was conducted in the Chinese program in a research university on the east coast of the United States. The participants were eight L2 Chinese learners in an advanced Chinese course required for Chinese majors. Among eight students, six were undergraduate students; one was a graduate student; one was a law student. Seven out of eight students had worked or studied abroad in China or Taiwan. Among the six undergraduate students, five were graduating seniors and one was a junior. Undergraduate students who enrolled in this course all had completed at least six semesters of Chinese language courses. All eight students were highly motivated in learning Chinese.

3.2 TEXT

The three texts used in the current study were selected from two textbooks used in the advanced Chinese course that I taught. They are "*Anything Goes: An Advanced Reader of Modern Chinese*" (AG) and "*A Kaleidoscope of China: An Advanced Reader of Modern Chinese*" (AKC). One text (Unit 3) is from AG and two texts (Unit 4 and 5) are from AKC. The texts in the books were all selected from the newspapers and edited by the authors.

I used a text analysis software, "Chinese Text Analyzer," to analyze the texts. The table below shows the title and numbers of words and characters in each text.

Table 3. Texts for the study

	Title	# of characters	# of words
Unit 3	美国选举制度与美国民主 American Elections and American Democracy (Měiguó xuǎnjǔ zhìdù yǔ měiguó mínzhǔ)	1039	619
Unit 4	全球变暖，我们怎么办? What Should We Do About Global Warming? (Quánqiú biànnuǎn, wǒmen zěnmebàn?)	874	494
Unit 5	改良中国医疗制度 Improving China's Medical System (Gǎiliáng zhōngguó yīliáo zhìdù)	1078	655

The three readings were selected because they are closely related to the current national events in the United States and international events related to the nation. In Unit 3 *American Election and American Democracy*, the author described the American presidential election

system and argued how the election system is not necessarily "democratic." Since the presidential election happens every four years and the United States just held its presidential election last year, it would be useful to learn to talk about topics related American presidential election. Unit 4 *What Should We Do About Global Warming?* concerned how global warming affects the environment and human's life. The author urged the readers to start to take action and save the earth now. Global warming has become a heated topic nationally and internationally after President Trump withdrew from The Paris Agreement, which is to fight the climate change. China took the lead to after the United States stepped back. It would be interesting to talk about this topic from China's and America's perspective. In Unit 5 *Improving China's Medical System*, the author recounted some pitfalls in China's medical system such as high cost and unequal distribution of medical resources and pointed out that medical reform is a difficult problem worldwide. This topic, again, is widely discussed in the United States as some Congress members tried to repeal and replace the Affordable Care Act. Those three topics are suitable for students at the advanced level since students do not only learn to talk about their surrounding but also issues in a society and nation.

3.3   TARGET WORDS

Fifteen target words were selected for explicit instruction in each unit. There are 45 words in total. Studies involved vocabulary assessment generally ranged from 13 to 18 words in each reading (Brown, Waring, & Donkaewbua, 2008; Gazerani, Ammar, & Montésinos-Gelet, 2015; Peters, 2012; Stockwell, 2010). According to Nation (2008), a reliable test would have at least 30 items. In addition, students in the Chinese program were used to be tested for 30 or more

vocabulary in each lesson. Therefore, learning 15 words in each lesson was not too overwhelming but still presented some challenges.

Among fifteen words, five are verbs; five are adjectives; five are nouns. When selecting the words, the following conditions were taken into consideration: (1) parts of speech, (2) abstractness and literary, (3) meaning of the individual character, and (4) instructor's judgment and experience. Some verbs in Chinese can be used as nouns. The selected verbs that have dual parts of speech all have a higher frequency as verbs than a noun. The words are either abstract words or literary terms of simple daily vocabulary. In addition, I avoided choosing the words that students can easily guess the meaning from the individual characters that make them up. The most items consist of two or characters to represent the entire word or morpheme. Lastly, as the course instructor and the researcher teaching this course for five years, I selected words that I think students should learn and will need to talk about the topics under discussion.

The table below presents the selected words in this study. The English translations are taken directly from the vocabulary glossary in the textbooks.

Table 4. Target words for explicit instruction

Unit 3		
Verb	Sound/pinyin	English
打击	Dǎjī	attack
竞选	Jìngxuǎn	enter into an election contest; campaign for (office); run for
标榜	Biāobǎng	boast; excessively praise
恐吓	Kǒnghè	threaten; intimidate
炫耀	Xuànyào	show off; flaunt
Adj		
完善	Wánshàn	perfect; consummate
可取	Kěqǔ	desirable; recommendable
激烈	Jīliè	intense; sharp; fierce
高明	Gāomíng	brilliant; wise
能干	Nénggàn	capable; competent
Noun		
本领	Běnlǐng	skill; capability; ability
障碍	Zhàng'ài	obstacle; barrier
民意	Mínyì	popular will
空头支票	Kōngtóuzhīpiào	empty promise; bounced check
风度	Fēngdù	good manner; demeanor; bearing
Unit 4		
Verb	Sound	English
淹没	Yānmò	submerge; flood
拯救	Zhěngjiù	save; rescue
融化	Rónghuà	melt
破坏	Pòhuài	destroy; damage; disrupt
制定	Zhìdìng	lay down; draw up; formulate
Adj		
直接	Zhíjiē	direct; directly
大量	Dàliàng	in large quantity; great amount
可再生	Kězàishēng	renewable; reproducible
不利	Búlì	disadvantageous; unsuccessful
沿海	Yánhǎi	coastal; along the coast
Noun		
连锁反应	Liánsuǒfǎnyìng	chain reaction
粮食	Liángshí	grain food
灾害	Zāihài	disaster; calamity
饥荒	Jīhuāng	famine
趋势	Qūshì	trend; tendency
Unit 5		

Verb			English
陷入	Xiànrù		be caught in
建立	Jiànlì		set up; establish
注重	Zhùzhòng		lay stress on; pay attention to' attach importance to
集中	Jízhōng		concentrate; focus
创造	Chuàngzào		create; invent; bring about
Adj			
平价	Píngjià		par value; marked-priced
公正	Gōngzhèng		just; fair; impartial
突出	Tūchū		prominent
艰苦	Jiānkǔ		hard; arduous; difficult
合理	Hélǐ		rational; reasonable
Noun			
职责	Zhízé		duty; responsibility
公益	Gōngyì		public welfare
结论	Jiélùn		conclusion
体系	Tǐxì		system
国情	Guóqíng		condition of a country

3.4   PROCEDURE

The data collection started in the 7th week into the semester. Students had learned Unit 1 and Unit 2 from week 1 to week 6. The class structure, requirements, and teaching approaches in Unit 1 and 2 were the same as Unit 3, 4 and 5. Therefore, students did not need to get familiar with the new approaches.

As part of the course requirement, students were required to preview the vocabulary one day before the five words were introduced in class. For each word, students had to write three sentences: (1) original sentence that contains the target word in the text, (2) one example sentence with the target word from the dictionary, and (3) the sentence they create using the target words. Students were able to see their peers' answers on the Courseweb, a web-based

course management and learning site. I provided the feedback to their answers after the targets words were taught in class.

Students spent five class periods learning one unit. Each class period lasted 75 minutes. In each class period, 15-18 minutes were used for explicit vocabulary instruction. Figure 1 shows the vocabulary teaching plan in each unit. In Hour 1, I introduced five target words that correspond to the part of the text that students were reading and discussing in class. Since the words did not perfectly correspond to the text of the day every time, sometimes a word was introduced early or later before students encountered them in the text. In Hour 2, five minutes were used to review the five words learned in Hour 1 and 13 minutes be used to learn another five words. In Hour 3, 5 minutes were used to review the ten words learned in Hour 1 and Hour 2, and 13 minutes were used to learn the last set of five words. In Hour 4 and Hour 5, there was a review of all 15 words. Students had a vocabulary quiz in Hour 5.

Lesson period	Vocabulary teaching plan
Hour 1	Learn 5 new words
Hour 2	Review the words learned in Hour 1 + Learn 5 new words
Hour 3	Review the words learn in Hour 1 and 2 + Learn 5 new words
Hour 4	Review all 15 words
Hour 5	Review all 15 words + vocabulary quiz

Figure 1. Vocabulary teaching plan in each unit

3.5   VOCABULARY PRESENTATION AND ACTIVITIES

At the beginning of the class, I presented all five words on the PowerPoint, asked students the pronunciation of each word, and led the whole class to say the word. After that, I engaged students in the learning activity. Two main activities were used: (1) question and answer (Q&A) involving the target words (e.g., Unit 3&5) and (2) word association task (e.g., Unit 4). I used two different activities because the current study was classroom research. If I had used the same activity for the rest of the semester, students might get bored in class and feel demotivated to learn.

In Q&A, students undertook a personalized vocabulary practice. I asked questions centering the concept of the target words and invited students to share their personal experiences. For example, when practicing the word 恐吓 (kǒnghè; threaten), I asked questions such as "Have you been threatened? Under what situation?"; "Do you think it is a good way to get things done and why?"; "Why do you think people would threaten others?". The questions required students to describe from concrete situations to abstract ideas.

In word association task, I asked students to work in a pair and discussed what came to their mind when they saw the target word and explained the reason. For example, when seeing the word "to save; to rescue," they said "it makes me think of the elephant in Africa. We have to save/rescue them because people want their tusks and they are endangered now." The target words were presented in a table such as the one below.

Table 5. A sample of word association activity

Target word	Association	Reason
拯救 (zhěngjiù, save, rescue)		

There are four types of review activities: (1) fill-in-the-blanks, (2) classifying the vocabulary, (3) filling in the parts of speech table, and (4) creating a word map. Fill-in-the-blanks were used in Hour 2 and Hour 3 in every unit for review exercises. They had to figure out which word fits the sentence. If a word can be used in a different context, two different sentences were created. Therefore, there were about five to seven sentences in the exercise in Hour 2 and ten to twelve sentences in Hour 3. below is a sample of fill-in-the-blank exercise. Pinyin were not provided to students in class.

biāobǎng   kěqǔ   wánshàn
标 榜 (boast), 可取 (desirable), 完 善 (perfect)

zhège jì huàxiāngdāng   gè gèfāngmiàndōukǎo lǜ dào le
1. 这 个 计 划 相 当 _____，各 个 方 面 都 考 虑 到 了。

(This plan is quite _____, every aspect was taken into consideration.)

rì běnchēpǐnpáidōu   tā menfēichángshěngyóu
2. 日 本 车 品 牌 都 _____他 们 非 常 省 油。

(Japanese car companies all _____ that their cars are fuel-efficient.)

měiguóxuǎn jǔ zhìdùháishìyǒu   zhīchù
3. 美 国 选 举 制 度 还 是 有 _____ 之 处。

(There is still a _____ part in the U.S. election system.)

Figure 2. A sample of fill-in-the-blank exercise

In Hour 4, students had the review of all 15 words for the first time. They were asked to classify the words into different categories, which can be abstractness, positive and negative words, and job responsibility. Students decided on the categories themselves. This activity was conducted using a shared Google Document. Students worked in a pair, which was determined by the instructor. below is a sample of instruction on google drive.

陷入，建立，平价，职责，注重，突出，公益，合理，集中，结论，公正，体系，国情，创造，艰苦

Classify the words into groups/categories of your choice (except part of speech).

第一组：name of student A, name of student B.

第二组：name of studnet C, name of student D
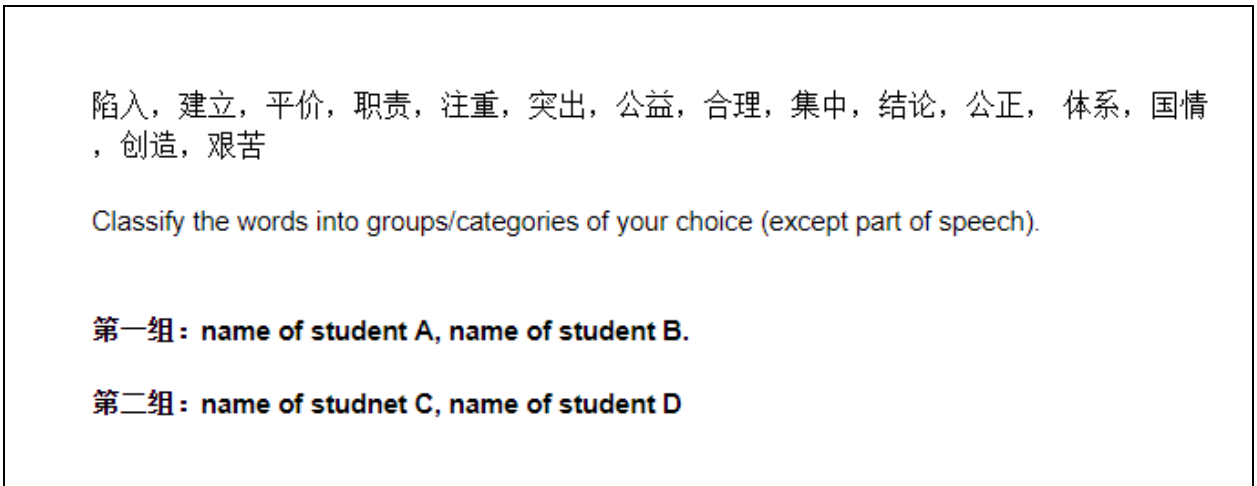
Figure 3. Sample of word classification activity on Google Doc

In Hour 5, there were two review activities. The first one was filling in a part of speech table, as showed in Figure 4. Student worked in a pair to complete this activity.

生词词性分类
(classify the words into their part of speech)
标榜，完善，可取，竞选，本领，打击，风度，激烈，障碍，恐吓，炫耀，高明，能干，空头支票，民意

动词 (verb)	形容词 (adj.)	名词 (noun)

Figure 4. Sample of the part of the speech table

The second activity was to respond a written prompt related to the text using a word map as a graphic organizer. I provided the student a prompt, and they were expected to create a word

map as an idea organizer and use as many new words as possible in their response. For example, in Figure 5 students answer the prompt, "what are the chain effects of the global warming?". Students would start with the earth (#1 in the figure) and say the earth has become warmer (#2). It will cause famine (#3.1) because the crop will not grow. In addition, the iceberg will melt (#3.2), and as a result, many lands will be submerged under the sea. After students drew the map, they presented their response as a group. Students drew the word map on a large post-it paper in a group of 4. Vocabulary activities for each class hour and the unit can be found in Section 1.01(a)(i)Appendix B.
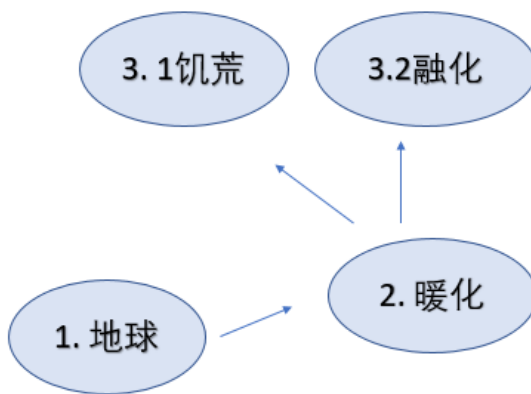
Figure 5. A sample of word map activity product

In addition to the classroom activities, students had one speaking assignment in each unit that engaged them to use the target words. The speaking assignment was adapted from a public speaking format, "Pecha-Kucha." Students started with creating a 10-slide Power Point presentation on a topic, and they had 20 seconds to explain the idea and concept in each slide. Each student had 3 minutes and 33 seconds to express their thought. Speaking assignments were submitted via VoiceThread. They were instructed to incorporate all 15 words taught in the class

into their speech and not to read from a script. Table 6 shows the prompts that students will receive for each assignment.

Table 6. Speaking assignment prompts

Unit	Speaking assignment
Unit 3	Express your opinion of the American presidential election system.
Unit 4	You will represent the United States to participate in the Model UN in China. Your team will defend the position that global warming is a serious matter.
Unit 5	You are an intern in the Congress. You give a presentation on the problem of the medical system in the United States to a group of government officials from China.

3.6   INSTRUMENTS

Four instruments were designed to answer the research questions. They are baseline vocabulary screening test, picture description task, text recall task, and a survey. Picture description and text recall also serve as students' final speaking test.

3.6.1   Baseline vocabulary screening test

In order to measure students' receptive vocabulary knowledge gain, students were given a baseline vocabulary screening test before the study started. The test followed the format of Yes/No question (Roche & Harrington, 2013). Students were asked to check if they knew the English meaning of the words. If yes, they had to write down the meaning.   The test were given in two parts so students would not feel overwhelmed. Students took the second part after turning in the first part.

The purposes of the baseline test are twofold: (1) find out how many words students already know so the result can serve as a comparison to the post-test and (2) decide what words will be explicitly taught in class. There are 72 test items. 45 words were the planned target words. Nine were nonwords, three from each text. Nonwords were created by replacing the original characters with new ones which had the same pronunciation and tone as the original words. For example, 享受 (xiǎngshòu; to enjoy) was replaced with 想授 (xiǎngshòu). An additional 18 words, six from each text, were selected to include in the test as a possible pool for explicit instruction if more than half of the students already knew the meaning of the words I planned to teach.

At the end of the semester, students were tested for the knowledge 45 target words again with the same test format.

3.6.2 Picture description task

The picture description task was designed to test students' productive vocabulary knowledge in speaking. This test was administered at the end of each unit as a speaking vocabulary test and at the end of the semester as a final assessment. However, the data for the unit test were not analyzed in the current study because the purposes of the giving vocabulary unit test were to encourage students to study and to monitor students' progress.

This task was adapted from Laufer and Nation's (1999) *Productive Vocabulary Level Test*. In their test, a few letters of the target word were provided in a sentence. For example, "I'm glad we had this opp_____ to talk." (Nation, 2008, p.154). According to Nation (2008), this task provides an opportunity for the researcher to explore whether students know the form and usage of the word in writing. In the current study, since the purpose was to explore whether students

know how to use the word in speaking, all the prompts were given orally. Students were shown a picture. A question was followed to ask students about the content of the picture. Students had to answer the question using one of the 15 words they learned. Unlike Laufer and Nation's test, students were not given the first character of the target word.

At the end of the semester, 12 out of 45 targets were randomly selected for the picture description test as a summative assessment. The test was conducted face-to-face with the instructor. The instructor showed a picture related to the target word and asked the student a question that required them to answer using the target word. I employed the interventionist dynamic assessment method when prompting students. Every student received the same prompts and at maximum three clues, from implicit to explicit ones. A sample of the test can be found in Section 1.01(a)(i)Appendix B.

3.6.3   Text recall task

A text recall task was used to measure students' productive vocabulary use in spontaneous speech. Measuring vocabulary knowledge in free speech can be challenging since students tend to rely on frequent words for communication purposes (Milton, 2009). Since the study aims to measure students' vocabulary knowledge of specific 45 words learned in class, the recall task of the texts will provide the context and allow students to apply and use the words learned in each reading. Picture description and text recall task were audio- recorded for analysis.

3.6.4   Survey

Students were asked to complete a survey at the end of the semester. The survey served as a self-reflection of their vocabulary learning method. In addition, they were asked to provide feedback on vocabulary activities. The survey also explored students' opinion on the vocabulary curriculum. The survey can be found in Section 1.01(a)(i)Appendix C.

3.7   DATA ANALYSIS

Baseline and post-test results were scored and compared to measure students' receptive vocabulary knowledge gain. Each vocabulary item is one point. Students had to accurately translate the meaning of the target word to receive one point.

For the picture description test at the end of the semester, the interventionist dynamic assessment method was employed. Every student received the same prompts and at maximum three clues. I assigned values to the prompt given at the different level. Students received 3 points if no extra prompt is needed, 2 points for 1 prompt, 1 point for 2 prompts, and zero for 3 prompts.

For the text recall task, I calculated the number of target words students used in their speech and compared the result with the baseline and post-test to find out whether there was a gap between students' receptive and productive knowledge.

Lastly, I conducted a qualitative analysis on all the data and tried to explore if certain semantic patterns emerged based on students' performances on all measures. Students' responses to the survey were compiled and categorized based on their characteristics.

4.0   FINDINGS

In this section, I present the findings of the explicit vocabulary instruction on students' vocabulary knowledge and answer my research questions.

4.1   RESEARCH QUESTION 1

Research Question 1: What is the impact of explicit vocabulary instruction on students' vocabulary knowledge as measured in the following three tests: translation task, picture description task, and text recall task?

4.1.1   Translation task

Table 7 presents the total score of the pre-test and post-test, and the percentage of the post-test. The maximum raw score for each test is 45. The words that students answered correctly in both pre-test and post-test were not given any points in the post-test score. In this task, students were asked if they knew the English translation of the target words. If they gave a positive answer, they had to write down the English meaning of the word. Since the translation test was taken anonymously, student's identity was coded S1, S2, S3 etc. The data show that all students improved their receptive vocabulary knowledge. Of the eight students, two students received

scores higher than 80%. Five students scored close to or higher than 70%. One student scored over 60%. Moreover, all students improved and gained between 24 points and 37 points. This finding suggests that explicit vocabulary instruction in class has a positive impact on students' vocabulary knowledge, as measured by English translation.

A further examination of the total number of mistakes students made showed that more mistakes occured in Unit 3 than Unit 5. Students made more mistakes on the words in Unit 3, the lesson that they learned first, which they took eight weeks before the post-test. Out of 120 answers in Unit 3, 38 words were either not translated or translated incorrectly. This number is equivalent to 32% of the total answers. The words that the students learned closer to the post-test were the words that they could most accurately translate. Unit 4 had 18 mistakes (15%), and Unit 5 had 12 mistakes (10%). In other words, 68% of the answers in Unit 3, 85% of the words in Unit 4, and 90% of the words in Unit 5 were correct. The correctness rate is quite high.

Table 7. Total and percentage of scores for the translation task in pre and post-test

Student	Pre-test	Pre-Test Percent (%)	Post-test	Post-Test Percent (%)
S1	9	20	33	73
S2	3	7	33	73
S3	5	11	32	71
S4	2	4	38	84
S5	0	0	38	84
S6	0	0	33	73
S7	1	2	27	60
S8	5	11	33	73

Note. Maximum score=45

4.1.2 Picture description task

Table 8 displays the dynamic assessment scores for each word in the picture description task: three means that students did not need any hints; two means that students needed one hint; one means that students needed two hints; and zero means that students needed three hints or did not use the target word. In this task, students received one picture at a time with a question. Using one out of the 45 target words they learned, they had to answer the question based on the picture. The data showed that among eight students, every student needed some assistance on minimum one word and maximum two words out of twelve words. HR and BN only needed assistance for one word and the rest of the students needed hints for two to three words.

Furthermore, no students needed any hints on six out of twelve words. For example, students did not need any hints for 可再生 (kězàishēng; renewable), 拯救 (zhěngjiù; to rescue), 淹没 (yānmò; to submerge), 连锁反应 (liánsuǒ fǎnyìng; chain reaction), 体系 (tǐxì; system), and 职责 (zhízé; duty). Only one student needed prompts for 风度 (fēngdù; demeanor) and one student for 炫耀 (xuànyàoto; boast). Therefore, students did not receive any hints for the majority of the words.

Students had the best control of words in Unit 4, compared to Unit 3 and Unit 5. All students could recall the words in Unit 4 without any hints, the unit that they learned in the middle of the intervention. Possible reasons may be that (1) students were more interested in the topic; (2) students might have prior knowledge of the words in Unit 4; (3) words in this unit is easier to learn. For words in Unit 3, every student needed some prompts to recall certain words. In Unit 5, the last unit students learned, students could recall two out of four words without any prompts. The data suggest that having explicit instruction in vocabulary words and engaging

students in a variety of vocabulary activities were important and contributed to their retention of vocabulary in this advanced Chinese language class.

Table 8. Dynamic assessment score for each word in the picture description task

Unit	Word	ZL	HR	LR	AH	SY	XJ	BN	JH
Unit 3	风度 (Demeanor)	1	3	3	3	3	3	3	3
	标榜 (To boast)	3	0	2	3	2	2	3	3
	炫耀 (To show off)	3	3	3	2	3	3	3	3
	本领 (Skill)	3	3	3	3	3	3	0	2
Unit 4	可再生 (Renewable)	3	3	3	3	3	3	3	3
	拯救 (To rescue)	3	3	3	3	3	3	3	3
	淹没 (To submerge)	3	3	3	3	3	3	3	3
	连锁反应 (Chain reaction)	3	3	3	3	3	3	3	3
Unit 5	体系 (System)	3	3	3	3	3	3	3	3
	创造 (To create)	0	3	2	2	2	0	3	0
	职责 (Duty)	3	3	3	3	3	3	3	3
	公益 (Public welfare)	2	3	3	3	3	3	3	2

Note: 3= no hint; 2=1 hint; 1= 2 hints; 0=3 or more hints

4.1.3 Text recall task

Table 9 presents the total, mean, and percentage of the scores in the text recall task. This task required students to summarize the three texts they learned and encouraged them to use as many

of the fifteen new words as possible. Students received one point for each of the fifteen target words that they included in their oral summaries of the text (45 target words across the three units). Three students were able to use over 90% of the target words in the task. Two students were able to use over 80%, one over 70%, and one over 60%. One student only used 40% of the target words. In conclusion, five out of eight students used 80% of the vocabulary words when summarizing the text.

The mean score for each unit indicates that students excelled in using words from Unit 4 compared to other units. Two students used all fifteen words when summarizing Unit 4. Even the student who received the lowest total score was able to use eleven out of fifteen words. No student was able to use all the words in Unit 3 and Unit 5 in the oral summary. These findings are more impressive when considering that the text recall task provided no assistance to students. Additionally, in this task students summarized orally texts that they had previously read and discussed in class on, for example, the U.S presidential election, and engaged in follow-up activities that focused on the relevant vocabulary for the text.

Table 9. Total, mean, and percentage of scores for the text recall task

Student	Unit 3	Unit 4	Unit 5	Total	Total Percent (%)
ZL	14	15	13	42	93
HR	12	14	13	39	87
LR	14	15	12	41	91
AH	10	12	8	30	67
SY	11	13	13	37	82
XJ	4	11	4	19	42
BN	14	14	13	41	91
JH	13	11	8	32	71
Mean	11.5	13.13	10.38	35	78

Note. Maximum score for each unit=15

4.2 RESEARCH QUESTION 2

Research Question 2: Based on the results of the vocabulary measures, (1) do students learn a particular part of speech more easily than others? and (2) do any semantic patterns emerge?

The data from the translation posttest, which measured students' ability to convey the meanings of Chinese words in English in writing, and the data from the oral text recall task, which measured students' spontaneous productive vocabulary knowledge were analyzed to answer the research question 2.

4.2.1 Do students learn a particular part of speech more easily than others?

In this section, I will answer the first sub-question: Do students learn a particular part of speech more easily than others?

4.2.1.1 Translation post-test

Table 10 presents the numbers of correct translation each student produced in three parts of speech: verb, adjective, and noun. The maximum average score for each word class per student is 15. The average number of correct responses for verbs among all 8 students is 12.38 (83%); the average number of correct responses for adjectives is 11.88 (79%); the average number of correct responses for nouns is 12.25 (82%). The data suggest that verbs are easier to be accurately translated into English. The mean score of verbs is 0.13 higher than the nouns. Adjectives are slightly more difficult to learn, compared to verbs and nouns.

The data also show that the accuracy rate of verbs was higher than nouns although the difference is not that large. The results contradict the general argument that nouns are the easiest

to learn among all parts of speech (Laufer, 1990). This finding might be due to the nature of the scoring of the translation task. The translation was marked incorrect if students translated the words as a different part of speech in English. For example, one student translated 本领 (běnlǐng; skill, capability, ability) as *skillful*. A possible reason why this change of part of speech occurred is that the target word is often used with 有 (yǒu; to have) to form a phrase 有本领 (to have skill), which is often translated as "skillful, capable, talented" in English when being used in a sentence. In this case, the student translated the expression in which the word *skill* was found without analyzing the nominal part of this formulaic verb phrase. The other instance was with the word 空头支票 (kōngtóuzhīpiào, bounced check). Four out of eight students translated the target word as "write a bounced check." They added the verb, *to write*, that commonly collocates with the noun *blank check* in their translations. Therefore, if I awarded students credit for knowing the semantic category of these two words and overlooked the grammatical category, the accuracy rate for nouns would increase to 12.88 (86%), that is, a higher accuracy rate than the verbs.

Table 10. Numbers of correct translation

Student	Verb (*n*=15)	Adjective (*n*=15)	Noun (*n*=15)
S1	15	15	12
S2	13	10	13
S3	13	11	13
S4	12	13	15
S5	14	12	12
S6	8	14	11
S7	9	9	10
S8	15	11	12
Mean	12.38	11.88	12.25 (12.88)
Percentage	83%	79%	82% (86%)

Note: n= number of words in each grammatical category

4.2.1.2 Text recall task

Table 11 presents the total number of target words that students used in the text recall task. In the text recall task, students received one picture at a time with a question. Using one out of the 45 target words they learned, they had to answer the question based on the picture. Overall, students used 11.75 verbs, 11.75 adjectives and 11.63 nouns on average. The data suggest that there are no major differences among word class when students used the words in spontaneous oral production. Students used nearly an equal number of words from different word classes. However, further analysis revealed that more verbs were used by all eight students compared to adjectives and nouns. Six verbs, two adjectives, and four nouns were incorporated in students' oral summary of the text by all eight students. The following are the words that all students used.

Verbs:	竞选 (enter into an election contest), 打击 (attack), 融化 (melt), 破坏 (destroy), 制定 (draw up), 建立 (establish)
Adjectives:	平价 (fair-priced), 可再生 (renewable)
Nouns:	民意 (will of the people), 连锁反应 (chain reaction), 粮食 (grained food), 饥荒 (famine)

We can conclude that advanced Chinese students had better control of verbs for this task. What might explain this finding is that verbs were essential to convey the theme of each text. The first text (Unit 3) was about the U.S. presidential election. The word, *enter into an election contest*, would be indispensable. In addition, the presidential candidates *attacked* each other during the campaign, a salient characteristic in the election. Student also watched video clips about this election behavior in class. Therefore, this deeper level processing made the word easier to remember and learn. The second text (Unit 4) was about the impact of global warming. The word, *melt* and *destroy*, are essential to discussing the impact of global warming. The text also presented the solutions to solve this problem and suggested that countries of the world

should work together and *draw up* regulations to slow down the impact of global warming. Furthermore, the word, *draw up*, was re-entered and reviewed in the third text (Unit 5), which was about improving China's medical system. The text stressed the importance of *drawing up* new policies and *establishing* an affordable medical care network for all citizens especially the underserved populations.

Table 11. Numbers of target vocabulary used in oral recall task

Student	Verb (*n*=15)	Adjective (*n*=15)	Noun (*n*=15)
ZL	13	15	14
HR	12	14	13
LR	14	14	13
AH	10	10	10
SY	13	11	13
XJ	8	5	6
BN	13	14	14
JH	11	11	10
Mean	11.75	11.75	11.63
Percentage	78.3%	78.3%	77.5%

Note: n= number of words in each grammatical category

4.2.2 Do any semantic patterns emerge?

Semantic patterns emerged in the translation post-test but not in the recall task. Therefore, only the results of the translation test will be discussed.

The data analysis showed that some semantic patterns emerged in the Chinese to English translation test which measured students' receptive knowledge. Two major findings are: (1) the more abstract the words were, the more difficult for students to learn. In other words, in De Groot & Keijzer's (2000) term, the more "imageable" the words were, the easier to learn; (2) the closer the conceptual fields were in Chinese and English, the easier to learn. That is, if the

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function, context, and semantic domain of the Chinese word were similar to English, it would be easier for students to remember its English translation. Figure 6 shows the numbers of mistakes of selected vocabulary in translation test. Every student translated the words on the left side of the chart correctly. Three to five students make mistakes on the words on the right side of the chart. I will provide examples to illustrate the observation in the next section.


Figure 6. Numbers of mistakes in translation test from 0 to 5

Imageable words are easier to translate. For example, 沿海 (yánhǎi; coastal) and 粮食 (liángshí; grain food) are more imageable words. The former represents the coast; the latter represents the grains such as rice, wheat, and beans. Because they are easy to imagine and

visualize, these words were easier to remember and translate for the students. All eight students were able to translate these two words correctly.

Conversely, abstract words are more difficult to translate. For example, 风度 (fēngdù ; demeanor/bearing) is an abstract word in both English and Chinese. Four students made mistakes on this word. 风度 (demeanor/bearing) is used to describe the outward behavior or the way that one behaves or conducts oneself. This word can be used in different phrasal contexts. One common usage is to combine with 绅士 (shēnshì; gentleman) to form a formulaic phrase 绅士风度 to describe a male who is well-educated, polite, and displays the behavior or appearance that resembles a gentleman. The other usage of 风度 (demeanor/bearing) is to use the word with 有 (have) to form the formulaic phrase, 有风度 (have demeanor/bearing). A common context for this word is in a sports competition. If one athlete losses the competition yet still shakes hands and congratulates his/her competitor, this behavior can be described as 有风度 (have demeanor/bearing). We can see that 风度(demeanor/bearing) represents a person's disposition and deportment, which are neither tangible nor imageable. Students need to learn 风度 (demeanor/bearing) in various contexts to grasp its meaning. Hence students may take a longer time to learn all aspects of the word.

The data analysis showed that students learned the words better if there was a one-on-one correspondence between Chinese and English words and the conceptual field of the Chinese and English words was the same or very close. For example, 融化(rónghuà) is translated as *melt*. According to the Oxford dictionary, the definition of *melt* is "to change something from solid to liquid by heating, or to dissolve a solid in a liquid." According to the Xian Dai Han Yu Ci Dian (the dictionary of Modern Chinese), the definition of 融化 (melt) is 冰雪等变成水 (bīngxuě

děng biànchéng shuǐ; ice/snow etc. becomes water), which is similar to the English definition of the word, *melt*. Therefore, it is easy for students to transfer their knowledge of the English word "melt" when learning the Chinese word, 融化 (melt). They can easily apply this word when talking about the melting of iceberg, ice cream, and snow. The data show that seven out of eight students translated 融化 (melt) correctly even though this word was learned nine weeks before the translation posttest.

Conversely, if the English translation of the Chinese word does not or cannot fully capture its meaning, it is more difficult to learn. For example, the data show that four out of eight students did not translate 高明 (gāomíng; wise) correctly. 高明 was translated as *wise* in the textbook. According to Oxford English dictionary, wise is defined as "having or showing experience, knowledge, and good judgment." The subject of *wise* is usually a person when *wise* is used as a predicate. However, in Chinese, 高明 (wise) is defined as 见解，技能高超 (jiànjié ,jìnéng gāochāo), which means *superior point of view or skills*. The subject of 高明 (wise) is a skill, method or point of view when 高明 (wise) is used as a predicate. In Chinese, 高 明 (wise) does not entail a person's intelligence, experiences or knowledge. Therefore, if a student transfers L1semantic knowledge to L2, they would produce a confusing and semantically incorrect sentence.

4.3   RESEARCH QUESTION 3

Research question 3: What is students' opinion of the explicit vocabulary instruction?

A final survey was administered at the end of the semester to learn about students' opinions on various aspect of the courses related to the vocabulary instruction and learning such as the method of introducing and reviewing new vocabulary, the types of assignments to allow students to work with the vocabulary, the number of words that they learned, as well as their self-reflection on their vocabulary learning experiences and the teaching approach in the current course. The following are the findings.

4.3.1 Approach to vocabulary introduction

New vocabulary was introduced using either Question and Answer (Q&A) or Word Association (WA) activity. In Q&A, the instructor used the target words and asked questions related to students' personal experiences in different contexts. WA activity required students to come up with a person, place, or event related to the target word, and they had to explain the reason why they made such an association. The data showed that four students preferred Q&A; three students preferred WA; one student liked both.

The main reason for the preference to Q&A was that this procedure provided contexts for students to use the words. One student explicitly wrote "using vocab in context helps." Another student explained:

> *"I preferred question answer, because while word association helped me understand the meaning of the passage, question answer helped me explore the nuances and different uses of the word, so if I understood it incorrectly, I would be corrected on spot."*

For this student, the teacher-initiated Q&A procedure helped him/her probe the functions of the words such as collocations, formulaic expression, formality, and pragmatics. This

technique seems to enable students to apply the words to varies situations and to motivate students to test their understanding of the word. Furthermore, another student reported:

"It allows me to utilize a question example and to also engage in conversation and build upon the conversation."

For this student, the question that the instructor asked provided a context to use the word. That is, students learned the usage of the word from the instructor's questions. In addition, this student applauded the benefit of being able carry out a conversation when a word was introduced in the Q&A format. In other words, context matters for learning vocabulary and facilitates the process of assigning meaning to new words.

The reasons for preference to word association varied. One theme that emerged was that WA helped students recall the word. Three students' comments supported this observation. One student showed that "when I recall the words, I have a better memory of the definition" and another student reported that this activity "was more beneficial when recalling the vocabulary to use in different contexts." These two students recalled for different purposes. WA activity helped the first student recall the definition of the words while helping the second student recall the contexts of using the words. The third student remarked that this activity helped him "learn the context of when to use the words."

Interestingly, "context" was reported in both Q&A and WA activities. We can conclude that both techniques allow students to use vocabulary in a contextualized way and that context, as has been argued repeatedly in the foreign language education literature, is an important component to vocabulary learning (Glisan & Donato, 2017).

4.3.2 Approach to vocabulary review

New vocabulary was reviewed using these four activities: fill-in-the-blank, word classification, fill in part of speech table, and word map. Three out of eight students liked more than one activity while the other six students had specific preferences and liked one activity more than others. Overall, four students like word map; three students like fill-in-the-blank and word classification; two students like part of speech table. The reasons for favoring one over other activities are as followed.

4.3.2.1 Fill-in-the-blank

Students reported that they like fill-in-the-blank activity was because it provided examples of the words used in sentences. Therefore, students could check their understanding of the vocabulary words, as well as see the correct usage of the words in a sentence context.

4.3.2.2 Word classification

Word classification activities asked students to divide selected vocabulary words into 2 or 3 categories of their choice, e.g., by semantic categories, collocation, abstractness, etc. One student commented that it was the first time that he/she had seen word classification for learning vocabulary and really liked this activity. That student continued explaining that this activity allowed him/her to review all aspects of a single word. For example, some students would divide the words by meaning, another by ideas that the words were related to, and the other would group them by part of speech.

One student seemed to consider world classification as part of speech because he/she explained that "knowing what part of speech these vocabulary words are is very helpful when

learning how to initially use them in a sentence." What might explain such association is that there was always one student in the class that divide the words by their parts of speech. I had to tell that student every time that we would this activity the next time and ask that student to come up with different classification system.

4.3.2.3 Fill in the part of speech table

Students who liked this activity did not elaborate in detail on their answer. Only one student described that "it helped with the construction of sentences later." Another student who liked this and the previous two activities reported that "they really helped me determine how to use the words in other sentences and how they grammatically fit in to everyday speech."

4.3.2.4 Word map

According to the survey, creating a word map was the most popular activity. One student commented that this activity was fun. Furthermore, one common theme that emerged was that creating a word map provided "contexts" to use the words. One student articulated that "word maps were helpful because then I could connect the words and use them in sentences to relate them to the context." This student truly captured the essence of this activity. When doing this activity, students created their own graphic organizer that helped them put related words and ideas together. Afterward, when they used the map that they created in the oral presentation, they were able to focus and communicate the meaning instead of worrying about the form of the word.

4.3.3 Vocabulary assignment and in-class practice

Throughout the course, the instructor provided students many opportunities to use the vocabulary. Therefore, students were asked what aspect of this course helped them learn the vocabulary the most such as vocabulary preview assignments, feedback on their vocabulary preview assignments, practice and review in class, and end-of-the-unit speaking assignments. For example, for vocabulary preview assignments, students had to submit them a day before the new words were introduced in class. They had to find the original sentence that contained the target word; look up the word in any online dictionary and write down one example sentence; lastly created their own sentences using the target word.

Three students mentioned that doing the preview assignment helped them a lot. One student elaborated that the preview activity helped him/her learn the most because after they did the assignment, "the meanings were constantly reinforced afterward." For this student, this preview stage provided the foundation for future learning.

Five students commented that the practice and review in class helped them learn the vocabulary the most. One student specified that while the preview assignments were helpful, "it was variety of exercises and the frequency of use that made this vocabulary learning experience much more positive than other classes." Students' reports support the benefit of explicit vocabulary instruction in foreign language classes. While quizzes, tests, and assignments all play a role in students' vocabulary learning, it is through the constant interaction, exploration, and exercise of vocabulary in class that students gain the active control of new words.

4.3.4   Number of new vocabulary words

In this course, students were required to learn 15 words that the instructor selected. This number was far less than the number of vocabulary students were asked to learn and memorize in a week in their First to Third Year Chinese courses. While one student considered 15 words too little, seven out of eight students reported that 15 words was a perfect amount and was about the number that they could handle. They noted that due to the good amount of words, they would actually use the words in speaking and appreciated that they could "remember them all and practice them thoroughly." In the case of the students' active control of vocabulary, less is certainly more.

Two students further commented on their past learning experiences. It was evidenced that reducing the vocabulary load lessen students' stress and contributed to more learning. Students wrote:

"In years past, we learned dozens of vocabulary in one unit and I ended up forgetting a lot of the vocab in the end, feeling as if I couldn't take away anything from the course."
"When studying for the final I was amazed that I didn't really have to relearn any of the words, whereas in other years it would be as if I were learning many of the words for the first time again."

Lastly, one point that worth reporting was that students still learn other words in addition to the 15 selected words during their learning process although only 15 words were required to memorize. One student explained that "I also learned other words while we learned each topic but I liked how we focused on these 15." Therefore, explicit vocabulary instruction still appears to encourage incidental vocabulary learning.

4.3.5 Is vocabulary learning easier, harder or about the same?

Five students responded that they considered learning the vocabulary this semester was easier at different degrees compared to the past. The main reason was that there were smaller amounts of words. Students expanded that due to the manageable amount of words, they could take time to learn the words and learn to use them in a meaningful context. Students wrote:

> *"I feel that I know these words a lot better and can actually use them in my vocabulary when speaking Chinese in the future."*
> *"I felt like we weren't too rushed to memorize it."*

In addition, less emphasis on hand-writing the characters and the employment of a different assessment method changed the way students learn the vocabulary and made learning vocabulary easier. In one student's view, "we focus so much on the few words that we have, that I do not learn them just for memorizing for a dictation, but so that I can use them when speaking in class and expressing thoughts in discussions." The dictation that the student mentioned was the vocabulary quiz that they took before new vocabulary was introduced in class in their previous Chinese classes. In the dictation quiz, students were required to write down the words or sentences they heard in Chinese characters. However, in the current course, the quiz took place after students learned and practiced the words in class and was in a speaking format which required students to use the word orally in a sentence.

Despite the five students who felt that vocabulary learning was easier, one student pointed that vocabulary learning was harder because "there was less classroom contact and more independent study." Forth Year Chinese meets three hours a week while level 1 to level 3 courses meet at least five hours a week. A few students in the past years have reflected that they

would love to have more contact hours. They felt that their Chinese deteriorated because they spent less time in class. This issue suggests the importance of the pedagogy and instructional strategies that the instructor uses and how can instructors maximize learning with limited contact hours. It is a topic that deserves attention in the field and further investigation given that many students are deprived of language learning in universities because of 5-day a week schedules and excessive credit hours that are not easily incorporated into their major field of study.

Lastly, two students revealed that their vocabulary learning experiences were about the same compared to the past. One student stated that the texts were more difficult than the ones in the past, therefore, although vocabulary was emphasized in class, the difficulty of the vocabulary increased. Therefore, vocabulary learning was not easier.

4.3.6　Vocabulary teaching approach in the current course

Students were asked if there is any difference on how this course approached vocabulary compared to their past learning experiences. Seven out of eight students were able to explain the differences they experienced. Four students pointed out that in the past, they felt that the instructor just wanted them to learn as much vocabulary as possible. After words were introduced, there were no opportunity to learn to apply the words in meaningful contexts or in conversations. Students' responses can be found in Table 12.

In the current advanced Chinese language class, all students observed that the goal of vocabulary instruction in this course was to help them understand the grammar, function, and constraints on the use of vocabulary. Mostly importantly, they were able to use the words in oral communication in the future. One students commented that "this is the most unique approach to

vocabulary I've ever taken." Students generally appreciate the learning process that allowed them to delve into the depth of the vocabulary words and experiment on them.

Table 12. Students' response regarding the vocabulary teaching approach

- This course is great for truly understanding vocabulary and helping us to take this vocabulary and actually remember it in the long run and use it in our conversations for years to come.
- This course approaches learning vocabulary for the sake of comprehension and utility, whereas in the past I felt as though some of my professors just wanted us to learn as much vocabulary as possible.
- This course tends to approach vocabulary by emphasizing words that can be used in multiple contexts. I feel like I understand how to use the 15 words we learned better than in previous classes because we focused on their proper usage.
- It approaches vocabulary differently than my previous classes in that we take time to understand each word and its varying contexts which I appreciate.
- This is the most unique approach to vocabulary I've ever taken
- I felt like the approach was very different. Previously, it seemed that the vocabulary was briefly introduced, perhaps with a good example or explanation, but then I just had to memorize it. In this class, I felt like the vocabulary was actually taught to us, and we were given opportunities to experiment with it (unlike in previous courses, where I would have been hesitant to try new vocabulary since points were deducted from our grade if we made mistakes in class)
- Differently, it is my first time seeing preview

4.4   RESEARCH QUESTION 4

Research Question 4: Do students change the way they learn the vocabulary after taking this course?

4.4.1   Changes in students' orientation to vocabulary study after the course

The data revealed that students changed the way they studied vocabulary after taking the current course. Table 13 presents students' responses on how they studied vocabulary before and after taking this advanced Chinese course. Students reported that in the past, they only memorized the character and definition when studying the vocabulary. The goal was to do well on the quiz by correctly translating the assigned characters into English. They reported that they used tools such as Quizlet and flashcard or simply wrote the words repeatedly on papers to achieve that goal.

However, after taking the current course, six out of eight students started to focus on learning the vocabulary in context to make sure that they knew how to use the words in sentences. That is, they were more interested in learning how to incorporate the words for communicative purposes. One student reported that she would read the example sentences to find out the context of using the words. Another student mentioned that she would read and re-read the passage and learn the target words in context. She reported that "I would go through the passage and circle the words that I don't know, and write them down on the side of the page to look up later, and then re-read the passage when I understand those words."

It is very clear that after receiving explicit vocabulary instruction, most students were more conscious about the way they oriented themselves to the study of new vocabulary. This new orientation may have resulted from how vocabulary learning was presented in the class, the focus of this study. They learned in a classroom environment that encouraged them to explore, make mistakes, and use the words in a meaningful way. Therefore, studying vocabulary was not just for the quiz. Vocabulary study has become alive, purposeful, and meaningful for the majority of these students. Vocabulary's role in communication became clear to them and

transformed the goal of 'passing the test' to learning vocabulary for expressing themselves in

oral communicative encounters and for understanding and interpreting texts.

Table 13. Students' orientation on vocabulary study before and after taking this course

Vocabulary learning approach before taking this course	Vocabulary learning approach after taking this course
• I studied mainly with flashcards. • Brute force memorization. • In the past, I studied large amounts of vocabulary each night for a quiz the next day, so my goal was only to memorize (mainly the characters and meaning) so that I could do well on the quiz. There were times when the pronunciation was not even something I studied. Also, before this semester I rarely considered the part of speech or how to use grammatically when studying. • I used Quizlet and recitations • Memorizing it but not really learning it • I rewrote the characters over and over, and repeated definitions while doing that. • I would write characters over and over again. It worked to learn how to write them (since that was the focus at the time), but they weren't very functionally integrated into my vocabulary. • I would write it over and over in my journal.	• I make sure that I understand how to use the vocabulary in a sentence and not just the definition. • I study now with the goal of committing the words to memory. I study in a way that can help me use the words when expressing my thoughts, so I focus on using the words in sentences, rather than studying the words and characters individually. • I look to find the words in sentences and understand how they are being used versus previously I would just consider their definition. • I look at example sentences now instead of rote memorization. • I definitely put more emphasis on learning words in context, and integrating them meaningfully into my vocabulary • I go through the passage and circle the words I don't know and write them on the side of the page to look up later, and then re-read the passage when I understand those words.

4.4.2 Time spent learning vocabulary outside of the class

Students were asked if they spent more, less or the same time on learning the vocabulary outside of the class in the current course. Two students responded that they spent about the same time. Six students commented that they spent less time. The most common reason was that there were fewer vocabulary words. Moreover, one student pointed out the benefit of having fewer words: "I use a different way of studying and understanding the vocabulary. When there were dozens of vocabulary to learn, I spent a lot of time but I ended up forgetting the words almost immediately after the unit." Another student's comment corroborated his/her peer's remark: "I definitely learned the vocabulary much more thoroughly in this class." To sum up, students valued the quality of the vocabulary knowledge instead of quantity.

5.0   DISCUSSION

The current study set out to investigate the impact of explicit vocabulary instruction on advanced L2 Chinese learners' vocabulary retention and explore students' attitudinal change toward vocabulary learning and instruction. Based on my findings, I will make three recommendations to help Chinese L2 learners at the intermediate to advanced level continue to develop proficiency by using advanced vocabulary resources. The recommendations are (1) incorporate explicit vocabulary instruction; (2) spend time wisely on teaching vocabulary of different level of difficulty; (3) design a vocabulary curriculum in a Chinese language course.

5.1   INCORPORATE EXPLICIT VOCABUARLY INSTRUTCION

Based on the findings that explicit vocabulary instruction had a positive impact on students' vocabulary knowledge growth and retention, one recommendation would be to systematically incorporate explicit vocabulary instruction in Chinese langauge courses.

The current study provided rich, systematic, and robust vocabulary instruction that ensured students' vocabulary gains and retention, as shown in the assessment measures. A variety of assignments, pair work activities, group work activities, and teacher-initiated procedures were developed to draw students' attention to vocabulary. They included vocabulary preview assignments, end-of-the unit speaking assignments, word association activities, teacher-

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initiated Q&A procedures, word classification activities, fill-in-the part of the speech table exercises, fill-in-the blanks exercises, and word map activities. One fourth of each class period was used for the direct teaching of vocabulary. The findings of the study showed that students' vocabulary resources were, indeed, expanded. Advanced Chinese learners leanred to use topic-appropriate vocabulary when performing an advanced level function and talking about specific social and global subject.

The findings of the current study are in line with previous research on the positive impact of explicit vocabulary instruction on vocabulary gains (Hulstijn & Laufer, 2001; Laufer, 2003; Lee, 2003). Laufer's paper (2003) provided empirical evidence to support her argument that in a classroom setting, foreign language students were able to remember the meaning of words better if they were engaged in vocabulary-focused tasks instead of learning the words from reading. In her study, students were engaged in three vocabulary-focused tasks: completing given sentences, writing an original sentence, and incorporating words in a composition. Similarly, Lee's (2003) study suggested that teacher-initiated question and answer sessions, which were to draw students' attention to the form, sound, meaning, and use of the vocabulary, could benefit students' short-term vocabulary retention in writing.

In summary, in a non-immersion environments where the instruction time is limited, explicit vocabulary instruction would bolster a more rapid acquisition of vocabulary. More importantly, students are able to talk about topics beyond their personal life using topic-specific, advanced, and sophisticated vocabulary. Being able to go beyond the autobiographical is important. Students at intermediate to advanced level often encounter a ceiling effect because they lack the appropriate vocabulary to talk about specific topics on a non-personal nature. Explicit vocabulary instruction is a solution to the problem.

5.2 SPEND TIME WISELY ON TEACHING VOCABULARY OF DIFFERENT LEVEL OF DIFFICULTY

Based on the finding that the abstractness of L2 words and the distance of conceptual field in L1 and L2 affect the learnability of L2 words, the second recommendation would be to spend time wisely on teaching vocabulary of different level of difficulties as determined by the abstractness and the distance of the conceptual field in L1 and L2.

I recommend that Chinese language instructors carefully analyze the vocabulary for explicit instruction during the vocabulary selection and lesson preparation stage. Since the class contact hour is limited, it is critical that while balancing the learning of easy and difficult vocabulary, instructors prioritize the time spent on more difficult words, defined as those that are abstract and that do not share a conceptual relationship with the students' L1. According to the finding of the current study, easy words were more imageable and concrete (e.g., 沿海, *coastal*). The uses, grammatical rules, and conceptual fields of those words were closer to L1, and vice versa for difficult words. Such a finding is explained by de Groot & Keijzer's (2000) observation that students could come up with more contexts for concrete words than abstract words because it is likely that there is already a matching image of the concrete word in students' lexical repertoire. As a result, concrete words are easier to learn, and students are able to remember them better.

Instructors can also examine the English translation of the target words and carefully compare the English translation with the meaning of the Chinese word. From my observation, Chinese L2 learners rely heavily on the English translations in the textbook to learn the meaning of the new words. However, English translations can sometimes mislead students regarding the

how words are used, particularly abstract words, because very often there is not a one-to-one correspondence between Chinese and English for those abstract, technical, cultural-specific, and sophisticated vocabulary. Therefore, it is the instructor's responsibility to point out the differences in meaning between L1 and L2. When encountering abstract words, more time could be allocated for students to experiment with using the new words in contexts based on the English translation. This process will help students create a new conceptual field in Chinese, as well as expand and build on their preexisting knowledge of the vocabulary.

5.3   DESIGN A VOCABULARY COMPONENT IN A CHINESE LANGUAGE COURSE

Based on the findings that direct vocabulary instruction has a positive impact on students' vocabulary growth and is a way to cultivate an autonomous language learner, the third recommendation is to design a vocabulary component in Chinese language course, as proposed by Nation (2013).

The current study attempted to apply one strand, namely language-focused learning, in Nation's (2013) four-strand framework for vocabulary curriculum design (see literature review for a summary of Nation's approach). Because language-focused learning has been successfully implemented and researched, if instructors could apply all four strands in a language course, growth in vocabulary knowledge and greater fluency would be foreseeable. Therefore, based on Nation's suggestions, I will exemplify the implementation of the four-strand framework: (1) meaning-focused input; (2) language-focused learning; (3) meaning-focused output; (4) fluency development.

5.3.1 Meaning-focused input

Students learn new words through reading or listening in a meaningful context. Nation (2013) suggested that less than 2% of the words should be new to students. However, the texts in the Chinese textbooks used for the advanced level normally contain more than 2% of unknown words. What instructors could do is to provide two types of input. First, the instructor asks students to read the text and circle the words they do not know. Second, the instructor tells the story or rephrases the text orally. While rephrasing the text, the instructor paraphrases the unknown words and draws students' attention to the words that will be practiced more intensively later. In the current study, the words selected for language-focused learning in each class period was five. I suggest that the instructor can select 3-7 words based on students' level of proficiency and difficulty of the words. Creating visual aids on PowerPoint facilitates the retelling and paraphrasing procedure to make the input more comprehensible and meaningful. If the story or text is too long, the instructor can divide the text into several segments. It is advisable that teachers treat each segment as a concept or idea of its own, so the flow of the story is not interrupted.

5.3.2 Meaning-focused output

After students understand the story or text, the instructor can provide an opportunity for students to develop their vocabulary knowledge in speaking or writing. Students should be encouraged to use the target words in contexts with which they are familiar. The output activity should not overwhelm students. Nation (2013) suggests activities such as problem solving, role-play, discussing the text etc. One activity I tried in the past was to ask students to change a narrative

into a dialogue and present the dialogue in a comic strip. If time allows, the instructor could ask students to present their comic strip orally or act it out.

5.3.3   Language-focused learning

After students have understood the text and have tried to use the target words in context, the instructor can draw students' attention to words for direct instruction. The instructors can use activities implemented in the current study, such as a word association activity, Q&A procedure, and fill-in the blanks exercise.

5.3.4   Fluency development

Fluency development is intended to train students to use the vocabulary they already know by engaging students in working with easy and learned materials. Nation (2013) suggests activities such as 4/3/2 and ten-minute writing. I tried 4/3/2 activity several times and found it very effective and engaging. I asked students to work in pairs and explained to them that they had four minutes to summarize the reading of the unit to their partner. They had to use all four minutes. After that, they would be paired with a different partner and had three minutes to summarize the same text. Lastly, they will repeat the procedure in one minute. Students reflected that it was difficult to complete the task in one minute and realized the importance of using concise vocabulary to express themselves. Lastly, Nation (2008) suggests that the instructor should try to balance the four strands (meaning-focused input, language-focused learning, meaning-focused output, and fluency development) and use one quarter of the learning time on each strand.

In short, in this section, based on the literature and my experiences designing the current study, I provided my recommendations of creating an explicit vocabulary component in a Chinese language course and systematic ways to teach advanced vocabulary so that student will continue to grow in their proficiency.

6.0   REFLECTION

6.1   REFLECTION ON THE CURRENT STUDY AND FUTURE RESEARCH

If I conduct the current study again, I would control and balance the number of easy and difficult words. The new design will allow me to have more time to focus on abstract vocabulary and conduct a more accurate measurement of students' vocabulary gain. In addition, I would choose a different task instead of oral recall test to minimize the task effect as observed in the current study where more verbs were used by all eight students compared to adjectives and nouns. I hope a carefully constructed task controlling for parts of speech would provide students opportunities to use words from all parts of speech.

The current study only implemented one strand in Nation's (2013) four-strand framework. A future study could investigate the impact of vocabulary gain and retention when applying all four strands into a Chinese language course. The results would contribute to vocabulary leaning and teaching.

6.2   A SCHOLARLY PRACTIONER'S REFLECTION

This was the first time that I systematically conducted explicit vocabulary instruction in an advanced Chinese language course. Throughout the process, I have learned how assessment

drives learning and instruction and the effect of engaging activities. Most importantly, my mission as a teacher is affirmed.

What I found fascinating was that students changed the way they studied vocabulary because the assessment method was different in the current course. In the first to third year Chinese courses, the vocabulary quiz assessed students' vocabulary writing ability and whether they knew the English meaning of the target words. Therefore, students only studied to memorize the translation of the vocabulary and often forgot the words once the vocabulary quiz was completed. In the current course, I assessed students' ability to recall and use new words in a meaningful spoken context. Therefore, students were more interested in learning the function and uses of the words and were more willing to try to incorporate the words in speaking so they would know if they used the words correctly. I am excited to see that students change the way they approach vocabulary because it means that this course prepares and equips students with skills to take charge of their own learning. I am glad to see that students are on their way to become autonomous language learners.

In this course, I developed a variety of activities not only for vocabulary instruction but also for speaking, reading, and writing activities. For example, students were put in groups to debate on a topic; they made an advertisement for a clinic that specialized in plastic surgery; they were engaged in role-play activity and had to convince the other group to accept their proposal to save the Maldives which could be under the ocean in the near future due to global warming. At the end of the semester, I designed a timed activity for students to review all 45 words with their peers. Students were divided into two groups. Two students in each group were given a deck of flashcards with the 45 target words. They could provide any clues for the other two team members to guess what the word was as long as they did not mention the characters in that word.

They had three minutes for this activity and could skip a word if they did not know the meaning or their team members could not guess the word. Students were excited about this activity and they enjoyed competing with each other. I could see their excitement and spark in their eyes. One student commented after the activity that "this was very fun." As a teacher with more than ten years of teaching experiences, I recognize that spark. It is a sign of true engagement and serious learning.

Lastly, this study confirms my belief with regard to the purpose of teaching. From the conversations with my fellow Chinese teachers, many of them gave a vocabulary quiz even before students read the text and practice the words, or the instructor introduces new words. The reason is that if students study the words and know the words before they come to class, it will make the teaching easier. However, is our goal as instructors to ask students to teach themselves to make our teaching easier? Or do we teach to make students learn? While I understand the perspective of those teachers, I believe there are other ways to ensure students preview the reading and vocabulary and that vocabulary instruction should not be ignored and is as important as instruction in any other part of the language. We should not overwhelm and overwork students by having them memorize endless vocabulary lists out of context just to make our teaching easier. My hope is that this study has shown how explicit vocabulary instruction can expand students' meaning-making resources. In-service and pre-service Chinese teachers can be motivated to reflect on the role of direct vocabulary instruction in their practices and consider incorporating a systematic and robust explicit vocabulary instruction component in their courses.

APPENDIX A

VOCABULARY INSTRUCTION PLAN

The table shows the plan for vocabulary instruction in each unit and class period.

Unit 3

	New word activity	Review activity
Hour 1	Learn 5 new words Activity: Answering questions involving target words	
Hour 2	Learn 5 new words Activity: Answering questions involving target words	Review 5 words in Hour 1 Activity: Fill-in-the blanks
Hour 3	Learn 5 new words Activity: Answering questions involving target words	Review 10 words in Hour 1 and 2 Activity: Fill-in-the blanks
Hour 4		Review all 15 words Activity: Classifying words
Hour 5		Review all 15 words Activity: Fill in parts of speech Making a word map

Unit 4

	New word activity	Review activity
Hour 1	Learn 5 new words Activity: word association activity	
Hour 2	Learn 5 new words Activity: word association activity	Review 5 words in Hour 1 Activity: Fill-in-the blanks
Hour 3	Learn 5 new words Activity: word association activity	Review 10 words in Hour 1 and 2 Activity: Fill-in-the-blanks
Hour 4		Review all 15 words Activity: Classifying words
Hour 5		Review all 15 words Activity: Fill in parts of speech Making a word map

Unit 5

	New word activity	Review activity
Hour 1	Learn 5 new words Activity: Answering questions involving target words	
Hour 2	Learn 5 new words Activity: Answering questions involving target words	Review 5 words in Hour 1 Activity: Fill-in-the blanks
Hour 3	Learn 5 new words Activity: Answering questions involving target words	Review 10 words in Hour 1 and 2 Activity: Fill-in-the blanks
Hour 4		Review all 15 words Activity: Classifying words
Hour 5		Review all 15 words Activity: Fill in parts of speech Making a word map

A SAMPLE OF PICTURE DESCRIPTION TASK

Instruction to students:

Your teacher will show you a picture and ask you a question. Answer the question based on the picture. In addition to the original question, you will be given three clues at most.

Question: (target word: melt)

The temperature of the earth is higher and higher, what are the possible consequences?

Clue 1: In addition to X, what may happen?

Clue 2: anything happens in the north pole?

Clue 3: what happen to the glaciers?

STUDENT SURVEY

Reflect on your learning of vocabulary this semester and respond to the following questions. Your candid response is appreciated. Your feedback will be taken into consideration for future course planning.

     0. Do you participate in this study? Yes/No

1. New vocabulary was introduced using these two activities:
   A: question and answer
   B. word association

   Do you prefer one activity over the other? Please explain.

2. New vocabulary was reviewed using these four activities:
   A. fill-in-the-blanks
   B. fill in part of speech table
   C. word classification
   D. word map

        Do you prefer one activity over the other? Please explain.

3. Please rank the 6 activities in order of your preference (from 1-6). If you like two tasks equally, you can assign them the same raking. You do not need to use all 6 numbers.

   (   ) question and answer
   (   ) word association
   (   ) fill-in-the-blanks
   (   ) fill in part of speech table

(   ) word classification

(   ) word map

4. Compared to your past experiences learning Chinese, do you find vocabulary learning easier, harder, or about the same?
   Yes, I find it easier to learn the vocabulary.
   No, I find it difficult to learn the vocabulary.
   No, about the same

5. What aspect of this course help you learn the vocabulary the most? (For example, vocabulary preview and feedback on the Courseweb; practice and review in class; use it in the assignment etc.)

6. How did you study vocabulary in the past before taking this course?

7. Have you changed the way you study after taking this course? If yes, please explain what you do now to study vocabulary that you did not do before this course.

8. You learn 15 words in each unit. Do you think it is too much, too few or just about the number you can handle? Please explain.

9. Compared to your past experiences learning Chinese, in this course, do you spend more, less, or almost the same time on learning the vocabulary outside of the class? Please explain.

10. Compared to your past experiences taking Chinese courses, how different does this course approach vocabulary?

SCHEDULE AND STUDY TIMELINE

Week	Date	Content	Note
Week 7	10/10 (Tue) Monday class	**Baseline Vocabulary test**	Baseline Vocabulary Screening Test
	10/11 (Wed)	Unit 3 (Hour 1)	**Vocabulary intervention starts** 15 minutes vocabulary instruction 1 (learn 5 new words)
Week 8	10/16 (Mon)	Unit 3 (Hour 2)	18 mins vocab instruction 2 (5 minutes: preview Hour 1 vocabulary) (13 minutes: practice 5 new words)
	10/18 (Wed)	Unit 3 (Hour 3)	18 mins vocab instruction 3 (5 minutes: preview Hour 1&2 vocabulary) (13 minutes: practice 5 new words)
Week 9	10/23 (Mon)	Unit 3 (Hour 4)	18 mins vocab instruction 4 (review 15 words)
	10/25 (Wed)	Unit 3 (Hour 5) Vocabulary quiz	18 mins vocab instruction 4 (review 15 words) • **vocab unit quiz (Picture description task)**
Week 10	10/30 (Mon)	Unit 4	
	11/1 (Wed)	Unit 4	
Week 11	11/6 (Mon)	Unit 4	
	11/8 (Wed)	Unit 4	
Week 12	11/13 (Mon)	Unit 4	

		Vocabulary quiz	
	11/15(Wed)	Unit 5	
Week 13	11/20 (Mon)	Unit 5	
	11/22 (Wed)	Thanksgiving	
Week 14	11/27 (Mon)	Unit 5	
	11/29 (Wed)	Unit 5	
Week 15	12/4 (Mon)	Unit 5 Vocabulary quiz	**Vocabulary intervention ends**
	12/6 (Wed)	**Vocabulary post-test**	• **Vocabulary post-test** • **End of the semester survey**
Week 16	12/11-12/15	Final's week	**One-on-one speaking test (picture description and recall task)**

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