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Size Matters: Measuring the Receptive Vocabulary size of First Semester and Last Semester Students in the English Major at Higher Education Institutions in El Salvador

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Size Matters: Measuring the Receptive Vocabulary size of First Semester and Last

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by

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Abstract

Vocabulary size has been one of the most frequently researched aspects of vocabulary acquisition and has been found to be a determinant factor in the achievement of English language proficiency. Notwithstanding, the profile of Salvadoran English majors does not include this aspect, nor is there any account of previous studies being conducted to either introduce this notion and its importance or to make an estimate of the English majors' vocabulary size. This study sought to fill the gap in the Salvadoran L2 literature by providing rough estimates of learners' vocabulary sizes through a sample of 312 English majors from three different regions of El Salvador. Participants were divided into two groups: first semester (FS) and last semester (LS). Vocabulary size measures were made by utilizing the well-established Yes/No tests (Meara, 1992) through a battery of 12 tests that were adapted in Excel to measure vocabulary knowledge of the first-five 1,000 high frequency words and academic vocabulary. Results show that whereas FS learners are true beginners, LS learners' receptive vocabulary size falls short of the expected range to be considered proficient users of the language and may be inadequate to comply with certain expectations of their graduation profile. These findings encourage further research about L2 vocabulary development in El Salvador, so that informed curriculum decisions are made and achievable vocabulary learning goals are set to optimize English learning in El Salvador. Pedagogical implications are also provided.

Keywords: L2, vocabulary size, high frequency words, AWL, EFL

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Chapter I: Introduction

Rationale

The English language is no longer attached to a specific group of people or to a particular region or country. English is a global language, and people speak and study English everywhere, even in small developing countries like El Salvador. It is important to note that speaking English and being a proficient user of this language are not interchangeable terms. English First (EF) annually publishes a global ranking of English proficiency (EF EPI) based on scores from its standard English test (EF SET), which assess reading and listening skills. Drawing from data from 1.3 million non-native English speakers in 88 countries and regions, the EF EPI (2018) highlighted that the Latin American region has not experienced progress in average adult English skills since 2017. Moreover, El Salvador is among countries with very low English proficiency and ranks as number 70 with an average score of 47.42, which is equivalent to a B1 intermediate level in the Common European Framework of Reference for Languages (CEFR) and to a score between 57 and 86 in the TOEFL IBT. While there are several contributing factors that could account for such low proficiency, it cannot be denied that vocabulary size is a determinant one and therefore of great importance to be considered and measured.

Research suggests that vocabulary size is the number one predictor of reading comprehension (Hu & Nation 2000; Nation 2006) as well as of students' language performance. Masrai & Milton (2017) point out that correlations of vocabulary size and performance in the four language skills (reading, writing, listening, speaking) measured by standardized tests range from 0.6 to 0.8, hence, "explaining over 50% of variance in scores in foreign language performance" (p. 129). Leaving the academic factor aside and rather focusing on competencies, the exit profile

of Salvadoran English majors proposes that after graduation they can teach the language, work as interpreters or translators, and or work for the call center industry, but perhaps there are some loose ends in this assumption. Each of these jobs may require different vocabulary sizes intertwined with other skills, of course, and possibilities are that English majors are achieving the vocabulary size that suffices the expectations that have been set for them after graduation, but what if they are not? Empirical evidence demonstrates that even after about five years studying English, learners' vocabulary sizes do not measure up for the level needed to be proficient users of the language (Webb & Chang 2012; Milton, 2012).

Addressing vocabulary size is fundamental to improve learners' English proficiency, so knowing learners' vocabulary size is the first step to be taken. Currently, vocabulary size is not considered in the exit profile of English majors in El Salvador. Thus, the significance of measuring vocabulary size is stressed considering that not only will it provide a diagnosis of learners' vocabulary sizes but also will shed light on what needs to be done and/or changed in order to improve English teaching and learning in this Central American country. In addition, the vocabulary size measure is intended to inform curriculum decisions and to encourage the establishment of vocabulary learning goals in the English major to optimize learning in Salvadoran higher education institutions. This study seeks to answer the following questions:

Research Questions

1. What is the vocabulary size of Salvadoran first semester students in the English major at higher education institutions?

2. What is the vocabulary size of Salvadoran last semester students in the English major at higher education institutions?

3. What is the difference between vocabulary size of Salvadoran first and last semester students in the English major?

Chapter II: Literature Review

Meara (1980) drew attention to both the bulk of the work on vocabulary acquisition being conducted through research and its contribution to the field of foreign and second language vocabulary (L2). His assertion posited research in vocabulary acquisition, back then, as inadequate lacking theory and not being carried out in a systematic fashion. This call to the urgency for developing a more consistent research strategy on vocabulary acquisition marked the beginning of a new research era for the L2 field, in which the study on vocabulary acquisition took a stand that had been long overdue.

Since then, research on vocabulary acquisition has been continuously conducted. Not only does the number of studies on vocabulary vary but also does the number of topics related to it. Researchers have focused on different aspects of vocabulary, vocabulary size being one of the most frequently researched aspects. Hence, it is worth pondering why attention has been paid to vocabulary size and what influence it has had in the L2 field. It is essential to note that vocabulary size refers to the number of words that a person knows. However, this definition becomes problematic if we question what knowing a word means or what elements are involved so that knowledge of a given word can be claimed.

Knowing a Word

When it comes to examining vocabulary knowledge there is a distinction made between receptive (passive) and productive (active) word knowledge. Encompassed as receptive, or passive, vocabulary knowledge is a learner's ability to comprehend words through listening and or reading. Productive, or active, vocabulary knowledge, on the other hand, relates to a learner's ability to convey meaning through verbal or written language. Knowledge of vocabulary

comprises several aspects of a word, and the scope of the distinction between receptive and productive knowledge extends along each of these features. Nation (2001/2013) presents the most thorough description of what knowing a word means. He states that "At the most general level, knowing a word involves form, meaning and use" (p. 48). Table 1 presents the components and type of knowledge included under each of these three aspects of word knowledge. Not only does he acknowledge the components needed to know a word but also asserts that knowing a word involves different degrees. Thus, each of these elements could also be viewed as contained into more general constructs — dimensions.

Table 1

What Is Involved in Knowing a Word

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 this 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?
	constraints 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 (Nation, 2001, p. 49)

Accurately defining what it means to know a word is not an easy task considering the nuances and subtle differences that words may convey in different contexts. Nevertheless, to achieve such purpose, vocabulary researchers in the L2 field have offered a variety of frameworks (Richards 1976; Henriksen 1999; Qian's 2002). Although each framework has different constituents, Shen (2008) notes that besides being complementing, these frameworks distinctly demonstrate that there is general agreement that vocabulary knowledge has two

dimensions: breadth and depth. Vocabulary breadth, hereafter addressed as vocabulary size, is made up of the receptive vocabulary that a learner possesses, and it "refers to the number of words the meaning of which a learner has at least some superficial knowledge" (Shen, 2008, p.136), whereas vocabulary depth refers to the quality of such knowledge. In other words, depth refers to how well a learner knows different aspects of a word. These notions are fundamental to understand vocabulary knowledge as a construct.

Since languages are dynamic, vocabulary knowledge is constructed as a continuum that involves layers of knowledge occurring as the learners unfolds knowledge of the systematic patterns that lie behind a given word. Vocabulary size is the first element along this continuum as it may be used to indicate a learner's ability to differentiate real word forms from pseudoword forms in the target language (Milton, 2013). In addition, just as the elements involved in vocabulary knowledge are multi-faceted so are the benefits of vocabulary size and thus its role worth of consideration.

The Role of Vocabulary Size in Relation to Language Proficiency

As noted above, vocabulary size refers to the number of words of which an L2 learner has some basic knowledge. Its importance is demonstrated in light of the crucial role that vocabulary plays in communication, whether if this is written or verbal. Failing to understand the vocabulary that is being used while one is having an interaction to exchange information compromises understanding and results in breakdowns in communication. Therefore, the vocabulary size of an English learner is crucial in determining the learner's comprehension of the target language, and it directly affects his or her language proficiency across the four language skills (reading, listening, writing and speaking). Even though, little research has been conducted to individually

assess vocabulary size and its relation to each language skill, current studies provide empirical

evidence of the positive correlation that exists between receptive vocabulary size and the four

language skills.

Vocabulary size and the four language skills. According to Masrai and Milton (2018), "the

possession of a lexicon of the right size and quality is essential for good language performance,

and good language performance is essential for academic achievement" (p. 46). In view of this

statement, it is clear that vocabulary size occupies a place along a continuum of proficiency; at

one end of the continuum, vocabulary size precedes language performance, and language

performance bridges to academic achievement, which is at the other end. Academic literature

further reinforces this claim by suggesting that vocabulary size is the number one predictor of

students' language performance.

Vocabulary size and the receptive skills. Several studies have been conducted to analyze the

relationship between vocabulary size measures and the reading skill. These studies confirm that

reading comprehension is associated with vocabulary size and shed light on the fundamental role

that vocabulary size plays in predicting adequate reading comprehension (i.e., Laufer,1992; Hu

& Nation 2000; Nation 2006; Laufer & Ravenhorst-Kalovski, 2010). According to Stæhr (2008),

the tradition of research to examine this predictiveness has commonly been carried out with

measures of vocabulary size in relation to the reading skill. Nonetheless, some recent studies

have followed an approach that allows, to some extent, the examination of the relation between

lexical knowledge and language skills other than reading.

Shifting the traditional scope, Stæhr (2008) investigated the relationship between vocabulary

size and the reading, writing and listening skills by assessing EFL learners from a secondary

school in Denmark. Besides confirming the correlation between vocabulary size and reading comprehension, his findings also shed light on its relationship with the other two language skills. The results pointed out that vocabulary size could account for up to 52% of the variances in learners' competence to achieve an average or above-average score in writing. In terms for listening, he suggests that vocabulary size also justifies 39% of variance in the ability to get a score above the mean. He also emphasizes that knowledge of the most frequent 2,000 word families in English is fundamental. Although, Stæhr concluded that vocabulary size is a strong determiner in the performance of the three skills that were tested, his findings show stronger correlations between reading and writing (0.83 and 0.73, respectively) compared to that of the listening ability (0.69).

In a later study, Stæhr (2009) analyzed the impact that vocabulary size and depth had on the listening comprehension ability. This time he evaluated advanced Danish English foreign language (EFL) learners. According to his findings, both dimensions, size and depth, could explain half of the variances in the listening scores that the participants obtained in a standardized listening test from the Cambridge Certificate of Proficiency in English. The results indicated that vocabulary size and depth significantly correlated listening comprehension (0.70 and 0.65). Hence, providing further evidence of the positive correlation between receptive vocabulary size and the listening skill, which, as it was mentioned previously, was not very strong compared to that of reading and writing in his 2008 study.

Providing further support for Stæhr's (2009) findings, Van Zeeland and Schmitt (2013) concluded that to obtain adequate listening comprehension, a language user would need to know between 2,000 and 3,000 word families. Their study followed Hu and Nation's (2000)

methodology, inserting non-words into the passages that the participants listened to. By doing so, they had 36 native speakers and 40 non-native speakers of English listening to four stories made up of 100, 98, 95 and 90 percentage of known words. Their results demonstrated that the more known words participants encountered in the passages the better their listening comprehension in test scores. Although, Van Zeeland and Schmitt recognize that playing each story twice is a shortcoming of their study, their findings confirm the link between vocabulary size and listening comprehension.

Vocabulary size and the productive skills. Regarding the relationship between receptive vocabulary size and the speaking skill, Adolphs and Schmitt (2003) sought to replicate the Schonell et. al. (1956) word count study of Australian oral English. Through means of corpus linguistics, the authors analyzed two large spoken corpora, the Cambridge and Nottingham Corpus of Discourse in English (CANCODE) and the spoken component of the British National Corpus (BNC). Their analysis indicates that a vocabulary size of 5000 word families, a larger vocabulary size than that proposed in the original study, equips a learner with enough lexical resources to engage in everyday spoken discourse. Thus, the authors concluded that to minimize lexical gaps in everyday communication and to better develop oral skills better attention should be paid to vocabulary development.

Further evidence about vocabulary size and oral skills was found by Oya et al., (2009), who examined how the speaking performance of Japanese students studying English in New Zealand was impacted by language contact and vocabulary knowledge. To measure the participants' oral performance, the authors utilized a story-retelling task, and a questionnaire was used to collect information about English exposure. The participants' receptive vocabulary size was assessed by

using Nation's Vocabulary Levels Test (VLT). Their results show significant correlations between test scores obtained in the VLT and oral fluency, accuracy, complexity, and global impression features such as intelligibility and confidence of speaking performance. The authors assert that these findings "suggest that knowing more words enables the construction of more complex sentences and phrases when speaking" (p. 19). If this is possible for oral discourse, then one can speculate that such complexity in sentence structure could also be achieved in written discourse.

Besides being one of the subskills that compose English language proficiency, the writing ability is also closely related to academic success since there is no doubt that writing is one of the various forms in which language learning is assessed in academic settings. According to Brynildssen (2000), "The breadth and depth of a student's vocabulary will have a direct influence upon the descriptiveness, accuracy, and quality of his or her writing." (p.2). Overall writing quality heavily depends on the lexical knowledge that learners possess in order to articulate and convey messages about specific topics. With this I do not intend to claim that the writing skill is completely defined by vocabulary size; we cannot ignore other factors that play role when elaborating ideas through writing, yet as it was mentioned earlier, empirical evidence supports the fact that vocabulary is fundamental in explaining variances whether these are for reading, listening, speaking or writing scores. To illustrate, Astika's (1993) assessment of 210 foreign students' writing samples confirmed that out of different features of writing quality such as content, organization, vocabulary, language use, and mechanics; the single feature of vocabulary accounted for up to 83.75% of the total score variances.

Lastly, Milton et al., (2010) further confirm the overall impact that receptive vocabulary size has on the four language skills and its significance for language performance. In their study they utilized two different formats, written and aural, to obtain vocabulary size measures. Their analysis showed that vocabulary size consistently explains roughly 50% of scores variance in the language sub-skills.

Vocabulary size and academic performance. Since performance in the four language skills is interconnected with academic performance, it also has been found that vocabulary size positively impacts overall academic performance. Townsend et al. (2012) used regression analysis to measure the individual contributions of general vocabulary size and knowledge of academic vocabulary in relation to overall grade point average (GPA) scores of middle school students, including both native and non-native students. Their findings demonstrate that the contribution of general vocabulary size accounted for 26% and 43% of GPA variances depending on different disciplines, and that knowledge of the academic vocabulary provides an additional contribution of 2% to 7% depending on the discipline.

In a different study, Harrington and Roche (2014) further prove this contribution. They used first year university Arabic students' GPA to measure academic performance of written English proficiency. Even though, their findings posit academic writing and vocabulary recognition as the best predictors of GPA, the results also demonstrate the important role of vocabulary size in explaining about 25% of variances in students' GPA. Moreover, Masrai and Milton (2017) developed a multilevel model that combined four variables (L1 vocabulary knowledge, L2 general and academic vocabulary knowledge, and intelligence) as predictors of academic achievement. They utilize the GPAs of 96 undergraduate students from two universities in Saudi

Arabia. Their findings showed that in combination, the four variables can account for about two-thirds of variance in academic performance, but that knowledge of academic vocabulary had the strongest individual correlation to academic achievement, providing and additional and unique 7% variance to academic success. 56% of the GPAs variances was explained by L2 general and academic vocabulary knowledge.

In a more recent study, Masrai and Milton (2018) revisited the conclusion from Townsend et al. (2012). The authors agreed on the crucial function that vocabulary size and academic vocabulary knowledge performs in accounting for variations in academic success since their results showed that vocabulary size in combination with academic vocabulary knowledge explained about 55% of variance. These findings document that vocabulary size is an underlying variable of English language performance of L2 learners. Lexical growth interconnects to language performance progress, and language performance progress interconnects to academic success.

Some of the empirical evidence presented so far has made a distinction between vocabulary size and academic vocabulary knowledge. Therefore, it is equally important to draw attention to what is meant by this distinction. First, even though "words" fall into the umbrella term of "vocabulary", they are also subcategorized according to their use. Second, based on that subcategorization, certain lexicon is appropriate to suffice the needs for everyday language use and communication, yet that same lexicon may fall short on satisfying the lexical demands of an academic context.

Types of Vocabulary

Language requirements vary according to settings, circumstances, and people with whom one interacts. Words are defined and categorized based on their linguistic features; consequently, the nature of the lexical item determines whether it is of general or specialized use, which affects the occurrence of the item in spoken or written texts. The complexity of this truth, however, is that some lexical items may occur in all types of contexts and in all kinds of uses of the language, whereas others may be more specific to a certain type of discourse. Based of frequency levels there are three types of vocabulary: high-, mid-, and low-frequency words. In addition, the register of academic English demands a more specialized lexicon, academic vocabulary.

Frequency-based vocabulary. This group consists of high-, mid-, and low-frequency words. High-frequency words are words that are most frequently used in the English language. Due to their high occurrence, the bulk of coverage that they provide to spoken and written texts is large. From a corpus of written English, West (1953) created the first high frequency list, the General Service List (GSL), which is now criticized due to its size and age. Another list of high-frequency words is Nation's (2012), the British National Corpus (BNC)/ Corpus of Contemporary American English (COCA). One criticism of the first 2,000 words of the BNC/COCA is the inclusion of complete lexical sets (i.e., numbers, days of the week), which are not merely frequency based. Despite this criticism, the BNC/COCA was created by using words from both spoken and written texts, and therefore it offers word lists that include contemporary English, representative of the lexicon that native speakers of English currently use. For this reason, this study used the BNC/COCA word lists to assess receptive vocabulary size of the participants.

There is ongoing debate as to how large the group of high-frequency words is; some
scholars would suggest that the 3,000 word families is an acceptable size while others would
propose 2,000 word families. Nation (2006) found that 2,000 word families provide coverage of
about 80% of a written text; if learners acquire knowledge of them, they will understand a
significant amount of the running words in either written or spoken discourse, so their learning is
fundamental for L2 learners. Furthermore, Nation's points out that making a distinction of mid-
frequency and low-frequency words is beneficial. These two are differentiated from high-
frequency words by means of statistical measures: *frequency, range, and dispersion.* Frequency
indicates the number of occurrences of a word in the corpus. Range eliminates words that have
high frequency only in a specific subject area and not across many subjects, and dispersion
makes sure that there is balance in the even distribution of words (Dang et al., 2017).
Midfrequency words are words that are not as frequent as high-frequency words, yet they add
more than 10% of text coverage, and, in combination with high frequency words and proper
nouns, account for up to 98% of text coverage. For Nation, mid-frequency words are those from
the third to the ninth 1,000. Low frequency words, on the other hand, are those from the tenth
1,000 forward, and even though there are thousands of them, they provide a smaller coverage.
According to Nation (2001/2013):

> At least the third 1,000 to the fifth 1,000-word lists should be an explicit vocabulary-
> learning goal for non-native speakers who know the high-frequency words, and after that
> the sixth 1,000 to the ninth 1,000 words are the next rational goal. (p.26)

Knowing that the first five 1,000 word lists include words from both high- and mid-
frequency levels, which in addition are the levels that provide a larger proportion of text

coverage, Nation's recommendation is reasonable. In consideration of this, this study will conduct a vocabulary size measure of these five frequency levels to obtain a rough estimate of Salvadoran total receptive vocabulary size. Nevertheless, as it was previously mentioned, the linguistic attributes of the lexicon that satisfies the demands of an academic context differ from those of frequency-based vocabulary, and so it is critical for English learners to acknowledge that a vocabulary size constituted mostly of words in the frequency levels may be insufficient to thrive in academic settings.

Academic Vocabulary. Academic vocabulary is highly noticeable in academic texts, whereas it is not in everyday language use. Snow and Uccelli (2009) suggest that academic language is not easily defined because several terms can be applied for such definition, so to conceptualize academic language, they identified characteristic features of both academic and colloquial language. For academic language, they listed 5 components: *interpersonal stance, information load, organization of information, lexical choices, and representational congruence.* Their findings suggest that the lexical choices of academic texts compared to colloquial language are highly diverse and demonstrate the use of formal expressions, abstract terms, and precision of content words and connective devices (p. 119). Furthermore, Schleppegrell (2001) states that academic vocabulary carries out the abstraction of some pieces of information in academic texts that would not be simply expressed with the language of everyday conversations, thus contributing to the density and abstraction of academic texts. Some academic words are also polysemic, which means that besides their core definition they have an extended meaning across disciplines (Masrai & Milton, 2018).

The first four studies that developed academic lists (Campion and Elley, 1971; Praninskas, 1972; Ghadesy, 1979; & Lynn, 1973) were carried out without the assistance of computers, and the selection principles for academic words were inconsistent. Later, Xue and Nation (1984) combined the resulting lists from these studies and created the University Word List (UWL), which did not truly demonstrate a balanced selection of topics from different disciplines. This was the result of the conflicting criteria that were used to define academic words and the insufficient size of the corpora. In response of the salient need of a well-structured list from a larger academic corpus during that time Coxhead (2000) identified the need for a new academic word list —the Academic Word List (AWL).

The AWL was developed using a 3,500,000-token corpus of academic English. The selection of academic words was based on *specialized occurrence,* meaning that "the word families included had to be outside the first 2,000 most frequently occurring words of English, as represented by West's (1953) GSL" (Coxhead, 2000, p. 221). Frequency, range, and dispersion were also employed for the selection of items. The AWL contains 570 word families presented in ten different sublists according to word frequency, and it provides approximately 10% lexical coverage in academic texts. Some scholars (Gardner and Davies, 2014; Masrai and Milton, 2018), however, question the specialist nature and contribution of the AWL and argue that it is just a subset of high frequency words. There is still debate as to whether the nature of the AWL is consistent with that of academic vocabulary, and therefore there are some inquiries about its contribution. Nonetheless, findings from empirical research (Townsend et al., 2012; Dang & Webb, 2014; Masrai & Milton 2017, 2018) advocate that, regardless of the flaws, the AWL contribution is distinctive and consequently mutually exclusive from that of general vocabulary

size. The unique contribution of the AWL to explaining variances in academic performance and in reducing the lexical learning burden for L2 learners makes it an important element of L2 instruction, which is the reason why academic vocabulary is also included in this study.

Having defined these two kinds of vocabulary and knowing the critical role they both play for L2 learners, another question emerges: how many words should English L2 learners know to achieve adequate comprehension? Answers to this question are drawn from empirical sources.

Lexical Threshold and Lexical Coverage: How Much Vocabulary is Needed for Comprehension?

"Adult native speakers have receptive vocabulary sizes of around 20,000 word families." (Nation, 2013, p. 29), and perhaps L2 learners may picture this size as a learning goal. To answer the question of how many words an L2 learner should know, the focus will be shifted towards comprehension of written texts because as it was acknowledged in the first section of this literature, the research tradition in L2 vocabulary acquisition has generally analyzed the relationship between vocabulary size and the reading skill, proving that vocabulary size plays an essential role in predicting adequate reading comprehension; hence, commonly the numbers presented are in relation to understanding of written texts. Before discussing the literature that advocates for the number of words that L2 learners need for reading comprehension, *lexical threshold* and *lexical coverage*, two fundamental terms for the understanding of this evidence, will be described.

The lexical threshold can be defined as "the minimal vocabulary that is necessary for 'adequate' reading comprehension" (Laufer & Ravenhorst-Kalovski, 2010, p. 15). Nation (2001/2013) explains that the threshold can be interpreted either as an essential boundary to be crossed or as a probabilistic one for reading comprehension to take place. An associated factor of

lexical threshold is lexical text coverage, which according to Laufer and Ravenhorst-Kalovski (2010), is defined as "the percentage of running tokens in a text that a reader understands" (16). Hence, Research has been conducted to determine the relationship of lexical coverage and reading comprehension.

Laufer (1989) used a reading test to measure comprehension of a text and stablished a minimal 55% threshold for adequate comprehension. She found that at 95 % coverage, participants achieved a score of 55 or a higher one. Additionally, her findings showed that the nature of lexical coverage is probabilistic as some participants at lower coverage levels also achieved the score set as adequate comprehension. In another study, Hu and Nation (2000) adapted a fiction text and created four coverage groups (80%, 90%, 95%, 100%) to examine the relationship of lexical coverage and reading comprehension of non-native speakers of English. Their results indicated that a lexical coverage of 98% is needed for adequate comprehension since participants did not achieve comprehension at the 80% coverage level, and just a few of them gained it at the 90% and 95% coverage levels.

Nation (2006) estimates that a vocabulary size of 8,000 to 9,000-word families is needed to reach 98% of lexical coverage. By using lemma lists from the British National Corpus (BNC), he developed 14 frequency word lists to determine the vocabulary size to attain 98% coverage of written and spoken texts. The data from this study pointed out that the coverage of the first thousand most frequent word families in written texts ranges from 78% to 81% while the second thousand adds a coverage of 8% to 9%; the third thousand provides an extra coverage of 3% to 5% and the fourth and fifth thousand adds up to 3%. The coverage of the rest of the lists and off-list words ranges from less than 1% to 4% (Nation, 2006, p. 79).

Furthermore, Laufer and Ravenhorst-Kalovski (2010) attempted to recontextualized the percentages of lexical coverage for adequate reading comprehension. Despite the use of the most updated version of the Vocabulary Profile test, updated research tools, and a larger sample of participants, their findings confirmed those of earlier studies regarding lexical threshold and coverage for adequate reading comprehension. Therefore, they suggest that for adequate comprehension an optimal threshold is between 6,000 and 8,000 word knowledge and about 98% of text coverage. On the other hand, a minimal threshold is the knowledge of 4,000–5,000 words and the coverage of about 95% of text.

Other empirical investigations have been done to estimate the lexical threshold needed for achieving comprehension in the reading and listening sections of English proficiency standardized tests like the Test of English as a Foreign Language (TOEFL) . Chujo and Oghigian (2009) estimated that for coverage of 95% of the running words in the TOEFL paper-based (PBT), the most frequent 5,000 word families were needed, and that 4,000 word families would account for 95% of coverage in the iBT version. These results were obtained from the examination of vocabulary occurring in six PBT practice tests an in an official TOEFL iBT. A methodological drawback from Chujo and Oghigian's is that, to obtain these estimations, they integrated different sections of the practice tests into a corpus, which could result in inaccurate calculations since the vocabulary employed in each section may differ in terms of frequency. With the purpose of rendering a more accurate account for coverage estimations, Kaneko (2014) focused on reading passages from five past TOEFL iBTs and suggested that 95% coverage of reading passages is provided by the most frequent 6,000 word families. In a later study, Kaneko (2015) examined the listening sections of past TOEFL iBTs and concluded that the most frequent

3,000 word families in combination with proper nouns provided 95% of lexical coverage., but to attain 98% coverage, 6,000 word families were necessary. It is important to note that further research is needed in this area, yet these findings are still informative considering that the TOEFL test is a graduate requisite for English majors in El Salvador.

These studies educate the vocabulary learning goal that L2 learners should consider in order to attain a lexicon of the "right size", at least, for reading comprehension since it would be problematic to solely transfer this numbers to proficiency in the other language skills without proper evidence. Nation (2001/2013) advices L2 learners to keep increasing their vocabulary sizes even when they have already obtained a size of 9,000 words, but how do L2 learners measure the size of their vocabularies?

The Yes/No test: Measuring Receptive Vocabulary Size

To estimate vocabulary size measures, the two major practices are dictionary-based and corpus-based. The dictionary-based method samples word families from a dictionary and tests the learners on them, whereas the corpus-based method chooses word families by their frequency on a corpus (Shen, 2008). For corpus- based, as reported by Nation (2001/2013), "the sampling involves arranging the vocabulary into frequency-based groups—the most frequent 1,000 words, the second 1,000 most frequent words, and so on—and sampling from each frequency group" (p. 523). What follows sampling, is the creation of vocabulary size tests for L2 learners with the aim to attain a rough estimation of the total number of lexical items they know. Having this estimation is valuable when assessing vocabulary growth, placing learners across different proficiency levels, or as Nation (2001/2013) asserts, when providing "one kind of goal for learners of English as a second or foreign language." (p. 522).

There are different vocabulary size test formats, Meara's (1992) Yes/No test being one of them. The Yes/No format was created as an alternative to the multiple-choice vocabulary size format, which was found to lack validity and reliability due to learners' self-reporting of their vocabulary knowledge. As a result, Anderson and Freebody (1983) suggested to include pseudowords to the list so that learners' overestimation of their knowledge could be counterbalanced, and thus scores accuracy improved. Meara and his colleagues developed the Yes/No test format as a quick method for profiling learners' vocabularies and as a placement tool. The Yes/No test measures receptive vocabulary knowledge by presenting the test taker with a list of isolated target lexical items taken from specific frequency levels. This format requires the test taker to make a lexical judgement and can be regarded as an activity that involves meaning recall since the test taker only needs to indicate whether he or she knows the item or not. Each test includes 40 real words and 20 pseudowords.

The Yes/No test scoring method. The purpose of pseudowords is to encourage reliability of test takers' self-assessment. Therefore, test takers' who are randomly guessing and claiming knowledge of pseudowords obtain a downwards adjustment in their final score. This is done by calculating two scores. Each test item may result in four response combinations as Figure 1 illustrates. False alarms play an important role in determining the final score; the higher the false-alarm rate, the lower the final score.

Figure 1

Response matrix per item in the Yes/No test. (Beeckmans et al., 2001, p. 237)

In comparison to other vocabulary size tests, the advantages of using the Yes/No test to measure receptive vocabulary lie on different aspects. In general, Yes/No tests are easy to create, to administer, and to score. Nonetheless, there is current discussion and concerns about the validity and reliability of the Yes/No test. Some scholars like Beeckmans et al. (2001) and Lam (2010) have discussed some of the benefits and limitations of the yes/no vocabulary test as a measurement tool for receptive vocabulary knowledge; These are well documented in the literature as follows:

Benefits.

- The Yes/No format contributes to economy of time by allowing the assessment of a large sample of words in a short period of time, which also enhance reliability.

- The simplicity of the format only requires minimal efforts from the test takers to respond, and moreover favors the adaptation and administration of the test by using technology, eliminating scoring errors and providing immediate feedback.

- Academic literature (Meara & Buxton, 1987; Meara & Jones, 1988; Harrington & Carey, 2009) reports that the Yes/No test has been found to correlate well with other language proficiency measures and thus is a suitable option to other language proficiency tests (Lam, 2010, pp. 57-59).

Limitations.

- Guessing in the Yes/No test has been found to inflate the vocabulary size estimation.

- The Yes/No test does not allow the assessment of different meanings of a given word; it merely attends to passive word recognition without encouraging a more active and complex view of what knowing a word means.

- There is a particular difficulty to administer the Yes/No test to speakers of Indo-European languages due to the lexical similarities that these languages share with English, which results in a cognate effect. (Beeckmans et al., 2001, pp. 238-40)

Certainly, the Yes/No test has pros and cons. The rationale for the adoption of the Yes/No test as the instrument to measuring receptive vocabulary size in this study extends beyond the convenience that it poses for its construction, administration, and scoring. The major benefit of the Yes/No test is that its reliability has been proved by its correlation with other proficiency tests. The major limitation is the one represented by the cognate effect since Spanish is an Indo-European language and many Spanish words cognate with English. According to Meara (1992), "These words are usually, but not exclusively, low frequency words in English" (p.11). To reduce the cognate effect, Meara created pseudowords from Greek and Latin roots and added them in the sample Yes/No tests in his book. The purpose of these words was to account for random guessing from speakers of these languages, who based their answers on the

closeness of the target language with their L1, and to therefore discourage inaccurate scores. As stated by Meara (1992):

> This correction factor works reasonably well in practice: it tends to underestimate the passive vocabulary skills of Romance speakers but seems to give a reasonably accurate measure of their active vocabulary knowledge. It does not affect native speakers of languages which are not cognate with English. (p. 11).

Considering that the major design issue with the Yes/No test for the participants in this study is addressed by the author and that the pseudowords for this study were taken from his sample tests, the Yes/No test is expected to provide an accurate and reliable vocabulary size measure.

Suffice to say that, since the aforementioned sources demonstrate the fundamental role that vocabulary size plays on L2 performance and overall academic achievement, it is fundamental to report the receptive vocabulary sizes of Salvadoran English majors. Based on this, this study aims to diagnose first year and last year English majors' vocabulary sizes and to appraise vocabulary size differences across a 5-years span.

Chapter III: Methodology

This study follows a cross-sectional research design for which a big sample is crucial in order to validate the results and to ensure that they are meaningful.

Research questions

1. What is the vocabulary size of Salvadoran first semester students in the English major at higher education institutions?

2. What is the vocabulary size of Salvadoran last semester students in the English major at higher education institutions?

3. What is the difference between vocabulary sizes of Salvadoran first and last semester students in the English major?

Participants

The participants in this study were 312 EFL students, enrolled in the English major at three different higher education institutions in El Salvador. They were divided into two groups: English majors first semester (FS) and English majors last semester (LS). The FS group was composed of about 162 students who were starting their first semester in the English major in El Salvador. The LS group consisted of about 150 exiting students who have completed about five years of English instruction. Participants in both groups were students from three different regions of El Salvador: West, Central, and East. It might be possible that some participants had received bilingual education before starting the program or had taken English classes at English academies before or at the same time that they were studying their English major. The curriculum for the English major differs from institution to institution; however, across all the participating institutions, there is general agreement on the English class that students in the FS

group receive. Thus, based on this, there is one class in English for the FS group, namely Basic

English, while the rest of their classes are taught in Spanish. Class time also varies from

institution to institution; participants from the FS group receive between 4 and 10 hours of

English language instruction a week. On the other hand, the classes that participants from the LS

group take differ much more depending on the institution, yet for most of them all classes are

taught in English; they receive between 5 and 12 hours of English instruction within a week. In

addition, some of the participants from both groups, most of them from the LS group, already

have jobs that involve the use of the English language on a daily basis. All the participants were

recruited by simple random sampling in order to guarantee representativeness.

Materials

To gather the data for this study a battery of 12 vocabulary size tests (VSZT) was

utilized.

Size test (VSZT). The VSZT in this study provided a vocabulary size measure of the first

five 1,000-word frequency levels of the British National Corpus (BNC)/ Corpus of

Contemporary American English (COCA) and the Academic Word List (AWL). The rationale

for selecting the first five 1,000 levels was threefold. First, these levels represent vocabulary at

the levels that provide greatest text coverage, and therefore their measure is of great value to L2

learners. Second, these five levels supply a good representation of the English vocabulary that

native speakers currently use because of the differing criteria that was utilized for the creation of

the 1000-2000 word lists (mostly from spoken texts) and that of the 3000-5000 (BNC/COCA

rankings after eliminating items from the 1,000-2,000). Third, since this study not only sought to

report vocabulary size of the FS and LS group but also to identify differences in vocabulary size

across levels, it was essential to guarantee the assessment of vocabulary knowledge that could be

expected for both groups, thus canceling the ceiling effect. As Webb and Sasao (2013) asserted "mastery of the 5,000 word level may be challenging for all but advanced learners, so assessing knowledge at the five most frequent levels may represent the greatest range in vocabulary learning for the majority of L2 learners" (p. 266). Overall, the levels that the VSZT measured are representative of high frequency words and match the purpose of this study.

The VSZT was created on Excel using the Visual Basic for Applications language (VBA) and following Meara's (1992) format and scoring method (see Appendix A). Each test contains 60 vocabulary items out of which 40 are real words and 20 are false words. The purpose of including false words was to cancel participants' judgements when taking the test and to obtain a sound estimate. The false words in the VSZT were borrowed from Meara's (1992) test. They follow the phonetic rules of the English language and were created by changing letters of real words. For the selection of items, three steps were followed: random selection, discrimination/elimination of problematic items (false cognates), and reselection.   As shown in figure 2, lexical items in the VSZT are presented in columns, and next to each item there are to two option buttons labeled as "Yes" and "No", respectively. All the real words in the test were randomly selected from Nation's (2012) BNC/COCA word lists 1-5 and Coxhead's (2000) Academic Word List (AWL). All false words in the test were borrowed and randomly selected from Meara's Yes/No tests samples.

Figure 2

Example items from the vocabulary size test (VSZT)

In order to control for order effect and to eliminate the possibility of cheating, two forms (A, B), differing in items and item's order, were constructed for each test. Therefore, there were two versions for high frequency words in the 1,000 level (1KA, 1KB), two for high frequency words in the 2,000 level (2KA, 2KB), two for high frequency words in the 3,000 level (3KA, 3KB), two for high frequency words in the 4,000 level (4KA, 4KB), 2 for high frequency words in the 5,000 level (5KA, 5KB), and 2 for the AWL list (Awl-A, Awl-B). Refer to Table 2 for more details about the VSZT.

In addition, considering that the sample for the study was large, having two versions of each test allowed us to make a more reliable estimate. Meara's (1992) stated that "Even more reliable estimates can be obtained by getting a testee to fill in two or three tests at the same level." (p. 10). Hence, being the tests in the VSZT based on word lists containing 1000 words, two tests from the same frequency level render a sampling rate of approximately one word in twelve (1000/80=12), allowing a fair degree of accuracy and reliability in the estimation of a participant's vocabulary size. The VSZT included a window in which participants selected their institution and group information before starting the tests with the aim to help categorize results by campus and region (see Figure 3).

Table 2

VSZT Battery of 12 Yes/No Tests

Word List	Test Version	Test Details
BNC/COCA 1,000 Level	1KA 1KB	Total: 80 real words from the 1,000 Level Each version contains 60 lexical items: 40 real words and 20 false words.
BNC/COCA 2,000 Level	2KA 2KB	Total: 80 real words from the 2,000 Level Each version contains 60 lexical items: 40 real words and 20 false words.
BNC/COCA 3,000 Level	3KA 3KB	Total: 80 real words from the 3,000 Level Each version contains 60 lexical items: 40 real words and 20 false words.
BNC/COCA 4,000 Level	4KA 4KB	Total: 80 real words from the 4,000 Level Each version contains 60 lexical items: 40 real words and 20 false words.
BNC/COCA 5,000 Level	5KA 5KB	Total: 80 real words from the 5,000 Level Each version contains 60 lexical items: 40 real words and 20 false words.
AWL	Awl-A Awl-B	Total: 80 real words from the AWL sublists Each version contains 60 lexical items: 40 real words and 20 false words.

Figure 3

Participants' campus and group information window in the VSZT

Procedure

In order to facilitate the presentation of vocabulary size estimates per region and per institution, each campus was assigned a code under which each student had a key number that benefited the accomplishment of this goal (Table 3). To answer the question of how large the vocabulary sizes of first semester (FS) and last semester (LS) Salvadoran students are, the participants took the VSZT. This measure further allowed to answer the third research question of this study by providing the input needed to determine if there were vocabulary size differences across first and last semester. Refer to table 4 for tests taken per group and per campus.

Table 3

Code Per Campus and Participants' Sample Key Numbers

Campus	Campus' Code	Sample of Participants' Key Number
West Region	A	A1, A2, A3,…An.
Central Region	B	B1, B2, B3, ...Bn
East Region	C	C1, C2, C3,...Cn

Table 4

Tests Taken by Participants from Each Institution

Campus	Participants' Group	Test given and Survey Details
West, Central, and East	FS LS	1000 1K (1KA, 1KB); 2000 2K (2KA, 2KB); 3000 3K (3KA, 3KB); 4000 4K (4KA, 4KB); 5000 5K (5KA, 5KB); AWL (Awl-A, Awl-B)

Size test. The test was administered in March 2020, by the middle of the 2020 first

semester. Students took the computerized version of the yes/no test using Excel. Following

Meara's (1992) advice to obtain more reliable estimates, each participant took two versions of

the same test (i.e. 1KA, 1KB), and the results were averaged. Therefore, each participant took a

total of 12 tests. To counterbalance sequence effect of the entire series of tests that the

participants took, all 12 tests were randomly arranged into two sets (VSZT-SetA, VSZT-SetB).

As shown in Table 5, VSZT-SetA presented the test in the following randomized order. Based on that order, VSZT-SetB was created by reversing the first half and the second half of VSZT-SetA.

Table 5

VSZT-SetA and VSZT-SetB

VSZT-SetA	VSZT-SetB
5KA	4KB
3KA	4KA
2KB	Awl-A
3KB	1KA
Awl-B	2KA
1KB	5KB
1KA	3KB
2KA	Awl-B
5KB	1KB
4KB	5KA
4KA	3KA
Awl-A	2KB

Each test took about 5 minutes to complete, so some participants finished half of the test set (6 tests) in about 30 minutes. The test was administered in the participants institutions' computer laboratories — It was first verified that each participating institution in this study had access to a computer lab — and during the participants' class time. Class instructors brought their students to the laboratories and were present at the time the VSZT was being administered to each group of students.

Participants' key numbers were given to each student, and VSZT-SetA and VSZT-SetB were assigned to every other student to eliminate the possibility of cheating. The instructions were delivered in the participants' native language, Spanish, as well as in English to guarantee comprehension. To begin, students were told to write their key number to start the test (see

Figure 4) as otherwise they were not going to be allowed to go to the next test window (see

Figure 5).

Figure 4

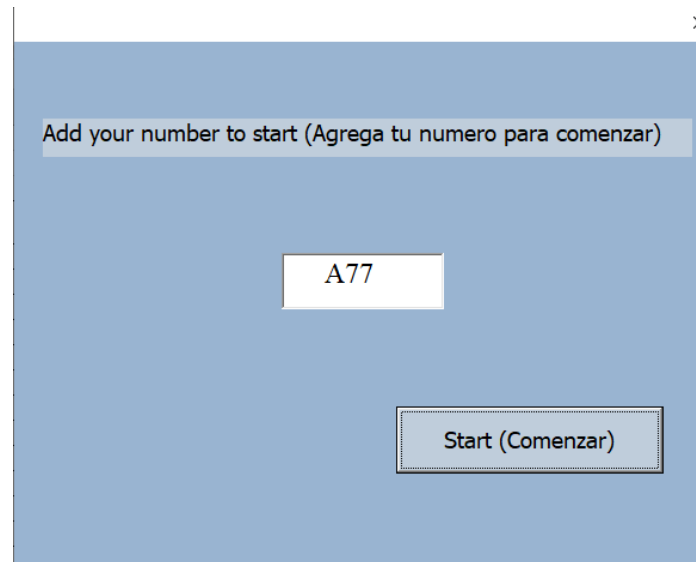*VSZT first screen where participants will introduce key number*
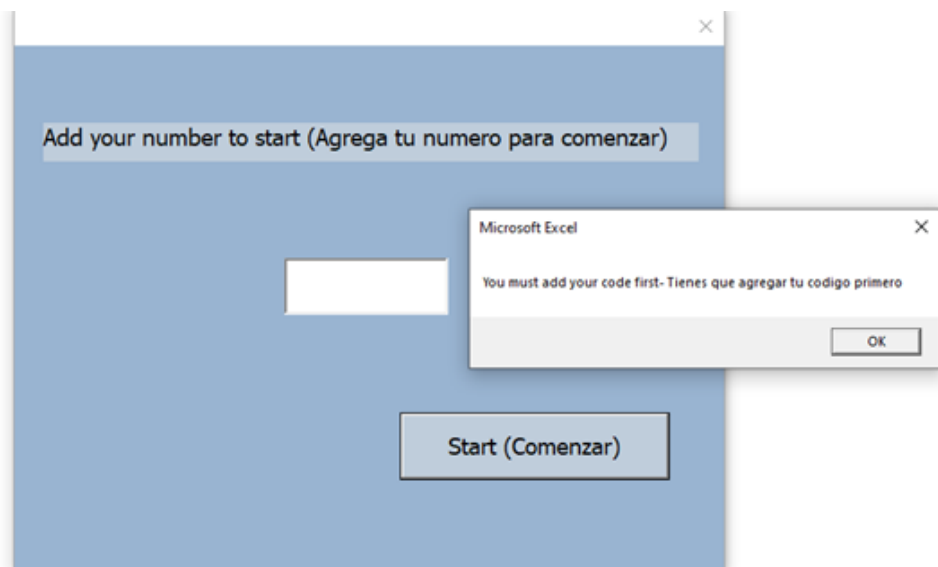

Figure 5

*VSZT error message when key number is not added*

After this, the participants were directed to select their campus and group information (see Figure 3 in the materials section). Then, they saw the first test in the set and were instructed to indicate whether they knew the words by clicking the "Yes" or "No" option button next to each lexical item. Furthermore, it was explained to them that "knowing" a word referred to being able to recall at least one of the word's meanings. Due to the similarities between the participants' native language, Spanish, and the target language, English, they were also reminded that they were looking at English words, and therefore by clicking "Yes" they were confirming their knowledge of the English word rather than that of a similar word in Spanish. Moreover, they were forewarned to avoid guessing since wrong guesses would negatively affect their score.

Even though students needed approximately one hour to finish any of the two test sets (VSZT-SetA , VZST-SetB), some participants might experience exhaustion and/or boredom. To reduce potential negative effects on students' performance from these factors, they could take a 3-minute break inside the lab after finishing the first half of the set (6 tests) and before starting the second half. Some participants took the break while other decided not to. After completion, the participants emailed the vocabulary set to: vocabulario2020@gmail.com, an email account that was specifically created for this study.

Chapter IV: Data Analysis and Results

The Yes/No test was administered to report vocabulary sizes of Salvadoran English majors and to determine if there are receptive vocabulary size differences between first semester students, who are starting the English major, and last semester students, who have been in the program over a five-year span. Tests scores were based on Meara's matrix for test scoring of the yes/no test, and these were analyzed by employing both descriptive and inferential statistics. To present vocabulary size estimates per region, de-identifying codes were used to match participants' scores to their corresponding campus.

The average scores for the vocabulary size test (VSZT) are shown in figures 6 and 7 for both first semester (FS) and last semester (LS) learners. The results reveal growth in vocabulary knowledge for students in the last semester group who have received English instruction across a five-year span. Both participating groups took Yes/No tests to report sizes of the first five 1,000 high frequency word lists (K1 to K5) as well as academic vocabulary knowledge.

Figure 6

First Semester Learner's Vocabulary Size
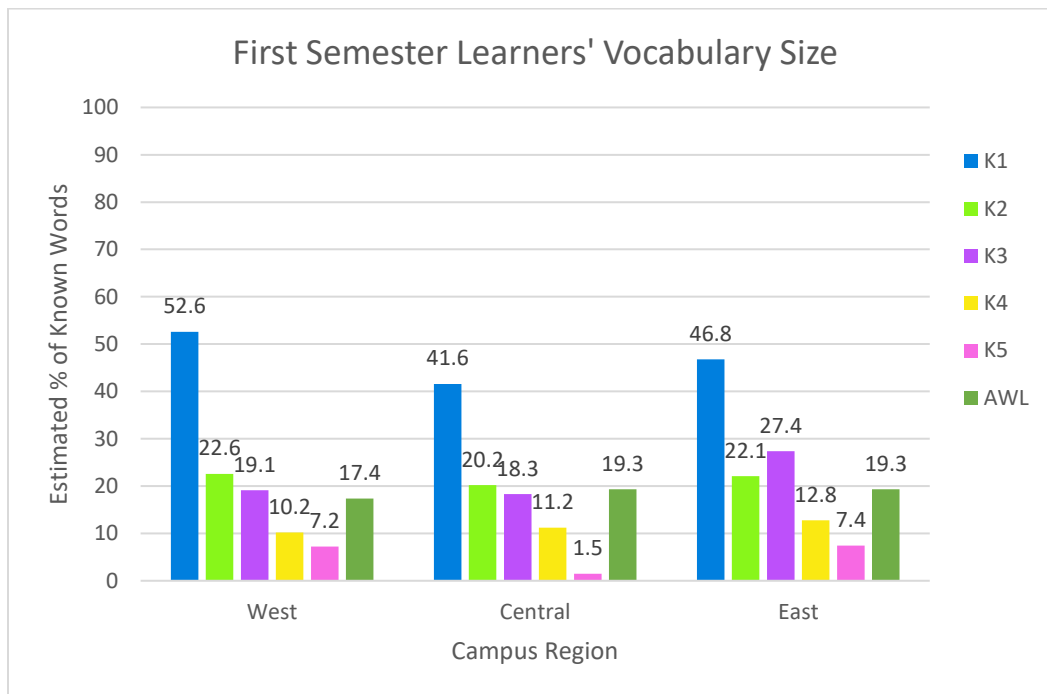
Figure 7

Last Semester Learner's Vocabulary Size
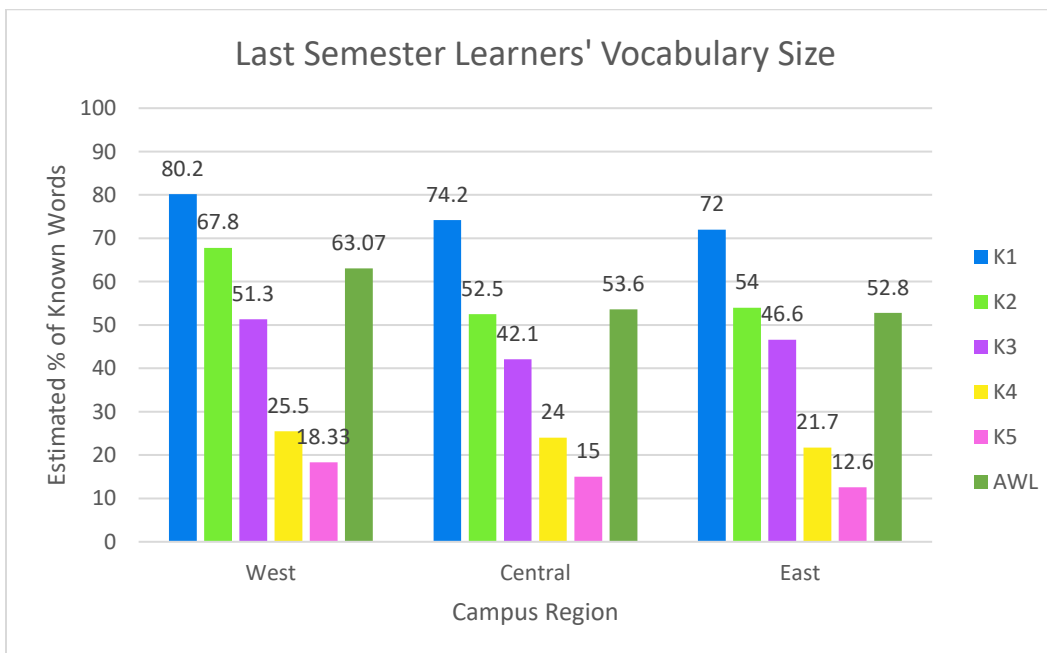
Comparison of First Semester Students' Results among Regions

First 1,000 (K1) Yes/No test results per region. One way analysis of variance

(ANOVA) was used to compare the average scores of first semester students in the first 1,000

high frequency words (K1). The results indicate a statistically significant difference among West

FS, Central FS, and East FS in their K1 average scores. The F ratios for the total scores of the

test were F (2, 146) = 3.749, (p =.026) (see Table 6). To identify differences among the three

groups of FS learners, Post Hoc tests using the Fisher's Least Significant Difference (LSD) test

were performed. The differences in the mean scores of K1 for the West FS learners (M =52.6, SD

=16.9) were statistically significant with those of the Central FS learners (M =41.6, SD =24.6).

The scores of the West FS learners did not differ significantly from the scores of the East FS

learners (M =46.8, SD =18.9). Neither did the scores of the Central FS learners differ

significantly (p = .212) from those of the East. The results indicate that by the beginning of the

English major first semester students know approximately half of the first 1,000 high frequency

words, and that out of the three regions, FS learners from the West knew more K1 words.

Table 6

One Way ANOVA Analysis of K1 VSZT FS Groups

	SS	df	MS	F	Sig.
Between Groups	3136.891	2	1568.445	3.749	.026
Within Groups	61082.935	146	418.376		
Total	64219.826	148			

Second 1,000 (K2) Yes/No test results per region. First semester participants from the

West, Central, and East regions also took the second 1,000 high frequency VSZT (K2). One way

analysis of variance (ANOVA) was conducted to compare their average scores. The results

reveal that the differences in the K2 average scores among all three regions are not statistically

significant. The F ratios for the total scores of the K2 test were F (2, 91) = .179, (p = .837) (see

Table 7). Post Hoc tests using the Fisher's LSD were run to further explore differences in mean

scores between groups. The results confirmed that the differences between the average scores of

the West (M =22.6, SD=16.9), the Central (M =20.2, SD =14.0), and the East (M =22.1, SD

=17.5) FS learners were not statistically significant (p = >.05) from each other. These results

present a drop of nearly half of the average scores that first semester learners obtained from K1

to K2, indicating that, out of the second 1,000 words, first semester learners from all three

regions roughly know about 20% of the total words.

Table 7

One Way ANOVA Analysis of K2 VSZT FS Groups

	SS	df	MS	F	Sig.
Between Groups	95.793	2	47.8	.179	.837
Within Groups	24399.760	91	268.1		
Total	24495.553	93			

Third 1,000 (K3) Yes/No test results per region. One way analysis of variance

(ANOVA) was conducted to compare the average scores of first semester students in the third

1,000 high frequency words (K3). The results indicate that the differences in the K3 average

scores among all three regions are not statistically significant. The F ratios for the total scores of

the K3 test were F (2, 55) = 1.993, (p =.146) (see Table 8). Post Hoc tests using the Fisher's LSD

test were performed to further explore differences in average scores between groups. The results

show that the differences between average scores of the West (*M* =19.1, *SD* =15.6), the Central (*M* =18.3, *SD* =12.4), and the East (*M* =27.4, *SD* =15.2) FS learners were not statistically significant (*p* >.05). The results suggest that by the beginning of the English major at the three different regions, first semester learners' knowledge of the first 3,000 high frequency words is indistinguishable.

Table 8

One Way ANOVA Analysis of K3 VSZT FS Groups

	SS	*df*	*MS*	*F*	*Sig.*
Between Groups	821.007	2	410.504	1.993	.146
Within Groups	11329.768	55	205.996		
Total	12150.776	57			

Fourth 1,000 (K4), fifth 1,000 (K5), and academic words (AWL) Yes/No test results per region. The mean scores on the VSZT of the fourth 1,000 high frequency words achieved by first semester West, Central, and East learners were 10.2, 11.2, and 12.8, respectively. The standard deviation of the East learners (*SD* =12.0) is the largest among the three groups, indicating that the score differences among this group are the greatest. The opposite is true for the West group of learners (*SD* =5.1). For the VSZT of the fifth 1,000 high frequency words, their scores were West FS (*M* =7.2, *SD* =5.0), Central FS learners (*M* =1.5, *SD* =1.2), and East FS learners (*M* =7.4, *SD* =7.6). Scores for the VSZT of the academic word list were: West FS (*M* =17.4, *SD* =9.8), Central FS (*M* =19.3, *SD* =13.7), and East FS (*M* =19.3, *SD* =15.8).

One way analysis of variance ANOVA was used to determine if the differences among the three groups of learners were statistically significant. The results of the ANOVA show that

the differences in average scores in the K4, K5, and AWL tests of first semester learners from all three regions were not statistically significant. The F ratios for the total scores of the K4 VSZT were $F(2, 24) = .164$, $(p = .850)$; the F ratios for the K5 VSZT were $F(2, 15) = 1.569$, $(p = .241)$, and the F ratios for AWL were $F(2, 90) = .205$, $(p = .850)$ (see Table 9).

To dismiss any pair differences among the three groups, Post Hoc tests using the Fisher's LSD test were conducted, thus confirmed that the mean scores of last semester students from all three regions in K4, K5, and AWL tests did not differ significantly from each other. These results demonstrate a decreasing pattern on average scores from K3 to K5, yet AWL scores are, to the naked eye, close to those previously presented for K3 high frequency words, hence showing a slight increase from average scores of K4 and K5 tests. In addition, the results also reveal that the vocabulary knowledge of K4, K5 and AWL among first semester learners from all three regions is identical.

Table 9

One Way ANOVA Analysis of K4, K5 and AWL VSZT FS Groups

	SS	df	MS	F	Sig.
K4					
Between Groups	28.940	2	14.470	.164	.850
Within Groups	2122.079	24	88.420		
Total	2151.019	26			
K5					
Between Groups	105.593	2	52.797	1.569	.241
Within Groups	504.643	15	33.643		
Total	610.236	17			
AWL					
Between Groups	73.352	2	36.676	.205	.815
Within Groups	16131.444	90	179.238		
Total	16204.796	92			

Comparison of Last Semester Students' Results among Regions

First 1,000 (K1) Yes/No test results per region. One way analysis of variance (ANOVA) was used to compare the average scores of last semester students in the first 1,000 high frequency words (K1). The results indicate a statistically significant difference among West LS, Central LS, and East LS in their K1 average scores. The F ratios for the total scores of the test were F (2, 132) = 3.315, (p =.039) (see Table 10). To identify differences among the three groups of LS learners, Post Hoc tests using the Fisher's LSD test were performed. The

differences in the mean scores of K1 for the West LS learners (*M* =80.2, *SD*=12.7) were

statistically significant with those of the East LS learners (*M* =72.0, *SD* =20.0). The scores of the

West LS learners did not differ significantly from the scores of the Central LS learners (*M* =74.2,

SD = 13.2). Neither did the scores of the Central LS learners differ significantly (*p* = .499) from

those of the East. The average test scores from the first 1,000 high frequency words presents a

clear distinction among regions. The results show that the K1 receptive vocabulary size of

participants from the West is greater than that of participants from the Central and East regions.

Table 10

One Way ANOVA Analysis of K1 VSZT LS Group

	SS	*df*	*MS*	*F*	*Sig.*
Between Groups	1625.053	2	812.526	3.315	.039
Within Groups	32349.681	132	245.073		
Total	33974.733	134			

Second 1,000 (K2) Yes/No test results per region. The mean scores on the VSZT K2

achieved by last semester West, Central, and East learners were 67.8, 52.5, and 54.0,

respectively. The standard deviation of the East learners (*SD* =22.8) is the largest among the

three groups, indicating that the score differences among this group are the greatest. The opposite

is true for the West group of learners (*SD* =14.5). To determine if the differences among the

three groups were statistically significant, ANOVA was run. The results show a statistically

significant difference in the K2 average scores for the three groups. The F ratios for the total

scores of the K2 test were *F* (2, 140) = 9.060, (*p* < .000) (see Table 11). To distinguish

differences among the three groups of LS learners, Post Hoc tests using the Fisher's LSD test

were performed. The differences in the mean scores of K2 for the West LS learners were

statistically significant with those of both the Central LS and the East LS learners, (p < .000) (*p <*

.001) respectively. The differences in the mean scores between the Central LS learners and the

East LS learners were not significant (*p* =.700). Regarding the second 1,000 high frequency

words, the results show that last semester learners from the West region have significantly larger

receptive vocabulary size than participants from the West and Central regions.

Table 11

One Way ANOVA Analysis of K2 VSZT LS Group

	SS	df	MS	F	Sig.
Between Groups	6721.497	2	3360.749	9.060	.000
Within Groups	51931.555	140	370.940		
Total	58653.052	142			

Third 1,000 (K3) Yes/No test results per region. Participants from the West, Central,

and East regions took the third 1,000 high frequency VSZT (K3). One way analysis of variance

(ANOVA) was conducted to compare their average scores. The results reveal that the differences

in the K3 average scores among all three regions are not statistically significant. The F ratios for

the total scores of the K3 test were F (2, 132) = 2,368, *p* =.098 (see Table 12). However, when

the Post Hoc tests were performed, the results indicate that whereas the differences between the

mean scores of the West LS learners (*M* =51.3, *SD* =18.9) and those of the East (*M* =46.6, *SD*

=21.9) were not significant, the differences between the mean scores of the West LS learners and

those of the Central LS learners (*M* =42.1, *SD* =20.6) were statistically significant (*p* =.031). The

results show a drop in the mean scores from K1 to K3, indicating that, out of the third 1,000

words, last semester learners from all three different regions know between 40% and 50% of the total words.

Table 12

One Way ANOVA Analysis of K3 VSZT LS Group

	SS	df	MS	F	Sig.
Between Groups	1989.430	2	994.715	2.368	.098
Within Groups	55452.396	132	420.094		
Total	57441.826	134			

Fourth 1,000 (K4) and fifth 1,000 (K5) Yes/No test results per region. The mean scores on the VSZT of the fourth 1,000 high frequency words achieved by last semester West, Central, and East learners were 25.5, 24.0, and 21.7, respectively. The standard deviation of the West learners (SD =20.8) is the largest among the three groups, indicating that the score differences among this group are the greatest. The opposite is true for the Central group of learners (SD =14.5). For the VSZT of the fifth 1,000 high frequency words, their scores were West LS (M =18.3, SD =16.1), Central LS learners (M =15.0, SD =13.6), and East LS learners (M =12.6, SD =11.1).

One way analysis of variance ANOVA was used to determine if the differences among the three groups of learners were statistically significant. The results of the ANOVA show that the mean scores on both K4 and K5 VSZTs of last semester learners from all three regions were not statistically significantly different. The F ratios for the total scores of the K4 VSZT were F (2, 77) = .275, p = .760) , and the ones for the K5 VSZT were F (2, 64) = .984, (p =.379) (see Table 13).

To dismiss any pair differences among the three groups, Post Hoc using the Fisher's LSD test tests were performed. This, thus, confirmed that the mean scores of last semester students from all three regions on both K4 and K5 tests did not differ significantly from each other. These results demonstrate a remarkably drop of nearly half of the mean scores from K3 to K5, indicating that, out of the fourth and fifth 1,000 words, last semester learners from all three regions roughly know about one fourth of the total words.

Table 13

One Way ANOVA Analysis of K4 and K5 VSZT LS Group

	SS	*df*	*MS*	*F*	*Sig.*
K4					
Between Groups	188.162	2	94.081	.275	.760
Within Groups	26363.025	77	342.377		
Total	26551.188	79			
K5					
Between Groups	392.776	2	196.388	.984	.379
Within Groups	12776.201	64	199.628		
Total	13168.978	66			

Academic vocabulary (AWL) Yes/No test results per region. One way analysis of variance (ANOVA) was employed to compare the average scores of last semester students in the Academic Word List (AWL). The results indicate a statistically significant difference between West LS, Central LS, and East LS in their AWL average scores. The F ratios for the total scores of the test were $F (2, 139) = 4.185$, ($p = .017$) (see Table 14). Differences among the three groups

of LS learners were determined by performing Post Hoc tests. There is a statistically significant difference in the mean scores of AWL between the West LS learners (M =63.0, SD =14.4) and those of the Central LS learners (*M* =53.6, *SD* =19.8) (*p* =.015), as well as between the mean scores of the West LS and the East LS learners (*M* =52.8, *SD* =21.5) (*p* =.011). However, there were no differences between the mean scores of the Central LS and East LS (*p* =.843). The average test scores from academic vocabulary words presents a clear distinction among regions. The results show that participants from the three regions have different AWL receptive vocabulary size, being the one from the West region significantly larger.

Table 14

One Way ANOVA Analysis of AWL VSZT LS Group

	SS	*df*	*MS*	*F*	*Sig.*
Between Groups	2988.151	2	1494.075	4.185	.017
Within Groups	49625.173	139	357.016		
Total	52613.324	141			

Differences in Vocabulary Size (First Semester and Last Semester-Differences)

Figure 8 shows K1 to K5 and AWL VSZT mean scores for both first and last semester groups. To analyze if the differences between the mean scores of first semester and last semester students in the data were significant, Independent t-tests were conducted.

Figure 8

First and Last Semester Learners' Vocabulary Sizes
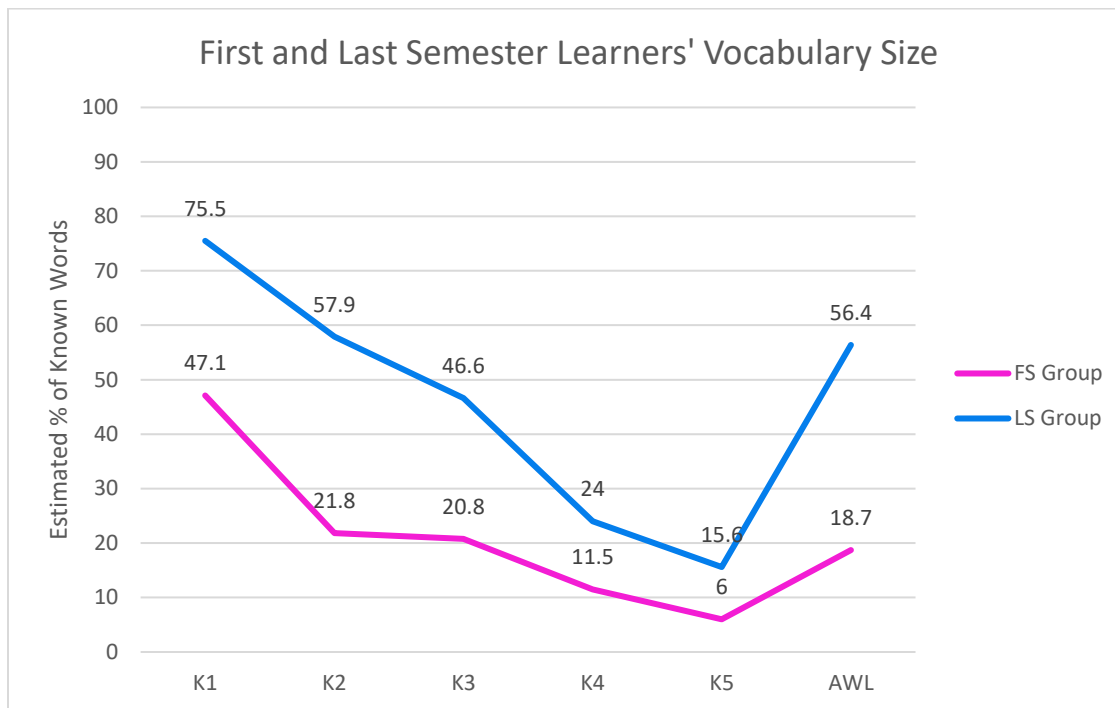
First 1,000 (K1) VSZT. An independent sample t-test was conducted to identify the differences between first and last semester learners' mean scores at the first 1,000 high frequency words. There was a statistically significant difference between the scores of both groups (*df* [282], *t* =-12.804, *p* < .000). The average score for the LS learners was greater (*M* =75.5, *SD* = 15.9) than the one for the FS learners (*M* = 47.1, *SD* = 20.8). The results suggest that participants from the last semester of the English major possess more vocabulary knowledge of the first 1,000 high frequency words than participants from the first semester do at the beginning of the major.

Second 1,000 (K2) VSZT. An independent-sample t-test was conducted to identify the differences between first and last semester learners' mean scores at the second 1,000 high frequency words. There was a significant difference between the average scores of the FS ($M =$ 21.8, $SD = 16.2$) and LS ($M = 57.9$, $SD = 20.3$) groups; t (235) = -14.468, ($p <.000$). The results suggest that, by the end of the English major, LS learners' vocabulary knowledge of K2 words is significantly greater than that of FS learners at the beginning of the program.

Third 1,000 (K3) VSZT. An independent sample t-test was conducted to identify the differences between first and last semester learners' mean scores at the third 1,000 high frequency words. There was a statistically significant difference between the scores of both groups (df (191), $t = -8.620$, $p < .000$). The average score for the LS learners was greater ($M =$ 46.6, $SD = 20.7$) than the one for the FS learners ($M = 20.8$, $SD =14.6$). The results suggest that participants from the last semester of the English major possess more vocabulary knowledge of the third 1,000 high frequency words than participants from the first semester.

Fourth 1,000 (K4) VSZT. An independent-sample t-test was conducted to identify the differences between the average scores of first and last semester learners in the fourth 1,000 high frequency words. There was a significant difference between the average scores of the FS ($M =$ 11.5, $SD = 9.0$) and LS ($M =24.0$, $SD = 18.3$) groups; t (105) = -3.389, ($p < .001$). The results suggest that LS learners know more vocabulary from the K4 high frequency words than FS learners.

Fifth 1,000 (K3) VSZT. An independent sample t-test was conducted to identify the differences between the average scores of first and last semester learners in the fifth 1,000 high frequency words. There was a statistically significant difference between the scores of both

groups (*df* (83), *t* = -2.826, *p* < .006). The average score for the LS learners was greater (*M* = 15.6, *SD* = 14.1) than the one for the FS learners (*M* = 6.0, *SD* =5.9). The results suggest that participants from the last semester of the English major possess more vocabulary knowledge of the fifth 1,000 high frequency words than participants from the first semester.

Academic Word List (AWL) VSZT. An independent-sample t-test was conducted to identify the differences between first and last semester learners' average scores for academic vocabulary. There was a significant difference between the average scores of the FS (*M* = 18.7, *SD* = 13.2) and LS (*M* = 56.4, *SD* = 19.3) groups; *t* (233) = -16.457, (*p* < .000). The results suggest that, by the end of the English major, LS learners master more academic vocabulary than FS learners at the beginning of the program.

Table 15 shows descriptive statistics as well as the results of the six different independent t-tests that were conducted for both groups at each vocabulary level.

Table 15

Summary of Independent Sample T-test for K1-K5 and AWL First and Last Semester Groups

Outcome	First Semester			Last Semester					
	M	*SD*	*N*	*M*	*SD*	*N*	*T*	*df*	*P*
K1	47.1	20.8	149	75.5	15.9	135	-12.804	282	.000
K2	21.8	16.2	94	57.9	20.3	143	-14.468	235	.000
K3	20.8	14.6	58	46.6	20.7	135	-8.620	191	.000
K4	11.5	9.0	27	24.0	18.3	80	-3.389	105	.001
K5	6.0	5.9	18	15.6	14.1	67	-2.826	83	.006
AWL	18.7	13.2	93	56.4	19.3	142	-16.457	233	.000

Chapter V: Discussion

In light of the crucial role that vocabulary knowledge, and notably vocabulary size, pose for attaining English proficiency, the main purpose of this study was to measure and report vocabulary sizes of Salvadoran English majors to evaluate whether their scores match those that the literature suggests suitable for English proficiency. I began this paper by calling attention to the low level of English proficiency in El Salvador as well as the lack of English proficiency growth in the Latin American region over the past three years. The results in the present study lend strong support to perhaps one of the principal explanations for Salvadorans and Latin Americans' lagging.

Research Question 1

What is the vocabulary size of Salvadoran first semester students in the English major at higher education institutions? In answer to the first question, results indicate that on average, students from the FS group possess a vocabulary size of approximately 1,259 words from the first five 1,000 high frequency words and academic vocabulary. The greatest overall average score among FS groups was 52.6% (about 526 words) on the K1 level by participants from the West campus. FS learners' performance was significantly different only on the first 1,000 high frequency words test. Differences in performance were not found on the other four 1,000 high frequency word tests (K2 to K5) or on the academic vocabulary test. The fourth and fifth 1,000 high frequency word tests yielded the lowest scores, with overall averages ranging from 1.5% to 12.8% among regions. The overall averages for K4 and K5 were 11.5% and 6.0 %, respectively. However, it appears that, approximately seven or eight weeks after entering university, FS learners in average know 18.7% of the headwords from the academic words list. The greatest

overall average per campus was 19.3% by participants from both the Central and East campuses. These results are relatively higher than those obtained on the K4 and K5 tests, which also makes this an important finding in view of the specialist nature of academic vocabulary that defines its frequency.

In contrast with high frequency lexicon that is easily encountered in everyday language use, recalling Snow and Uccelli's (2009) as well as Schleppegrell's (2001) words, the features of academic vocabulary satisfy the demands of English academic register that everyday language would not meet, thus contributing to the density and abstraction of academic texts. One question is salient in light of these results: What makes first semester English majors know more academic words than words from the K4 and K5 high frequency levels? Several considerations are involved to provide a response for this question. First, let us remember that there is ongoing debate as to how large the group of high frequency words is, but acknowledging Nation's (2001/2013) position, K4 and K5 word lists fall into the mid frequency words group, and as Webb and Sasao (2013) stated, except for advanced learners, knowledge of the fifth 1,000 word level is challenging for all. Therefore, first semester learners' scores on the K4 and K5 are as they might be expected.

Second, researchers have found that English-Spanish cognates — words with semantic and/or orthographic similarities— are prominent in academic texts (Bravo et al., 2007; Carlo et al., 2004; Martinez, 1994). According to Lubliner and Hiebert's (2011) frequency analysis, "seventy five percent of the AWL headwords are cognates, most of which are more common in Spanish than in English" (p.20). Among this category of cognates, the authors list "acquire, demonstrate, interpret, and motive" as example words that are part of the English academic

register, but which Spanish counterparts "adquirir, demostrar, interpretar, and motivo" are high frequency used words. From a historical standpoint, Lubliner and Hiebert (2011) attribute such phenomenon to the Latin bound roots of both English and Spanish, resulting in an advantage for Spanish-speaking learners to acquire knowledge of academic vocabulary. Arteagoitia and Howard (2015) further support this position as they suggest that Spanish knowledge represents an advantage to "unlock" word meanings, specifically of those that are infrequently used in English oral communication, but which Spanish cognates are commonly used. Adopting this position provides an explanation for the results that FS learners obtained in the AWL test compared to those on the K4 and K5 frequency levels, even in light of the procedure followed to construct each test list in which cognates were eliminated.

The findings also demonstrate a consistent decreasing pattern, noticeable not only in terms of average scores but also in terms of sample size across the first five 1,000 frequency tests (see Table 15). The largest vocabulary sizes from the FS group are found in the K1 frequency level with 12.7% of the total raw scores ranging above 74%. The largest sample is found in the K1 frequency test, as well, with a total number of 149 subjects. Fluctuations in the sample size are due to a data analysis judgement that was made based on the following arguments: (1) Meara (1992) asserts that unreliable test scores result from participants who either responded "Yes" to more than ten false words or from those whose number of total "Yes" responses to real words was below ten; (2) based on the assumption that the participants' scores were unreliable, then their performance is not meaningful to be included in data analysis since consideration of such scores may either overestimate or underestimate the final results.

It seems that FS learners' performance is related to the vocabulary frequency level, and therefore, a consistent means drop is observed from K1 to K5. Additionally, this further provides a nuance account for different proficiency levels among each group of first semester learners; it has been proved that the Yes/No test as a placement tool differentiates between low and intermediate level proficiency (Lam, 2010). The increase of unreliable scores across the five frequency levels is presumably the result of these levels largely extending over the existing vocabulary size of the participants; thus, as they moved from frequency level to frequency level, more "guessing" occurrences as well as fewer "Yes" responses were noticed, subsequently affecting the sample size. According to Meara (1992), proficiency in the high frequency levels can be accounted by a score of 75% or higher in the Yes/No test, whereas a number of "Yes" answers below ten means that "the test is just too hard" (p. 13) for the learners.

Research Question 2

What is the vocabulary size of Salvadoran last semester students in the English major at higher education institutions? Results suggest that by the time Salvadoran English majors are in the last semester of their program, their vocabulary size is, on average, of approximately 2,760 words from the first five 1,000 high frequency words and academic vocabulary. The first and second 1,000 high frequency word tests along with the academic vocabulary tests yielded the highest average scores, whereas K4 and K5 present the lowest scores among and within LS groups, thus following the same pattern observed with FS students. However, as opposed to what is expected from FS group scores at the fourth and fifth 1,000 high frequency levels, LS learners are considered advanced learners, and these two levels should not be challenging for them (Webb & Sasao, 2013). Differences in performance were found on the K1 to K3 levels as

well as on academic vocabulary, with the LS group from the West region achieving the highest scores.

Participants from the LS group of this study are assumed to be qualified to, among others, teach English in El Salvador after graduation. However, Meara (1992) asserts that whereas learners whose scores on the first 2,000 high-frequency levels are below 75% may possess the ability to manage specific yet very limited situations, the lack of knowledge of these basic words in their vocabularies affect their fluency, and therefore they "…are not really functional in English" (p.4). For learners to be regarded as proficient in the high-frequency word bands, according to Meara (1992), their scores in the yes/no tests must be 75% or higher. It is important to mention that few participants from the LS group have probably mastered the first 3,000 high-frequency words after nine semesters in the English program. Raw scores indicate that 61.5% of the participants (n = 135) on the K1 high frequency words scored 75% or higher, whereas only 20.9% of the participants (n = 143) on the K2 level and 11.9% of the participants (n = 135) on the K3 level achieved similar scores.

Furthermore, even though academic vocabulary is among the tests that yielded higher scores with an overall average of 56.4%, only 20% of the participants (n =142) achieved a score of 75% or higher. As it was mentioned earlier, on the assumption that Spanish-speaking learners have some sort of advantage to attain academic lexicon knowledge due to the Latin relatedness of English and Spanish (Lubliner & Hiebert, 2011; Arteagoitia & Howard, 2015), LS learners' average scores on the academic test fall short of what might be expected. The findings also show that LS learners display a similar decreasing pattern to that of FS learners, yet, for them, the most significant drops were found on scores and sample sizes of both K4 and K5 tests.

On the one hand, these findings provide evidence of a positive outcome as they demonstrate vocabulary size growth across a five-year span. On the other hand, they also give insight about two important caveats. First, in light of vocabulary size growth evidence, determining what the vocabulary growth rate is, is crucial so that realistic vocabulary goals as well as vocabulary learning plans may be established for English majors in El Salvador. For Webb and Chang (2012) learning approximately 400 word families per year is doable for L2 learners. Under this expectation, English learners would need up to eight years to merely learn the first three 1,000 high frequency words without even including academic vocabulary, and yet the academic literature proves that, even after over six years of English instruction, mastery of the first 2,000 word families is deficient among EFL learners from different contexts (Webb & Chang, 2012; Henriksen & Danelund, 2015; Nguyen & Webb, 2017). On this basis, LS learners' scores mirror those of previous studies and are somewhat justified (since participants from previous research were not necessarily English majors), but this simultaneously suggest a slow vocabulary growth rate to which attention needs to be paid.

Second, considering that the TOEFL test is essential for getting English teaching licensing/certification in El Salvador, and that scores of over 500 points in the paper base TOEFL test, are a graduate requisite for some English majors in El Salvador, makes the LS learners results remarkably informative. Let us remember that Laufer and Ravenhorst-Kalovski (2010) suggest that knowledge of 4,000–5,000 provides a coverage of about 95% of a text, which is the minimal threshold for adequate comprehension. Additionally, Chujo and Oghigian (2009) estimate that knowledge of the most frequent 5,000 word families is needed to achieve 95% of the running words in the TOEFL paper-based (PBT), and although they state that 4,000 word

families account for 95% coverage in the TOEFL iBT version, Kaneko (2015) estimates that

6,000 word families account for 98% coverage of the listening and reading sections of the iBT

version. Adopting these estimates means that Salvadoran English majors may need a vocabulary

size of about 4,000 to 6,000 words to meet the TOEFL requirement either if what they seek is

graduation or to become English teachers. These findings, then, reveal that it may be the case

that only few participants from the LS group may possess adequate, or at least the minimal,

vocabulary size that suffice the demands that English majors may face by the end of their

program.

Research Question 3

What is the difference between vocabulary size of Salvadoran first and last semester

students in the English major? This question was answered by looking at overall average scores

of both FS and LS groups. On average, the vocabulary size difference between both groups is of

nearly 1,500 words. Based solely on this figure, it can be assumed that as they advance in the

English major, Salvadoran learners gain knowledge of about 167 words per semester; of course,

the fidelity of such claim is questionable in view of the novelty of this project and the sample

size distribution across the different vocabulary frequency levels tested in this study.

As noted earlier, the results obtained by both groups are supporting evidence of vocabulary

size differences and therefore growth. Regardless of both groups displaying the same pattern of

decreasing average scores as they progressed through the different vocabulary levels, vocabulary

size differences seem not to be neither compromised on the first 3,000 high frequency word

levels nor on the academic vocabulary test; the gap difference narrows between both groups

when looking at average scores for the fourth and fifth 1,000 word levels. What can be noted is

that the point of comparison would not be fair given the fact that sample sizes, are completely different for both groups at all levels at this point. Still these results shed light on important considerations for English majors. Meara and Milton's (2003) Swansea Levels Test (XLex) suggests vocabulary size scores to Cambridge EFL exams that align with the different levels of the Common European Framework of Reference for Languages (CEFR) (as cited in Milton & Alexiou, 2009, p. 198). If I were to adopt their suggested ranges, the vocabulary size estimate corresponding to FS learners in this study, place them at the A1 level (<1500), while the vocabulary size estimate for the LS participants, place them at the B1 level (2750-3750) of the CEFR (Milton & Alexiou, 2009, p. 198). This later statement, thus, correlates to information from the English First English proficiency Index (EF EPI) (2018) report presented in the rationale of this study.

Pedagogical Implications

This study sought to describe the lexical ability that first and last semester English majors possess by reporting an estimation of vocabulary sizes. Consistent with findings from previous research conducted on vocabulary size measures, these results demonstrate that English proficiency is low among Salvadoran English majors. While vocabulary size is not the only contributing factor explaining such proficiency, research proves that it is a crucial one for English proficiency and academic success, and therefore actions should be taken to catalyze vocabulary development.

I want to use the evidence that this study yielded to advocate for vocabulary learning goals to be set as part of the English majors' profile. It is evident that the English curriculum for Salvadoran English majors requires a systematic and balanced focus, in which vocabulary

teaching and learning, in combination with existing practices, take a stand. To achieve this, research is essential. A starting point involves continuous vocabulary size measures, so that sound research-based decisions are made at both the institutional and personal levels. The major benefit of conducting these measures is their rendering of vocabulary size estimations that would build up realistic vocabulary learning goals, pedagogical practices, and vocabulary learning strategies, thus optimizing learning and English proficiency in the country.

Once vocabulary learning goals are set, it is important to work towards the creation of meaningful word knowledge development, which may be a daunting task for English educators in EFL contexts. As educators, even if we would like to, we cannot teach everything, especially when it comes to teaching vocabulary that is a dynamic construct. Working towards a systematic and balanced curriculum also implies focusing on encouraging independent learning. There should be a focus on vocabulary learning strategies that would guarantee that English majors would be able to independently and continuously work on the expansion (breath) of their vocabulary sizes and their mastery of all the components involved in word knowledge (depth). Nation's (2001/2013) framework of the four strands may serve as a useful asset to guide teaching and learning through the different aspects involved in knowing a word; its adoption may signify the beginning of a more systematic vocabulary program for English educators and English majors geared towards meaningful word knowledge development in El Salvador.

Limitations

The present study aimed data collection from a large enough sample size in order to guarantee representation and generalization. Even though the total number of vocabulary size tests collected for first and last semester learners was of 162 and 150, respectively, there were

unreliable test scores that were not included in the data analysis. This resulted in significant

sample size fluctuations across the different vocabulary levels included in the battery of

vocabulary size test (VSZT), and therefore have an impact on the representation and

generalization of the Yes/No test results. Additionally, the procedure followed for the selection

of lexical choices for each Yes/No test that disregarded the incorporation of cognates into each

test could represent variability of scores, resulting in either overestimating or underestimating of

the participants' current vocabulary size.

Furthermore, decisions such as the use of the Yes/No test, the exclusion of unreliable test

scores for data analysis as well as certain information acknowledged in this study were grounded

on previous research assumptions that may be a source of disagreement or even questioning of

the reliability of the findings. Lastly, in hopes of fulfilling the gap in the Salvadoran L2

literature, this study is the first effort that has been made to measure and report receptive

vocabulary size estimates of English majors in El Salvador, which means that validation of the

results is not perfect since most of the existing literature that has conducted vocabulary measures

has been made with EFL learners and not with English majors , as it is the case of this study.

Suggestions for Further Research

This study becomes the foundation for further research in relation to vocabulary size

estimates for Salvadoran English majors. The findings are not conclusive, and it is ideal to refer

to them as preliminary results; further research with a larger sample size should be the next step.

Replication of this study and further research on vocabulary size differences is also fundamental

to validate the fidelity of these results. I make a call for higher English institutions and English

educators in El Salvador to combine their efforts in the continuation of a more elaborated and

planned research study that yields more information about vocabulary sizes and knowledge in order to optimize English learning in our country.

Chapter VI: Conclusion

In this study, I have reported rough estimates of vocabulary size of first and last semester Salvadoran English majors studying their programs at three different campuses from the three most representative regions of the country. Meara's (1992) Yes/No test was used to conduct the vocabulary size measure receptive knowledge of the first five 1,000-word frequency levels of the British National Corpus (BNC)/ Corpus of Contemporary American English (COCA) as well as of academic vocabulary. Nation's (2012) BNC/COCA word lists 1-5 and Coxhead's (2000) Academic Word List (AWL) were utilized for tests creation.

The results suggest that even though there are vocabulary size differences between both groups of learners, last semester learners' average scores do not meet those proposed by the academic literature to be considered proficient users of the English language. Learners' performance from both groups was higher at the first 1,000 high frequency level, whereas the lowest scores are observed in the fourth and fifth 1,000 levels for both groups. It appears that there is a slow vocabulary growth rate, and attention should be paid to the lexical ability that each of the competences that English majors are expected to demonstrate at the end of their programs require, ensuring that they will meet them by the time they graduate. Further research is necessary for the establishment of vocabulary learning goals as well as for the creation of a more systematic and balanced English curriculum with a focus on vocabulary development for English majors in El Salvador.

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Appendices

Appendix A: Yes/No VSZT

VSZT-SetA 1KA   X

Instructions: Read each word and then click 'Yes' if you know the word or 'No' if you don't know it.
Once you're done, click on 'Finish and Start Next Test' to continue.

Finish and Start Next Test

#	Word	Yes	No	#	Word	Yes	No	#	Word	Yes	No
1.	obey	○ Yes	○ No	21.	thristy	○ Yes	○ No	41.	nonagrate	○ Yes	○ No
2.	expect	○ Yes	○ No	22.	large	○ Yes	○ No	42.	accident	○ Yes	○ No
3.	common	○ Yes	○ No	23.	shine	○ Yes	○ No	43.	sadly	○ Yes	○ No
4.	balfour	○ Yes	○ No	24.	door	○ Yes	○ No	44.	grow	○ Yes	○ No
5.	lannery	○ Yes	○ No	25.	red	○ Yes	○ No	45.	plate	○ Yes	○ No
6.	hold	○ Yes	○ No	26.	love	○ Yes	○ No	46.	pull	○ Yes	○ No
7.	enough	○ Yes	○ No	27.	oxylate	○ Yes	○ No	47.	degate	○ Yes	○ No
8.	bath	○ Yes	○ No	28.	birth	○ Yes	○ No	48.	gummer	○ Yes	○ No
9.	christian	○ Yes	○ No	29.	succeed	○ Yes	○ No	49.	cantileen	○ Yes	○ No
10.	warm	○ Yes	○ No	30.	song	○ Yes	○ No	50.	tooley	○ Yes	○ No
11.	radling	○ Yes	○ No	31.	free	○ Yes	○ No	51.	father	○ Yes	○ No
12.	speed	○ Yes	○ No	32.	lip	○ Yes	○ No	52.	contortal	○ Yes	○ No
13.	lapidoscope	○ Yes	○ No	33.	path	○ Yes	○ No	53.	too	○ Yes	○ No
14.	glande	○ Yes	○ No	34.	wake	○ Yes	○ No	54.	channing	○ Yes	○ No
15.	dowrick	○ Yes	○ No	35.	mundy	○ Yes	○ No	55.	damage	○ Yes	○ No
16.	book	○ Yes	○ No	36.	sew	○ Yes	○ No	56.	dogmatile	○ Yes	○ No
17.	business	○ Yes	○ No	37.	troake	○ Yes	○ No	57.	grey	○ Yes	○ No
18.	money	○ Yes	○ No	38.	lauder	○ Yes	○ No	58.	aistrope	○ Yes	○ No
19.	poor	○ Yes	○ No	39.	system	○ Yes	○ No	59.	different	○ Yes	○ No
20.	joke	○ Yes	○ No	40.	new	○ Yes	○ No	60.	retrogradient	○ Yes	○ No