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# Learner Background and Approaches to Vocabulary Learning

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**Learner Background and Approaches to Vocabulary Learning**

by

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A Thesis

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## Abstract

Language learners have many assets to consider in the process of planning language instruction (Echevarría et al., 2017). One of the most obvious areas of difficulty in predicting students' prior knowledge is in vocabulary. Teachers must be aware of their students' approaches to independently learning new vocabulary in order to plan effective instruction (Nation, 2013; Yang & Wang, 2015; Alharbi, 2015; Echevarría et al., 2017; etc.). Brown (2013) and the pilot for this study have found inconsistencies in students' approaches. This study sought to determine whether these inconsistencies were predictable based on the variables of gender, academic major, and linguistic background. Participants completed a word card creation task and a demographic and language-learning strategy use survey. The strategy survey and the information from the word cards was compared to the demographic survey. Most variables did not lead to statistically significant results. However, there were statistically significant differences in word card data according to participant linguistic background and gender. If these differences continue to appear in research, teachers could use this information to anticipate and plan efficiently for the needs of their students.

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## Chapter I: Statement of Problem

Language is not acquired in a vacuum. For language learners, this means that there are endless possibilities for improving language skills. People do not generally remember their own experience in acquiring their first language and remain amazed at the ability of children to absorb new ideas and almost immediately apply new linguistic concepts to their own speech. To most people, the infinite resources of and potential for learning language are astounding. To language teachers, however, the open-endedness of language learning can be viewed as either a benefit or a challenge.

As a language teacher, I have taught students from many different educational and cultural backgrounds. When developing a curriculum plan for either university-level students or K-12 students, I have found that it is difficult to gain in-depth insight into my students' prior educational experiences in order to allow that to inform my instructional plan. In K-12 education, the problem of a lack of time that affects educators at all levels is compounded by a need to move into standards-based curriculum as soon as possible in the school year. In university settings, instructors have a great deal of content to deliver, but even less time than K-12 educators to adequately do so. However, vocabulary instruction needs to be individualized and differentiated, so it would be beneficial to find a way to determine the extent to which there is a relationship between students' personal, linguistic, and language-learning backgrounds and their behavior in learning new vocabulary independently.

Students' linguistic and language learning backgrounds and language learning ability levels can differ widely in all ESL classrooms. One of the areas where this difference may be most easily visible is in vocabulary learning. Nation and Webb (2011) found that while vocabulary learning and the mental processes behind it have been researched extensively, the

methods currently used to teach vocabulary have not been researched to the same degree. This lack of research, knowledge about best practices, and lack of teacher training in individualized vocabulary teaching, as well as the unique needs of individual students and the individualized nature of vocabulary learning in general, means that vocabulary learning is often left to be done independently by students, whether in-class or elsewhere. This is not a complaint, and may, in fact, be a necessity. Nation (1990) argues that “the direct teaching of vocabulary is best done on an individualized basis” (p. 119). However, this individualized instruction is not always feasible in a classroom environment, and it is a certainty that students will be exposed to and acquire vocabulary outside of the classroom. Echevarría, Vogt, and Short (2017) agree, citing their Gradual Increase of Student Independence (GISI) model to illustrate that teachers should plan for independent language learning by explicitly teaching learning strategies to their students. These strategies are scaffolds whose use should be taught along with a method for determining when to use those strategies independently, since the necessity of their independent use can (out of necessity) and should (due to academic standards) be expected. Therefore, due to the individualized nature of vocabulary learning and teaching, it is necessary for language teachers to have some notion of the approaches their students use when learning new words independently.

Determining students’ assets in the language-learning process is one of the most critical components of language teaching due to the effects of prior experiences on future behaviors and attitudes (Echevarría et al., 2017). As such, in order to increase their students’ success in language learning, ESL teachers need to determine in the planning phase of lesson development 1) their students’ personal, linguistic, and language learning backgrounds, and 2) how their values, individual attributes, prior schooling, and language-learning experience all have the

potential to influence their individual approaches to independently learning vocabulary (Echevarría et al., 2017). Understanding these factors will help teachers improve the effectiveness of their students' independent vocabulary learning by identifying ineffective strategy choice and application, helping students implement more effective learning approaches, and improving implementation of presently-used approaches.

This study is, in part, a replication of two other studies: the first is a thesis project that measured students' pronunciation learning strategies and then matched that against what students wrote down on a vocabulary flashcard, in a task that is almost identical to the one presented in the current study (Brown, 2013). The second study that this one replicates is a class project that I completed. The only differences between this project and the "pilot" study are that the previous study did not include a demographic survey beyond asking students about their first language, and participants were only asked to create three word cards instead of the ten completed in this study. Additionally, the previous study placed no strict limits on students' time spent creating word cards, while this study suggested that students limit themselves to three minutes. Finally, this study differs from both of those previously mentioned in terms of the wording of the prompt used on the word cards.

## Chapter II: Review of Literature

### Vocabulary Learning

**Nation's stages of vocabulary learning.** Nation (2013) identified four stages in the process of planning vocabulary learning. It is important to understand these stages in order to understand what participants in the present study would be normally expected to be doing at this particular point in the vocabulary acquisition process.

The first stage that Nation identified consisted of choosing which words to learn. As mentioned previously, language learners do not acquire new language solely in the vacuum of a language classroom, and in fact would be hindered in the acquisition process by limiting themselves to what is explicitly taught by their language instructors (Snow & Katz, 2010). However, in order to prevent students from becoming overwhelmed by the amount of vocabulary information they could potentially be absorbing on a daily basis, it is important to teach students how to filter new vocabulary to decide what is most important to their own language-learning goals (Echevarría et al., 2017). University students, for example, would need to know general academic vocabulary, and would benefit from focusing on the words in the Academic Word List.

The second stage that Nation identified was choosing aspects of word knowledge to focus on, which refers to his classification of word knowledge into form, meaning, and use (see Table 1). Nation notes that any of those three could be given attention by a language learner, but that the specific focus should depend on the individual goals of the learner, specifically, what their purpose is for learning that vocabulary. Nation also notes that many language learners focus primarily on the meaning of a word during the process of learning it, and that explicit vocabulary instruction should and does focus on meaning and meaning-related aspects (2013).

The third stage of the vocabulary learning process, after having chosen words and the specific kind of information that should be learned about those words, is to choose a strategy for doing so. The importance of explicit instruction in vocabulary learning strategies, as well as examples of strategies that can be utilized, will be discussed in a later section.

The final stage of vocabulary learning is to plan repetition of the words so that they are not forgotten by the learner. Nation (2013) says that this is “one of the most important strategies to encourage remembering” of words that have been learned (p. 329). This stage was not examined in the present study.

**Word knowledge.** There is a discrepancy in different scholars’ interpretations of what constitutes word knowledge. Jiang (2000) summarizes three approaches to the definition of word knowledge: 1) a word is known if it can be recognized and/or recalled by the learner, 2) a word is known if the learner is aware of the word’s form, position, function and meaning, and 3) a word is known if it can be processed automatically. There is no consensus as to which of these definitions is correct or even most useful, and that lack of consensus illustrates the confusion surrounding what constitutes effective vocabulary instruction. This confusion may help explain the wide variation in student approaches to learning new vocabulary.

All of the approaches listed above are useful in different instructional contexts. The recognition/recall approach can help instructors determine which materials are accessible to their students. This allows instructors to potentially measure vocabulary knowledge and provide comprehensible input at their students’ individual levels. The third approach regarding automatic processing is useful for the same reasons. However, the major shortcoming of these approaches is that they are only useful in narrow situations. Specifically, these two approaches seem to apply only to already-learned words that are encountered or utilized in a given context. In order for that

context to be provided at a comprehensible level, instructors must themselves provide it. This is not always helpful for the independent, explicit, academic vocabulary learning that students so often engage in. While learning from context is a valuable skill, it is not always feasible for English learners (see section on language-learning strategies, below).

The second approach to defining word knowledge is from Nation (1990). A major strength of this approach is that it helps measure students' metalinguistic knowledge. This internal processing requires students to reflect on their own goals, consider the academic expectations placed on them, and contemplate pragmatically how a word is used and how knowing that word may benefit them. The ability to do this cognitive work independently is a lifelong advantage and demonstrates personal investment in language learning on the part of the student. This investment is critical to the continuation of the lifelong process of language learning long after a student ceases to be enrolled in language courses. Because of this, Nation's overall approach was a significant inspiration for the present study.

Although Jiang's analysis above has Nation dividing word knowledge into four parts, Nation has more recently divided features of vocabulary into the categories of form, meaning, and use (2013). Examples of this categorization, as well as questions learners must consider when thinking about these aspects of word knowledge, can be found in Table 2.1.

Table 2.1

*Adaptation of Nation's (2013) Categorization of Vocabulary Items*

Category	Example Items	Questions for Learners
Form	Spelling, Pronunciation	How do I say this word? How do I write it? How do I modify it for different contexts? How is it conjugated (verbs)?
Meaning	Definitions, Synonyms, Translations	What does this word mean? Do I already understand this concept? How can I say this differently?
Use	Descriptions of use, context for use	How does a native speaker say this? What is the appropriate context for this word? How does the word's meaning change in different contexts? Are connotations of this word positive or negative?

The present study did not utilize Nation's exact classifications as presented above. In this study, part of speech information was considered to be part of the form category. Nation (2013), on the other hand, would consider part of speech to be in the use category due to part of speech being relevant to sentence-level grammar. This change in categorization was made because part of speech can be relevant as well in relation to word parts. For example, a student would not be able to differentiate between the suffix *-er* in *teacher* ("one who teaches") and the suffix *-er* in *greener* ("more green") without knowing that *teach* is a verb and *green* is an adjective.

Nation (2013) would argue that in order to obtain a complete understanding of a word, students would need to consider all three of the vocabulary categories in Table 2.1. However, there is some evidence that students do not do this consistently, if at all (Brown, 2013; pilot study). The pilot study for the present research also indicated that there were demographic differences in students' focus on the different modified categories. The present study hopes to

clarify what these differences are, the extent of them, and how they relate to strategy use in independent vocabulary learning.

### **Strategies for Vocabulary and Language Learning**

**Importance of strategy instruction.** This section will discuss types and specific examples of vocabulary and general language-learning strategies used by language learners. This is important knowledge for the present study because not all language learners use the same strategies in their learning and not all learners use strategies effectively. These differences cannot be ignored by language teachers.

Not all language-learning strategies are created equal and not all strategies are useful for all aspects of language learning or for all levels of the students using them. Language-learning strategies can be broadly sorted into two categories: strategies involving explicit learning and those involving implicit learning. A strategy involving implicit learning would be reading an authentic text to organically encounter and learn new vocabulary. That strategy's explicit equivalent would be memorizing translations of first language vocabulary into the target language. Once again, these strategies are not equally useful in all situations: Naeimi and Foo (2015), for instance, found that direct or explicit learning strategies were more useful than indirect or implicit strategies when it came to vocabulary learning for pre-intermediate level students. The same is not necessarily true of higher- or lower-level students, respectively.

Consider the strategy of learning from context: this is only useful once a student has built up enough vocabulary to be able to understand enough surrounding context to learn new information from it. A student who has not even mastered the one thousand most common English words, for example, would struggle so much from contextual learning that they would benefit very little from it: Nation (2013) argues that language learners attempting to learn

vocabulary from context need to have a solid understanding of a minimum of 95-98% of the running words in a text in order to glean any new information from it. This is obviously not an attainable level of understanding for someone who has barely begun to communicate in a given target language.

Strategies should be chosen based on the individual needs of the student. Those needs can be monitored and controlled somewhat by that student's instructor (assuming the student has an instructor), but students are far more effective at learning language when they can monitor their own learning, understand their own needs, and choose their own strategies and practices (Echevarría et al., 2017; Nation, 2013; Yang & Wang, 2015). Alharbi (2015) argues that these strategies should be explicitly introduced to students in order to achieve this state of improved learning.

The examples and studies above lead to some conclusions about the relationship between learner needs and appropriate strategies. First, the learner's level of ability in the target language needs to be evaluated, along with their amount and type of prior schooling in their first language. From there, teachers can choose appropriate learning strategies to provide to their students. Second, the importance of vocabulary words to individual students must be critically analyzed (Echevarría et al., 2017). Once this analysis is complete, teachers and learners together or learners independently can decide 1) whether the word needs to be learned beyond its implications in context and 2) how thoroughly students need to study it. Third and finally, students should always be encouraged to develop their metalinguistic knowledge by evaluating their own needs and choosing the appropriate strategy for the specific language-learning situation (Echevarría et al., 2017).

## **Demographic Variables and Implications for Language Learning**

This section will detail demographic variables that have been connected in various studies to student behavior in language learning. As the present study is focused on ESL international students studying in the United States, variables discussed here will pertain mostly to that group. The personal variables include age, gender, and country of origin. Linguistic variables are first language and language-learning background. Finally, this section will discuss a language-learning background survey that was adapted for use in the present study.

**Gender.** Oxford and Nyikos (1989) conducted a study using the Strategy Inventory for Language Learning (SILL) that was correlated to a background questionnaire that asked about participants' gender, among other variables. The study found a highly significant difference between the results of male and female participants in that female participants used learning strategies more frequently than the male participants.

Mulac et al. (2001) surveyed three different studies on linguistic differences between males and females and found that in all three studies, male linguistic behaviors could be described as "direct, succinct, personal, and instrumental" while female linguistic behaviors could be described as "indirect, elaborate, and affective" (p. 121). The authors concluded that those linguistic preferences "function in ways that are consistent with stylistic preferences that distinguish national cultures" (Mulac et al., 2001, p. 147).

The Gu (2002) study involved a survey in which students were asked about their use of vocabulary-learning strategies, which was then compared to their vocabulary size and their English proficiency level. Finally, performance on the survey, overall proficiency, and the vocabulary size test were analyzed according to participants' gender. The study found that female students performed better on both the vocabulary size test and the proficiency test.

Additionally, the study found that female students had a significantly greater belief in using strategies other than memorization to learn new vocabulary (2002). Finally, the study found that female students “reported significantly more use of vocabulary learning strategies than their male counterparts” (Gu, 2002). This echoes the findings of Oxford and Nyikos (1989).

Vasu and Dhanavel (2015) conducted a study in which Indian ESL learners’ demographic variables were collected and then correlated with student attitudes and approaches to learning new vocabulary. While the study found no relationship between the importance students place on learning new vocabulary and their gender, gender was “highly significant” in relation to participants’ preferred sources for learning new words (p. 225). Additionally, the Vasu and Dhanavel study found that female students were more likely to use a wide variety of sources in order to learn new words.

Dawadi (2017) used a modified version of the SILL to survey 370 Nepali students about their language-learning strategy usage as it related to participant gender. While the results of this study indicated that females actually used strategies overall less than their male counterparts at a statistically significant level, Dawadi concluded that regardless of the specific differences found, there is likely a relationship between gender and language-learning strategy use (2017).

Aside from the specific context of language-learning strategies, research on academic achievement has consistently shown gender differences in educational attainment in the area of academic grades in K-12 classrooms. Voyer and Voyer (2014) conducted a meta-analysis of over 300 studies conducted on the topic of academic grades as they relate to gender and found that female students had consistently higher achievement in academic grades.

Although girls achieve higher academic grades in K-12 classrooms, this is true in spite of the fact that girls tend to be given less attention by their teachers. Boys are more likely to be

called on, are more likely to have disciplinary problems that draw more teacher attention toward them and are more likely to talk out of turn in class and therefore be interacted with (Woolfolk, 2010). Although the interaction in this case comes in the form of disciplinary action, it is still a form of linguistic input. It is possible that this may lead to higher productive language abilities in boys as they are likely to have had more linguistic interaction with teachers and other adults.

**Linguistic and cultural background.** When discussing acquisition of a second language, learners' first languages and other languages that they have been exposed to cannot be ignored because language learners' future learning is influenced in every conceivable way by their exposure to those other languages. This section will first detail how a learner's first language background can affect the processes by which they learn a second language and will then discuss the language-learning experience survey adapted for this study.

***First language and country of origin.*** It is common knowledge that the linguistic distance between students' first (L1) and second (L2) languages can contribute to a student's difficulty level when learning an L2. The target population in this study consisted almost entirely of L1 speakers of Chinese and Nepali who were from China and Nepal, respectively.

The Nepali language uses an alphasyllabic writing system that utilizes a script called Devanagari (Daniels & Bright, 1996), while English uses the Roman alphabet. Chinese languages use a logographic writing system composed of thousands of characters which symbolize concepts rather than sounds (Daniels & Bright, 1996; Mair, 1996). Daniels and Bright (1996) describe Chinese languages as "phonetically imprecise" and say that readers of Chinese "must guess or memorize the appropriate sound of the phonetic for each character in which it occurs" (pp. 201-202). A phonemic comparison of all three languages is presented in Table 2.2.

Table 2.2

*Comparison of Consonants in English, Nepali, and Mandarin*

	Bilabial	Labiodental	Dental	Alveolar	Palatal	Velar
Plosive	p <sup>[a]</sup> b <sup>[b]</sup>		t* d*	t <sup>[c]</sup>		k <sup>[a]</sup> g <sup>[b]</sup>
Nasal	m <sup>[a]</sup>		n*	n <sup>[c]</sup>		ŋ <sup>[a]</sup>
Fricative		f <sup>[c]</sup>		s <sup>[a]</sup>		
Glide	w <sup>[b]</sup>			r <sup>[b]</sup>	j <sup>[b]</sup>	
Liquid				l <sup>[a]</sup>		

Note: Adapted from Edward (2991) and Khatiwada (2009). Table only includes shared phonemes and is not representative of all consonants in these languages.

<sup>[a]</sup> Phoneme shared between English, Mandarin, and Nepali. <sup>[b]</sup> Phoneme shared between English and Nepali

<sup>[c]</sup> Phoneme shared between English and Mandarin. \*Phoneme exists in English and Nepali, with a different place of articulation.

Table 2.2 illustrates that English, Mandarin, and Nepali share five phonemes, English and Nepali share eight additional phonemes (three of which have a different place of articulation in Nepali than in English), while English and Mandarin share three additional phonemes beyond the five that all three languages share.

In terms of culture, studies have shown that students who demonstrate high “global competence,” or a desire to integrate with other cultures through the language learning process, are likely to be more highly motivated language learners (Semaan, 2015). This global competence is likely related to socioeconomic factors, and, as a result, the effects of global competence on individual English learners is likely to trend in the same direction across national borders. However, as all of the participants in the present study voluntarily chose to study internationally, it is difficult to know with any degree of certainty whether differing levels of global competence would be discernible between these students.

In general, young adult English learners prefer to use resources such as social media to learn new vocabulary (Vasu & Dhanavel, 2015). Sharma (2012) conducted a small-scale study which found that youth in Nepal are increasingly making use of English through social media

and, by doing so, are creating a bilingual and bicultural identity. This is likely the case in China as well. However, while nearly all Chinese students have studied English at some point, only seven percent of Chinese students use English often (Bolton & Graddol, 2012). Liu, Lin, and Wiley (2016) obtained a similar result in a survey of English learners in China: the researchers found that they were in need of more opportunities to practice their oral English skills. There has not been extensive research to compare Nepali and Chinese English learners to determine the existence or nature of differences between them as it relates to their approaches to learning English.

*Language learning experience (second languages) and English proficiency.* There is a strong correlation between use of specific language learning strategies and overall language proficiency; that is, students who are highly proficient at language learning are likely to be found to have been using specific strategies (Kamalizad & Samuel, 2015; Kiram, Sulaiman, Swanto, & Din, 2014; Ou Yang & Wu, 2014). This section will detail the relationship between strategy application experience in language learning and students' resulting skills at learning languages.

Kamalizad et al. (2015) conducted a study of English as a Second Language and English as a Foreign Language learners in which the ESL learners were found to be highly differentiated in terms of strategy use depending on their proficiency level. Among the EFL learners, the fact that there was relatively little incentive or opportunity to practice English led to a lack of engagement with the language, which may have caused students to not consider strategy implementation particularly important. ESL students, on the other hand, reported very high levels of engagement with the language depending on their proficiency level. As a result, their perceived need to practice the language whenever possible led them to use many and varied strategies to improve their abilities.

Kiram et al. (2014) conducted a study similar to that of Kamalizad et al. (2015): both studies used the same data collection instrument. The results of this study were insignificant in terms of relating specific strategy category use to language proficiency levels but did indicate that general and consistent use of strategies leads to higher language proficiency. Having used language-learning strategies while learning second languages other than English may improve a student's ability to apply those strategies in their English learning.

Wong and Nunan (2011) found that more effective language learners tended to adopt a more independent and autonomous orientation toward their learning, effectively applying strategies as needed and generally being more engaged with their learning. The same study found that less effective learners were more "authority-oriented" and spent less time outside the classroom "activating their English" (p. 152).

The importance of metalinguistic knowledge to the utilization of language-learning strategies cannot be overstated: it is precisely these metacognitive abilities that allow students to objectively analyze a language-learning task and understand its demands. Once students understand the task, they can use their metalinguistic knowledge once again to evaluate the strategies they are considering using to decide which is the most appropriate in the given situation (Echevarría et al., 2017). This metacognitive ability is useful when learning any and all languages.

Students who use specific language-learning strategies are more successful at learning than are students who take a more haphazard approach to their learning; that is, students who use strategies are more likely to be successful in language learning (Kamalizad et al., 2015; Kiram et al., 2014; Ou Yang et al., 2014). These more successful students are more likely to have metalinguistic knowledge that enables them to compare and contrast the strategies they are

considering using. This is a valuable skill since not all strategies are created equal. In addition, these students' higher levels of metalinguistic knowledge can be correlated with a potential for higher target language proficiency (Kiram et al., 2014).

Vann and Abraham (1990) posited a connection between lower performance on tests of metacognitive abilities and failure to appropriately and effectively apply language-learning strategies. This is an important part of metalinguistic knowledge: the ability to understand the task at hand and be able to apply previously known strategies to the situation. Vann et al. agree with assertions made by other researchers that training in strategy application in addition to strategy use is an effective way to develop learner independence (1990). As mentioned previously, this independence is likely to lead to higher engagement and therefore proficiency in the target language.

These studies demonstrate that as a learner's metalinguistic knowledge improves, so does their level of independence in language learning. As language learning is a lifelong process, the ability to improve skills in the target language independent of the traditional language classroom is invaluable and is applicable to learning all languages.

***English learning experience survey.*** In 2009, researchers at the University of Minnesota's Center for Advanced Research on Language Acquisition (CARLA) published a language strategy use inventory for use by language teachers. The purpose of the inventory was to help language teachers determine what language-learning strategies were employed by their students and to what degree so that teachers could modify instruction to encourage students to try new strategies and become aware of their own learning processes.

The survey contains six sections: Listening Strategy Use, Vocabulary Strategy Use, Speaking Strategy Use, Reading Strategy Use, Writing Strategy Use, and Translation Strategy

Use. The inventory asks participants to rate their use of each named strategy using four options: “I use this strategy and like it,” “I have tried this strategy and would use it again,” “I’ve never used this strategy and am interested in it,” and “This strategy doesn’t fit for me.” Table 2.3 contains examples of strategy statements found in the survey, with the exception of the vocabulary section, which will be discussed in more detail below.

Table 2.3

*CARLA Strategy Survey Examples*

<b>Listening</b>	Attend out-of-class events where the new language is spoken.
	Listen for key words that seem to carry the bulk of the meaning.
<b>Speaking</b>	Regularly seek out opportunities to talk with native speakers.
	Look for a different way to express the idea, like using a synonym.
<b>Reading</b>	Try to find things to read for pleasure in the target language.
	Make predictions as to what will happen next.
<b>Writing</b>	Practice writing the alphabet and/or new words in the target language.
	Wait to edit my writing until all my ideas are down on paper
<b>Translation</b>	Translate in my head while I am reading to help me understand the text.
	Put my own language out of mind and think only in the target language as much as possible.

Language learning does not occur in a vacuum and methods of learning new linguistic information are not exclusive to particular modes such as reading or speaking, respectively. It is therefore not surprising that although the sections above are not focused on vocabulary specifically, some of the strategies for those modes of language use require vocabulary knowledge in order to be effective. Items from the vocabulary strategy section are presented in Table 2.4.

Table 2.4

*CARLA Vocabulary-Learning Strategies*

<b>Strategies to learn new words:</b>	Pay attention to the structure of the new word.
	Break the word into parts that I can identify.
	Group words according to parts of speech (e.g., nouns, verbs).
	Associate the sound of the new word with the sound of a word that is familiar to me.
	Use rhyming to remember new words.
	Make a mental image of new words.
	List new words with other words that are related to it.
	Write out new words in meaningful sentences.
	Practice new action verbs by acting them out.
	Use flash cards in a systematic way to learn new words
<b>Strategies to review vocabulary:</b>	Go over new words often when I first learn them to help me remember them.
	Review words periodically so I don't forget them.
<b>Strategies to recall vocabulary:</b>	Look at meaningful parts of the word (e.g., the prefix or the suffix) to remind me of the meaning of the word.
	Make an effort to remember the situation where I first heard or saw the word or remember the page or sign where I saw it written.
	Visualize the spelling of new words in my mind.
<b>Strategies to make use of new vocabulary:</b>	Try using new words in a variety of ways
	Practice using familiar words in different ways.
	Make an effort to use idiomatic expressions in the new language.

This survey was originally intended to measure language learners' preferences. As a result, the survey items are a fairly comprehensive look at the types of activities language learners can engage in. As this study focuses on language learners' background experiences, the survey was modified to reflect that purpose. First, rather than rating strategies, participants were asked to simply check off whether they had been taught or told to use the given strategy. Second, because the researcher did not personally know the participants and was unsure of their exact level of English language proficiency, many items were linguistically simplified to reduce the potential for confusion.

**Research Question**

What is the relationship between students' linguistic and language learning backgrounds and their approaches to learning new vocabulary?

## Chapter III: Methodology

### Participants

Participants in the study consisted of 35 total EAP students enrolled in classes at a university in a northern U.S. city. Six participants' data were discarded, the reasons for which are described in detail below. Of the 29 remaining participants, 19 were male and 10 were female. The tables below break down the participants according to college associated with field of study, age, and first language (listed along with countries of origin associated with these participants).

**Major.** The chart above demonstrates that 9 participants came from major programs within the Business School, 12 came from major programs within the College of Science and Engineering, and the remaining eight participants came from other majors. For ease of data analysis, participants were placed into those three categories according to their major: Business, CSE (College of Science and Engineering), and "Other," which included participants with major programs in the College of Liberal Arts, the School of Health and Human Services, and the School of Public Affairs.

**Home country and first language.** Participants were also grouped according to their first language and country of origin. The two largest groups of participants came from Nepal (13 participants) and China (5 participants). One Bhutanese participant listed Nepali as a first language and was therefore grouped with the Nepali participants, while one Taiwanese participant listed Chinese as their first language and was grouped with the Chinese participants. It should be noted that the survey did not ask participants to specify their native dialect. The remaining nine participants were placed into a category simply called "Other," as some home country and first language combinations were unique and it was important to preserve participant anonymity.

Table 3.1

*Participant First Language and Country of Origin Correspondence*

Categorization	First Languages Represented	Countries of Origin Represented	N
Nepali	Nepali	Nepal; Bhutan	14
Chinese	Chinese	China; Taiwan	6
Other	Arabic, French, English, Japanese, Karen, Mongolian, Sindhi	Bahrain, Ivory Coast, Burkina Faso, Nigeria, Japan, Thailand, Germany, Pakistan	9

**Participant recruitment considerations.** Participants were recruited from various sections and levels of classes in an English for Academic Purposes (EAP) program. Participants were informed of the opportunity to take part in the study by their instructors, some of whom chose to offer their students extra credit for participation. Instructors were notified of the participation of their students by asking those students to write their names on a list corresponding to their instructor. Those lists were later shared with the corresponding instructors. No instructors were present at the data collection.

**Procedure**

The data collection instrument for this study was completed in two parts: first, participants completed a task in which they were given ten blank “word cards.” Secondly, participants took a detailed demographic survey. Both of these instruments were administered to participants in a single session for reasons of feasibility. Because of this single-session approach, participants were not pre-tested (as they were in the pilot study) to ensure that they were not familiar with the words used. Lack of familiarity with the words chosen for the study was assumed, as is explained below.

**Word cards.** The word cards that formed the first part of the data collection instrument were ten separate pieces of paper, each with a different English verb not likely to be known to

students who were just beginning to study in an English-speaking country. The verbs used were the following: compile, persist, invoke, commence, distort, erode, pose, incline, refine, and mediate. These verbs were randomly selected from the last two sublists of the Academic Word List (AWL). The verbs compile, persist, and invoke were repeated from the pilot study. Although the verbs were expected to be unknown to the participants in the study, teachers in the particular ESL program from which participants were recruited were expected to cover the AWL as part of their regular curriculum. However, since most students only stay in this ESL program for one semester and most instructors begin their AWL instruction with Sublist 1, it is highly unlikely that the final sublists of the AWL were meaningfully or even briefly covered by the time participants participated in the data collection process for this study, which occurred toward the end of the semester.

Verbs were used for this part of the instrument for reasons of consistency with the pilot study and because of the potential for students to include more use- and form-related information than they would for a noun, adjective, etc. The verbs used were assorted: there were a variety of transitive, intransitive, and ditransitive verbs. On each piece of paper that formed the individual word cards, participants were instructed verbally and in writing to use any resources available to them to create a word information card for someone who was attempting to learn that word for the first time. They were verbally instructed to include any and all information they thought another international student would need to know if they were to decide to learn that word. Participants were given a piece of paper with web addresses of two online dictionaries that they were told were simply suggested resources for them to use, rather than a requirement. As the study did not focus specifically on how or even whether students use dictionaries, the resource(s) the participants decided to use was not relevant and, as such, was not measured.

In order to correlate responses to the demographic survey to student behavior in creating the word cards, the researcher assigned each participant a random number and coded each packet of word cards given to that student accordingly.

**Demographic survey.** After completing the vocabulary task, participants took a demographic survey. The survey's questions can be categorized as follows: basic questions, such as age, gender, and home country; and linguistic background, including first language, experience learning other second languages, and number of years spent studying English.

*Design considerations.* The potential for participant fatigue was considered in the creation of the survey instrument. However, the study required that detailed information about participants' language-learning background be collected so that this information could be correlated with their approach to the vocabulary task. This detailed information could not be collected in a short survey format, so the final version of the survey included a large number of questions.

Another issue that was present in both the pilot study and the final version of the study was the necessity of maintaining opacity in the instructions for the word card task. This was done intentionally in order to elicit a relatively natural response from participants. Terms like "flashcards" and "cards" were avoided in the data collection materials in order to prevent participants from associating the task with previous expectations set by language instructors. Using those terms may have led participants to generate the traditional idea of a flashcard, which customarily consists of a word on one side of the card and a definition on the other. In order to elicit the desired kind of natural response, participants were simply asked to write down anything they thought would be important for another international student to know if they were trying to learn the word. Therefore, although the task was designed as an open-ended activity, there was a

vaguely defined outcome that the researcher had in mind, although it was important not to share that desired outcome with the participants.

29 of the 35 participants completed the data collection task in a manner consistent with what the researcher anticipated, while the remaining six seemed to misunderstand the instructions to varying degrees. One participant appeared to have thought that the task had to do with word association and on each word card wrote a protracted list of words. Another participant wrote on each word card a different reason why they believed that learning vocabulary is important. Another wrote on each word card about the general benefits of improving their overall English skills.

### **Data Analysis**

Information written on the word cards was sorted into three categories primarily based on Nation's classification of vocabulary knowledge: form, meaning, and use (with some deviation; see Table 2.1 and accompanying explanation). The form category consisted of information about pronunciation, part of speech, and conjugation. The meaning category included definitions and synonyms of the word. The use category included information about collocations and example sentences. For each word card, the number of instances of information from each category was counted. The items were counted regardless of whether or not the information about the word was correct. The number of items corresponding to each of those categories was then correlated with student responses to the demographic survey. Table 3.2 gives examples of how items were coded for the word "mediate." Items were coded in the same manner for the other word cards.

Table 3.2

*Coding Samples for the Word “Mediate”*

Code	Information from Word Card (Mediate)	Justification
Form	<p>“[hand-drawn loudspeaker icon] / mi.di.eit / “</p> <p>“<u>verb</u>”</p> <p>“<u>Other word in family</u>- mediated, mediation, mediator, mediating”</p>	<p>Refers to pronunciation of the word</p> <p>Part of speech</p> <p>Conjugations and words with the same stem fall into the form category; this was counted as four form items</p>
Meaning	<p>“Mediate means separating two groups of people involved in a disagreement to try to help them to agree”</p> <p>“Synonyms – appease, legation, middleman, etc.”</p>	<p>The word “means” is included in the response</p> <p>Synonyms refer to meaning; this group of responses counted as three meaning items</p>
Use	<p>“almost as if you are putting end to fight or trying to stop a war between two people/groups”</p> <p>“<u>for example</u>: In ancient times, kings were believed to mediate between the people and the gods.”</p>	<p>Refers to the real-world context for using this word</p> <p>Specifically denotes that it is an example</p>

Note in Table 3.2 that the examples for “Use” are relatively ambiguous. This is a major limitation of the present study: participants were not asked why they included the information that they did (see “Problems and future studies”). Therefore, it cannot be definitively known if the participants included that information as a way of providing themselves with a reference to a collocation or a context for using the word, or if they intended for these to be additional examples of meaning.

The demographic survey was used to categorize participants according to a variety of variables. Due to the small sample size, it was necessary to consolidate those categories to obtain groups that were of a meaningful size to achieve a statistically significant result in a t-test. In many cases, this meant that the categories needed to be generalized to the point of no longer being meaningful.

**Coding.** This section will detail the above-mentioned coding and categorization changes that were made to account for a small sample size and create large enough groups to lead to meaningful statistical analysis. More detailed, disaggregated information about the participants can be found in the “Participants” section.

***Home country and first language.*** The small sample size presented a large limitation in relation to the home country and first language variables. In order to obtain a potentially statistically significant result, participants were placed into categories according to the reporting of their home country as Nepal or another country (“other”). There were three reasons for this: one is that the Nepali participants were a more homogenous group than others in terms of the self-reported correlation between their home country and first language. The second is that it was thought to be more valid to maintain some resemblance to the pilot study in the face of the difficulties with the small sample size. The third is that the Nepali-speaking participants alone made up more than twice the number of participants (14) as the next-largest home country/first language group (Chinese; six participants).

***Gender.*** On this open-ended question, all participants self-reported as either male or female. Of the participants in the study whose data was used, 19 were male and 10 were female.

***Reasons for studying in the United States.*** There were six possible options for participants to choose for this question, in addition to a space for them to add another option if

they chose. Of the six options, three were chosen consistently by the participants: “My family wanted me to,” “I don’t like the university options in my home country,” and “I want to improve my English.” The “I like American culture” option was removed because it was chosen by only three participants, all of whom also chose the “I don’t like the university options in my home country” option. Therefore, the final three categories were essentially the following: “My family wanted me to” (seven responses), “I like American culture and/or American universities” (13 responses), and “I want to improve my English” (15 responses). Since the question allowed participants to choose more than one option, the number of responses was not equal to the number of participants.

Additionally, many participants responded by filling in the “Other” option with their own response. Of these participants, some also chose an additional pre-written option. In those cases, the written response was not counted as an additional response to the question because those responses never differed significantly from the pre-written option. In other cases, the participant only filled in the “Other” option and did not select a pre-written option. In those cases, an attempt was made to code the response according to one of the three main categories when possible. If it was thought that the “Other” response adequately described one of the pre-written responses, that participant was not tabulated as having added a response in addition to that. The responses added to “Other” are listed in the table below, along with additional chosen responses and the coding chosen for the “Other” response, if it was possible to code it to match one of the pre-written responses.

Table 3.3

*“Other” Responses to Question: “Why did you decide to study in the United States?”*

“Other” Response	Additional Response(s)	“Other” Code
“Enter the program between SCSU and my home university”	“I want to improve my English”	none
“Best education and higher priority of U.S. degree”	“I want to improve my English”	“I like American culture and/or the education system”
“I want to get better education and get a renowned degree”	none	“I like American culture and/or the education system”
“Friends advice”	none	none
“Exploring”	“I like American culture” and “I want to improve my English”	none
“Better education”	“I don’t like the university options in my home country”	none
“I wanted to go to Japanese college but I couldn’t pass the exams”	“I want to improve my English”	none
“I wanted to”	none	none
“Be more outgoing and learn widely knowledge”	“I like American culture” and “I want to improve my English”	none
“Family moved to the United States”	“I don’t like the university options in my home country”	none

**Major.** The question related to participants’ major was another area where the small sample size had a negative effect on the data analysis process. However, it was possible to analyze three groups of majors: participants whose major fell within the Business School (N=9),

participants whose major was in the College of Science and Engineering (N=12), and all other majors (N=8).

## Chapter IV: Results

### Demographic Variables and Word Card Data

First, the binary-coded (in the case of age) and binary-reported (in the case of gender) demographic variables were compared in an independent samples t-test to the number of times items related to form, meaning, and use, respectively, appeared on the word cards of the participants. The second independent samples t-test compared responses on the non-binary demographic variables portion of the survey to the number of times items related to form, meaning, and use appeared on the word cards of the participants.

**Gender.** Table 4.1 summarizes results comparing the number of form, meaning, and use-related items to participants' self-reported genders.

Table 4.1

#### *Form, Meaning, and Use-Related Items as a Function of Participant Gender*

Variable		Gender				Significance (2-tailed)		
		Female n=10	Male n=19	t-value	df			
Form	M	7.20	9.11	.395	27	.696		
	SD	9.75	13.44					
Meaning	M	21.00	16.11	-1.182		27	.248	
	SD	13.12	9.09					
Use	M	3.30	7.89	2.074			27	.048*
	SD	5.12	5.92					

$p < 0.05^*$

There was not a significant difference in the number of form or meaning-related items with regard to participant gender. However, there was a significant difference in the number of use-related items for male ( $M=7.89$ ,  $SD=5.92$ ) and female ( $M=3.30$ ,  $SD=5.12$ ) groups;  $t(27)=2.074$ ,  $p=0.047742$ .

**Major.** There were no statistically significant differences found in the number of form, meaning, or use-related items by participant major.

Table 4.2

*Form, Meaning, and Use-Related Items as a Function of Participant Major*

Variable		CSE (n=12)	Business (n=9)	Other (n=7)	F	df	Significance	
Form	M	6.6667	11.8889	8.1429	.552	20	.585	
	SD	9.01850	17.98224	8.62996				
Meaning	M	15.4167	19.8889	19.5714	.095			.910
	SD	7.42794	9.49269	16.96916				
Use	M	7.7500	2.8889	8.5714	1.251			
	SD	5.20708	3.05959	8.77225				

$p < 0.05^*$

**Home country/first language.** This demographic variable was combined in multiple ways. See “Methodology.” A series of one-way ANOVAs were performed to compare the differences between the Nepali, Chinese, and All Other groups regarding the number of form, meaning, and use-related items they included on their word cards. The results are combined in Table 4.3.

Table 4.3

*Form, Meaning, and Use-Related Items as a Function of Participant Linguistic Background (Nepali vs. Chinese vs. All Others)*

		Sum of Squares	df	Mean Square	F	Sig.
Form	Between Groups	1130.903	2	565.451	4.903	.016*
	Within Groups	2998.270	26	115.318		
	Total	4129.172	28			
Meaning	Between Groups	353.155	2	176.578	1.617	.218
	Within Groups	2839.603	26	109.216		
	Total	3192.759	28			
Use	Between Groups	202.516	2	101.258	3.276	.054
	Within Groups	803.690	26	30.911		
	Total	1006.207	28			

$p < 0.05^*$

Table 4.3 shows that there was a statistically significant difference between the groups on the form category [ $F(2, 26) = 565.45, p = 0.016$ ]. Differences in performance in the categories of meaning and use were not statistically significant.

**Reasons for studying in the U.S.** Participants' responses to the question of why they chose to study in the United States were not statistically analyzed due to the open-endedness of the question. Participant responses are presented in Table 4.4, as coded according to Table 3.2.

Table 4.4

*Participants' Reasons for Studying in the United States*

Response	N
"I want to improve my English"	15
"I like American culture and/or American universities)	13
Other (see Table 3.2)	8
"My family wanted me to"	7

**Demographic Variables and Strategy Survey Data**

This section will present the statistical analysis of variables from the demographic survey in relation to participant responses on the language-learning strategy survey.

**Gender.** There was no statistically significant difference in participant responses to the strategy survey according to their gender.

Table 4.5

*Strategy Survey Responses per Category per Participant as a Function of Participant Gender*

Variable		Male (n=19)	Female (n=10)	t-value	df	Significance (2-tailed)
Listening & Speaking	M	48.2456	48.3333	-.009	27	.351
	SD	22.49467	28.27336			
Vocabulary & Translation	M	40.6015	55.0000	-1.631		.214
	SD	19.05545	28.38231			
Reading & Writing	M	58.5526	57.5000	.128	.288	
	SD	19.11798	24.43813			

$p < 0.05^*$

**Major.** There was no statistically significant difference in participant responses to the strategy survey according to their major. This is described in Table 4.6.

Table 4.6

*Strategy Survey Responses per Category per Participant as a Function of Participant Major*

Variable		CSE (n=12)	Business (n=9)	Other (n=7)	F	df	Significance
Listening & Speaking	M	46.5278	56.4815	45.2381	.575	25	.570
	SD	21.74761	26.60728	24.93377			
Vocabulary & Translation	M	44.0476	53.1746	39.7959	.682		.515
	SD	22.55345	27.91914	20.14283			
Reading & Writing	M	58.3333	66.6667	51.7857	1.127	.340	
	SD	20.87118	18.75000	19.66989			

$p < 0.05^*$

**Home country/first language.** There was no statistically significant difference in participant responses to the strategy survey according to their home country or first language. This was true when comparing Chinese participants to all others, as well as comparing Nepali participants to all others.

Table 4.7

*Strategy Survey Responses per Category per Participant as a Function of Participant Linguistic Background (Chinese vs. all others)*

Variable		Chinese (n=6)	Others (n=23)	t-value	df	Significance (2-tailed)
Listening & Speaking	M	44.4444	49.2754	-.430	27	.670
	SD	29.18650	23.28906			
Vocabulary & Translation	M	50.0000	44.4099	.517		.609
	SD	25.15260	23.19120			
Reading & Writing	M	50.0000	60.3261	-1.094	.284	
	SD	15.81139	21.53623			

$p < 0.05^*$

Table 4.8

*Strategy Survey Responses per Category per Participant as a Function of Participant Linguistic Background (Nepali vs. all others)*

Variable		Nepali (n=14)	Others (n=15)	t-value	df	Significance (2-tailed)
Listening & Speaking	M	6.21	5.40	.751	27	.459
	SD	2.966	2.874			
Vocabulary & Translation	M	6.64	15	.415		27
	SD	3.342	6.13			
Reading & Writing	M	4.79	4.53	.405	27	
	SD	2.082	1.187			

$p < 0.05^*$

## Chapter V: Discussion

This study sought to answer the question of how demographic variables and previous language learning training relate to vocabulary-learning behaviors. Differences were found in the areas of gender and linguistic background.

### **Reasons for Studying in the United States, Sources of Funding, and Future Plans**

While the responses to these questions were interesting and may contribute to understanding of overall international student background, the open-endedness of the questions and responses and the small sample size made these questions unfeasible to analyze statistically with regard to performance on the vocabulary task or the language-learning survey. See “Problems and future studies” for more suggestions about how to improve responses to these questions.

### **Results: Word Cards and Demographic Variables**

**Age.** Difficulty on the age question came from some apparent misunderstanding by the participants of what the question was asking. Many failed to note how long they had been studying English, which made it impossible to analyze the data according to whether participants had begun to study English during the critical period. Future studies should reformulate this question in order to accurately determine participants’ age of first exposure to English. Additionally, the widest age range of the participants was only ten years.

**Gender.** Female students in this study included far less use-related items on their word cards than the male students. This was a statistically significant difference, and there are many ways that this discrepancy can be viewed. The first critically important factor to consider is the ambiguity of this category as it was interpreted in the present study (see Table 3.2). Due to the nature of the task (see “Problems and future studies”), it is impossible to know participants’

purposes in including example sentences. If, however, they were intended as interpreted here (examples of context and collocations), this discrepancy between male and female students could indicate that male students struggle with understanding how academic words are used in context. This would mean that they included more use-related items in order to clarify. It could also indicate that female students struggle, but that they respond by becoming frustrated and therefore including less information. On the other hand, the results could indicate that male students feel very comfortable with use-related items or may believe they are likely to have to use those items. Of course, this is all educated speculation, as the present study did not ask participants to reflect on their responses. Additionally, the quality of the items included on the word cards was not evaluated. It is possible that although female participants included less use-related information, the quality of those participants' examples may have led them to feel as though they had a satisfactory understanding of the use of the word. Again, unless participants in future studies are asked why they chose the information they did, it is impossible to know with any degree of certainty. However, the results of this study support the conclusions of other studies related to consistent, statistically significant differences in language-learning behaviors as they relate to gender (Gu, 2002; Mulac et al., 2001; Oxford & Nyikos, 1989; Vasu & Dhanavel, 2015; etc.).

**Major.** There was no statistically significant difference in word card information between students in different major programs. Other studies (Gu, 2002; Zhou & Interprasert, 2015) have found statistically significant differences between students of different major programs and both language proficiency and language-learning strategy choice. It should be noted that students in this particular English program are usually freshmen in their first or second semester in the United States, and that there was no question on the study that asked students to specify whether they had actually been admitted to their chosen major or taken any classes

pertaining to it. In a longitudinal study, there could be a comparison between how these students approach the word card task when they first arrive in the United States and how they do so as juniors or seniors who have nearly completed a program of study in their chosen field. The lack of specialized experiences of this study's participants could help explain the lack of differences between the approaches of the students in the present study.

**Home country and first language.** In the analysis of the difference between Nepali students and all other students, there was no statistically significant difference found. While not statistically significant, Chinese and "Other" students in this analysis included nearly three times the amount of form-related information (see Table 2.1) on their word cards as the Nepali students did. This difference is similar to what was found in the pilot study and may prove to be statistically significant with a larger sample size.

In the second analysis, which compared Chinese-speaking student performance on the word card task to that of all other students, the difference in the amount of form-related information was highly statistically significant, with Chinese-speaking participants including nearly four times the amount of form-related information as all other students. For all ten words in the word card task, Chinese-speaking participants included an average of nearly two form-related items per word, while all other students averaged one form-related piece of information per two words. This difference is similar to the differences found in the pilot study. This dramatic difference in approaches may be due to a lack of familiarity with the Roman alphabet on behalf of the Chinese students. As noted in the review of the literature, "Chinese" is not a single language, but rather a single, common written language that when spoken orally manifests as a group of mutually unintelligible languages. Chinese students come from a background that requires them to pay attention to the specifics of their written language in order to ensure

intelligibility with others in their country, and they likely place more importance on form-related items as a result (Daniels & Bright, 1996).

### **Problems and Future Studies**

The most obvious issue with this research data was the fact that the sample size was small. Future studies should seek to recruit more participants because much of the statistical analysis of the data was insignificant due to the small sample size. It would also be beneficial to include participants from more than one university in order to account for differences in programs. In addition, future studies should broaden their scope in order to find participants who are a wider range of ages. These changes would serve the additional purpose of expanding the range of linguistic and cultural backgrounds of the participants.

A major limitation of the study is that participants were not asked why they included the information that they did. This led to some ambiguity in classifying items (see Table 3.2). For example, it could not be known if participants intended for example sentences on their word cards to serve as additional examples of meaning or of collocations and contexts. As it relates to the major change to Nation's (2013) form category in terms of parts of speech (see Table 2.1 and accompanying explanation), asking participants why they included part of speech information could further clarify whether in the future it should be categorized as form ("I wrote it so I could understand the parts of the word") or use ("I wrote it because I wanted to know how to use it in a sentence") information. The latter would adhere to Nation's categories and may provide more consistency with other studies (2013).

Another problem came from the instructions used in the word card instrument: many participants misunderstood the intent of the task. However, this is not an easy problem to address, as evidenced by the widely varying approaches the participants who misunderstood took

while completing the task. It may help to make it clear to participants that they are to create an informational page about the word listed and to imagine that they will be giving that page to another international student who will be tested on or must learn the word. It may even help to randomly assign participants to two groups: A and B. Participants in the A group would receive a packet with half of the words while participants in B group would receive the other half. A participants would be told that B participants will be tested on the A words and will have only the packets that the A participants made as a resource. The test given would not need to be measured as part of the study but may increase participants' motivation to fully complete the task and may be a good way to measure what students do under pressure, as they are when studying for an actual test. Regardless of changes in the data collection instrument, I believe that it is important to maintain the element (real or imagined) of helping other international students in future studies as most of the international students at this university come from cultures that value collaboration.

Many of the participants failed to complete parts of the questions. If the study were repeated, it may be useful to eliminate the time limit on completing the data collection instrument so that researchers could verify that participants had completed all of the questions before submitting the instrument. In order to maintain a reasonable length of time to conduct the study, extra words could be added that would not be counted, or words could be analyzed only up to the minimum number of words that all participants completed.

Since the students who expected to receive extra credit were guaranteed it simply by signing in during data collection, they had no intrinsic motivation to fully complete the tasks to the best of their ability. This was not an issue in the pilot study, as the participants in that study were supervised in the completion of the data collection instrument by their regular English

instructor. Future studies should consider the possibility of administering the data collection instrument in a manner similar to the pilot study. While this may create the potential for the Hawthorne effect to be an issue, the study could potentially be modified to have more value as an instructional tool in order to assist teachers in differentiating for their students.

With regard to the demographic survey, there are many changes that I would recommend for future studies. Questions 1-4 worked well as independent, open-ended questions. However, other parts could be added to the questions to further narrow interpretation of students' linguistic backgrounds. For example, Question 5 could ask participants to specify their native dialect and even the writing system they are most familiar with. Many of the other questions on the first page would have been clearer had they been asked during an informal interview with the researcher. This would have allowed the researcher to elicit elaborated responses. Questions 6, 7, and 10 were particularly problematic in terms of clarity of responses. This lack of clarity could be alleviated by either re-formatting the questions to split them into multiple parts or having them added to an oral interview. For questions 8 and 9, I would not follow a checkbox format for future studies. I would still request that participants choose options that applied to them for those questions, but rather than checking those boxes, I would have participants rank the options that apply to them. To simplify this process and ensure that each question is responded to, it may be easier to administer the survey in a computer-based format rather than as a hard copy. This will enable future researchers to determine whether or not a relationship exists between the variables analyzed in those questions and how participants complete the task.

On the language-learning survey, I would recommend more consistency in choosing items from CARLA's survey if that is used as a source for language-learning strategies. Specifically, I would only focus on productive strategies rather than receptive strategies because

receptive strategies are inherently not measurable using the data collection instrument in this study. In addition, since there have now been two studies measuring what participants put on word cards such as these (the present study and Brown, 2013), it may not be necessary to use CARLA's survey as a source of language-learning strategies. Future studies could simply create a checklist of items that have appeared on the word cards in the aforementioned studies. This would simplify data analysis and allow for comparison between studies. Another option would be to use the SILL instrument rather than the CARLA survey, as other studies have done (Dawadi, 2017; Oxford & Nyikos, 1989).

Although the scale of this study is relatively small, the results presented here may indicate the emergence of a pattern of vocabulary learning behaviors in students of certain cultural, linguistic, personal, and academic backgrounds. Future studies could indicate whether such patterns are consistent and therefore usable by language teachers in the curriculum planning phase of their instruction. Discovery of a pattern could help teachers personalize their instruction and increase the success of language learners in their classrooms.

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## Appendix A: Word Card Task

Word: **Invoke**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Compile**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Persist**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Commence**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Distort**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Erode**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Pose**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Incline**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Refine**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

Word: **Mediate**

Instructions: On this piece of paper, include any information that you think would be useful for someone to know if they wanted to learn the word above. Use any resources that you would like. You will have three minutes to complete this word.

## Appendix B: Demographic Survey

### Demographic Survey

Researcher Use Only
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# _____
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1. How old are you? \_\_\_\_\_
2. What is your gender? \_\_\_\_\_
3. What is your major or field of study? \_\_\_\_\_
4. What country do you consider to be your home country? \_\_\_\_\_
5. What language(s) did your parents or guardians speak to you when you were a child?  
\_\_\_\_\_
6. What other languages do you speak? List them below along with your age when you started learning each of them (example: Spanish, 5 years old). **Include English.**  
\_\_\_\_\_  
\_\_\_\_\_
7. List any countries you have spent a large amount of time in/lived in along with the total amount of time you were in each country (example: France, 3 months). **Include the United States and your “home country” from Question 4.**  
\_\_\_\_\_  
\_\_\_\_\_
8. Why did you decide to study in the United States? *Choose any and all options that apply.*
  - My family wanted me to
  - My government wanted me to
  - I don't like the university options in my home country
  - There are no university options in my home country
  - I want to improve my English
  - I like American culture
  - Other (please explain): \_\_\_\_\_
9. How are you paying to study here? *Choose any and all options that apply.*
  - I am paying with money I earned personally
  - My family is paying
  - My home university is paying
  - My government is paying
  - Other (please explain): \_\_\_\_\_
10. Do you plan to use English after you finish your studies at St. Cloud State? If so, describe how you plan to use it. (For example, “I plan to look for a sales job in the United States” or “I plan to apply for an English-language graduate program in health care management” etc.) *Please be specific.*  
\_\_\_\_\_

## Appendix C: Strategy Survey

### Language-Learning Background Survey

Below is a list of language-learning strategies. If you have ever had a teacher who taught you or told you to use a particular strategy, *put a mark in the box next to it*. If you have not had a teacher who taught you or told you to use a particular strategy, leave the box next to it blank. *Do not mark boxes for strategies you have not been taught or told to use.*

A teacher has taught me or told me to:

- Practice sounds in English that are very different from sounds in my own language to become comfortable with them.
- Look for relationships between the sound of a word or phrase in English with the sound of a familiar word.
- Pay special attention to specific parts of the language; for example, the way the speaker pronounces certain sounds.
- Listen for word and sentence stress to see what native speakers stress when they speak.
- Try to understand what I hear without translating every word.
- Focus on the context of what people are saying.
- Ask for speakers to use different words if I don't understand it the first time around.
  
- Pay attention to the structure of new words.
- Break the word into parts I can identify.
- Group words according to parts of speech (nouns, verbs, etc.).
- Relate the sounds of new words to the sounds of new words that are familiar to me.
- Make a mental image of new words.
- List new words with other words that are related to it.
- Write out new words in meaningful sentences.
- Practice new action verbs by acting them out.
- Use flash cards to learn new words.
- Visualize the spelling of new words in my mind.
- Try using new words in different ways.
  
- Think about how a native speaker of English might say something and practice saying it that way.
- Ask others to tell me when I say something wrong.
- Find a different way to say the same thing, like using a synonym.
- Make up new words or guess if I don't know the right ones to use.
- Use my own language for a moment if I know the person I'm talking to can understand what I say.
  
- Read as much as possible in English.
- Guess the meaning of the reading by using clues from the reading material.

- Use a bilingual dictionary to get an idea of what the same word in my native language would be.
- Use an English dictionary to see what words mean.
  
- Try writing different kinds of texts in English (personal notes, messages, letters, course papers, etc.)
- Find a different way to say something when I don't know the correct expression (use a synonym, describe the idea, etc.)
- Use reference materials such as a glossary, dictionary, or thesaurus to help find or make sure of the meaning of words in English.
- Try to get feedback from others, especially native speakers of English.
  
- Plan what to write or say in my own language and then translate it into English.
- Try not to think about my own language and think only in English as much as possible.
- Be careful when transferring words and ideas from my own language into English.

## Appendix D: Informed Consent

### Second Language Vocabulary Learning Informed Consent

You are invited to participate in a research study of second-language vocabulary learning. You were selected as a possible participant because you speak English in addition to your first language(s) and are a student at [University].

This research project is being done by Samantha Carley as part of the requirements for the Master of Arts in Teaching English as a Second Language program at St. Cloud State University.

**Background Information and Purpose:** The purpose of this study is to learn more about how students learn new vocabulary.

**Procedures:** If you decide to participate you will complete a background survey and a 30-minute written and computer-based activity that measures how you learn new words. The length of time of your participation is the length of time of those activities.

**Risks:** There is no risk associated with participation in this study, other than the normal level of stress you may feel while completing a language task.

**Benefits:** Your participation in the task may improve your understanding of how you learn new words and make you think critically about your learning.

**Confidentiality:** Information gathered for this study is confidential and will be reported as aggregated (group) results. No one will be able to identify you personally.

**Research Results:** The results of this study will be included in a thesis project that will be available after it is completed, likely in May 2017.

**Contact Information:** If you have questions right now, please ask. If you have more questions later, you may contact me at [casa1005@stcloudstate.edu](mailto:casa1005@stcloudstate.edu) or my supervisor, Dr. Choonkyong Kim, at [ckim@stcloudstate.edu](mailto:ckim@stcloudstate.edu). You will be given a copy of this form for your records.

**Compensation:** By agreeing to participate you are entering yourself in a drawing to randomly win one of three (3) five-dollar (\$5) Caribou Coffee gift cards.

**Voluntary Participation/Withdrawal:** Participation is voluntary. Your decision whether or not to participate will not affect your current or future relations with St. Cloud State University, the researcher, or anyone in any academic program. If you decide to participate, you are free to withdraw at any time without penalty.

**Acceptance to Participate:** Your signature indicates that you are at least 18 years of age, you have read the information above, and you have consented to participate. You may withdraw from the study at any time without penalty after signing this form.

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Signature

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Date