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Kimmerly Harrell  
*University of Central Florida*



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THE EFFECTS OF THE VOCABULARY SCENARIO TECHNIQUE- ENGLISH LEARNER  
PEER PROTOCOL ON NINTH GRADE ENGLISH LEARNERS  
WHO STRUGGLE WITH LITERACY

by

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for the degree of Doctor of Philosophy  
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at the University of Central Florida  
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## ABSTRACT

Recent data have shown that only 34% of eighth graders and 37% of 12<sup>th</sup> graders were reading at or above proficiency (NAEP, 2015). A total of 21% of Hispanic eighth graders were reading at or above proficiency, and only 25% of Hispanic 12<sup>th</sup> graders were reading at or above proficiency. Of African-American students, 16% of eighth graders and 17% of 12<sup>th</sup> graders were reading at or above proficiency. In order for adolescents to become successful and productive adults, they need to acquire advanced literacy skills. Many of these demands require an education beyond high school (Rothman, 2012).

Concern for English learners (EL) is even more warranted due to the fact that they represent the fastest growing school-age population in the United States and tend to exhibit lower academic achievement than their non-EL peers (Matthews & Ewen, 2006; National Clearinghouse for English Language Acquisition [NCELA], 2006; Padolsky, 2005; Thomas & Collier, 2001; Klingner, Artiles, & Barletta, 2006).

To address this issue, the present study was conducted to examine the effects of a Vocabulary Scenario Technique English Learner Peer Protocol (VST-ELP) with ninth-grade English learners (ELs) who were struggling with literacy. The technique's purpose was to increase students' vocabulary in order to improve their listening, speaking, reading, and writing skills. The study employed an experimental design, specifically a pre-test/post-test comparison group design with a total of 34 participating students and one classroom teacher. The study was conducted over four weeks with six hours of intervention.

An analysis of variance revealed that there was an increase in mean scores from pre to post in the experimental group on both the synonym and sentence tests. Findings suggest that the

Vocabulary Scenario Technique English Learner Peer Protocol (VST-ELP) was effective with ninth-grade EL students who were struggling with literacy. Clinical implications and future research directions were discussed.

To my Uncle Darryl C. Walker. If you were here, I know you would be beyond excited to drive to Orlando for my graduation (with Grandma fussing at you the whole way). It still hurts. I miss you dearly. I know I have made you proud.

To my friend and brother, Dr. Willys G. Michel. A life well lived.

To one of my many mentors, Dr. Lennette J. Ivy. I wish I could have completed all of this before you got called home. I hope I have made you proud. I will continue to carry the torch.

“Don’t get mad. Don’t get even. Do better. Much better. Rise above.  
Become so engulfed in your own success that you forget it ever happened.”

-Donald Driver

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## CHAPTER 1 THE PROBLEM AND ITS CLARIFYING COMPONENTS

### Introduction

This study was conducted to explore the effects of a Vocabulary Scenario Technique English Learner Peer (VST-ELP) Protocol for ninth-grade English Learners (ELs) who struggled with literacy. The focus of this technique was to increase the students' vocabulary in hopes of improving their reading comprehension skills. This chapter presents the statement of the problem, purpose of the study, theoretical framework, research questions/hypotheses, significance of the study, limitations, delimitations, assumptions, and operational definitions.

### Statement of the Problem

Concern for adolescent literacy achievement is warranted with English learners (EL). English learners represent the fastest growing school-age population in the United States and have been projected to represent over 40% of the school age population by the year 2030 (Matthews & Ewen, 2006; National Clearinghouse for English Language Acquisition [NCELA], 2006; Padolsky, 2005; Thomas & Collier, 2001). English learners tend to exhibit lower academic achievement (particularly in literacy) than their non-EL peers (Klingner, Artiles, & Barletta, 2006). By the time ELs enter high school, they lag far behind their classmates in literacy accomplishments (Koelsch, 2006). According to the 2015 National Assessment of Education Progress (NAEP) data, only 21% of Hispanic 8th graders scored at the proficient or above reading level (NAEP, 2015). For 12th grade Hispanic students, only 25% scored at the proficient or above reading level (NAEP, 2015). The consequences of limited reading proficiency can be significant; involving limited academic success, fewer employment opportunities, financial

difficulties, and a challenging overall existence in society. These data reveal that there is a need for interventions to assist ELs in achieving academic proficiency. But, despite the need for interventions, researchers have found that there are also some challenges in developing the appropriate interventions to ensure literacy attainment for EL students.

Short & Fitzsimmons (2007) listed six major challenges to improving adolescent EL literacy: (a) lack of common criteria for identifying ELs and tracking their academic performance, (b) lack of appropriate assessments, (c) inadequate educator capacity for improving literacy in ELs, (d) lack of appropriate and flexible program options, (e) inadequate use of research-based instructional practices, and (f) lack of a strong and coherent research agenda specifically about adolescent EL literacy. Out of the six challenges, there are four that I will address for the context of this study.

The first challenge, lack of criteria for identifying ELs, makes it difficult to determine who students are and what they need to be successful (Short & Fitzsimmons, 2007). Individual states vary in their definitions of English learners, some may use the term English language learners (ELL), while others use the term EL (Short & Fitzsimmons, 2007). The federal government uses the term limited English proficient (LEP) to describe English learners (U.S. Department of Education, 2005). If a student is identified as LEP, this means that they were born outside of the United States, speak a language other than English in the home, and has not met the sufficient mastery of English required for a English-language classroom (U.S. Department of Education, 2005). However, some states may have varying definitions and use the terms ELL or EL to refer to this body of students (Short & Fitzsimmons, 2007). Other states may define

students as those who are eligible for language services or as those who are actually receiving services (Short & Fitzsimmons, 2007).

The second challenge deals with inappropriate assessments being used to determine if ELs are making progress or not. The typical standardized tests that examine academic knowledge are commonly not sensitive to second language acquisition (Short & Fitzsimmons, 2007).

Without effective assessments, teachers are confronted with separating students' difficulties in acquiring English from difficulties that may be connected to their educational background and native language literacy skills (Short & Fitzsimmons, 2007).

The third challenge relates to educators having very little professional development for teaching literacy to adolescent EL students. Skillful educators are needed so that they can help adolescent EL students gain literacy skills in the content areas. The fourth challenge is one of program options. Schools are faced with the responsibility of helping adolescent EL students become proficient in English and meet the high school graduation requirements in a short amount of time. Most ELs require four to seven years of instruction in order to reach the average performance of native English speakers (Collier, 1987; Short & Fitzsimmons, 2007). Our educational system is designed on the traditional four-year high school model for all students; whereas, EL students might benefit from a more flexible plan such as a five-or six-year option for high school (Callahan, 2005; Short & Fitzsimmons, 2007). The fifth challenge addresses the limited use of evidence-based research practices. Unfortunately, there is a dearth of research on effective instruction for adolescent EL students; however, recommendations can be prepared based on the present available evidence and promising practices (Short & Fitzsimmons, 2007). The sixth challenge, the lack of strong and coherent research agendas for adolescent EL literacy,

is closely related to the fifth. The National Reading Panel (2000) conducted a review of research on areas relevant to adolescent EL literacy and found that of 450 studies, only 17 addressed instruction for EL students and fewer than that addressed adolescent EL students. Out of those studies, a major area that was emphasized was vocabulary acquisition.

The vocabulary research on ELs shows that vocabulary acquisition plays the most crucial role in learning English language as well as in school achievement (August, Carlo, Dressler, & Snow, 2005). Vocabulary is the foundation of school success for EL students and native English speakers as well as (Calderon, Slavin, & Sanchez, 2011). Many students of poverty, students who struggle with reading, and ELs come to school with vocabularies half the size or less of those of their classmates (Rupley & Slough, 2010). There is significant discrepancy between English speaking only students (EO) and ELs in English language vocabulary size (i.e., breadth of vocabulary knowledge) (Chung, 2012). Estimates of the receptive vocabulary size of EOs before receiving formal school instruction vary from 5,000 to 7,000 or even 10,000 words (Biemiller & Slonim, 2001; Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006, Chung, 2012; Graves, 2007). Estimating the vocabulary size of ELLs poses a great challenge because of higher number of individual variables (Chung, 2012). Graves (2006) suggested that an estimate of 3,000 to 6,000 English words is reasonable for ELs' vocabulary size. Unfortunately, this disparity in breadth of vocabulary knowledge increases with time (Blachowicz et al., 2006; Kieffer & Lesaux, 2007). Also, another concern is the fact that ELs lag behind EOs in their depth of vocabulary knowledge (Chung, 2012; Gass & Selinker, 2008). Vocabulary knowledge can be described as the knowledge of a word not only by definition, but also by how that word fits into

the world (Stahl, 2005). Depth of vocabulary knowledge refers to literal meanings, connotations, antonyms, synonyms, morphological forms, and syntactical forms.

Depth of vocabulary is also a concern with EL high school and college students. According to Laufer and Yano (2001), high-school EL graduates and EL college students know less than 25% of the vocabulary of their native English speaking peers. English language learning college students may face numerous challenges in reading, writing, speaking, and listening at the college level (Lei, Berger, Allen, Plummer, & Rosenberg, 2010). Vocabulary knowledge affects not only reading comprehension but also oral comprehension (Chung, 2012). Reading comprehension requires students to be able to read, interact with a text, and then take away meaning from that text (Solis, Ciullo, Vaughn, Pyle, Hassaram, & Leroux, 2010). Oral comprehension is when students have the ability to listen to and understand what is being presented to them through spoken words and sentences (Chung, 2012). Vocabulary knowledge enables listeners to identify syntactic relationships, a requirement for sentence comprehension (Chung, 2012). Academic vocabulary, however, is more challenging to learn than conversational language, it is the type of vocabulary that is found in content areas such as math, social studies, science and language arts (Sibold, 2011). Academic vocabulary tends to be specific and sometimes abstract, making it difficult for ELs to grasp (Sibold, 2011). Cummins (1979) introduced a concept that helped to draw attention to the academic language struggles of EL students. The cognitive academic language proficiency (CALP) detailed the challenges that ELs face as they work to catch up with their peers in academic aspects of school (Cummins, 1979, 2008). While all students can acquire basic interpersonal communicative skills (BICS) regardless of their academic capacity, CALP requires students to be able to understand and express (oral

and written) concepts and ideas (Cummins, 2008). In other words, CALP can be considered the intersection of thought and language (Bylund, 2011; Vygotsky, 1986).

Just as other adolescents, EL adolescents need explicit instruction in order to learn vocabulary. Knowledge of words, word parts, and word relationships are critical if students are to understand the topics that are being addressed in their content area classes (Graves, 2006). Many EL students, as well as non EL students, lack background knowledge of the topics that are taught in middle and high school content classes (Short & Fitzsimmons, 2007). Background knowledge is what students know from personal experience, school, or other experiences they may have from other countries. Moll, Amanti, Neff, & Gonzalez (1992) defined the term “funds of knowledge” to describe the process of educators understanding the rich culture that students bring from their homes and communities into the classroom. These funds of knowledge can provide meaningful, culturally responsive lessons that drawsl on the students’ prior knowledge (Moll et al., 1992). Vocabulary and background knowledge are both critical factors in reading comprehension (Kamil et al., 2008). They both mediate the extent to which other reading comprehension behaviors are utilized (Cromley & Azevedo, 2007). The Common Core State Standards (CCSS, 2010) emphasize the use of complex text which requires students to discuss concepts, provide evidence, and support their claims. Students’ ability to do so depends largely on the vocabulary and background knowledge they bring to the text. Therefore, attention to vocabulary acquisition in EL adolescents is critical.

A step toward effective change to increase adolescent literacy rates is the development of empirically based strategies to encourage students’ reading comprehension skills (Biancarosa & Snow, 2006; Moore, Bean, Birdyshaw & Rycik, 1999). Limited vocabulary knowledge is a

potential cause of reading comprehension difficulties, especially among adolescent struggling readers, whether ELs or native English speakers (e.g., Bailey, 2006; Biancarosa & Snow, 2006; Chall & Jacobs, 2003; Fillmore, 1982; National Institute of Child Health and Human Development [NICHD], 2000; RAND Reading Study Group, 2002; Stahl & Nagy, 2006; Valdes, 2000).

### Purpose of the Study

The primary purpose of this study was to examine the effectiveness of a direct, explicit method of teaching vocabulary, specifically designed for ELs to obtain comprehensible input (Krashen, 1981) through the use of peers. The protocol is named the Vocabulary Scenario Technique-English Learner Peer Protocol (VST-ELP, 2015). Instructional approaches with vocabulary have varied in the amount of emphasis placed on the explicitness or implicitness for teaching specific words, the types of vocabulary taught, and the depth and breadth of the words taught (Taboada, 2009). Explicit teaching of vocabulary words generates rich language contexts in which students are exposed to words on frequent occasions and where word awareness is created through the explicit focus on words (Taboada, 2009). Explicit vocabulary instruction happens when students are given definitions or other characteristics of words to be learned (National Reading Panel, 2000). Therefore, this study was conducted to examine another means of explicit vocabulary intervention in order to add additional empirical research to the field of EL adolescent language and literacy acquisition.



## Theoretical Framework

This theoretical framework will introduce and describe the theories that explain the basis for this study. It will look at the importance of vocabulary to literacy development, the explicit teaching of vocabulary, and instructional dosage.

### Importance of Vocabulary to Reading Comprehension

Vocabulary knowledge is key to literacy development (Beck, McKeown, & Kucan, 2013; Bromley, 2007). Literacy entails reading, speaking, listening and writing (CCSS, 2010), and vocabulary can be connected to proficiency in all areas of literacy (Berne & Blachowicz, 2008). Vocabulary has an impact on reading fluency and reading comprehension. Reading fluency is comprised of accuracy, smoothness, and pace (Montgomery & Hayes, 2005). Students who are fluent readers draw from a larger vocabulary and are able to read at a quicker pace (Bromley, 2007). For students who have smaller vocabularies, reading is often laborious (Montgomery & Hayes, 2005). Having a strong vocabulary is critical for reading comprehension. Reading comprehension and vocabulary have a reciprocal relationship: vocabulary is necessary for comprehension, and comprehension is necessary to broaden vocabulary (Bromley, 2007; Kieffer & Lesaux, 2007).

In a meta-analysis of 31 studies Scammacca et al. (2007), summarized findings from research on reading instruction for adolescent readers. These studies were synthesized to determine the effectiveness of the interventions for adolescents and to identify the implications of the findings. Of the 31 studies, five examined vocabulary interventions. Scammacca et al.,

(2007) determined that vocabulary interventions had the largest overall effect size, meaning that the vocabulary interventions were successful in improving vocabulary acquisition.

The meta-analysis produced several implications for practice. One in particular was that it is not too late to intervene with adolescents; and older students can benefit from participating in interventions (Scammacca et al., 2007). Another implication was older students who have reading difficulties benefit from interventions that focus at the word text level (Scammacca et al., 2007).

The last implication to be mentioned is that older students who have reading difficulties can benefit from improved knowledge of word meanings and concepts (Scammacca et al., 2007). This meta-analysis provided findings that support more direct types of vocabulary instruction. The students who participated in the selected meta-analysis vocabulary intervention studies made gains due to being directly tested on the words they were taught (Scammacca et al., 2007). This implication also shows how content area teachers can see gains in student achievement by focusing some instructional time on the vocabulary that is necessary to understand the subject matter that students are expected to learn (Scammacca et al., 2007).

This meta-analysis provided research-based guidance for all of the professionals who work with adolescents who struggle with becoming literate. It acknowledges that there is work to be done with adolescents, and it recognizes the role that vocabulary plays in reading comprehension.

## Explicit Teaching of Vocabulary

Researchers have shown that explicit instruction is a practical mean of teaching vocabulary (Baumann, 2009). The National Reading Panel (2000) stated that explicit vocabulary instruction happens when students are given definitions or other characteristics of words to be learned. It involves “active, reflective, and meaningful interactions” between a student and instructor (Rupley, Blair, & Nichols, 2009) and combines opportunities for teacher/student exchanges and scaffolding. Scaffolding is the process of systematically providing support to build upon the student’s mastery of a task (Rupley, et al., 2009).

The Adult Basic Education Practitioner’s Committee (2005) stated that explicit teaching of vocabulary can be accomplished by defining new words before reading a passage. Providing vocabulary instruction before reading can help students learn the word and increase their reading comprehension (Adult Basic Education Practitioner's Committee, 2005; Khamesipour, 2015).

Goerss, Beck, & McKeown (1999) provided research that supported the concept that in order for students to learn and retain new vocabulary, they need to be involved in active learning that requires them to make associations between word learning and their experiences as well as have opportunities to practice, discuss, and apply their knowledge. Taylor, Mraz, Nichols, Rickelman, & Wood (2009) offered strategies for helping students participate in active vocabulary development in their content classrooms. Those strategies include activating prior knowledge and interest, teaching key morphemes and root words, knowledge rating (Taylor et al., 2009).

The first strategy is activating prior knowledge and interest. Activating prior knowledge before reading has been identified as a vital step in increasing students’ interest in a topic and

improving their understanding of the concepts presented in the reading (Heffernan, 2003; McKenna, 2004; Taylor et al., 2009). Activating prior knowledge helps students to make connections between the subject matter and their own personal experiences (Guthrie & Wigfield, 2000).

The second strategy is teaching key morphemes and root words. Teaching students to recognize and analyze parts of words that may be familiar to them before they read them can make vocabulary more comprehensible (Taylor et al., 2009).

The last strategy is knowledge rating. Knowledge rating (Vacca & Vacca, 2005) is a word study that gives students the opportunity to tap into their prior knowledge and assess what they know and what they need to learn. First, students are initially presented with vocabulary words they will see in their academic readings, and they are asked to assess their understanding of the words by ranking them on a knowledge rating scale (Taylor et al., 2009). Lastly, when the students read the text, they are told to refer to their initial knowledge rating scale whenever they come across words they do not recognize (Taylor et al., 2009). Each of these strategies can assist students in increasing their vocabulary skills and mastering their academic content.

Mastering academic vocabulary is vital for EL students. Nisbet & Tindall (2015) described key principles for explicit teaching of vocabulary. The first principle involves being purposeful in selecting words to teach EL students. Explicit teaching should target academic words, as those are the words students need in order to be successful with content area schoolwork (Nisbet & Tindall, 2015). The second principle consists of defining and explaining the target words in EL friendly terms. An EL friendly definition should have a vocabulary and syntactical structure that is comprehensible by EL students (Nisbet & Tindall, 2015). The third

principle focuses on drawing attention to the aspects of language: syntax, semantics, morphology, phonology, and pragmatics. When teaching new words, it is important to model the correct pronunciation to students (Nisbet & Tindall, 2015). Bringing attention to word parts and their meanings and how the word functions at the sentence level is vital as well (Nisbet & Tindall, 2015). The fourth principle suggests that learners have multiple exposures to each individual word. Word knowledge is built in increments and requires numerous exposures for a student to truly understand the word meaning (Nisbet & Tindall, 2015; Stahl & Nagy, 2006). The fifth principle encourages educators to provide as many opportunities for practice as possible across all modes of language. It is important for students to be engaged in meaningful practice that involves listening, speaking, reading, and writing (Nisbet & Tindall, 2016).

### Instructional Dosage

Understanding the level of dosage is necessary in order to affect vocabulary knowledge while still being considerate of the limited amount of time teachers have to teach vocabulary (Baumann, 2009). In the current literature, the number of word encounters ranges from 1 to 40 (Beck, Perfetti, & McKeown, 1982; Webb, 2007).

Webb (2007) examined the effects of word encounters on the vocabulary of 121 Japanese students who were learning English. This particular study examined the impact of 1, 3, 7, and 10 word encounters. The participants were randomly assigned to four separate treatment groups. The participants in treatment group 1 encountered the target word one time, the participants in treatment group 3 encountered the target words three times, the participants in treatment group 7 encountered the target words seven times, and the participants in treatment condition 10

encountered the target words ten times. In Webb's study, the comparison group did not have any exposure to the target words.

For Webb's study, dosage was observed within the context of incidental vocabulary learning through progressive word exposure treatment groups. Researchers used 10 dependent measures to assess knowledge. The analysis from this study showed that treatment group 10 demonstrated significant gains when compared to treatment group 1. Treatment group 7 produced greater learning on every measure when compared to treatment group 1. Treatment group 7 had similar gains on receptive measures, but they showed larger gains on measures of vocabulary knowledge. Treatment group 10 had significantly larger gains than treatment group 7 on four of 10 measures. Webb (2007) concluded that exposing students to 10 encounters with a word during reading might have a noteworthy impact on their vocabulary growth.

A VST (2010) pilot study used a language intensive VST protocol (VST-LI) to teach vocabulary to fourth-grade students. This study had 24 word encounters per word and six words taught per week over six weeks for a total of 36 words (dosage = 9 hours). VST-LI was intended to be used by a speech-language pathologist to explicitly teach vocabulary to students. For this study, two classrooms at an elementary school participated, each with approximately 25 students. Students were assigned to either a treatment or a control group. Another classroom was randomly selected to participate in a pre-test, post-test validation group in order to vet the synonym and sentence measures that were used in the study.

The data analysis from this study showed that the treatment group had results that were statistically significant,  $F(1, 41) = 27.68, p < .001$ , partial eta-squared = .40. Because of the statistical significance of the treatment, VST-LI showed potential as a feasible instruction

method to teach vocabulary. Even with the significance of the VST-LI treatment, there was concern that an approach with this much intensity may not be practical for teachers to implement in their classrooms.

Spielvogel (2011) conducted a VST study with a less intensive protocol. The VST language sensitive (VST-LS) had 14 word encounters per word with eight words being taught over a four-week period for a total of 32 words (dosage = 6 hours). This study was also conducted at an elementary school. In the VST-LS, the reduced word encounters in the protocol allows for teachers to teach more words per week and still give students the opportunity to have multiple encounters with each word through listening, speaking, reading, and writing.

The data analysis from this study showed that there was a statistically significant difference in the post-test scores for the synonym measure,  $F(1, 35) = 14.76, p < .001$ , and the sentence measure,  $F(1, 34) = 43.66, p < .001$ , between the treatment and control groups. The participants in the treatment group on average scored higher on both the synonym and sentence measures than the participants in the control group.

The results from these studies were encouraging and show that explicit vocabulary instruction can be beneficial for all students who are acquiring new vocabulary. The present study also set out to establish that explicit vocabulary instruction was vital, particularly for students who were also learning English as a second language.

### Research Questions and Hypotheses

The researcher conducted the study to answer the following two research questions with corresponding hypotheses:

Research Question 1: When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a multiple-choice synonym test than EL ninth graders who are taught using typical vocabulary instruction by a ninth-grade ESOL teacher?

Hypothesis 1: Ninth-grade EL students who participate in the VST protocol will demonstrate a greater gain on multiple-choice synonym test than ninth-grade EL students who participate in vocabulary instruction used by the ESOL teacher.

Research Question 2: When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a fill-in-the blank/word-bank sentence test than EL ninth graders who are taught using typical vocabulary instruction by a ninth-grade ESOL teacher?

Hypothesis Two: Ninth-grade EL students who participate in the VST protocol will demonstrate a greater gain on fill-in-the-blank/word-bank sentence measure than ninth-grade EL students who participate in vocabulary instruction used by the ESOL teacher.

### Significance of the Study

In this study, the researcher aspired to add empirical data supporting the efficacy of a vocabulary technique that aims to increase word knowledge and academic achievement among EL high school students. This is important because adolescents are expected to read, write, understand, interpret, and discuss text across multiple subject areas in schools. The amount of



vocabulary instruction intensity that is required to promote vocabulary acquisition with EL adolescents is unknown. Many of the studies reviewed on vocabulary in ELs have been lacking in strong experimental designs as compared to studies of English only speaking students (August et al., 2005; Nation, 2001; Taboada, 2009). Conducting research on instructional techniques like VST is a critical step in the development of evidence-based vocabulary practices that contribute to understanding and use of English in listening, speaking, reading and writing as they relate to academic learning in high school.

#### Limitations

The following were the possible limitations of the study.

1. The students participating in the study were residents of Central Florida and not representative of students in other geographical areas.
2. Language proficiency levels obtained on the Comprehensive English Language Learning Assessment (CELLA) were not indicative of students' current English proficiency. With the exception of five students, all other participants were last administered the CELLA on March 2, 2015. Since that time, all participants have been enrolled in a ninth-grade ESOL class and therefore may have acquired additional English proficiency skills.
3. Some participants were used as interpreters for their peers. Because the researcher is not a native speaker of Haitian Creole, the nature of the interpretation given by the peers was unknown.

4. The location of the intervention may have been a limiting factor. The space being used for the intervention was not a designated classroom. Rather, it was more of an open/exposed multi-purpose space.
5. There were time constraints in that the intervention was taught over four weeks, providing a dosage of six hours.

#### Delimitations

1. This study included two groups: (a) an experimental group and (b) a comparison group within the same two reading classes in one high school. The students were randomly assigned to the experimental and comparison groups by the researcher.
2. Experimental and comparison groups came from the same two reading classes taught by one ninth-grade ESOL teacher.
3. Student participants were in the ninth grade.
4. Students were grouped into dyads according to their Comprehensive English Language Learning Assessment (CELLA) score for instruction. Students who were identified as being proficient or high intermediate in speaking English were interpreters for those students who were identified as beginners or low intermediates in speaking English.
5. All student participants completed all pre-assessments prior to the intervention.
6. All student participants completed all post-assessments once the intervention was complete.

### Assumptions

1. EL students need explicit instruction to acquire grade level vocabulary.
2. By following a specific teaching protocol, VST-ELP instruction by the researcher was equivalent for all students in the experimental classrooms.
3. Some variability in comprehensible input may have been present due to use of peer-tutors in instruction.
4. Vocabulary instruction provided in the comparison group was equivalent for both comparison group classrooms.
5. Students in both the experimental group and the comparison group completed the pre-test/post-test synonym and sentence vocabulary measures earnestly.
6. The multiple choice synonym test and the fill-in-the-blank/word-bank sentence test measured vocabulary gains in participating students.

### Operational Definitions

The following terms were operationally defined for the purposes of the study.

EL students (ELs). Students who speak a language other than English at home and have varying levels of proficiency in English (Rosa-Lugo, Mihai, & Nutta, 2012).

Explicit instruction. Unambiguous and direct approach to teaching (Archer & Hughes, 2011). It involves conveying new information to students through meaningful teacher-student exchanges and teachers guiding student learning (Rupley et al., 2009).

Students who struggle with literacy. Ninth-grade students who have scored outside the passing range on the Florida Standards Assessment (FSA) on the sixth- and seventh-grade reading test; that is <3 on a 5-point scale.

Scenario. Two to five sentence stories that are used in the VST.

Tier 2 words. High frequency words that are found across a variety of domains (Beck et al., 2002). Tier 1 words are basic vocabulary words that rarely require direct instruction (Beck et al., 2002). Tier 3 words are low frequency words that context-specific, these words can appear in school subjects, hobbies, occupations, technology, and weather (Beck et al., 2002).

Vocabulary knowledge. For this study it is the ability to identify synonyms and chose words to complete a sentence appropriately.

Vocabulary Scenario Technique (VST). A method of teaching vocabulary words using a two- to five-sentence story or “scenario” that explicates the meaning of the word. Scenarios are constructed to resonate with the experiences of students and serve as a basis for a variety of activities (Ehren, 2008).

Vocabulary Scenario Technique-English Learner Protocol (VST-ELP, 2016). The Vocabulary Scenario Technique protocol employing peer-tutors with higher English proficiency to provide comprehensible input to ELs with lower English proficiency.

### Summary

This chapter presented the statement of the problem which then introduced the purpose of the study. The theoretical framework was introduced and described the theories that are the basis of the study. The chapter then concluded with the research questions/hypotheses, significance of the study, limitations, delimitations, assumptions, and operational definitions. This study was conducted to examine the effects of a VST-ELP protocol for ninth-grade ELs who struggle with literacy. The

## CHAPTER 2 LITERATURE REVIEW

### Introduction

This chapter presents the rationale for a study examining direct, explicit vocabulary instruction for EL adolescents who struggle with literacy and academic achievement. This literature review was focused on several areas: workforce literacy, college and career readiness, adolescent literacy, vocabulary needs of EL adolescents, Haitian educational history, and vocabulary interventions and strategies for EL adolescents. Haitian culture is specifically being addressed in this chapter due to the majority of the participants being of Haitian descent.

### Workforce Literacy

The National Institute for Literacy defined literacy as “an individual's ability to read, write, speak in English, compute, and solve problems at levels of proficiency necessary to function on the job, in the family, and in society” (National Literacy Act, 1991, p. 1). Workforce literacy can be described as a set of skills and knowledge that individuals need to effectively perform their job tasks (Ott, 2001). It is also described by the National Literacy Act (1991) as the basic skills training needed to develop literacy. It includes: (a) instruction in English as a second language, (b) communication and problem solving, (c) interpersonal skill building, and (d) reading and writing skill building. In the 21<sup>st</sup> century, having basic literacy skills does not adequately prepare individuals to effectively perform their job tasks.

“When the literacy skills of most residents in a community are not keeping pace with what employers expect or what is required to bring workplaces up to 21<sup>st</sup> Century standards, the prospects for everyone’s future becomes threatened” (21<sup>st</sup> Century Workforce Commission,

2000, p. 24). Employers who are looking for individuals to fill even their entry-level job positions are looking for a higher level of skill and literacy mastery (Casner-Lotto & Barrington, 2006; Langer, 2001). With all of the advanced technological innovations and other global influences on industries, workers must be able to use higher-level thinking skills, problem solving skills, and effective communication skills (Askov, 1995). It has been projected that 62% of jobs in the United States in 2018 will require an education beyond high school, as compared to 28% in 1973 (Rothman, 2012). In a collaborative study conducted by The Conference Board, Corporate Voices for Working Families, The Partnership for 21st Century Skills, and The Society for Human Resource Management (2006), human resource and senior executives were surveyed and interviewed about the readiness of students to enter the U.S. workforce. The majority of employers who responded viewed reading comprehension as a very important basic skill for job success for high school graduates. They also ranked professionalism, collaboration, critical thinking, and communication as very important applied skills for new graduates entering the workforce.

### College and Career Readiness

According to Conley (2012), college and career readiness can be defined as the “level of preparation a student needs to enroll and succeed-without remediation-in a credit bearing course at a postsecondary institution that offers (1) a baccalaureate degree (2) transfer to a baccalaureate program, (3) to enroll in a high-quality certificate program that enables students to enter a career pathway with potential future advancement” (Conley, 2012, p. 21).

It is anticipated that in 2018, 62% of jobs in the United States will require an education beyond high school (Carnevale, Smith, & Strohl, 2010). In 1973, that number was just 28%

(Carnevale et al., 2010). A total of 73% of the fastest growing occupations require some form of postsecondary education or training (Moore, Alvermann, & Hinchman, 2010), and college-ready students are more likely to be prepared for postsecondary education and the workforce (Cline, Bissell, Hafner, & Katz, 2007). These students are also more likely to partake in the social and political aspects of citizenship (Dougherty, Mellor, & Smith, 2006) than are students who are not college ready. Studies on college students have shown, however, that increasingly students may not find high school preparation sufficient for success in college or in the job market (Gruenbaum, 2012). Green and Forester (2003) stated that more than half of the students who graduate from high school, and more than two-thirds of all the students who start high school, do not graduate with the minimal requirements needed to apply to a four-year college or university.

Trends among adolescents also continue to be discouraging in terms of college readiness (Radcliffe & Bos, 2013). Recent National Assessment of Educational Progress (NAEP) academic achievement reports present a continuing trend where only about one-third of eighth-grade students rank within the “at or above proficient” category for mathematics, reading, writing, and science. There is also a significant gap in underachievement between Hispanic and African American groups in comparison to other racial and ethnic groups (Radcliffe & Bos, 2013). Adolescents’ low NAEP scores and the current dropout rates raise the question posed by Radcliffe & Bos (2013): How many will be ready for college by graduation?

College and career readiness have developed as major focal points in educational accountability systems (Lombardi, Conley, Seburn, & Downs, 2012). Knowledge and skills connected with college and career readiness have become the central goal of the Common Core

State Standards and an ensuing initiative led by Race to the Top Assessment Program (Lombardi et al., 2012).

College agencies, such as American College Testing (ACT) have shown that students are not performing adequately in college and career readiness (Achieve, 2016; ACT, 2015). ACT publishes an annual report entitled *The Condition of College & Career Readiness*. This report provides the progress of high school graduates in the United States. The findings from 2015 revealed that 46% of graduates met the ACT college readiness benchmark in Reading (ACT, 2015). Of the 46%, 19% were African American and 31% were Hispanic (ACT, 2015). Even though college preparation is a part of most high school curricula in the United States today, many students who apply for college admission often must enroll in remedial courses because they are not adequately prepared for the rigors of college (Moore et al., 2010).

Several researchers have linked remedial or developmental education to students not obtaining a college degree (Moore et al., 2010). Adelman (1999, 2004) found that students who take at least one remedial course are not as likely to graduate with a bachelor's degree as students who do not take remedial courses. This likelihood is even greater for those students who take more than one remedial course. Findings such as these have prompted private organizations and many state legislatures to call for more rigorous standards and increased graduation requirements for all students (Moore et al., 2010). Overall data reveal that students are perhaps not fully prepared and equipped to transition into either college or the workforce. Achieve (2014) surveyed high school graduates between the years of 2011-2014, reporting that many high school graduates reported gaps in their preparation for work and college. In the 2014 Achieve report, 50% of ELs reported not being prepared for work or college.



### Adolescent Literacy

According to the NAEP, proficient means that “students have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations and analytical skills appropriate to the subject matter” (p. xx).

Literacy in middle school and high school becomes more complex. Students are required to comprehend and use text to acquire new and significant information (Edmonds et al., 2009). In order to be successful, middle school and high school students must interact with new text and vocabulary on a daily basis. They may need not only additional literacy instruction but instruction on strategies as well (Biancarosa, 2005).

Because the NAEP data show that only a small percentage of students are able to read proficiently, it is crucial that educators look more closely at the type and intensity of literacy instruction. Current researchers in adolescent literacy are now starting to pay more attention to intervention research for adolescents who struggle with literacy.

The literacy needs of adolescents require that educators consider evidence based instructional approaches to address their goals. Torgesen et al. (2007) presented three goals for improving academic literacy. The first goal is to increase students’ levels of reading proficiency. This will assist in preparing students for the high literacy demands that they will face in the workforce and in postsecondary placements. The second goal is to ensure that students who have met grade level reading standards in the third grade continue to meet the appropriate benchmarks as they matriculate through middle and high school. The third goal is to assist students who are reading below grade level to acquire the knowledge they will need to meet required academic standards.

To obtain the three goals mentioned above, Torgesen et al. (2007) outlined six essential areas of growth in knowledge, reading, and thinking skills for adolescents. They are: (a) reading fluency, (b) vocabulary knowledge, (c) content knowledge, (d) higher-level reasoning and thinking skills, and (e) motivation, and engagement. The impacts of these areas are discussed below.

### Reading Fluency

Typically, reading fluency does not increase significantly after the sixth grade (Tindal, Hasbrouck, & Jones, 2005; Torgesen et al., 2007). Still, students must continue to increase their knowledge of sight words in order to meet grade level expectations for reading fluency, as the words in grade level text increase annually (Torgesen et al., 2007; Torgesen & Hudson, 2006). In order to fluently read complex multisyllabic words in middle and high school text, students must have a broad repertoire of word-analysis skills (Henry, 1993; Torgesen et al., 2007). One thing that is not clear in the research is to what extent advanced word-analysis skills should be explicitly taught to grade level readers after the third grade (Torgesen et al., 2007).

### Vocabulary Knowledge

Vocabulary in text increases after the third grade (Anderson & Nagy, 1992; Torgesen et al., 2007). It also plays a progressively important role in supporting reading comprehension as students' matriculate through middle school and high school (Torgesen et al., 2007). Graves (2000) observed that expanding students' vocabulary after the third grade has to be supported. Students have to learn the meanings of many new words by concluding their meaning from how they are used in text and from their knowledge of word parts. Some researchers have found that students' expansion of vocabulary after the third grade comes from their exposure to new words

during reading (Cunningham & Stanovich, 1998; Torgesen et al., 2007). It has also been recommended that explicit and systematic instruction with new vocabulary should be a part of the effort to increase adolescent reading proficiency (Beck et al., 2002; Stahl & Fairbanks, 1986; Torgesen et al., 2007).

### Content Knowledge

Researchers have shown that the knowledge related to the content of text being read leads to better reading comprehension (Hirsch, 2006; Kintsch, 1998; Torgesen et al., 2007). To increase students' depth of understanding and increase their knowledge base, texts in the higher grades are written using significant assumptions about what students already know (Torgesen et al., 2007). For students who are not able to keep up with the pace of the content-area texts, they fall further behind (Torgesen et al., 2007).

### Higher Level Reasoning and Thinking Skills

It is vital that students continue to grow in their capacity to make inferences, draw conclusions, and engage in critical thinking (Pressley, 2000). Students' metacognition must be stimulated and supported during their middle and high school years.

### Motivation and Engagement

Research suggests that motivation and interest in reading weaken after early elementary grades (McKenna, Kear, & Ellsworth, 1995) resulting in decreased or limited growth in reading proficiency among adolescents (McKenna et al., 1995). Another negative impact on adolescents is that they are usually less engaged with their text while they are reading (Torgesen et al., 2007).

If adolescents are to leave high school as proficient readers they must continue to develop these six areas of knowledge, skill, and attitude (Torgesen et al., 2007).

### Vocabulary Needs of EL Adolescents

Taboada wrote in 2009 that the population of English Learners (ELs) was one of the fastest-growing groups among the school-aged population. In 2002, 43% of the nation's teachers had at least one English learner in their classrooms (USDOE & NICHD, 2003). English learners are defined as individuals whose language backgrounds are other than English, and whose English proficiency is not yet developed to the extent where they can benefit fully from English-only instruction (August & Shanahan, 2006).

English learners tend to exhibit lower academic achievement (particularly in literacy) than their non-EL peers (Klingner et al., 2006). National data show a huge reading-achievement gap between English language learners and English-only students (EOs) (Chung, 2012). Results of the 2015 National Assessment of Educational Progress (NAEP) showed that only 4% of eighth-grade ELs tested at or above proficient in reading (NAEP, 2015). The consequences of limited reading proficiency can be significant; these involve limited academic success, fewer employment opportunities, financial difficulties, and a challenging overall existence in society.

Many students of poverty, students who struggle with reading, and English learners come to school with vocabularies half the size or less than those of their classmates from higher economic backgrounds (Rupley & Slough, 2010). In order for ELs to experience school success, they must achieve English language proficiency. Researchers have shown that vocabulary acquisition plays the most crucial role in ELs' learning of the English language as well as in school achievement (August, 2005).

Among second language learning errors, vocabulary errors happen most often, occurring as frequently as three times more often than grammatical errors (Chung, 2012; Gass & Selinker, 2008). Estimates of the receptive vocabulary size of ELs before receiving formal school instruction vary from 5,000 to 7,000 or even 10,000 words (Biemiller & Slonim, 2001; Blachowicz et al., 2006, Chung, 2012; Graves, 2007).

Estimating the vocabulary size of ELs poses a great challenge because of the higher number of individual variables (Chung, 2012). Graves suggested that an estimate of 3,000 to 6,000 English words is reasonable for ELs vocabulary size. Unfortunately, this disparity in breadth of vocabulary knowledge increases with time (Blachowicz et al., 2006; Kieffer & Lesaux, 2007). Also, of great concern is the fact that ELs lag behind EOs in their depth of vocabulary knowledge (Chung, 2012; Gass & Selinker, 2008). Depth of vocabulary knowledge refers to literal meanings, connotations, antonyms, synonyms, morphological forms, and syntactical forms. Vocabulary knowledge even affects EL high school and college students. According to Laufer and Yano (2001), high-school EL graduates and EL college students know less than 25% of the vocabulary of their native-speaking counterparts. English learning college students may face numerous challenges in reading, writing, speaking, and listening at the college level (Lei et al., 2010). Vocabulary knowledge affects not only reading comprehension, but also oral comprehension (Chung, 2012). Vocabulary knowledge enables listeners to identify syntactic relationships, a requirement for sentence comprehension (Chung, 2012).

Carlo et al. (2004) developed, implemented, and evaluated an intervention designed to build breadth and depth of word knowledge and reading comprehension in 254 bilingual and monolingual children from nine 5th-grade classrooms in four schools in California, Virginia, and

Massachusetts. The intervention, which consisted of 15 weeks of instruction, was organized around the topic of immigration. The curriculum relied on a variety of text genres including newspaper articles, diaries, firsthand documentation of the immigrant experience, historical accounts, and fiction. The instruction for this intervention was delivered for 30-45 minutes per session, four days a week. Every fifth week was devoted to review of the previous four weeks' target words. Classroom teachers were trained by the researchers to deliver the instruction. Target vocabulary words were selected from brief, engaging reading passages. A relatively small number (12) of vocabulary items were introduced each week; the words were those that students at this level were likely to encounter repeatedly across texts in different domains. Although there were relatively few words introduced each week, activities helped children make semantic links to other words and concepts and thus attain a deeper and richer understanding of a word's meaning as well as learn other words and concepts related to the target word.

In a vocabulary study conducted by Vaughn-Shavuo (1990), researchers examined the effectiveness of procedures for presenting words to first-grade Spanish dominant students. In this study, children were randomly assigned to two groups. Both groups received vocabulary instruction during a 30-minute daily English as a Second Language (ESL) class. One group worked on learning words that were presented in individual sentence contexts. The other group worked on words presented in meaningful narratives, dictated their own sentences using the target words, and examined picture cards that illustrated the word meanings. During three weeks of instruction, 31 words were presented to each group. By the end of the training, the latter group, whose instruction was more elaborated than the first group, showed better ability to use the English vocabulary than did the control group (21 words learned vs. nine).

Gaining access to the information taught in middle and secondary content area classes requires that all children exit the elementary grades with good reading comprehension capacity (Carlo et al., 2004). Without this capacity, access to grade level appropriate content knowledge, entry into challenging courses in secondary school, success on the test increasingly being required for promotion and graduation, and entry into tertiary education are all unlikely (Carlo et al., 2004). Successful vocabulary curricula increase children's word knowledge by approximately 300 words a year (Carlo et al., 2004; Stahl & Fairbank, 1986). Addressing the vocabulary deficits of second language learners, who may arrive in U.S. classrooms in second or third grade with no English vocabulary at all, is even more challenging (Carlo et al., 2004).

Often vocabulary instruction receives inadequate attention in elementary and secondary classrooms (Biemiller & Boote, 2006; Sibold, 2011). Academic vocabulary, specifically the language that may occur in multiple contexts or the precise words that are presented in a specific context, can help students acquire new learning strategies and skills (Marzano, 2004). Academic vocabulary, however, is notably more difficult to learn than conversational language because it is more specific and sometimes abstract, making it difficult to grasp (Sibold, 2011). In the United States, there are no reliable estimates of the breadth of vocabulary of Spanish-speaking ELLs upon school entry or of the magnitude of their vocabulary growth over a school year (August et al., 2005).

### Haitian Educational History

In this study, more than half of the participants are of Haitian descent. It is important to explore the educational history of the students in order to understand some of the challenges they face upon coming to the United States. Haitian migration into the United States began in the 18<sup>th</sup>

and 19th centuries (Gelin, 2002). The first wave of Haitian immigrants came to the United States seeking political asylum and settling mainly in the New York area (Catanese, 1999; Gelin, 2002). The second wave of immigrants came following the dictatorship of Francois “Papa Doc” Duvalier who unleashed brutality and corruption in Haiti for 14 years (Burtoff-Civan, Vilsaint, & Morisset-Metellus, 1994; Gelin, 2002). The third wave of immigrants who came to the United States were a part of the elite upper and middle class who were fleeing the presidency of Jean Claude “Baby Doc” Duvalier (Gelin, 2002; Laguerre, 1984). Unlike many other refugees who came to the United States, Haitians were greeted with prejudice and hostility (Gelin, 2002).

Schools were first established in Haiti in the 1800s (Burtoff-Civan et al., 1994). The original Haitian education system was modeled on the French educational system which emphasized literature. The French system school cycle consisted of 14 years of education (Burtoff-Civan et al., 1994). This system was in place until 1978 when education reform began. Although reform was accomplished, education was still not easily accessible to the poor (Burtoff-Civan et al., 1994). According to a 2002-2003 education census by the World Bank (2006), 92% of Haitian schools were privatized (Cone, Buxton, Lee, & Mahotiere, 2014). With Haiti’s extreme poverty, most families could not afford to send their children to school. Luzincourt & Gulbrandson (2010) found 32% of Haitian children who were age six had never been to school, and 55% of children from ages six to 12 were currently enrolled in school. There have also been linguistic barriers to education in Haiti. Though most Haitians speak Creole, only the elite speak French (Luzincourt & Gulbrandson, 2010). Even though education is highly valued, it has been privatized and inaccessible to the majority of Haitians (Pierce & Elisme, 1997). Because education is a dominant factor in decreasing poverty, many Haitian families have



migrated to the United States so that their children can receive a free education (Cone et al., 2014).

Once Haitian students arrive in the United States they often have difficulties adapting to the learning environment (Gelin, 2002). Appropriate grade placement can also be difficult, because students from Haiti rarely arrive with school records (Giles, 1990). In Haiti, rote learning and memorization are the norm for those students who do attend school (Burtoff-Civan et al., 1994). In the United States, abstract thinking and conceptualization are required of students and can sometimes be problematic for students who have arrived from Haiti (Pierce & Elisme, 1997). Most of the difficulties in adapting for Haitian students come in the form of language acquisition (Gelin, 2002). The majority of Haitians speak Haitian Creole. Only about 10% of the Haitian population can be considered bilingual in French and Haitian Creole (Burtoff-Civan et al., 1994).

### Vocabulary Intervention and Strategies for EL Adolescents

Instructional approaches of vocabulary have varied in the amount of emphasis placed on the explicitness or implicitness for teaching specific words, the types of vocabulary taught (text vs. content), and the depth and breadth of the words taught (Taboada, 2009). Explicit teaching of vocabulary words creates rich language contexts in which students are exposed to words on multiple occasions and where word awareness is created through the explicit focus on words (Taboada, 2009). The literature on approaches and strategies for EL students are presented in this section.

According to August et al. (2005), taking advantage of a student's first language has proven to be effective if the first language shares cognates with English. Cognates are defined as vocabulary items in two different languages that are similar both "orthographically and semantically" (August et al., 2005, p. xx). Considering the large number of cognate pairs between Spanish and English, there is a high possibility for transfer to occur for a large number of words (Wallace, 2008). English language learners may even be able to draw connections between cognate pairs on the basis of sound alone, benefiting not only students literate in Spanish but those who are limited only to oral proficiency (Wallace, 2008).

Another important instructional practice is to make sure ELs know the meaning of basic words (Wallace, 2008). It is important that ELs learn the labels for many words that English only students already know (Wallace, 2008). The Three Tier Model of Beck et al. (2002) places vocabulary words into three categories: (a) Tier 1 consists of basic or common words, (b) Tier 2 involves words that are used across the curriculum and multiple meaning words, and (c) Tier 3 contains content specific vocabulary. Tier 1 words are the most common words in English and they make up a significant percentage of the words students read. Sight words, function words, and words that name objects are included within Tier 1 vocabulary. Tier 2 words are useful terms found with high frequency. These are the words that are important to understanding the text and are used across the curriculum. Tier 3 vocabulary words are found with less frequency and are typically limited to specific content areas.

Effective vocabulary instruction emphasizes direct instruction (Sibold, 2011). By using direct instruction, teachers can incorporate relevant vocabulary into before, during, and after reading stages of instruction (Sibold, 2011). It is important for teachers to explicitly teach

vocabulary using effective instructional practices that will engage students in learning new words (Sibold, 2011). Sibold, (2011) suggest several instructional practices for teaching vocabulary words. Some of those instructional practices include: (a) repetition, (b) signal word of the day, (c) talk through, (d) academic vocabulary journals, (e) graphic organizers, and (f) board games.

Repetition involves having the student to repeat the word out loud at least three times and using the word in a sentence. Signal word of the day is when the teacher selects a word from the students' reading, pronounces the word, and the students echo the word. This word is then used as a signal for the children to start or stop an activity. The talk-through strategy allows students to talk through definitions and hear the word in context. The academic vocabulary journal strategy allows students to record the new word in their journals, use the word in a sentence, and also draw a pictorial representation of the word. Using graphic organizers as a strategy provides visual representations that show the concept and arrangement of the vocabulary word. Lastly, using games as a strategy can be a great tool for reinforcing ELs vocabulary (Sibold, 2011). Board games help to promote vocabulary usage as well as interactive and teacher created games (Sibold, 2011).

It is evident that a great need exists for more experimental and quasi-experimental studies on approaches for enhancing ELs' vocabulary knowledge (Chung, 2012). Vocabulary knowledge plays a crucial role in closing ELs' literacy achievement gap (Chung, 2012). Teachers need to cultivate vocabulary growth in ELs through a language and word enriching environment as well as engaging and interesting instruction in vocabulary words and word-learning strategies (Chung, 2012). By doing these things, teachers can assist students in developing the vocabulary that they need in order to be successful in and out of the classroom.

Krashen (1981, 1982) proposed that language is acquired when individuals understand what they hear and read. This hypothesis is known as comprehensible input (Rodrigo, Krashen, & Gribbons, 2004). In their study, Rodrigo et al. (2004) examined the impact of two different approaches based on comprehensible input for Spanish speaking students. One approach focused on meaningful reading, combining self-selected and assigned reading. The other approach included both reading and comprehensible aural input and focused on reading and discussion of assigned texts. There were two experimental groups and a comparison group. The first experimental group experienced an extensive reading approach. The second experimental group read and participated in debates and discussions about the required readings. The comparison group participated in an intermediate grammar and composition course along traditional teaching guidelines, i.e., checklist vocabulary test and grammar test.

The study revealed that the experimental (the comprehensible input groups) groups in reading and reading discussion outperformed the traditionally taught group on a vocabulary test and grammar test (Rodrigo et al., 2004). The results from this study showed that comprehensible input-based approaches were more effective than traditional instructional methods, particularly when working with EL students (Rodrigo et al., 2004).

Second-language acquisition is a multifaceted development that includes social and academic language proficiency (Gerena & Keiler, 2012). Peer tutoring is an instructional strategy that can enhance second-language acquisition for students. It is a strategy that uses peers as one-on-one instructors to provide individual instruction, clarification of concepts, and repetition (Bowman-Perrott, deMarin, Mahadevan, & Etchells, 2016). It is a research based intervention that helps students learn academic content (Bowman-Perrott et al., 2016; King, Staffieri, &

Adelgais, 1998). Peer tutoring has been proven effective for English learners (Bowman-Perrott et al., 2016; Greenwood, Arreaga-Mayer, Utley, Gavin, & Terry, 2001).

### Summary

This chapter presented the rationale for a study examining direct, explicit vocabulary instruction for EL adolescents who struggle with literacy and academic achievement. The literature discussed looked at workforce literacy and college and career readiness for adolescents. The chapter also reviewed adolescent literacy as well as the specific vocabulary needs of EL adolescents. Since the majority of participants were Haitian, the history of Haitian education was discussed in order to paint a picture of what students experience upon coming to the United States. Lastly, there was a discussion regarding vocabulary interventions and strategies for EL adolescents.

## CHAPTER 3 METHODS

### Introduction

This study was conducted to investigate the effects of a Vocabulary Scenario Technique-English Learner Peer (VST-ELP, 2016) Protocol for ninth grade EL students who struggle with becoming literate in English. In this chapter, the researcher reviews the methods used to examine the research questions of this study. This chapter begins with a review of the research questions, followed by information regarding the research design, population, method of data collection, and instrumentation used. The methodology that was used to investigate each research question is explained followed by a chapter summary.

### Research Questions

This study employed a quasi-experimental design. With this design, the independent variable is still under the control of the researcher, but the experimental and comparison groups are not representative of a single population (Sprinthall, 2007). The participants for this study were already assigned to their reading class according to their scores on the Florida State Assessment reading portion. Participants were randomly assigned to either an experimental or comparison group by the researcher. Pre and post-tests were administered to the experimental and comparison groups to respond to the following two research questions:

Research Question 1: When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a multiple-choice synonym test than EL ninth graders who are taught using typical vocabulary instruction by a ninth-grade ESOL teacher?

Hypothesis 1: Ninth-grade EL students who participate in the VST protocol will demonstrate a greater gain on multiple-choice synonym test than ninth-grade EL students who participate in vocabulary instruction used by the ESOL teacher.

Research Question 2: When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a fill-in-the blank/word-bank sentence test than EL ninth graders who are taught using typical vocabulary instruction by a ninth-grade ESOL teacher?

Hypothesis Two: Ninth-grade EL students who participate in the VST protocol will demonstrate a greater gain on fill-in-the-blank/word-bank sentence measure than ninth-grade EL students who participate in vocabulary instruction used by the ESOL teacher.

### Research Design

In this study, an experimental research design was employed using a comparison and an experimental group, with non-equivalent group design. In the first part of the section, the researcher discusses the rationale for selecting this design. In the second part of the section, the researcher discusses the components of the design.

The experimental design was chosen as it was possible to randomly assign students to the experimental and comparison groups. This is an appropriate design when analyzing two comparable groups with one dependent variable which, in this case, was whether or not the students were being taught using the vocabulary intervention. In an effort to avoid Type 1 errors and make fair comparisons, the researcher selected groups that had as many similarities as possible, especially controlling for language proficiency. Type 1 errors occur when the null hypothesis is rejected (Gall, Gall, & Borg, 2007). The researcher analyzed and reported

descriptive statistics for both groups and determined if there were any significant differences between both groups when controlling for language.

### Procedures

The researcher received approval from the University of Central Florida Institutional Review Board (see Appendix A) and the Orange County Public School Institutional Review Board (see Appendix B).

The intervention protocol and typical instruction were conducted across the same four weeks. The weeks were not consecutive due to an interruption by a week of statewide testing. The identical 32 words were taught to both the experimental and comparison groups, eight each week. Dosage of instruction in both groups remained constant. Vocabulary instruction was conducted for 30 minutes, three times a week for four weeks, which equaled 90 minutes a week for a total dosage of six hours. The experimental group of students received the VST-ELP intervention in another room during their regularly scheduled reading class on the school campus. The comparison group of students remained in their regularly scheduled class and received their typical vocabulary instruction. Typical vocabulary instruction were the methods used by the classroom teacher to teach vocabulary to the students. They can consist of vocabulary games, vocabulary work sheets, and writing vocabulary words and definitions.

The experimental group received intervention from the researcher using the VST-ELP Protocol. The comparison group received the typical vocabulary instruction from the ESOL classroom teacher.



### Setting

This study took place in an urban Title 1 high school (grades 9-12) in Central Florida. According to the 2015 demographic report, there was a population of 197,249 students from Pre-K to 12<sup>th</sup> grade in the participating Central Florida school district. Table 1 contains the demographics for the school district. All data relevant to participants were recorded using the VST-ELP Data Collection Form (Appendix C).

Table 1

#### *School District Demographics*

Ethnicity/ESE/EL	Percentage
Hispanic	38
White	28
Black (Haitian)	27
Asian	5
Multicultural	2
ESE (Exceptional Student Education)	22
EL (English Learner)	28

School demographic data from 2015 reported a population of 2,337 students in grades nine through twelve. Table 2 presents the demographic information for the school in which the study was conducted.

Table 2

*Participating High School Demographics (OCPS, 2015)*

Ethnicity/ESE/EL	N	Percentage
White	54	2.3
Black (includes Haitian students)	1,975	84.5
Hispanic	226	9.7
Asian/Pacific Islander	42	1.8
American Indian	12	.5
Multiracial	28	1.2
ESE (Exceptional Student Education)	399	16.8
EL (English Learner)	286	12.2

The participating classes were two double block EL reading classes. Double block classes mean that students are getting twice the instructional time than other students. Therefore, the students participating in this study all received double reading instruction. According to the Florida Department of Education (FDOE), high school students who score at Level 1 or Level 2 on Florida Comprehensive Assessment Test (FCAT) Reading and who have intervention needs in the areas of decoding and/or fluency must have an extended block of reading intervention. This may occur through a double block of intensive reading or by blocking together a class of intensive reading with another subject area class (FDOE, 2013).

### Student Participants

All student participants were enrolled in the same high school. At the request of the school district's Institutional Review Board (IRB), the researcher obtained written assent from the students and written consent from the parents and classroom teacher. A total of 36 EL ninth-grade students began the study. Two students were not included in this study due to absences. The total student participation was 34. A total of 18 students were in the experimental group, and 16 students were in the comparison group. One student was not present to take the pre-test; neither was he present on the days the pre-test was offered again. Another student was not present for the pre-test and withdrew from the school. Of the students, 29 identified as Haitian and five identified as Hispanic. There were 20 females and 14 males. The students ranged in age from 14 to 17 years old. Eleven students identified as 14 years of age; 16 identified as 15 years of age; four identified as 16 years of age; and three identified as 17 years of age. One student was identified as having an Exceptional Student Education (ESE) status which was other health impairment (OHI). Demographic data for all student participants are presented in Table 3.

Table 3

*Experimental and Comparison Groups by Gender, Age, and Ethnicity*

Characteristic	Experimental Group ( <i>n</i> = 18)	Comparison Group ( <i>n</i> = 16)	Total Sample ( <i>n</i> = 34)
Gender			
Male	9	5	14
Female	9	11	20
Age			
14	5	6	11
15	10	6	16
16	2	2	4
Ethnicity			
Haitian	16	12	28
Hispanic	2	4	6

The researcher randomly assigned students from both classes to either an experimental or comparison group. For the random assignment, the researcher used the website Research Randomizer (Urbaniak & Plous, 2015). Research Randomizer is a free tool for generating numbers and assigning participants to experimental groups. The researcher input the students' ID numbers, and this generated a list that assigned students to the experimental group. The remaining students were assigned to the comparison group. Once assigned to the experimental and comparison groups, students were placed in dyads according to their language proficiency levels. The dyads consisted of one student who was proficient in English and one student who was not proficient in English according to their CELLA scores. The English proficient student was the peer interpreter for the study.

Students' language proficiency levels were determined by their Comprehensive English Language Learning Assessment (CELLA) scores. All English learning students within the state of Florida are required to take the Comprehensive English Language Learning Assessment

(CELLA) to measure their proficiency in English. The CELLA has four areas; listening, speaking, reading, and writing (Florida Department of Education [FDOE], 2015). Students in the state of Florida take the CELLA annually until they are classified as being English proficient (FDOE, 2015). With each score on the CELLA, the student is also give a performance level. The performance levels are beginning, low intermediate, high intermediate, and proficient.

For listening and speaking skills, the beginning performance level (580-681) means that the students speaks and understands spoken English that is below grade level (FDOE, 2015). Low intermediate (682-713) means that students speak in English and understand spoken English that is at or below grade level (FDOE, 2015). High intermediate (714-738) means that students, with minimal support, speak in English and understand spoken English that is at grade level (FDOE, 2015). Proficient (739-835) means that students speak in English and understand spoken English at grade level in a manner similar to non-EL students (FDOE, 2015).

For reading skills, the beginning performance level (605-743) means that students read in English below grade level (FDOE, 2015). Low intermediate (744-761) means that students read in English at or below grade level text (FDOE, 2015). High intermediate (762-777) means that students read in English at grade level texts with minimal support (FDOE, 2015). Proficient (778-820) means that students read grade level text in English in a manner similar to non-EL students (FDOE, 2015).

For writing skills, the beginning performance level (600-689) means that students write in English below grade level and require continuous support (FDOE, 2015). Low intermediate (690-720) performance means that students write in English at or below grade level and require some support (FDOE, 2015). High intermediate (721-745) performance level means that students

write in English at grade level with minimal support (FDOE, 2015). Proficient (746-850) performance level means that students write in English at grade level in a manner similar to non-EL students (FDOE, 2015).

### Teacher Participant

The classroom teacher was a full-time English to Speakers of Other Languages (ESOL) teacher and taught three double block EL reading classes. The classroom teacher instructed the comparison group. The teacher has a B.A. in Spanish and had been teaching at the high school level for six years. She also taught six years in middle school and worked for two years as a substitute, teaching English to adults. She has a teaching certificate in English for Speakers of Other Languages (ESOL) and World Language-Spanish. She also holds endorsements in Reading and ESOL. The interventionist/researcher instructed the experimental group. She is an American Speech-Language-Hearing Association (ASHA) certified and state licensed speech-language pathologist.

### Measures

#### Vocabulary Acquisition

A synonym test (Appendix D) and fill-in-the-blank/word-bank sentence test (Appendix E) were developed and used as pre-and post-test measures for both the experimental and comparison groups. The synonym test was first developed and used in the Vocabulary Scenario Technique pilot study (Ehren, Zadroga, & Proly, 2010). The fill-in-the-blank/word-bank sentence test was first developed and used for the Spielvogel (2011) VST study.

The synonym test was developed from a corpus of 44 Tier 2 words selected from a reading passage being taught during the time of the study. Tier 2 words are academic words that are found across different domains (Beck et al., 2013). The words were selected from the passage by the classroom teacher according to their complexity in comparison to previous vocabulary words learned in class. Based on the results of the synonym test, administered to both classrooms by the researcher, a corpus of words (Appendix F) was selected which met the criteria of more than 50% of the ninth graders not knowing the word. From this corpus of words, the fill-in-the-blank/word-bank sentence test was then given to the experimental and comparison group. The VST-ELP Fidelity Checks appear in Appendix G.

The Comprehensive English Language Learning Assessment (CELLA) was used to measure the English proficiency of the participants. The Florida Comprehensive Assessment Test (FCAT) is a criterion referenced assessment administered by the state of Florida to assess students' skills in mathematics, reading, science, and writing. The FCAT was replaced by the Florida State Assessment (FSA).

## Methods

### Intervention Protocol-Experimental Group

The researcher utilized the Vocabulary Scenario Technique-English Learner Peer Protocol (VST-ELP) intervention for the experimental group. The original Vocabulary Scenario Technique (VST) is a protocol intended for use by speech-language pathologists and teachers for direct vocabulary intervention in a classroom or therapeutic setting (Ehren, 2008). It is an explicit instructional technique grounded in scenarios, short stories of two to five sentences that

are created to reverberate with students' experiences and explicate the meaning of the targeted words. The scenarios (Appendix H) provide a base for language-focused vocabulary instruction which include listening, reading, speaking, and writing (Ehren et al., 2010). The VST allows the speech-language pathologist and/or teacher to provide scaffolding to students as they experience several encounters with new words (Ehren et al., 2010).

The approach can be tailored to meet a variety of student needs; hence, various protocols can be designed employing this approach (Ehren et al., 2010; Spielvogel, 2011). For this study, the Vocabulary Scenario Technique-English Learner Peers Protocol (VST-ELP) was created to meet the needs of students at different English proficiency levels.

Students who were identified as being proficient or high intermediate in speaking English according to their CELLA were selected to be interpreters for the students who were identified by the CELLA as being either a beginner or lower intermediate in speaking English or who did not have CELLA scores. Once the interpreters were selected, they received a 30-minute training by the researcher the day before the intervention began. This training consisted of showing the interpreters their prompts for interpreting. The VST-ELP protocol allowed for interpretation after each word encounter was presented. After the word was presented to the group, the researcher held up a written sign that read "interpret." This prompted the interpreters to turn to their peer and interpret the information being given to the group. There was a total of eight dyads during the study. Table 4 shows the CELLA scores for the participants.



Table 4

*Participants' CELLA Scores*

Variables	Performance Levels	Experimental Group (n=18)	Comparison Group (n=16)
Listening/Speaking	Beginning (580-681)	4	1
	Low intermediate (682-713)	2	1
	High intermediate (714-738)	4	8
	Proficient (739-835)	5	2
Reading	Beginning (605-743)	5	4
	Low intermediate (744-761)	5	4
	High intermediate (762-777)	5	3
	Proficient (778-820)	1	2
Writing	Beginning (600-689)	2	3
	Low intermediate (690-720)	7	5
	High intermediate (721-745)	3	4
	Proficient (746-850)	4	1

The VST-ELP allowed for 20 word encounters rather than the 14 (Spielvogel, 2011) and 21 encounters (Ehren et al., 2010) used in the previous VST studies. The 20 word encounters provided more opportunities for the EL students to learn and interact with the word. For the VST-ELP, the interpreting moments were counted as word encounters. For this study, encounters were defined as the number of times the students were exposed to the target vocabulary word. This study allowed for 20 encounters for each vocabulary word, and this included encounters for interpretation for the dyad groups. A checklist (Appendix I) was created by the researcher that allowed for documentation each time there was an encounter with the new vocabulary word by the student.

The materials used for the intervention included index cards for students to create word walls, visual displays of scenarios, hole punchers, metal rings, protocols with scenarios, and a list of synonyms for target words. Each week, eight index cards (word walls) were distributed to the students to record their words. There was a different color index card for the words each week. The index cards were held together by metal rings and created ahead of time so that the researcher would not have to spend intervention time punching holes and sliding cards through rings.

Following is the protocol for each of the weeks: On Day 1, the researcher taught four words and the students experienced 16 encounters with those words. Encounter 1 was a visual display of the vocabulary scenario presented by the researcher on paper. Encounter 2 allowed the peers in the dyads to interpret the scenario. In Encounter 3, the researcher required the students to suggest a synonym for the word. Encounters 4 and 5 allowed the peers in the dyads to interpret the word and suggest a synonym. In Encounter 6, the researcher required the group to read the scenario aloud with the target vocabulary word and the synonym. Encounters 7 and 8 required the students to write the target word on their portable word wall. Encounters 9 and 10, required the students to write the target word and think about how they could use the target word in a sentence. Encounters 11 and 12 allowed the students to create sentences using the target word (these sentences were elicited from students who did not require interpretation). Encounters 13 and 14 allowed the researcher to select the best sentence using the target word and write it on the board for the students to copy on the back of their portable word walls. Encounter 15 allowed the peers in the dyads to interpret the information for reviewing the words and saying the

synonyms together. Encounter 16 allowed for another recital of the synonym in unison by the class.

On Day 2, the researcher taught four more words and experienced 16 encounters with these words as well. Day 2 was an exact replication of Day 1. The peers in the dyads replicated the same interpretations on Day 2 as they did for Day 1, using a new set of vocabulary words. On Day 3, the researcher reviewed the eight words taught on Day 1 and Day 2. This included Encounters 17-20. During Day 3 the researcher exposed the students to the morphological variations of the eight words they learned during the week. In Encounter 17, the researcher displayed the morphological sheets and required the students to write the morphological variations on the back of their portable word walls. In Encounter 18, the researcher allowed the students to think of a sentence using the target word as they were writing the morphological variations. In Encounters 19 and 20, the researcher required the students to create two sentences using the target word. Morphological variations included changes in part of speech or syntactic use of the work; for example, the target word “formless” had two variations; formlessly and formlessness. For each of the eight words that had morphological variations, the researcher presented those variations to the students visually on sheets of paper. The intervention process was repeated across four weeks until 32 words were taught during the 30 minute sessions, three times a week.

#### Typical Instruction-Comparison Group

The ESOL teacher used different methods of instructing the comparison group, but she used the same vocabulary words that the researcher used with the experimental group. The same

typical instruction procedures were used every day and conducted at the same time as the intervention with the experimental group. The students who were in the comparison group were not grouped into dyads. Many of the students in the comparison group had various levels of English proficiency, but they often interpreted for one another in the classroom during vocabulary and other instructional activities. The classroom teacher typically began by dividing the group into two teams so that the activity became a competition. She would introduce the word to each team to determine if the students were familiar with it. If a team was familiar with the word, she would then ask for their interpretation of the word. If the team's interpretation of the word was correct, she continued. If the team's interpretation of the word was incorrect, she would instruct students to review the word (such as looking at the beginning, middle, and end of the word) and see if they could recognize any familiarities with it. If the teams were still not familiar with the word, the ESOL teacher then provided the definition, synonym, and antonym for the word. The teams were then instructed to fold a piece of paper into four squares, and write the word in the middle and in the top left they wrote the definition.

Once the students finished discussing the word, they completed a review. The classroom teacher used two methods for reviewing. The first method consisted of having the students spell the word with individual students saying a letter. Students who said an incorrect letter had to sit down and were not allowed to participate. The final person provided a definition, synonym, and antonym of the selected word.

Another method of review that was used required that the students be divided into two groups or teams. The classroom teacher wrote the word on a piece of paper. An individual from each team showed the word to his or her team. The other team had to then attempt to guess the

vocabulary word. The teams were allowed to act out the words and use other words to guess the targeted vocabulary word. Once a team member guessed the correct word they had to provide the definition, synonym, and antonym.

### Fidelity of Implementation

In order to control for the external threat of treatment validity (Edmonds & Kennedy, 2013), the researcher provided the intervention for the experimental group. The researcher video recorded the intervention sessions using an iPad. VST-ELP Fidelity Checklists (Appendix G) were used to ensure the fidelity of the intervention provided to the experimental group. The VST-ELP included a checklist for Day 1, Day 2, and Day 3. The checklist was used by an independent rater to check “yes” or “no” to determine if the identified four words had been taught on Day 1 and Day 2, and if 16 encounters had been provided for each of the four words taught on those days. The VST-ELP Day 3 checklist was used by an independent rater to check “yes” or “no” to determine if all eight words had been reviewed and if four encounters had been provided for the eight words reviewed on that day. On all three checklists, there was an area provided so that comments or notes could be made regarding additional encounters.

The checklist also monitored if cues were provided to the students and the amount of time used to provide the intervention. The fidelity checks were conducted across three 30-minute VST-ELP intervention sessions in weeks 2 and 4; this equated to a total of 50% of the study.

Two trained research assistants were assigned to watch intervention sessions in weeks 2 and 4. Each of the research assistants had one 30-minute training session with the researcher. During this training session, the researcher demonstrated how to use the fidelity checklist and

how to access and watch the videos. Each research assistant observed the same six sessions (three for both experimental groups). Each checklist had a tally for the number of steps that were completed accurately. A final percentage was determined by dividing the total number of accurately completed steps by the total number of incorrect steps and then multiplying by 100%. The results of the fidelity checks using the VST-ELP fidelity checklist specified that fidelity of treatment was 90%. Thus, the intervention protocol was followed 90% of the time during its administration. The recorded intervention sessions were kept in an encrypted file, and the two research assistants secured them individually in a locked office at the university.

Additionally, the comparison classes were also audio recorded and reviewed by the researcher. This was done to ensure that all participants in the experimental group were treated equitably and to make sure that there was no application of the VST intervention to the comparison group participants. The researcher listened to 50% of the total instructional time that occurred over the four weeks in order to document whether or not the classroom teacher provided any instruction related to the intervention. From the samples that were reviewed, there were no occurrences of usage of the intervention within the comparison group by the teacher. The Intervention Vocabulary Word Comparison is displayed in Appendix J.

### Data Analysis

Data were analyzed using the IBM SPSS software to run statistical tests. For Research Question 1, a repeated measure analysis of covariance (ANCOVA) was used. ANCOVA is the presence of a continuous variable in addition to the dependent and independent variable as a means for control (Tabachnick & Fidell, 2013). For this study, ANCOVA was used to control for language proficiency. Even though the participants were all in the same grade, their language

proficiencies varied. Therefore, their Comprehensive English Language Learning Assessment (CELLA) scores had to be used as a covariate to account for the difference in their language proficiencies. For Research Question 2, a repeated measure ANCOVA was also used. The covariate for this research question was the mean of the participants CELLA scores (listening/speaking, writing, and reading).

Descriptive data were calculated and reported for the dependent measures (test scores). Means, standard deviations, estimated marginal means, and standard error of the mean were presented for the pre and post synonym and sentence measures. Effect sizes were run to determine the size of the difference between the experimental and comparison group. The repeated measure ANCOVA was also used to determine statistical significance between the experimental and comparison group.

### Summary

This chapter presented and reviewed the methodology used to conduct the present study. An experimental design was employed to answer the two research questions which guided the study. The setting along with the various participants and groups were discussed. The measures used over the course of the study were presented and the data analytic procedures for each of the research questions were noted.

## CHAPTER 4 RESULTS

### Introduction

This study investigated the effects of a vocabulary scenario technique for ninth-grade English learners who struggle with literacy. A repeated measure analysis of covariance (ANCOVA) and analysis of variance (ANOVA) test were used to determine if ninth-grade EL students who received the Vocabulary Scenario Technique-English Learner Protocol (VST-ELP) intervention demonstrated significant gains on a pre-post synonym and sentence test as compared to students who received typical vocabulary instruction. This chapter contains information related to participant attendance, missing data and a summary of the statistical data analysis performed for each research question.

### Participant Attendance

Although students were encouraged to attend school each day over the duration of the four-week study, not all students were present each day. The researcher provided a total of six hours (1.5 hours per week x 4 weeks) of intervention to participants in the experimental groups. The six hours did not include time used completing the pre-test and post-test. Of the total number of participants, 10 from the experimental group were present for all 12 sessions and therefore received six hours of intervention. Five participants were present for 11 sessions and received 5.5 hours of intervention. One participant was only present during four sessions and therefore received only two hours of intervention. In the comparison group, 12 participants were present for all 12 sessions and received typical instruction. Two participants in the experimental group were only present 11 sessions and received 5.5 hours of intervention. One participant was only



present for 10 sessions and received five hours of intervention. There was also one participant who was present for eight sessions, receiving only four hours of intervention. Table 5 contains the treatment hours' data for each group.

Table 5

*Hours of Intervention/Instruction*

Experimental (n = 16)	Intervention hours	Comparison (n = 16)	Instruction Hours
10 participants	6.0	12 participants	6.0
5 participants	5.5	2 participants	5.5
1 participant	2.0	1 participant	5.0
		1 participant	4.0

Missing Data

At pre-test, there were initially 32 participants (16 experimental and 16 comparison) who met inclusion criteria. Because some students were not present for the pre-test or for the post-test and some did not have scores for the covariate (CELLA), there were 23 students for the final synonym analysis (13 experimental, 10 comparison). For the final analysis for the sentence, the covariate (CELLA) could not be used. This resulted in a total of 29 students participating in the final analysis.

## Data Analysis

### Research Question 1

When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a multiple-choice synonym test than EL ninth graders who are taught using typical vocabulary instruction by a ninth-grade ESOL teacher?

To address Research Question 1, a repeated measures ANCOVA was used. The independent variable was the student groups; the dependent variables were the pre-test and post-test scores. The covariate used in this analysis was the Comprehensive English Language Learning Assessment (CELLA) mean score. Although the participants were all ninth graders, their language proficiencies varied; therefore, the CELLA mean score was used as a covariate to account for the difference in participant language proficiencies. The CELLA score designates that all of the participants are ELs. The CELLA has four areas; listening, speaking, reading, and writing (FDOE, 2015). Students in the state of Florida take the CELLA annually until they are classified as English proficient (FDOE, 2015). With each score on the CELLA, the student is also given a performance level: beginning, low intermediate, high intermediate, and proficient. Table 6 displays the CELLA areas and performance levels.

Table 6

*CELLA Performance Levels*

CELLA Area	Performance Levels	Meaning
Listening/Speaking	Beginning (580-681)	Can speak/understand spoken English below grade level
	Low intermediate (682-713)	Can speak/understand spoken English at or below grade level
	High intermediate (714-738)	With minimal support can speak/understand spoken English at grade level
	Proficient (739-835)	Can speak/understand spoken English at grade level similar to non-EL students
Reading	Beginning (605-743)	Can read in English below grade level
	Low Intermediate (744-761)	Can read in English at or below grade level
	High intermediate (762-777)	Can read in English at grade level with minimal support
	Proficient (778-820)	Can read grade level text in English similar to non-EL students
Writing	Beginning (600-689)	Can write in English below grade level and requires continuous support
	Low intermediate (690-720)	Can write in English at or below grade level and requires some support
	High intermediate (721-745)	Can write in English at grade level with minimal support
	Proficient (746-850)	Can write in English at grade level similar to non-EL students

Descriptive data for all of the dependent measures (test scores) are presented in Table 7. Means, standard deviations, estimated marginal means, and standard error of the mean are presented for all pre and post synonym measures. The pre-test mean for the experimental group was 20.46 ( $SD = 6.159$ ), and the post-test mean was 26.38 ( $SD = 8.088$ ). The pre-test mean for the comparison group was 24.30 ( $SD = 5.100$ ), and the post-test mean was 26.40 ( $SD = 6.552$ ). This shows a six-point gain for the experimental group and a two-point gain for the comparison group. Because these were simply descriptive statistics, no inferences were made. These changes will be discussed further in the following sections.

Table 7

*Descriptive Statistics: Pre and Post Multiple Choice Test Scores*

Variables		Mean	Standard Deviation	N	Estimated Marginal Means	Standard Error
Presyn	Experimental	20.46	6.159	13	20.76	1
	Comparison	24.30	5.100	10	23.9	1
	Total	22.13	5.926	23		
Postsyn	Experimental	26.38	8.088	13	26.78	1
	Comparison	26.40	6.552	10	25.9	1
	Total	26.39	7.297	23		

The estimated marginal means were calculated in order to show how the covariate changes the mean scores between the groups. The estimated marginal means show the estimate of change in the scores based on the covariate. The pre-test estimated mean for the experimental group was 20.76, and the post-test estimated mean was 26.78. The pre-test estimated mean for the comparison group was 23.9, and the post-test estimated mean was 25.9. Even though there

was some adjustment of scores with the estimated marginal mean, it still revealed a six-point gain for the experimental group and a two-point gain for the comparison group. Therefore, even if the means for the covariate were not calculated, the experimental group still had greater gains than the comparison group.

Effect size is a way to measure the size of the difference between two groups (Coe, 2002). For this study, the effect size used was Cohen's *d*, eta squared, and *r* squared. *R* square was determined by calculating the sum of squares for an effect divided by the total sum of squares. Cohen's *d* was determined by equivalence to *r* square (Wilson, Becker, & Tinker, 1995).

Table 8 presents statistical data that indicate significance and effect size for the synonym pre to post-test. A repeated measures ANCOVA was used to determine significance. Statistical significance is the likelihood that the perceived difference between two groups is due to chance (Sullivan & Feinn, 2012). There was approximately 11% (eta square;  $r^2 = .076$ ;  $d = .6$ ) of the variance in pre- to post-test scores that could be accounted for when controlling for the CELLA. Although this was a medium effect size, it was not statistically significant ( $F_{1, 20} = 2.4$ ,  $p = .133$ ). Neither group had improved scores on the synonym post-test sufficiently for there to be a significant effect. This could possibly be due to the sample size ( $n=23$ ). Increases in sample size would allow for the possibility of more participants and, therefore, more variance among the sample group (Sullivan & Fein, 2012).

Table 8

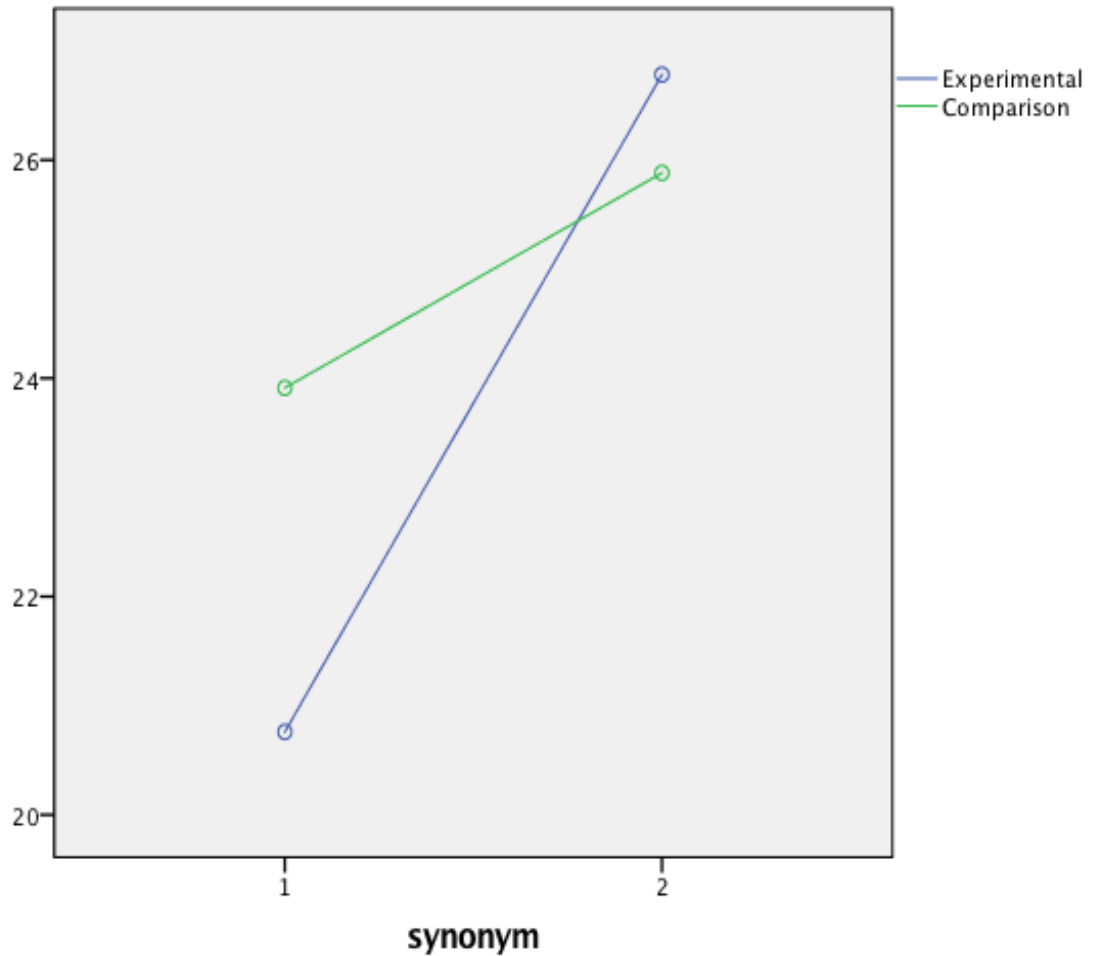
*Tests of Within-subjects Effects: Pre and Post Multiple Choice Test Scores*

Groups	df	Mean Square	F	Sig.	Partial Eta Squared	$r^2$	Cohen's $d$
Synonym (pre to post test for both groups)	1	18.056	2.448	.133	.109	.076	.6
Synonym * CELLA (interaction of synonym pre to post with CELLA)	1	25.408	3.445	.078	.147	.107	.6
Synonym * groups by class	1	46.179	6.261	.021	.238	.195	1.0
Error	20	7.375					

There was approximately 15% (eta square;  $r^2 = .107$ ;  $d = .6$ ) of the variance in post synonym scores that could be accounted for by interaction of CELLA, with pre- and post-tests. However, this was not statistically significant ( $F_{1, 20} = 3.4$ ,  $p = .078$ ). When looking at the synonym and CELLA score, it had an effect size of 0.6 ( $d$ ). This was a medium effect size as determined by Cohen (1988). This indicated that there was an interaction between CELLA scores and the pre- and post-test scores, but it could not be detected due to the small sample size. Therefore, statistical significance could not be determined.

There was a statistically significant interaction effect of the synonym test with the two groups, experimental and comparison ( $F_{1, 20}=6.3, p < .05$ ). There was approximately 24% (eta square;  $r^2 = .195; d = 1$ ) of the variance in scores that could be accounted for when controlling for the covariate. This was a large effect size as determined by Cohen (1988). The intervention revealed a change in scores on the post-test for the experimental group.

The data show that the experimental class had the largest gains in scores between the synonym pre- and post-tests. The covariate was used to equalize the groups prior to intervention. Figure 1 shows the interaction of the adjusted synonym scores pre- and post-test between the experimental and comparison groups. This shows that although the experimental group had lower scores than the comparison initially, at the completion of the intervention the experimental group scores were higher than those of the comparison group.



*Figure 1.* Interaction of adjusted pre-post multiple choice test scores (1 = experimental, 3 = comparison)

As shown in Table 9, the ANCOVA results suggest the covariate CELLA was significantly related to pre- and post-test scores ( $F_{1, 20} = .52.5$   $p = .000$ ). There was an effect size of 1.041. This was a large effect size as determined by Cohen (1988). There was approximately 72% (eta square;  $r^2 = .72$ ;  $d = 2$ ) of the variance in scores that could be accounted for when



controlling for the covariate. This means that the CELLA had a significant impact on the synonym scores for both groups.

Table 9

*Tests of Between-subjects Effects: Pre and Post Multiple Choice Test Scores*

CELLA	df	Mean Square	F	Sig.	Partial Eta Squared	r <sup>2</sup>	Cohen's d
Covariate influence on the DV	1	1222.437	52.526	.000	.724	.72	2
Difference between the two groups	1	14.221	.611	.444	.030	.01	0
Error	20	23.273					

There was no statistically significant difference between the experimental and control groups ( $F_{1, 20}=.611$   $p =.44$ ) with the CELLA. There was approximately 3% (eta square;  $r^2 = .01$ ;  $d= 0$ ) of the variance in scores that could account for group difference. This was a small effect size as determined by Cohen (1988). Thus, when controlling for the CELLA, the experimental group showed the largest gains on the synonym post-test.

## Research Question 2

When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a fill-in-the-blank/word-bank sentence test than EL ninth graders who are taught using typical vocabulary instruction by a ninth-grade ESOL teacher?

A repeated measures ANCOVA model was created to answer this question. The independent variables were the experimental and comparison groups; the dependent variables were the pre- and post-test scores. The covariates were the CELLA mean scores (listening/speaking, writing, and reading). Although the participants were all ninth graders, their language proficiencies varied, therefore, the CELLA mean score was used as a covariate to bring equality amongst the groups. The CELLA score designates that all of the participants are ELs.

Descriptive data for all the dependent measures (test scores) are presented in Table 10. Means, standard deviations, estimated marginal means, and standard error of the mean are presented for all pre and post measures. The pre-test mean for the experimental group pre-test was 19.77 ( $SD = 7.529$ ), and the post-test mean was 25.00 ( $SD = 11.113$ ). The pre-test mean for the comparison group was 20.70 ( $SD = 9.534$ ), and the post-test mean was 25.40 ( $SD = 10.575$ ). The data showed a six-point gain for the experimental group and a five-point gain for the comparison group.

Table 10

*Descriptive Statistics: Synonym Means and Variability Prior to and After use of the Covariate*

Pre/Post Tests		Mean	Std. Deviation	N	Estimated Marginal Means	Standard Error
Presentence	Experimental	19.77	7.529	13	20.25	1
	Comparison	20.70	9.534	10	20.06	1
	Total	20.17	8.266	23		
Postsentence	Experimental	25.00	11.113	13	25.62	1
	Comparison	25.40	10.575	10	24.58	1
	Total	25.17	10.637	23		

The estimated marginal means were also determined. The estimated marginal means show the estimate of change in the scores based on the covariate. The pre-test estimated mean for the experimental group was 20.25; the post-test estimated mean was 25.62. The pre-test estimated mean for the comparison group was 20.06; the post-test estimated mean was 24.58. Even though there was some adjustment of scores with the estimated marginal mean, a five-point gain for the experimental group and a four-point gain for the comparison group were seen. A possible explanation for these scores is that there could have been more significance with a larger group size and possibly a longer intervention time.

Table 11 presents statistical data indicating significance and effect size for the sentence pre- to post-test. A repeated measures ANCOVA was used to determine significance. Statistical significance is the likelihood that the perceived difference between two groups is due to chance (Sullivan & Feinn, 2012). There was approximately 18% (eta square;  $r^2 = .14$ ;  $d = .8$ ) of the variance in sentence scores that could be accounted for when controlling for the sentence test. This was statistically significant ( $F_{1, 20} = 4.5$ ,  $p = .048$ ), and this was a large effect size as

determined by Cohen (1988). This shows that the groups had sufficiently improved scores on the sentence post-test for there to be a significant amount variance accounted for.

Table 11

*Test of Within-subjects Effects: Pre and Post Fill-in-the-blank/Word Bank Sentence Test Scores*

Groups	df	Mean Square	F	Sig.	Partial Eta Squared	r <sup>2</sup>	Cohen's <i>d</i>
Sentence (pre to post test for both groups)	1	33.456	4.448	.048	.182	.14	.8
Sentence * CELLA (interaction of sentence pre to post with CELLA)	1	45.759	6.083	.023	.233	.197	1
Sentence * groups by class	1	1.987	.264	.613	.013	.008	.2
Error(sentence)	20	7.522					

There was approximately 23% (eta square;  $r^2 = .197$ ;  $d = 1$ ) of the variance in sentence scores that could be accounted for by the interaction of pre-post scores and the CELLA. This revealed a statistically significant interaction between the sentence test from pre to post and the CELLA ( $F_{1, 20} = 6.1$ ,  $p = .023$ ). This was a large effect size as determined by Cohen (1988). This indicated that the CELLA mean significantly adjusted initial scores; however, the adjustment

was not equivalent for pre- and post-test scores. Consequently, the CELLA was not a legitimate covariate. Thus, further analysis was conducted, removing the CELLA. Once the CELLA was removed, the number of participants increased to 29 from 23. The change in participant numbers can be seen in Table 12.

Table 12

*Increase in Participants After CELLA Removal*

Class2	Mean	N	Std. Deviation
Experimental	706.2051	13	41.90499
Comparison	715.0000	10	40.27707
Total	710.4267	23	40.51732

The significant interaction effect of the sentence test between the experimental and comparison groups was not statistically significant ( $F_{1, 20} = .26, p = .613$ ). The effect size was 0.017. This was a small effect size as determined by Cohen (1988). There was approximately .1% of the variance in scores that could be accounted for when controlling the covariate. Therefore, there was no variance that can be accounted for from the sentence test between the experimental and comparison groups.

Table 13 presents statistical data that indicates significance and effect size for the sentence pre- to post-test. A repeated measures ANOVA was used to determine significance. There was a statistically significant increase in score from pre to post-test regardless of group ( $F_{1, 27} = 15.38, p = .001$ ). There was approximately 36% (eta square;  $r^2 = .819; d = 2$ ) of the

variance in sentence scores that could be accounted for by the pre-post scores. There was a large effect size. There was no interaction between sentences scores and groups ( $F_{1, 27} = .576, p = .455$ ). Approximately 2% (eta square;  $r^2 = .013; d = .2$ ) of the variance in interaction sentence scores was accounted for. There was a small effect size.

Table 13

*Test of Within-subjects Effects: Pre to Post-test*

Groups	Df	Mean Square	F	Sig.	Partial Eta Squared	$r^2$	Cohen's d
Sentence	1	190.938	15.383	.001	.363	.358	1.5
Sent*	1	7.145	.576	.455	.021	.013	.2
groups by class							
Error (sent)	27	12.412					

Table 14 shows that there was no statistically significant difference in score between groups ( $F_{1, 27} = .132, p = .719$ ). There was approximately .5% (eta square;  $r^2 = .004; d = .1$ ) of the variance in sentence scores between groups. This represented a very small effect size.

Table 14

*Test of Between-subjects Effects: Pre to Post-test*

	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	r <sup>2</sup>	Cohen's <i>d</i>
Class2	26.956	1	26.956	.132	.719	.005	.004	.1
Error	5509.664	27	204.062					

### Summary

In this chapter, the results of the study were presented. Research Question 1 asked, “When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a multiple-choice synonym test than EL ninth graders who are taught using traditional vocabulary instruction by a ninth-grade ESOL teacher?”

Statistical analysis using ANCOVA resulted in a statistically significant interaction effect of the synonym test between the experimental and control group. There was little interaction between the CELLA and pre and post-test scores. The experimental group had the largest gains in score between the synonym pre and post-test.

Research Question 2 asked, “When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a fill-in-the blank/word-bank sentence test than EL ninth graders who are taught using typical vocabulary instruction by a ninth-grade ESOL teacher?”

Statistical analysis using ANCOVA revealed that the interaction between the CELLA and the pre/post scores significantly adjusted the initial scores. This indicated that the CELLA was

not a legitimate covariate. There was no significant interaction effect of the sentence test between the experimental and comparison groups. There was a statistically significant increase in scores from pre to post regardless of groups.



## CHAPTER 5 DISCUSSION

### Introduction

The purpose of this study was to examine whether a direct, explicit method of teaching vocabulary, the Vocabulary Scenario Technique (VST-ELP, 2016) protocol was effective for increasing the vocabulary of ninth-grade English learner (EL) students. The results of a repeated measures ANCOVA and ANOVA indicated the protocol to be effective in increasing scores of the experimental group on the synonym post-test. For the sentence test, the protocol was effective in increasing post-test scores for both the experimental and comparison groups. In this chapter, the overall findings, impact of limitations on results, implications for practice, and recommendations for future research are presented.

### Discussion of the Findings

#### Research Question 1

When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a multiple-choice synonym test than EL ninth graders who are taught using traditional vocabulary instruction by a ninth-grade ESOL teacher?

It was hypothesized that following the administration of the VST-ELP protocol, the experimental group of ninth-grade EL students would demonstrate greater gains on a multiple choice synonym test than the comparison group of ninth-grade EL students who received typical vocabulary instruction.

Results from the descriptive statistics confirmed that the experimental group (20.46/26.38) made higher gains on the synonym post-test than the comparison group (24.30/26.40). The experimental group mean score increased by six points on the post-test, even though this group's pre-test mean score was four points lower than that of the comparison group. The comparison group showed a two-point mean score increase from pre- to post-test on the synonym test.

The effect of the synonym test between the experimental and comparison group was not statistically significant when controlling for the covariate. There was a medium effect size for this test; however, it was not statistically significant. Neither the experimental nor the comparison group had scores that showed enough improvement to have a significant effect. Data also showed that there was little interaction between the CELLA score and pre-/post-test scores.

There was, however, a statistically significant interaction effect of the synonym test between the experimental and comparison groups. Data showed that the experimental group had the largest gains in score on the synonym test from pre to post. Even though the experimental group had the lowest scores on the pre-test, once the intervention was completed their scores increased. This showed that the intervention had a significant influence on the synonym post-test scores for the experimental group.

Two known factors may have contributed to the gain being less significant than expected. The study was conducted for only four weeks. Having more time, perhaps six weeks, may have resulted in a larger effect size and more gains on the post-test. The previous VST studies conducted in 2010 and 2011 (Spielvogel) both showed statistically significant differences and were conducted for six (2010) and four (2011) weeks; however, neither study focused on the EL

population using a peer protocol. Thus, this study offers important data for the research and teaching of vocabulary to ELs.

A second factor to consider when speaking of the lack of gains is motivation. Students may have had factors outside of school that kept them from being motivated. Most of the participants in this study were from low SES backgrounds. Many of them had other responsibilities outside of school, i.e., taking care of younger siblings or other family members, that may have taken precedence over school obligations. The majority of the participants in this study were Haitian. For many families in Haiti, there are extensive boundaries to achieving desired levels of education (Nicholas, 2014). Many families migrate to the United States in hopes of overcoming geographical and financial barriers to education for their children (Nicholas, 2014). Even though this is the desired outcome, some students still lack the motivation to be successful in school (Nicholas, 2014).

## Research Question 2

When controlling for language proficiency, do ninth-grade ELs receiving peer-assisted vocabulary intervention with the VST-ELP protocol, demonstrate greater gains on a fill-in-the-blank/word-bank sentence test than EL ninth graders who are taught using typical vocabulary instruction by a ninth-grade ESOL teacher?

It was hypothesized that following the administration of the VST-ELP, the experimental group of ninth-grade EL students would demonstrate greater gains on a fill-in-the-blank/word-bank sentence test than the comparison group of ninth-grade EL students who received typical vocabulary instruction.

Results from the descriptive statistics confirmed that the experimental group (19.77/25.00) made higher gains on the sentence post-test than the comparison group (20.70/25.40). The comparison group showed a five-point mean score increase from pre to post on the sentence test.

There was also a statistically significant interaction between the sentence test from pre to post and the CELLA. This indicated that the CELLA mean was significantly adjusting the initial scores; however, the adjustment made by the CELLA mean was not equivalent for the pre- and post-test scores. This indicated that the CELLA was not a valid covariate. The interaction effect of the sentence test between the experimental and comparison groups was not statistically significant. This indicated that no variance could be accounted for from the sentence test between the two groups.

Because it was determined that the CELLA covariate was not appropriate for the sentence test, a repeated measure analysis of variance (ANOVA) was used to determine significance. There was a statistically significant increase in score from pre- to post-test, regardless of group. There was no interaction between the sentence scores and the groups. There was also no statistical significance in scores of the experimental and comparison groups.

When trying to determine why there were such small gains on the synonym and sentence tests, two student factors were considered: student participation and student preparation. Student preparation was affected by experiences such as whether or not students were having a bad day and their motivation to learn was lessened, and whether or not students understood the test information when it was presented (in English). Student participation was affected by the accuracy of the interpretation during the intervention and students' rushing through the test and

the time constraints of the intervention. Likely, the most pertinent factor was the student gain in understanding/proficiency in English.

Krashen (1981, 1982) stated that language is acquired when individuals understand what they hear and read. This concept is identified as comprehensible input (Rodrigo et al., 2004). If the participants in this study were not sufficiently proficient in English, they would not be able to understand the information presented in the pre- and post-test. Therefore, they would be unable to provide the correct answers on the assessment.

Another factor possibly affecting the results was the accuracy of the CELLA scores. With the exception of five students, all participants were administered the CELLA in March of 2015. Therefore, the scores were not the most recent. Some students could have acquired additional English proficiency skills, and some may have continued to be at the basic level after the CELLA administration. Students who may have still been at the basic level would have had difficulty understanding the information presented in the pre- and post-test. This could have led to students guessing some of the answers rather than responding with knowledge.

Finally, the language of the assessments affected the results. The pre- and post-test were presented to the participants in English. The researcher was not trained in interpreting or translating in Haitian Creole. In the participants' classroom, all teaching/learning materials were presented in English. Because there were some participants whose English proficiency was lower than others, it is possible that these students had difficulty understanding the pre- and post-test material. For future research, it would be beneficial to analyze the data based on the participants' individual language levels.

The students' socioeconomic status affected their activity in the study. The high school attended by the participants was located in a low socioeconomic area of the city. There were days when some participants came in with different behaviors than the previous day and stated that they were "having a bad day" because of something going on at home, e.g., siblings or parents being incarcerated, staying up late and getting up early to take care of siblings, or having to work late on a school night. Sometimes the participants just stated that they did not feel like talking and, therefore, were not engaged much during the intervention on that day.

The interpretation of peer tutors affected the participation of the students. At multiple times during the intervention, the participants who were peer tutors would state that they were unsure of how to say a certain word in Haitian Creole. They were instructed by the researcher to attempt to find an interpretive word that was as close to the target word as possible and to use other words/examples to try to relay the word to their peer. Because the researcher was not a native speaker, there was no way to determine if the peer tutors' interpretations were correct. This also relates to the thoughts of Krashen (1981, 1982) and Rodrigo et al. (2004) on comprehensible input. Participants who were on the receiving end of the peer tutoring did not have assistance from the peer tutors when they were administered the pre- and post-test. Therefore, comprehensible input was not being provided. This could have contributed to the very small gains on the post-test.

There were a few moments when the researcher was able to have conversations with the participants about school and education. During these conversations, the researcher noted that some participants were not as motivated as others to do well in school. For some of the participants, coming to school was just about not being at home, being able to socialize, and

receiving free meals. They did not take school/education seriously. Some of the participants spoke about wanting to do well in school so that they could leave Orlando and go to college elsewhere. All of the participants would be first generation college students if they decided to go to college.

### Impact of Limitations on Results

There were four limitations to the study presented in Chapter 1 which are worthy of discussion as to their impact on the results of the research: (a) language proficiency levels, (b) peer interpretations, (c) location of the intervention, and (d) time constraints.

In regard to the CELLA/language proficiency scores, some of those scores were not indicative of the participants' current English proficiency. The school system administers the CELLA annually to students until they are classified as being English proficient. With the exception of five students, all participants were last administered the CELLA in March of 2015. This study took place between March and April of 2016. Thus, participants who were not yet English proficient should have taken the CELLA again in March, but those scores were not available to the researcher. Therefore, there was no way of determining if participants had acquired English proficiency or if some were still functioning at lower levels of proficiency.

Another limitation was interpreting in Creole. Even though the students were paired in dyads with peers who had higher English proficiency scores, the interpreters sometimes indicated that they were unable to interpret certain words in Creole. If repeating this study again, it would be beneficial to have a professional interpreter who speaks Haitian Creole and could ensure that the students were comprehending what was being said to them. Also, being able to

have up-to-date CELLA scores and more time to train peer tutors could enhance the effectiveness of the study.

The location of the intervention was in the middle of a large “flex” space, an open space where students often hung out between classes, surrounded by classrooms. This space was also used by teachers and for special classes. At times, there were other individuals in the flex space while the intervention was occurring. Also, whenever the bell rang, the intervention had to pause so that students could walk through the flex space and go to their next classes. The noise during the changing of classes was a distraction for the researcher and the students. This was the only available space that was offered for the intervention. Like most public schools, the target high school was short on space and could not provide a designated classroom for the intervention to take place. For future studies, it would be beneficial to have a quiet classroom or another space so that the intervention could be carried out with minimal distractions.

The intervention occurred three days a week for 30 minutes. At times, the researcher and peer tutors felt rushed to get through all of the words during each session. When using the VST-ELP, adequate time needs to be built in so that the peers have enough time to effectively provide an interpretation for their peers. It would be reasonable to say that adding an additional 15 minutes to the VST-ELP protocol would likely allow a sufficient amount of time for an interpreter to function effectively.

### Implications for Practice

It is known that vocabulary acquisition plays a critical role for English learners in school achievement and learning English (August et al., 2005). This study showed that the VST-ELP could possibly be a useful instructional tool for use with adolescent English learners. In the



previous VST studies, i.e., Spielvogel (2011) and the 2010 pilot study, both treatment groups had results that were statistically significant. Although both of the previous studies were conducted with English speaking students, it still suggests that the protocol has the potential to create greater gains.

The VST-ELP (2016) shows potential for use by speech-language pathologists and other educators in the instructional setting. Speech-language pathologists and classroom teachers typically seek instructional tools that are practical for classroom use. Even if an additional 15 minutes were added for interpretation, the VST-ELP could be incorporated in a collaborative classroom with a speech-language pathologist and classroom teacher.

Vocabulary plays a large role in reading comprehension for adolescents as they go through high school and into secondary placements or the workforce (Ott, 2001). The findings of this study showed support for using explicit vocabulary instruction with adolescents. Being able to explicitly teach vocabulary to EL adolescents will add to their thinking, reading, writing, listening, and speaking skills.

The findings in the present study supported Sibold's (2011) recommendations regarding the use of vocabulary instruction with an emphasis on direct instruction. The direct, explicit instruction from this study can help students understand vocabulary before, during, and after their stages of reading instruction.

#### Recommendations for Future Research

This study was the first to use the VST-ELP (2016). Therefore, there are several recommendations. In this study, the peer tutors received training for only 30 minutes during one of their class periods. For future research, if using peer tutors again, it would be beneficial for the

peer tutors to receive extended training. Having the opportunity to test their interpreting skills with other students before being assigned peers could help alleviate the interpretive challenges observed in the study.

Additionally, having a professional who speaks Haitian Creole would benefit the researcher as well as the student interpreters. Because the researcher was not a speaker of Haitian Creole, it was difficult to determine what was being spoken among the students, even during casual conversation. There were also instances where the peer tutors were unsure of the appropriate interpretation for some of the words and sentences. Having a professional who speaks Haitian Creole would ensure that students are comprehending the intervention material being presented to them; the professional could also assist the researcher in understanding what the students are saying.

It would also be advantageous to include the length of time that participants have been in the United States. For EL student's oral proficiency in English takes 3 to 5 years to develop and academic English proficiency can take 4 to 7 years (Cummins, 2008). For this study there was a demographic sheet completed for each participant that provided information on when they had arrived in the United States. That information for the participants wasn't analyzed in this study, but should be included for future studies.

Due to time constraints, this study was only able to be carried out for four weeks. The previous VST study conducted in 2010 was carried out over six weeks with nine total dosage hours. The study by Spielvogel (2011) was carried out over four weeks with six total dosage hours. With the six-week VST study, there were 36 words versus 32 words with the four-week VST. With the VST-ELP, it is unclear if conducting a six-week study and adding additional

words would be beneficial. Conducting both a six-week study with and without additional words, using the VST-ELP, could clarify what would be most effective for the purpose of participant gains. Also, providing an additional 15 minutes would be beneficial so that interpreters would have extra time to interpret the protocol.

Adding a qualitative piece to this protocol would be advantageous to the research. Qualitative research is exploratory and involves a naturalistic approach (Gall et al., 2007). It helps to present an understanding of underlying reasons and motivations and uncover trends. Using a mixed-methods design could help determine whether other factors are involved with participants being successful in the intervention. It could also be useful when working with participants from different cultural and ethnic backgrounds in finding out how they view and value education.

### Summary

This study was conducted to investigate the effects of a VST-ELP on ninth-grade EL students. The findings of this study revealed some improvements in the vocabulary skills of EL ninth graders who struggle with literacy. The experimental group demonstrated higher gains from pre-test to post-test.

These findings show that the VST-ELP has potential for being an instructional method that supports the use of explicit vocabulary instruction for EL adolescents. Further research is suggested and warranted to continue investigating the effects of the Vocabulary Scenario Technique-English Learner Peer (VST-ELP) protocol with a variety of adolescent students.

APPENDIX A  
APPROVAL TO CONDUCT RESEARCH



University of Central Florida Institutional Review Board  
 Office of Research & Commercialization  
 12201 Research Parkway, Suite 501  
 Orlando, Florida 32826-3246  
 Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

**Approval of Exempt Human Research**

**From: UCF Institutional Review Board #1  
 FWA00000351, IRB00001138**  
**To: Kimmerly Kenyatta Harrell**  
**Date: December 23, 2015**

Dear Researcher:

On 12/23/2015, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
 Project Title: The Effects of the Vocabulary Scenario Technique on Ninth Grade English Learner Students who Struggle with Literacy  
 Investigator: Kimmerly Kenyatta Harrell  
 IRB Number: SBE-15-11847  
 Funding Agency:  
 Grant Title:  
 Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 12/23/2015 08:42:41 AM EST

IRB Manager



# Orange County Public Schools

445 West Amelia Street • Orlando, FL 32801-1129 • Phone 407.317.3200 • www.ocps.net

## Notice of Approval

Approval Date: 3/8/16

Approval Number: 0032

Project Title: The Effects of the Vocabulary Scenario Technique on Ninth Grade English Learner Students who Struggle with Literacy

Requester: Kimmerly Harrell

Project Director/Advisor: Dr. Barbara Ehren

Sponsor Agency/Institutional Affiliation: University of Central Florida

Thank you for your request to conduct research in Orange County Public Schools. We have reviewed and approved your application. This Notice of Approval expires one year after issue, 3/7/17 .

If you are interacting with OCPS staff or students, you should have submitted a Principal Notification Form with your application. You may now email the principals who have indicated interest in participating, including this Notice as an attachment. After initial contact with principals, you may then email any necessary staff. This notice does not obligate administrators, teachers, students, or families of students to participate in your study; participation is entirely voluntary.

OCPS badges are required to enter any OCPS campus or building (see the [Security Clearance Flow Chart](#)).

You are responsible for submitting a [Change Request Form](#) to this office prior to implementing any changes to the currently approved protocol. If any problems or unexpected adverse reactions occur as a result of this study, you must notify this office immediately by emailing a completed [Adverse Event Report Form](#). On or before 2/7/17 , you must complete a [Request for Renewal or Executive Summary Submission](#). Email all forms to [research@ocps.net](mailto:research@ocps.net). All forms may be found at [www.ocps.net/cs/services/accountability/Pages/Research.aspx](http://www.ocps.net/cs/services/accountability/Pages/Research.aspx).

Should you have questions or need assistance, please contact Mary Ann White at (407) 317-3201 or [mary.white@ocps.net](mailto:mary.white@ocps.net).

Best wishes for continued success,

Tavy Chen, Ed.D.  
[tavy.chen@ocps.net](mailto:tavy.chen@ocps.net)  
Director, Accountability and Research  
Orange County Public Schools

Cc: Brandon McKelvey, Senior Director, [brandon.mckelvey@ocps.net](mailto:brandon.mckelvey@ocps.net)

"The Orange County School Board is an equal opportunity agency!"

APPENDIX B  
VST-ELP PROTOCOL

DAY 1  
Script & Encounter Worksheet

Materials

Portable Word Walls

Large display of scenarios x 4

Print outs of the scenarios with target word highlighted or bolded/underlined for each student dyad

Black sharpie

Encounter worksheets

Cue & Do

Cue: “Good morning students, my name is Ms. Harrell and I have a way to help you learn new words. Knowing more words will help you read better, write better, and help you get better grades and do better on tests. While you are learning new words, some of you are going to be working on your own and some of you are going to be working in pairs of two because one of you is stronger in English than the other. For those of you who are working in pairs, one of you will interpret the information into your native language for your partner. When I hold up this sign, that’s when you’ll know it’s your turn to interpret.”

Do: Hold up sign and give the students time to interpret.

Cue: “While you’re doing that, I’m going to be passing out some PWWs that you will be using over the next four weeks. Please don’t touch them until I tell you the directions.”

Do: Pass out the PWWs.

Cue: On the front white card of your PWW, please write your name.

Do: Hold up “interpret sign” and give them a moment to translate and write their names. While they are writing their names, instructor displays first scenario [E1 \_\_\_\_].

Cue: “Now we are going to get started learning our first word. Please pay special attention to the highlighted word while I read the scenario aloud.”

Do: Instructor highlights the target word and then reads the scenario aloud. Hold up the sign.

Cue: “Please interpret the scenario. [Interpreters will turn to peers and interpret scenario into their L1 while still leaving the target word in English E2\_\_\_\_] While your classmates are doing that, please be thinking about what that highlighted word might mean.”

Cue: “Everyone ready? Who has an idea what that highlighted word means?”



Do: Probe students for correct meaning of the word. Supply student-friendly definition.

Cue: “You’re right – the highlighted word means \_\_\_\_\_. Now I want you to think of a synonym for \_\_\_\_\_ [E3 \_\_\_\_\_]. A synonym that means the same thing as another word, like big and large or small and little.”

Do: Hold up interpret sign and say “interpret” [E4 \_\_\_\_\_]. Write the target word [E5] beneath the scenario with an equal sign and some of the synonyms elicited. If no synonyms are offered, provide synonyms for the students {SAMPLE SYNONYMS}. Write best synonym above the target word on the scenario.

Cue: “Now we are going to read the scenario together, first with the target word, and then with the synonym.”

Do: Hold up the interpret sign and say “please tell your peers that they will be listening while we read aloud.” Give them a moment to interpret.

Cue: “Now let’s read aloud together, first with the highlighted word and then with the synonym.”

Do: Chorally read the scenario with the target word [E6] and then with the synonym.

Cue: “Please write the highlighted word [E7] on the first colored card of the PWW on the blank side [E8].

Do: Hold up the interpret sign and say “interpret”. While the students are writing on their PWWs, instructor can walk around the room and check on progress.

Cue: “While you are writing the word [E9] on your PWWs, I would like for you to be thinking about how you can use \_\_\_\_\_ [E10].”

Do: Elicit two sentences from the students [E11 & E12] who do not require an interpreter.

Cue: “Who has a sentence for me? (instructor scaffolds as needed and jots down sentence on lesson plan) “Who has a second sentence for me?” (instructor scaffolds as needed and jots down sentence on lesson plan).

Do: Select best sentence and write it beneath the scenario for students to copy on the back of their cards [E13]

Cue: “Please write this sentence on the back of your word card.” [E14]

Do: Hold up the interpret sign and say “Please ask your peers to turn the card over and copy the sentence to the best of their ability”.

REPEAT FOR ALL EACH WORD

Review

Cue: “We learned \_\_\_\_\_ words today. Let’s review them.”

Do: Hold up the interpret sign and say “Please tell your peers that we are going to be reviewing our words and we will be saying synonyms together.” Call on a student and ask them to refer to their PWW and tell you a synonym for \_\_\_\_\_. [E15]

Cue: “What’s a synonym for \_\_\_\_\_ [E16] everyone?” (Class will say it chorally)

Do: Bridge to next lesson

Cue: “The next time I see you, we are going to learn \_\_\_\_\_ more words using your PWWs. I’m going to pick up your PWWs now and I’ll give them back to you the next time I see you.”

REPEAT REVIEW FOR EACH WORD

## DAY 2

### Script & Encounter Worksheet Materials

#### Portable Word Walls

Large display of scenarios x 4

Print outs of the scenarios with target word highlighted or bolded/underlined for each student dyad

Black sharpie

Encounter worksheets

#### Cue & Do

Cue: “Good morning students, again my name is Ms. Harrell. Today we are going to be learning more new vocabulary words. Knowing more words will help you read better, write better, and help you get better grades and do better on tests. Remember, while you are learning new words, some of you are going to be working on your own and some of you are going to be working in pairs of two because one of you is stronger in English than the other. For those of you who are working in pairs, one of you will interpret the information into your native language for your partner. When I hold up this sign, that’s when you’ll know it’s your turn to interpret.”

Do: Hold up sign and give the students time to interpret.

Cue: “While you’re doing that, I’m going to be passing out some PWWs that you will be using over the next four weeks. Please don’t touch them until I tell you the directions.”

Do: Pass out the PWWs.

Cue: On the front white card of your PWW, please write your name.

Do: Hold up “interpret sign” and give them a moment to translate and write their names. While they are writing their names, instructor displays first scenario [E1 \_\_\_\_].

Cue: “Now we are going to get started learning our first word. Please pay special attention to the highlighted word while I read the scenario aloud.”

Do: Instructor highlights the target word and then reads the scenario aloud. Hold up the sign.

Cue: “Please interpret the scenario. [Interpreters will turn to peers and interpret scenario into their L1 while still leaving the target word in English E2\_\_\_\_] While your classmates are doing that, please be thinking about what that highlighted word might mean.”

Cue: “Everyone ready? Who has an idea what that highlighted word means?”

Do: Probe students for correct meaning of the word. Supply student-friendly definition.

Cue: “You’re right – the highlighted word means \_\_\_\_\_. Now I want you to think of a synonym for \_\_\_\_\_ [E3\_\_\_\_\_]. A synonym that means the same thing as another word, like big and large or small and little.”

Do: Hold up interpret sign and say “interpret” [E4 \_\_\_\_\_]. Write the target word [E5] beneath the scenario with an equal sign and some of the synonyms elicited. If no synonyms are offered, provide synonyms for the students {SAMPLE SYNONYMS}. Write best synonym above the target word on the scenario.

Cue: “Now we are going to read the scenario together, first with the target word, and then with the synonym.”

Do: Hold up the interpret sign and say “please tell your peers that they will be listening while we read aloud.” Give them a moment to interpret.

Cue: “Now let’s read aloud together, first with the highlighted word and then with the synonym.”

Do: Chorally read the scenario with the target word [E6] and then with the synonym.

Cue: “Please write the highlighted word [E7] on the first colored card of the PWW on the blank side [E8].

Do: Hold up the interpret sign and say “interpret”. While the students are writing on their PWWs, instructor can walk around the room and check on progress.

Cue: “While you are writing the word [E9] on your PWWs, I would like for you to be thinking about how you can use \_\_\_\_\_ [E10].”

Do: Elicit two sentences from the students [E11 & E12] who do not require an interpreter.

Cue: “Who has a sentence for me? (instructor scaffolds as needed and jots down sentence on lesson plan) “Who has a second sentence for me?” (instructor scaffolds as needed and jots down sentence on lesson plan).

Do: Select best sentence and write it beneath the scenario for students to copy on the back of their cards [E13]

Cue: “Please write this sentence on the back of your word card.” [E14]

Do: Hold up the interpret sign and say “Please ask your peers to turn the card over and copy the sentence to the best of their ability”.

**REPEAT FOR ALL EACH WORD**

## Review

Cue: “We learned \_\_\_\_\_ words today. Let’s review them.”

Do: Hold up the interpret sign and say “Please tell your peers that we are going to be reviewing our words and we will be saying synonyms together.” Call on a student and ask them to refer to their PWW and tell you a synonym for \_\_\_\_\_. [E15]

Cue: “What’s a synonym for \_\_\_\_\_ [E16] everyone?” (Class will say it chorally)

## REPEAT REVIEW FOR EACH WORD

Do: Bridge to next lesson

Cue: “The next time I see you, we are going to review all of the words we learned this week using your PWWs. I’m going to pick up your PWWs now and I’ll give them back to you the next time I see you.”

### DAY 3

#### Script & Encounter Worksheet

#### Materials

##### Portable Word Walls

Large display of morphological variations

Black sharpie

Decorative hole punches

Morphology sheets

#### Cue & Do

Cue: “Good morning students, again my name is Ms. Harrell. Today we are going to be reviewing the vocabulary words we learned this week. Knowing more words will help you read better, write better, and help you get better grades and do better on tests. Today, everyone will be working in pairs so you can all practice your new words.

Do: Hold up sign and give the students time to interpret.

Cue: “While you’re doing that, I’m going to be passing out some PWWs and put you in pairs.”

Do: Pass out the PWWs and put any unpaired students in pairs.

Cue: “We are going to learn morphological variations for our new words.” Morphological variations are different forms of words. Morphology means how words are formed.

Do: Hold up interpret sign and say “interpret”

Cue: Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]

Do: Hold up interpret sign and say “please have your peers copy the variations on the back of their cards”.

Cue: “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”

Do: Elicit two sentences from the students [E19 & E 20]

#### REPEAT FOR EACH WORD

Cue: “Now I’m going to have you work with your partner and practice the words. You take turns saying the words, asking/telling synonyms, or making up your own sentences, while I walk around a give you a chance to show me your knowledge.”

Do: Hold up interpret sign and say “interpret”. Then, walk around with the decorative hole punches, ask each student to show you their knowledge, and give them a decorative hold punch on the corresponding index card.

Bridge: “Next week we are going to be learning \_\_\_\_\_ more words using your PWWs.”

APPENDIX C  
VST-ELP DATA COLLECTION FORM



VST-ELP Study Data Collection Form

Name: \_\_\_\_\_ Class: \_\_\_\_\_

Study ID Number: \_\_\_\_\_ Age: \_\_\_\_\_

Grade: \_\_\_\_\_ Gender: Male Female

Ethnicity: \_\_\_\_\_

Primary Language: \_\_\_\_\_ Home Language Survey Date: \_\_\_\_\_

Dominant/Native Language: \_\_\_\_\_

Language Classification: \_\_\_\_\_

First Date Enrolled in U.S. School: \_\_\_\_\_

Grades Completed in the U.S.: \_\_\_\_\_

LEP Code: \_\_\_\_\_

Program: \_\_\_\_\_

Basis of Entry: \_\_\_\_\_

Special Education Designation/Placement/Services: \_\_\_\_\_

Speech-Language Services: \_\_\_\_\_

CELLA Scores: \_\_\_\_\_

\_\_\_\_\_

FCAT/FSA Scores: \_\_\_\_\_

\_\_\_\_\_

IPT Scores and Designation: \_\_\_\_\_

\_\_\_\_\_

Days Absent During Intervention Period: \_\_\_\_\_

Total Hours of Intervention: \_\_\_\_\_

Vocabulary Test 1 (Pre)      Date: \_\_\_\_\_ Score: \_\_\_\_\_

Vocabulary Test 2 (Pre)      Date: \_\_\_\_\_ Score: \_\_\_\_\_

Vocabulary Test 1 (Post)      Date: \_\_\_\_\_ Score: \_\_\_\_\_

Vocabulary Test 2 (Post)      Date: \_\_\_\_\_ Score: \_\_\_\_\_

Notes:

APPENDIX D  
SYNONYM PRE/POST-TEST

Name: \_\_\_\_\_

Directions: A Synonym is a word that has almost the same meaning as another word. Read each underlined word and circle a word that has the same meaning.

Example: lavish

- a. plain
- b. old
- c. luxurious
- d. broke

1.) unconscious

- a. aware
- b. still
- c. motionless
- d. mindful of

2.) pitfall

- a. trap
- b. security
- c. safety
- d. focused

3.) re-inhabit

- a. change
- b. to live in again
- c. together
- d. environment

4.) fervor

- a. picky
- b. calmness
- c. enthusiastic
- d. relaxed

5.) fissure

- a. crack
- b. first
- c. steady
- d. closing

- 6.) arrogance  
a. meek  
b. humble  
c. haughtiness  
d. witty
- 7.) moss  
a. earth  
b. prey  
c. green plant  
d. tree
- 8.) sweep  
a. stumble  
b. brush  
c. rise  
d. release
- 9.) glance  
a. stare  
b. browse  
c. study  
d. overlook
- 10.) hesitate  
a. falter  
b. decide  
c. dive  
d. gather
- 11.) moment  
a. time  
b. forever  
c. always  
d. lifetime
- 12.) presence  
a. nearness  
b. far  
c. absent  
d. separate

- 13.) reflex
- a. spontaneous
  - b. slow
  - c. balanced
  - d. save

- 14.) fringe
- a. borderline
  - b. core
  - c. within
  - d. surrounding

- 15.) depth
- a. shallow
  - b. deepness
  - c. center
  - d. height

- 16.) beneath
- a. beside
  - b. overhead
  - c. under
  - d. aloft

- 17.) coil
- a. straighten
  - b. unbend
  - c. circle
  - d. order

- 18.) strand
- a. beachfront
  - b. land
  - c. tree
  - d. leaves

- 19.) terror
- a. audacity
  - b. brash
  - c. anxiety

d. bold

20.) splendor

- a. dull
- b. brilliance
- c. boring
- d. curious

21.) ruthless

- a. tender
- b. heartless
- c. warm
- d. ordinary

22.) bend

- a. arch
- b. straighten
- c. uncurl
- d. expand

23.) raw

- a. cooked
- b. pure
- c. natural
- d. decayed

24.) bent

- a. twisted
- b. straighten
- c. adjust
- d. rectify

25.) mass

- a. crowd
- b. best
- c. shortage
- d. good

26.) fragrance

- a. stench
- b. stink
- c. aroma
- d. reek

27.) dare

- a. duck
- b. sidestep
- c. challenge
- d. dodge

28.) soul

- a. body
- b. flesh
- c. spirit
- d. personality

29.) worse

- a. acceptable
- b. decent
- c. adequate
- d. bad

30.) terrible

- a. comforting
- b. relaxing
- c. dreadful
- d. ordinary

31.) formless

- a. shaped
- b. structured
- c. product
- d. shapeless

32.) among

- a. from
- b. through
- c. loved
- d. out of

33.) peace

- a. unrest
- b. war
- c. calmness
- d. battle

34.) colorless

- a. dyed
- b. unpainted
- c. stained



d. captivated

35.) listlessness

- a. vitality
- b. ambitious
- c. vigor
- d. lethargic

36.) nothingness

- a. life
- b. existence
- c. abrupt
- d. deadness

37.) slept

- a. wake
- b. existence
- c. napping
- d. arouse

38.) flame

- a. extinguish
- b. light
- c. blow
- d. cool

39.) edge

- a. core
- b. inside
- c. border
- d. center

40.) golden

- a. dark
- b. gloomy
- c. bright
- d. bleak

41.) loss

- a. gain
- b. acquire
- c. keep
- d. misplace

42.) spark

- a. abundance
- b. surplus
- c. hint
- d. excess

43.) wild

- a. savage
- b. tamed
- c. domestic
- d. broken

44.) lost

- a. possessed
- b. owned
- c. missing
- d. retained

APPENDIX E  
SENTENCE PRE/POST-TEST

Name: \_\_\_\_\_

**Directions:** Complete the following sentences by choosing the best word from the list and writing it in the blank space provided.

<p><b>Example:</b> I like to _____ ice-cream every day.</p> <p><b>Answer:</b> I like to <u>eat</u> ice-cream every day.</p>	<p>A. drink B. melt C. throw D. eat</p>
---	---

<p>1. We were _____ and needed directions.</p> <p>2. She was _____ for three days after the accident.</p> <p>3. Her face was _____ when she saw her dad get out of the car.</p> <p>4. The walls in my house have been _____ for the last five years.</p>	<p>A. unconscious B. golden C. lost D. tired E. behind F. disappointed G. happy H. colorless</p>
--	--

<p>5. The teacher was _____ in her criticism of the students.</p>	<p>A. sadness B. ruthless</p>
---	-----------------------------------

<p>6. He purchased all of the material _____ in order to make soap.</p> <p>7. The service at that restaurant was _____.</p> <p>8. The animals in the zoo went _____ when it was time for lunch.</p> <p>9. The second book we read was _____ than the first one.</p>	<p>C. worse</p> <p>D. long</p> <p>E. online</p> <p>F. raw</p> <p>G. terrible</p> <p>H. wild</p>
---	---

<p>10. Make sure your knees are _____ when you lift weights.</p> <p>11. She took the _____ clay and made a bowl.</p>	<p>A. formless</p> <p>B. gone</p> <p>C. ripped</p> <p>D. empty</p> <p>E. bent</p>
--	---

<p>12. Mary sat on the _____ of the counter.</p> <p>13. There was a _____ of mold surrounding the bathtub.</p> <p>14. The snake wrapped itself up in a _____ when we walked by the bush.</p>	<p>A. fringe</p> <p>B. side</p> <p>C. coil</p> <p>D. edge</p> <p>E. top</p>
--	---

<p>15. There was a _____ of fans at the concert.</p> <p>16. We warned him of the _____ of studying the night before a test.</p> <p>17. I took a _____ at my watch.</p> <p>18. Our nation has experienced many acts of _____.</p> <p>19. Lance stood on the _____ and watched the birds.</p>	<p>A. mass</p> <p>B. dock</p> <p>C. consequences</p> <p>D. pitfall</p> <p>E. glance</p> <p>F. strand</p> <p>G. terror</p>
---	---

<p>20. The football team suffered a great _____.</p> <p>21. Tiffany had a burst of _____ when she heard the news.</p>	<p>A. loss</p> <p>B. kindness</p> <p>C. fragrance</p>
---	---

<p>22. Once the children were gone to school, the mother finally had some _____.</p> <p>23. The flowers in the garden have a lovely _____</p> <p>24. The sun was shining, then a _____ later it was raining.</p>	<p>D. breakfast</p> <p>E. peace</p> <p>F. fervor</p> <p>G. laughter</p> <p>H. moment</p> <p>I. furniture</p>
--	--

<p>25. The small dog showed a _____ of interest in the bone on the floor.</p> <p>26. The palace was full of _____</p> <p>27. There is a _____ in Earth's crust.</p> <p>28. You could see her _____ by the way she laid down her head.</p>	<p>A. splendor</p> <p>B. spark</p> <p>C. gold</p> <p>A. room</p> <p>B. presence</p> <p>C. soul</p> <p>D. thoughts</p> <p>E. fissure</p>
---	---

<p>29. Men should watch their language in the _____ of ladies.</p>	<p>F. inside</p>
<p>30. Deep down in her _____ she felt sad.</p>	<p>G. listlessness</p>
<p>31. She _____ so long that her mother came in to check on her.</p>	<p>H. slept</p>
<p>32. The boat sank to a _____ of several hundred feet.</p>	<p>I. cheap</p>
<p>33. The young boy was staring into _____.</p>	<p>J. depth</p>
<p>34. His _____ earned him a lot of enemies.</p>	<p>A. space</p>
<p>35. For an athlete, he has a very slow _____.</p>	<p>B. attitude</p>
<p>36. The branch will _____ before it breaks.</p>	<p>C. nothingness</p>
	<p>D. arrogance</p>
	<p>E. reflex</p> <p>F. bend</p> <p>G. car</p>



<p>37. The _____ had covered the entire house.</p>	<p>H. moss</p>
--	----------------

<p>38. Try if you _____.</p> <p>39. Lori didn't _____ to ask for help if she needed it.</p> <p>40. We saw the _____ from outside the home.</p> <p>41. She had to _____ before her mother got home.</p> <p>42. The family was able to _____ their home after the storm.</p>	<p>A. flame</p> <p>B. sell</p> <p>C. keep</p> <p>D. hesitate</p> <p>E. win</p> <p>F. re-inhabit</p> <p>G. bother</p> <p>H. dare</p> <p>I. smile</p> <p>J. run</p> <p>K. sweep</p>
--	---

<p>43. The ball was _____ the leaves.</p>	<p>A. among</p>
---	-----------------

44. We had a picnic \_\_\_\_\_ a large tree.

B. in

C. beneath

APPENDIX F  
CORPUS OF WORDS

VST-ELP Study/Final Word List

**Week 1**

1. unconscious
2. pitfall
3. re-inhabit
4. fervor
5. fissure
6. arrogance
7. moss
8. sweep

**Week 2**

1. hesitate
2. splendor
3. ruthless
4. depth
5. beneath
6. reflex
7. moment
8. glance

**Week 3**

1. bent
2. mass
3. fragrance
4. dare
5. soul
6. formless
7. among
8. worse

**Week 4**

1. fringe
2. coil
3. raw
4. golden
5. listlessness
6. nothingness
7. spark
8. peace

APPENDIX G  
VST-ELP FIDELITY CHECKS

**Fidelity Check VST-ELP Day 1**

**Date:**

**Rater:**

\*SLP-Speech Language Pathologist

\*S- student

<b>Feature</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
Cue provided including: <ul style="list-style-type: none"> <li>• Bridge from previous lesson</li> </ul>			
<ul style="list-style-type: none"> <li>• Orientation to today's lesson</li> </ul>			
<ul style="list-style-type: none"> <li>• Expectations regarding performance</li> </ul>			
<b>Lesson includes 16 encounters for Word 1</b>			
E1 SLP displays scenario E2 S interprets scenario (with target word still in English) E3 SLP ask students to come up with synonym E4 S interprets target word and synonyms E5 SLP writes target word and synonyms E6 S read scenario with target word and then synonym E7/E8 S write target word on card E9/E10 SLP tells students while they are writing the target word on their cards they need to think about how to use the target word in a sentence E11/E12 SLP elicits 2 sentences from students E13 SLP selects the best sentence and writes it beneath the scenario for the students to copy E14 SLP instructs students to write the scenario on the back of their card E15 S provide a synonym for target word E16 SLP instructs all students to say the synonym for the target word in unison			
<b>Lesson includes 16 encounters for Word 2</b>			
E1 SLP displays scenario			

<p>E2 S interprets scenario (with target word still in English)  E3 SLP ask students to come up with synonym  E4 S interprets target word and synonyms  E5 SLP writes target word and synonyms  E6 S read scenario with target word and then synonym  E7/E8 S write target word on card  E9/E10 SLP tells students while they are writing the target word on their cards they need to think about how to use the target word in a sentence  E11/E12 SLP elicits 2 sentences from students  E13 SLP selects the best sentence and writes it beneath the scenario for the students to copy  E14 SLP instructs students to write the scenario on the back of their card  E15 S provide a synonym for target word  E16 SLP instructs all students to say the synonym for the target word in unison</p>			
<p><b>Lesson includes 16 encounters for Word 3</b></p>			
<p>E1 SLP displays scenario  E2 S interprets scenario (with target word still in English)  E3 SLP ask students to come up with synonym  E4 S interprets target word and synonyms  E5 SLP writes target word and synonyms  E6 S read scenario with target word and then synonym  E7/E8 S write target word on card  E9/E10 SLP tells students while they are writing the target word on their</p>			

<p>cards they need to think about how to use the target word in a sentence  E11/E12 SLP elicits 2 sentences from students  E13 SLP selects the best sentence and writes it beneath the scenario for the students to copy  E14 SLP instructs students to write the scenario on the back of their card  E15 S provide a synonym for target word  E16 SLP instructs all students to say the synonym for the target word in unison</p>			
<p><b>Lesson includes 16 encounters for Word 4</b></p>			
<p>E1 SLP displays scenario  E2 S interprets scenario (with target word still in English)  E3 SLP ask students to come up with synonym  E4 S interprets target word and synonyms  E5 SLP writes target word and synonyms  E6 S read scenario with target word and then synonym  E7/E8 S write target word on card  E9/E10 SLP tells students while they are writing the target word on their cards they need to think about how to use the target word in a sentence  E11/E12 SLP elicits 2 sentences from students  E13 SLP selects the best sentence and writes it beneath the scenario for the students to copy  E14 SLP instructs students to write the scenario on the back of their card  E15 S provide a synonym for target word</p>			



E16 SLP instructs all students to say the synonym for the target word in unison			
<ul style="list-style-type: none"> <li>• Bridge to next lesson</li> </ul>			
<ul style="list-style-type: none"> <li>• Lesson is 30 minutes</li> </ul>			

**Fidelity Check VST-ELP Day 2**

**Date:**

**Rater:**

\*SLP-Speech Language Pathologist

\*S- student

<b>Feature</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
Cue provided including: <ul style="list-style-type: none"> <li>• Bridge from previous lesson</li> </ul>			
<ul style="list-style-type: none"> <li>• Orientation to today's lesson</li> </ul>			
<ul style="list-style-type: none"> <li>• Expectations regarding performance</li> </ul>			
<b>Lesson includes 16 encounters for Word 5</b>			
E1 SLP displays scenario E2 S interprets scenario (with target word still in English) E3 SLP ask students to come up with synonym E4 S interprets target word and synonyms E5 SLP writes target word and synonyms E6 S read scenario with target word and then synonym E7/E8 S write target word on card E9/E10 SLP tells students while they are writing the target word on their cards they need to think about how to use the target word in a sentence E11/E12 SLP elicits 2 sentences from students E13 SLP selects the best sentence and writes it beneath the scenario for the students to copy E14 SLP instructs students to write the scenario on the back of their card E15 S provide a synonym for target word E16 SLP instructs all students to say the synonym for the target word in unison			
<b>Lesson includes 16 encounters for Word 6</b>			
E1 SLP displays scenario			

<p>E2 S interprets scenario (with target word still in English)  E3 SLP ask students to come up with synonym  E4 S interprets target word and synonyms  E5 SLP writes target word and synonyms  E6 S read scenario with target word and then synonym  E7/E8 S write target word on card  E9/E10 SLP tells students while they are writing the target word on their cards they need to think about how to use the target word in a sentence  E11/E12 SLP elicits 2 sentences from students  E13 SLP selects the best sentence and writes it beneath the scenario for the students to copy  E14 SLP instructs students to write the scenario on the back of their card  E15 S provide a synonym for target word  E16 SLP instructs all students to say the synonym for the target word in unison</p>			
<p><b>Lesson includes 16 encounters for Word 7</b></p>			
<p>E1 SLP displays scenario  E2 S interprets scenario (with target word still in English)  E3 SLP ask students to come up with synonym  E4 S interprets target word and synonyms  E5 SLP writes target word and synonyms  E6 S read scenario with target word and then synonym  E7/E8 S write target word on card  E9/E10 SLP tells students while they are writing the target word on their</p>			

<p>cards they need to think about how to use the target word in a sentence  E11/E12 SLP elicits 2 sentences from students  E13 SLP selects the best sentence and writes it beneath the scenario for the students to copy  E14 SLP instructs students to write the scenario on the back of their card  E15 S provide a synonym for target word  E16 SLP instructs all students to say the synonym for the target word in unison</p>			
<p><b>Lesson includes 16 encounters for Word 8</b></p>			
<p>E1 SLP displays scenario  E2 S interprets scenario (with target word still in English)  E3 SLP ask students to come up with synonym  E4 S interprets target word and synonyms  E5 SLP writes target word and synonyms  E6 S read scenario with target word and then synonym  E7/E8 S write target word on card  E9/E10 SLP tells students while they are writing the target word on their cards they need to think about how to use the target word in a sentence  E11/E12 SLP elicits 2 sentences from students  E13 SLP selects the best sentence and writes it beneath the scenario for the students to copy  E14 SLP instructs students to write the scenario on the back of their card  E15 S provide a synonym for target word</p>			

E16 SLP instructs all students to say the synonym for the target word in unison			
<ul style="list-style-type: none"><li>• Bridge to next lesson</li></ul>			
<ul style="list-style-type: none"><li>• Lesson is 30 minutes</li></ul>			

**Fidelity Check VST-ELP Day 3**

**Date:**

**Rater:**

\*SLP-Speech Language Pathologist

\*S- student

<b>Feature</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
Cue provided including: <ul style="list-style-type: none"> <li>• Bridge from previous lesson</li> </ul>			
<ul style="list-style-type: none"> <li>• Orientation to today's lesson</li> </ul>			
<ul style="list-style-type: none"> <li>• Expectations regarding performance</li> </ul>			
<b>Lesson includes 4 encounters for Word 1</b>			
E17 SLP displays morphology sheets and ask students to write variations on back of card E18 While students are writing variations of cards, SLP instructs them to think of a sentence using the target word E19/E20 SLP elicits 2 sentences from the students			
<b>Lesson includes 4 encounters for Word 2</b>			
E17 SLP displays morphology sheets and ask students to write variations on back of card E18 While students are writing variations of cards, SLP instructs them to think of a sentence using the target word E19/E20 SLP elicits 2 sentences from the students			
<b>Lesson includes 4 encounters for Word 3</b>			
E17 SLP displays morphology sheets and ask students to write variations on back of card E18 While students are writing variations of cards, SLP instructs them to think of a sentence using the target word E19/E20 SLP elicits 2 sentences from the students			

<b>Lesson includes 4 encounters for Word 4</b>			
E17 SLP displays morphology sheets and ask students to write variations on back of card E18 While students are writing variations of cards, SLP instructs them to think of a sentence using the target word E19/E20 SLP elicits 2 sentences from the students			
<b>Lesson includes 4 encounters for Word 5</b>			
E17 SLP displays morphology sheets and ask students to write variations on back of card E18 While students are writing variations of cards, SLP instructs them to think of a sentence using the target word E19/E20 SLP elicits 2 sentences from the students			
<b>Lesson includes 4 encounters for Word 6</b>			
E17 SLP displays morphology sheets and ask students to write variations on back of card E18 While students are writing variations of cards, SLP instructs them to think of a sentence using the target word E19/E20 SLP elicits 2 sentences from the students			
<b>Lesson includes 4 encounters for Word 7</b>			
E17 SLP displays morphology sheets and ask students to write variations on back of card E18 While students are writing variations of cards, SLP instructs them to think of a sentence using the target word			

E19/E20 SLP elicits 2 sentences from the students			
<b>Lesson includes 4 encounters for Word 8</b>			
E17 SLP displays morphology sheets and ask students to write variations on back of card E18 While students are writing variations of cards, SLP instructs them to think of a sentence using the target word E19/E20 SLP elicits 2 sentences from the students			
<ul style="list-style-type: none"> <li>• Bridging to next lesson</li> </ul>			
<ul style="list-style-type: none"> <li>• Hole punch cards of known words</li> </ul>			
<ul style="list-style-type: none"> <li>• Lesson is 30 minutes</li> </ul>			



APPENDIX H  
VST-ELP SCENARIOS

### VST-ELP Study- Week 1 Scenarios

1. The girl remained unconscious as the man drove away. A group of students saw her on the ground and called for help. Soon an ambulance arrived and took the girl to the hospital where she was treated.
2. Kelly's parents tried to explain to her the pitfalls of texting while driving. Kelly didn't listen and ended up having a car wreck. Thankfully she survived and did not hurt other drivers on the road.
3. The family was able to re-inhabit their home after the storm. They only had to make repairs to the garage and remove the trees that had fallen in their yard. Many other people in the neighborhood were not able to go back to their homes.
4. The boy's voice was full of fever as he talked about the concert. He had mowed lawns and did many other jobs in order to save money to buy his ticket. His parents were very proud of him.
5. Larry noticed water coming into his house and went outside and saw the fissure in the house. At that point he knew he needed to do something quick. He called the builder of the house and they came out to fix it.
6. Jill did not understand why everyone walked away from her when she talked. Her arrogance was driving away all of her friends and she did not know it. After a while she was all alone and had no one to talk to.
7. When we walked into the backyard, we were surprised that all of the moss that had fallen. It was spread all over the ground and even on the chairs and tables that were outside.
8. After the birthday party there was trash and paper everywhere. We sat down for a few minutes to look at the damage and catch our breath. After that, we got it and began to sweep everything outside and into bags.

## VST-ELP Study- Week 2 Scenarios

1. Missy stood in the door looking at the hard rain coming down outside. As soon as the rain stopped, she didn't hesitate to run and jump into her car.
2. The artist had spent weeks working on his painting. Once he was finished, he stood back and looked at the splendor of his work.
3. The professor was ruthless as he graded the papers. He even took off points for simple things such as having the wrong date on the page.
4. Tiffany was terrified of getting in the water. Since she didn't know the depth of the pool, she decided to just sit and watch the other children swim.
5. Everyone in the car was scared! In order to get to the other side of the state, we had to drive over a bridge that was beneath sea level.
6. It was easy to tell that the basketball player was tired. His reflex had become very slow and the players from the other team were easily defeating him.
7. After the singer got finished with her song, there was a moment when everything was quiet. Then, all of a sudden there was a big cheer and lots of hand clapping.
8. The gentlemen walking down the hall looked familiar. I took a glance at him a couple of times before going into my classroom.

### VST-ELP Study- Week 3 Scenarios

1. When the lady got out of her car, she noticed her bumper was bent. She then tried to remember where she had been that day and how this could have happened.
2. There was a mass of people standing outside in line for tickets to see Kobe Bryant's last game. Some of the people had been in line for two days.
3. As we were walking home from school, the fragrance from the restaurant caught our attention. We decided to stop and go inside to see what was cooking.
4. We were standing in the kitchen staring at the chocolate cake that just came out the oven. Then out of nowhere we hear, "don't you dare touch that chocolate cake"!
5. At the funeral for the elementary school teacher, her students talked about how she had such a beautiful soul and loved everyone.
6. She decided to take the formless clay and create an attractive bowl. Once she had finished, she decided to sell her masterpiece.
7. The parents decided to split their lottery winnings among their family members. Everyone was able to receive an equal amount.
8. When we walked inside the house it looked much worse than it did on the outside. But we decided the house was worth getting anyhow.

### VST-ELP Study- Week 4 Scenarios

1. The weeds were forming a fringe around the rocks. It was so thick that we were not able to climb to the other side.
2. When we walked into the room, we noticed that the cat had put herself in a coil. She looked very comfortable and we decided not to bother her.
3. My mother decided to do something different and serve the family raw vegetables. Everyone liked the vegetables except for the younger children.
4. We were excited about the golden opportunity we had to meet the President of the United States. The night before our meeting we were unable to get any sleep.
5. When Jason arrived to pick up Karen for the basketball game, he could tell she was full of listlessness. She was laying on the couch and hadn't even gotten dressed yet.
6. John sat outside for hours staring into the nothingness of the backyard. It was hard for him to believe that the storm had destroyed the entire yard.
7. After listening to the recruiter, Chris had a spark of interest in the job. He decided to apply and see what happens.
8. Whenever I go to the beach, I always admire the peace that is there. My goal is to go at least once a month.

APPENDIX I  
ENCOUNTERS VERIFICATION LISTS

## Encounters 1-16

- Display the visual of the vocabulary scenario. Read the scenario out loud (**E1**\_\_\_\_\_).
- “Please interpret the scenario. [Interpreters will turn to peers and interpret scenario into their L1 while still leaving the target word in English **E2**\_\_\_\_\_] While your classmates are doing that, please be thinking about what that highlighted word might mean.”
- You’re right – the highlighted word means\_\_\_\_\_. Now I want you to think of a synonym for \_\_\_\_\_ [**E3**\_\_\_\_\_]. A synonym that means the same thing as another word, like big and large or small and little.”
- Hold up interpret sign and say “interpret” [**E4** \_\_\_\_\_]. Write the target word [**E5**] beneath the scenario with an equal sign and some of the synonyms elicited. If no synonyms are offered, provide synonyms for the students. Write best synonym above the target word on the scenario.
- Chorally read the scenario with the target word [**E6**] and then with the synonym.
- Please write the highlighted word [E7] on the first colored card of the PWW on the blank side [E8].
- “While you are writing the word [E9] on your PWWs, I would like for you to be thinking about how you can use \_\_\_\_\_ [E10].”
- Elicit two sentences from the students [E11 & E12] who do not require an interpreter.
- Select best sentence and write it beneath the scenario for students to copy on the back of their cards [E13]
- “Please write this sentence on the back of your word card.” [E14]
- Hold up the interpret sign and say “Please tell your peers that we are going to be reviewing our words and we will be saying synonyms together.” Call on a student and ask them to refer to their PWW and tell you a synonym for \_\_\_\_\_. [E15]

- “What’s a synonym for \_\_\_\_\_ [E16] everyone?” (Class will say it chorally)

### **17-20 Encounters**

- Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]
- “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”
- Elicit two sentences from the students [E19 & E 20]

### **17-20 Encounters**

- Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]
- “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”
- Elicit two sentences from the students [E19 & E 20]

### **17-20 Encounters**

- Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]
- “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”
- Elicit two sentences from the students [E19 & E 20]



### **17-20 Encounters**

- Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]
- “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”
- Elicit two sentences from the students [E19 & E 20]

### **17-20 Encounters**

- Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]
- “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”
- Elicit two sentences from the students [E19 & E 20]

### **17-20 Encounters**

- Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]
- “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”
- Elicit two sentences from the students [E19 & E 20]

### **17-20 Encounters**

- Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]

- “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”
- Elicit two sentences from the students [E19 & E 20]

### **17-20 Encounters**

- Display morphology sheets and ask that the students to write the variations on the back of each word card. [E17]
- “While you’re writing the variations on your cards, I want you to be thinking of a sentence using the word \_\_\_\_\_ [E18]”
- Elicit two sentences from the students [E19 & E 20]

APPENDIX J  
INTERVENTION VOCABULARY WORD COMPARISON

Intervention Words	Comparison Group Test 1		Comparison Group Test 2		Experimental Group Test 1		Experimental Group Test 2	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Unconscious	8	8	7	8	9	8	9	8
Pitfall	6	10	3	2	8	9	3	2
Re-inhabit	12	12	5	6	8	11	3	9
Fervor	6	4	2	2	8	2	2	5
Fissure	1	9	4	7	6	9	4	7
Arrogance	10	5	3	7	6	5	6	5
Moss	6	4	9	5	2	10	8	14
Sweep	8	8	5	5	13	12	5	8
Hesitate	5	2	8	7	5	4	5	7
Splendor	10	6	2	4	10	8	2	4
Ruthless	9	11	10	7	12	12	12	13
Depth	12	11	11	9	6	16	11	11
Beneath	11	12	11	10	10	13	11	12
Reflex	6	9	6	11	7	2	9	12
Moment	11	8	11	11	11	15	16	13
Glance	4	3	8	9	1	0	9	13
Bent	11	12	7	9	10	16	11	10
Mass	5	7	10	10	7	13	14	15
Among	8	9	9	10	7	7	8	8
Fragrance	5	3	6	6	4	2	6	9

Intervention Words	Comparison Group Test 1		Comparison Group Test 2		Experimental Group Test 1		Experimental Group Test 2	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Dare	10	12	8	6	15	13	11	10
Soul	12	11	9	8	12	16	10	11
Formless	10	12	6	8	9	15	8	10
Worse	12	9	8	7	15	16	9	7
Fringe	7	4	3	3	5	10	6	11
Coil	2	10	4	5	9	16	8	11
Raw	4	9	1	1	3	11	0	5
Golden	11	5	0	1	11	12	0	1
Listlessness	4	7	1	1	1	8	0	3
Nothingness	8	8	1	1	6	13	1	9
Spark	3	3	8	9	6	12	10	9
Peace	11	12	11	9	9	16	14	14

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