How the Use of Learner-Generated Images and Authentic Materials Affects the Comprehension and Production of *Vivid Phrasal Idioms* in L2 English Learners

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How the Use of Learner-Generated Images and Authentic Audiovisual Materials Affects the Comprehension and Production of Vivid Phrasal Idioms in L2 English Learners

by

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Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Second Language Acquisition/Instructional Technology
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Abstract

Vivid Phrasal Idioms (VP Idioms) are non-compositional, figurative phrases that have limited flexibility, such as “once in a blue moon.” Research suggests that facility with idioms is an integral part of communicative competence in an L2 (Liontas, 2017; Sinclair, 1992). Despite the fact that they are ubiquitous throughout informal, spoken language (Karlsson, 2013; Liu, 2008), and occur less frequently in other registers of usage, newscasters and politicians employ VP Idioms for communication in what Myers (1996) has called the presentational mode. They also appear in academic discourse (Liontas, 2008). Nevertheless, research suggests that the English language learners in formal educational contexts study idioms through textbooks that feature idioms in non-native speaker-like contexts or neglect them entirely (Khan & Daskin, 2014; Liontas, 2008, 2015). This dissertation investigates how the instructional interventions affect both comprehension and productions of VP Idioms. The participants, who were all English for Academic Purposes (EAP) students enrolled a single course, were guided through the comparison condition and the two instructional interventions. A website designed for the research was used to guide students throughout the intervention and included definitions and images for each of the nine target VP Idioms, instructions on how to complete tasks, and supplementary materials. For the first experimental condition, learners created their own digital depictions of the literal meaning of the idioms, as recommended by Liontas (2008, 2015, 2017) and Vasiljevic (2012). For the second condition, learners were exposed to VP Idioms in authentic audiovisual contexts as recommended by Cakir (2011) and Liontas (2008, 2015, 2017). The students wrote a short dialogue containing one target VP Idiom after each of the three conditions.
Data analysis was mixed method. The quantitative data based upon the posttest scores was used to ascertain the relative effectiveness of each of the conditions. Based on the participants’ written dialogues, the researcher analyzed the qualitative data to ascertain the extent to which the students could use the target VP Idioms appropriately. The mixed method approach brought to light more complex interpretation of data than would have been possible through analysis using either quantitative or qualitative alone. Quantitative results reveal a statistical difference in the posttest scores between the Control and the Learner-Generated Images conditions only. Qualitative results are more nuanced, showing considerable individual differences in ability to produce idioms, with possible confounding variables, but students’ competent ability to produce two of the VP Idioms taught under the Learner-Generated Images condition and one presented under the Authentic Contexts condition. The discussion concludes with pedagogical implications based upon both the results of the current study and previous research by Liontas (2008, 2015, 2017b) and Vasiljevic (2015b).
Chapter I: Introduction

Figurative language flows throughout various forms of discourse in the English language, and it is ubiquitous in speech. Evidence for the frequency of idiom use has been documented empirically and based on corpus evidence (Grant, 2005; Liu, 2003, 2008; Simpson & Mendis, 2003; Sinclair & Moon, 2011). This evidence suggests that the type of discourse determines the likelihood with which the idiom will appear. Liu (2008) has conducted in-depth research on multi-word sequences, including idioms. She concluded, based upon corpus evidence that these forms occur more commonly in speech and informal writing contexts. Liontas (2008), however, argues that idioms are used in registers besides the informal and conversational, including in academic writing. Idiomologists cite the frequency of occurrence of these phrases as one rationale for teaching them (Andreou & Galantomos, 2008; Hagshenas & Hashemian, 2016; Irujo, 1986; Liontas, 2017b). Although there is no consensus among researchers investigating idioms on the precise definition for such combinations of words (Abel, 2003; Cacciare & Tabossi, 1988; Cieslicka, 2013; Gibbs & Nayak, 1989; Gibbs, Nayak & Cutting, 1989; Kim & Nam, 2017; Titone & Connine, 1999), the terms must be defined in order to present a clearer picture of the research efforts in this area. These efforts will be followed by a synthesis of their findings. First, there are terms for multi-word sequences that have been mistakenly grouped with idioms: lexical bundles, collocations, metaphors. Each one of these phrases has a specific definition that distinguishes it from idioms. Biber (2009) defines \textit{lexical bundles} as multi-word sequences of various lengths (2, 3, 4, 5, or more words) that occur at least 10 times per million words and in at least five texts within a corpus; in other words, these words occur with high
frequency within a target corpus and are represented across many of the texts within it. The sole criterion is frequency - lexical bundles may or may not be figurative in meaning. Collocations have been defined by computational linguists as a type of Multi-Word Sequence (MWS) wherein a word combination “occurs with markedly high frequency, relative to the component words or alternative phrasings of the same expression” (Baldwin & Kim, 2010, as cited in Pastor, 2017). Although metaphors will be discussed in greater detail in the literature review, the following definition will be used: “a figure of speech in which a word or phrase literally denoting one kind of object or idea is used in place of another to suggest a likeness or analogy between them” (Merriam-Webster, 2019). Herein the definition includes figurative language, but it specifies that a comparison is being made, which is not necessarily the case with idioms.

Most of the studies reviewed carefully delimit what is meant by idiom. Fernando and Flavell’s (1981) definition excludes phrases that have compositionality, which is generally the case with lexical bundles, n-grams. In order to be an idiom, the phrase must have Non-Compositionality; the literal meaning of the component words does not add up to the meaning of the whole phrase. Even though many studies address compositionality, arguing that idioms may be partially decomposable (Abel, 2003; Carrol & Conklin, 2014; Carrol, Littlemore, & Dowens, 2018; Cieslicka, 2013; Gibbs & Nayak, 1989; Gibbs et al., 1989; Kim & Nam, 2017; Nippold & Rudzinski, 1993; Titone & Connine, 1999), the meaning of an idiom never directly equates with the literal meaning of the phrase. According to Fernando and Flavell (1981), an idiom must be institutionalized in that the idiom is not an idiosyncrasy of an individual nor used by an isolated group of speakers. The figurative meaning of an idiom is widely recognized within a society, such that a broad audience of native speakers from a given language dialect would recognize it as such. A non-example may help to clarify the meaning of “institutionalized.” When the researcher
was in high school, she participated in a selective choir, composed of nine members, who only sang unaccompanied Madrigal songs. This acapella group performed in public somewhat often and was planning to compete in the state competition. The director reminded students, “You are a madrigal unit,” to emphasize that the singers must always listen to each other carefully so that the complex parts would fit together harmoniously. Today, artificial voices on an answering machine can sound almost natural, but back then, they did not. In addition, people associated “unit” with a robot. One day a group member remarked, in a manner that sounded more like a machine than a human, “I am a madrigal unit.” The result was laughter, as he had intended. The choir director liked his joke, and from then on, “We are a madrigal unit” became the choir’s nickname. There were even matching T-shirts printed with these words. Whatever the case, this phrase, though figurative, did not qualify as an idiom because only a mini-choir and their director used it.

A third study that focused upon clarifying the definition for idiom is unique in that it offers both similarity and contrast from Liontas’ (1999, 2002, 2017a) definition. Nunberg, Sag, and Wasow (1994) explain “idiom” as follows. Similar to “institutionalization,” the researchers mention that the idiom must have conventionality, being widely recognized and used within a culture group. As with studies by Fernando and Flavel (1981) and Liontas (1999, 2002, 2017a), the study by Nunberg and colleagues (1994) states that an idiom characteristically demonstrates inflexibility. This means that there is a limited range of syntax through which the speaker/writer can use the idiom and maintain the meaning. An idiom has figuration; this typically involves metaphor, metonymy, or hyperbole. Nunberg et al.’s definition includes affect, meaning that it is used when there is a strongly positive or negative association with what experience, situation, or personality is being essentialized through the idiom. It has proverbiality; in other words, the
writer/speaker uses idioms to comment on a commonly occurring situation. Nunberg et al.’s definition differs from Liontas (2001, 2008, 2017a) in that it includes *informality*. These researchers allege that “like other proverbial expressions, idioms are typically associated with relatively informal or colloquial registers and with popular speech and oral culture” (p. 493). In contrast, Liontas (2008) posits that idioms can be used in more than one register, including informal conversation, academic speech, and academic writing. Nunberg and colleagues claim that previous definitions of idioms are problematic in that “they have tended to over-grammaticize the phenomena—to ask the syntactic or semantic apparatus of the grammar to explain regularities that are in fact the consequences of independent rhetorical and discursive functions of the expressions. . . (However) in order to explain the properties of these expressions fully, we have to appeal not just to the semantic properties of idioms, but to the figurational processes that underlie them and the discursive functions that they generally serve” (p. 494). In sum, Nunberg et al. (1994) emphasize the necessity of clarifying the figurative language and its origins, along with pragmatics of when and how to employ idioms. Boers, Eyckmans, and Stengers (2007) state that the appropriacy of an idiom’s use depends on the situation since some idioms, such as “cross the Rubicon,” are appropriate to academic writing, while others, such as “kick the bucket” can only be used in very informal settings. The researchers cited herein acknowledge the centrality of the following characteristics in defining “idioms”: figuration, inflexibility, and institutionalization even though they differ somewhat in regard to the register of usage.

**Statement of the Problem**

Definitions for “idiom” devised by researchers such as Fernando and Flavel (1981), Liontas (2001, 2017a), Nunberg et al. (1994) have been reviewed above. These definitions serve
to distinguish idioms from other types of phrases and aim to provide clarity. The rationales written by previous researchers may help to establish the worthiness of idioms for their systematic and comprehensive inclusion in the SL and FL classroom (Liontas, 2008, 2015, 2017b). Studies by Irujo (1986), Khan and Daskin (2014), and Liontas (2008, 2015) suggest that second language learners are not being taught these idioms. These studies also indicate that, in other cases, the instruction is that is provided is not the most optimal for learning. Perhaps the fact that idioms seem to be either absent or inadequately covered in course textbooks reflects the editors’ lack of awareness of their importance. The editors’ unstated assumption that English for Academic Purposes (EAP) students need only to be prepared to pass the Test of English as a Foreign Language (TOEFL: Educational Testing Service, 2020), or perhaps another norm-referenced measurement instrument designed to test students’ English proficiency and to write in formal, academic English could be inferred based on the fact that many texts cover idioms only slightly or not at all. Myers (1996) explains the communicative value of idioms throughout three registers of usage, characterized by the acts of holding a conversation, understanding what appears in the media, or performing academic writing and speaking. While students throughout the world have the possibility of taking one of several high-stakes tests of English, Stirling (2015) argues that knowledge of a select group of idioms promotes successful completion of the TOEFL. Some of the same idioms are thought to be advantageous in taking the International English Language Testing System (IELTS), although this information was published by the company itself, not an independent researcher (Five Formal Idioms, 2018). Furthermore, many idioms are used in the presentational mode, the preferred register of usage for news reports and political speeches, wherein standard English matters, yet the speaker/writer aims to make a more intimate connection with the listener/reader than in academic discourse. In sum, students who
endeavor to attain full fluency in English should learn idioms because they promote academic success (academic mode), they are an integral part of oral social interaction (conversational mode), and they facilitate understanding of news reports and political speeches (presentational mode).

Myers (1996), whose research was mentioned above, classified speech events (written or spoken) into three modes: conversational, presentational, and academic. Reviewing and classifying the communication of non-native speakers of English according to these modes may be illustrative in understanding the importance of what Liontas (2015) called *Idiom Training*. In a nutshell, this term means the most effective way to teach idioms to L2 learners so as to promote their comprehension and ability to produce them. Idioms flow throughout communication in all three major modes of communication. According to Myers (1996), the mode that any speaker meets first in life and maintains indefinitely with his family and intimate friends is the conversational mode in L1. The goal of such speech acts is the immersion into the community and establishing or maintaining relationships. These speech acts are characterized by approximation, guessing, and non-standardized uses of language. In contrast, academic speech acts (written or oral) put relatively less emphasis on relationships. Instead, they emphasize precision, correctness, and distancing of oneself and one’s opinion. The use of citations in academic writing serves to not only connect the current research with that which has gone before but also to hide the agency of the author. Myers (1996) explains the function of citations and bibliographies as being “part of academic discourse’s effort to suppress personal involvement and agency. In academic events, author agency is reduced or ‘set aside’ or ‘disguised,’ and alternative explanations are highlighted in order to sustain the Cartesian ‘rule’ or ‘myth’ of doubt.
and objectivity” (p. 211). In effect, academic speech events follow the Cartesian tradition, in contrast to presentational speech events, to be explained next.

Presentational speech events, which are neither fully academic nor conversational, follow a different set of rules and serve a third discursive function. Myers (1996) explains that presentational speech usually includes ample use of visuals, which are less common and rigidly limited in academic writing. This mode does not permit non-standard usage like conversation yet aims for a deeper connection with the audience. Furthermore, the presenter does not disguise his/her voice. Those who communicate through the presentational mode must engage an audience that might not be removed in time and space as with academic discourse, and possibly even answer questions. To effectively position oneself as both an expert and a member of a community, as both one who poses questions to be explored and one who has arrived at an explanation, requires a sophistication of language usage that must not be too informal, which may damage his/her credibility, nor too coldly distant, which may alienate others in the community. Politicians and news media reporters must present themselves as knowledgeable and professional. Simultaneously, their audience may be less receptive if they fail to convey warmth and friendliness. Idioms may be useful in establishing this type of a relationship, that is, a scholarly and professional presence that simultaneously shares expertise and expresses deference to others. To assist students in acquiring the appropriate use of idioms, which may contribute to their ability to function in presentational mode, the instructor can teach students those idioms that are suitable for this purpose.

Definitions of Key Terms

Before making instructional decisions as to what idioms should be taught, if any, the definition of idiom needs to be further refined. Some researchers believe it is necessary for the
idiom to have a *literal counterpart*. While some researchers consider this to be an essential feature of an idiom, others mention idioms, such as “shoot the breeze,” which seem not to have any literal counterpart (Cacciare & Tabossi, 1988). To the criteria given above, Liontas (2017) adds the following in defining a *Vivid Phrasal Idiom* (VP Idiom).

1. “It is NOT a monomorphemic or polymorphemic expression such as a pad, a flop, to splurge . . . it must not be an ungrammatical expression, connective prepositional phrase, an incorporating verb idiom, or a social formula expression” (p. 77).

2. There is no one part of speech through which a VP Idiom can be uttered. Idioms that contain a verb are not limited to one tense, although there are constraints upon how they can be transformed. These differ according to individual instantiation. While not entirely frozen, idioms are, according to Fernando and Flavel (1981), transformationally deficient.

3. The reader or listener cannot decompose the idiom to glean its meaning.

4. It is vivid because the phrase or sentence elicits a mental image in the mind of the hearer/reader. This aligns with much of the research on teaching idioms by using etymologies (Aydin, 2017; Bagheri & Fazel, 2010; Boers et al., 2004, 2007; Rozati & Ketabi, 2013).

5. Liontas (2017a) delimits the definition of VP Idiom so as to exclude single-word, figurative expressions. Specifically, a VP Idiom is “a conventionalized complex multilexemic phrasal expression occurring above word level and usually of sentence length; hence it is phrasal” (p. 78).

6. The reader/listener cannot figure out the meaning based on the grammatical structure nor guess based on semantic information from its parts. The metaphoric meaning has been institutionalized, but a common and literal meaning also exists.
Many studies, reviewed in detail later in the proposal, included investigations of partial decomposability (Abel, 2003; Carrol et al., 2018; Cieslicka, 2013; Cieslicka & Heredia, 2017; Gibbs, 1980; Gibbs & Nayak, 1989; Gibbs, Nayak, & Cutting, 1989; Pollio & Pollio, 1974). However, the literal meaning is not always apparent. The historical roots of some idioms are so remote that even the literal meaning is obscure. For example, “short shift” uses an obsolete word for confession (Boers, Demecheleer, & Eyckmans, 2004). Wray (2009) suggests that psycholinguists engage in “post hoc linguistic game-playing,” when they analyze idioms for decomposability, whereas language learners do not (p. 193). Various explanations have been proposed for the importance of decomposability to idiom comprehension for both L1 and L2 learners of English. Wray (2009) suggests that decomposing idioms in light of their literal meaning and historical roots may not realistically reflect the cognitive process that takes place when a reader/listener meets a new idiom. Simply stated, to be able to find meaning from the decomposition of the idiom, in the absence of context, one would need to know its literal and historical exigency. Sometimes this has passed beyond the common knowledge of most native speakers of the language, not to mention the L2 learners. Some of the studies of idiom processing and decomposability (Abel, 2003; Gibbs & Nayak, 1989; Gibbs et al., 1989; Titone & Connine, 1999) may not give sufficient emphasis to the fact that the context provides ample clues to the idiom’s meaning.

In analyzing idioms, other terms require explanation, some of which are binary opposites. “Opaqueness” refers to the quality of an idiom’s meaning being entirely unrelated to its literal meaning. For example, nothing in the verb phrase, “kicks the bucket,” alludes to death, yet proficient English speakers would recognize this to mean “die.” The opposite of this is transparency. Many researchers (Abel, 2003; Carrol & Conklin, 2014; Carrol et al., 2018; Kim &
Nam, 2017; Nunberg et al., 1994) suggest that the meaning of some idioms can be inferred if one comprehends the literal meaning of the phrase although Gibbs (1980) Direct Access Hypothesis suggests that decomposition is not necessary in some cases because the reader is able to comprehend the meaning without decomposition. Examples of transparent idioms include “lend me a hand” and “hit the nail on the head” (Smith & Zygouris-Coe, 2009). Human hands enable a person to complete work, so by inference, “lend me a hand” implies that the speaker wants the listener to provide some help to complete a task. “Pop the question” has also been given as an example of a transparent idiom (Gibbs, Nayak, & Cutting, 1989). Based on the previous research cited above and Smith and Zygouris-Coe’s (2009) definition, idioms that have been classified as transparent may lend themselves to decomposition, at least partially, while opaque idioms may require instruction.

In fact, the Metasemantic Hypothesis addresses this directly, stating that transparent idioms, those wherein the literal and figurative meanings are close, are easier to figure out than opaque idioms, such as “kick the bucket” (Freyn & Gross, 2017; Nippold & Rudzinski, 1993). Another binary opposite is non-decomposability and decomposability. If an idiom is decomposable, then at least one of the words within it can serve as a clue, so that through analysis of the literal meaning of the phrase, the learner can glean the metaphoric sense. Much of the research conducted to investigate the effects of decomposability on idiom processing uses native speakers as participants (Cacciari & Tabossi, 1988; Gibbs, 1980; Gibbs & Nayak, 1989; Gibbs, Nayak, Bolton, & Keppel, 1989; Wasow, Sag, & Nunberg, 1984). However, some of the other theories reviewed below focus on how learners cope with idioms in a second language.
Motivation for the Study and Rationale for Choice of Material

Research exists to suggest that an awareness of metaphors and idioms can aid a citizen in a democratic society in grasping the meaning of political speeches, which may enable him/her to participate in the discourse of the media and politics. According to Charteris-Black (2011), political speeches make ample use of metaphors, and the idioms that instantiate them, in persuasive political speaking. These are used both on the campaign trail and after the candidate assumes office. He explains that although many factors affect the constituents’ views on a politician, the use of metaphor subtlety engages both the mind and the emotions of the listener. In this way, the politician establishes himself/herself as of good character. Then the politician employs a vivid source domain, such as the battle between good and evil (G.W. Bush) or strength (Thatcher) and associates it with a target domain that is central to his/her public policy. Similarly, Charteris-Black (2011) claims that a politician can do the opposite, creating a mental association between an undesirable outcome and a rival candidate or public policy. For example, he provides evidence that England’s Prime Minister Thatcher strategically associated weakness with the target domain of socialism. Furthermore, he argues that metaphoric language can be systematically deployed to persuade others to buy into their belief system. Data from an exploration of the Corpus of Contemporary American English (COCA: Davies, 2008) complement this research. For example, the following idioms, one of which (“testing the waters”) is a key term for this study, have occurred with high frequency. A COCA (Davies, 2008) search, with search limits restricted to “spoken,” “magazine,” or “newspaper” yielded the following hits. Each of the three idioms was investigated to find whether they collocated with the name of a politician, the name of a government official, or “government.” “Testing the waters” had 67 hits between January 1990 and August 2017; 26 of these occurred within the same
paragraph as the name of a politician (3) or candidate (23). “Double-down” also appears in the media and political discourse. Between 1990 and 2017, “double-down,” a phrase originally used in sports, appeared 33 times with the name of a government official, 23 of which occurred in 2017, and seven times with the name of a candidate. It seems that the news media frequently exploits the figurative value of these idioms while reporting on current events given the corpus evidence provided. Furthermore, political speeches rhetorically employ metaphoric language, and in some cases, idioms. Such communicative events fall within the scope of Myer’s (1996) presentational mode, described above.

Given that the underlying goal for this study is to elicit comprehension of and ability to produce idioms that are appropriate to both the academic and the presentational registers, and the participants were undergraduates, the researcher consulted Stirling (2015) to ensure that the majority of the idioms for this instructional intervention had been placed on his list of idioms that have been found to facilitate successful passing of the TOEFL examination. However, research by Lointas (2002, 2008), Hagshenas and Hashemian, (2016), and Karlsson (2013) suggests that in presenting idioms to ELL students, it is best to present the most frequently occurring idioms. Therefore, the researcher started by selecting high-frequency idioms from two target corpora, described below, but applied other criteria besides frequency, namely that the VP Idioms appear on at least one of the lists of idioms that are recommended for successful passage. Being mindful of the academic appropriateness of the idioms taught helped to align the research activities with objectives of the course in which data collection occurred. The main objective was reflected not only in the name of the course, Academic Vocabulary 5-6, but the textbook, Essential Academic Vocabulary (Huntley, 2006), which emphasizes academic vocabulary from the Academic Word List (Coxhead, 2000). Part of the rationale for this textbook choice was to provide students with
words that would likely promote success on the TOEFL exam. The researcher’s goal of teaching the students idioms that could be useful in the academic or presentational modes, therefore, fit in with the aims of the course.

**Research Questions**

The current investigation is based on previous research, particularly by Freyn and Gross (2017) and Vasiljevic (2012). The participants, who are adult English language learners, were enrolled in an English for Academic Purposes (EAP) program and were exposed to learning material designed to teach them the use of nine target idioms. A more detailed explanation of the participants, the rationale for selection of the idioms, and the instructional material will be offered in the methods section. In planning to meet the need for idiom instruction and to explore what strategies are most effective, the researcher posed the following two questions.

(1) Does the use of multisensory tools and sources (i.e., authentic video clips, definitions, websites, images) impact the learner’s production of vivid phrasal idioms? If yes, in what specific ways is the learner’s production of such idioms ascertained? If not, what explanations can be offered to uphold the lack of such an effect on learner’s production of vivid phrasal idioms? The students’ use of VP Idioms within each of their written dialogues will provide evidence as to what extent each learner has mastered the use of the target phrases.

(2) Does a multimodal approach to idiom instruction compare with that of a traditional approach? If yes, in what ways specifically? If not, what explanations can be offered? While Research Question #1 addressed production, this research question investigates receptive knowledge, in other words, the learners’ ability to comprehend Vivid Phrasal Idioms. Post-test scores for the Control, Authentic Contexts, and Learner
Generated Images conditions are analyzed to ascertain differences. Thus, the relative effectiveness of each treatment may be inferred.

**Summary**

Before explaining why learning second language idioms is vitally necessary to English language learners (ELLs), the term “idiom” itself needed to be defined. The researcher has endeavored to clarify what is meant by idiom, and to introduce “Vivid Phrasal Idiom” (Liontas, 1999, 2002, 2015, 2017a, 2017b), which Liontas has lucidly defined and which are the type of idioms included in this research. The researcher has provided a concise historical review of well-known theoretical research on idioms, much of which applies to L1 learners, with more detailed and recent theories, hypotheses, and a model to follow in the literature review section. Some of these theories predate Liontas’ (2002) *Idiom Diffusion Model of L2 Acquisition*, which will also be explained anon. Additionally, the introduction explained Myers’ (1996) major registers of usage (or modes) and how these apply to the current study. Finally, the motives for this research, the relative absence of adequate coverage of idioms in L2 teaching materials, and the crucial importance of L2 idioms for communication have been presented. The researcher qualifies her claim to the indispensability of idioms by citing research indicating that they are essential to the academic (Liontas, 1999, 2002, 2003, 2008, 2015, 2017a, 2017b) and presentational (Cooper, 1999; Liontas, 2008) modes. They are acknowledged by numerous researchers as being an indispensable part of the conversational mode of discourse (Boers et al., 2007; Karlsson, 2013; Liontas, 2008, 2017b; Liu, 2008), although this mode falls outside the scope of the current study. Finally, the reader has been introduced to the rationale for the choice of materials and the specific research questions to be investigated.
This investigation of VP Idioms that the researcher conducted in an instructional setting under three conditions is organized as follows. In the first section, the problem, the key terms, and the rationale for the study have been introduced. In Chapter 2, the previous research will be explained, classified according to the theoretical and pedagogical studies, the latter of which more closely resemble the current investigation. In Chapter 3, this researcher will explain how she operationalized the intervention aimed at addressing the perceived gap and the overall research design. In Chapter 4, this researcher will explain the results, specifically, whether or not the intervention was statistically significant, and what relatively subjective data emerged, including the content of the dialogues written by students and the student-generated pictures of the target idioms. The final chapter, Chapter 5, will summarize findings and will mention the limitations and outcomes of the research that address the perceived gap in how idioms have been taught. A thorough review of the literature is next.
Chapter II: Literature Review

This chapter begins with a review of the theories that are highly relevant to the cognitive processing of idioms by L2 learners, such as Paivio’s (1990) *Dual Coding Theory* and Lakoff and Johnson’s (1980) *Conceptual Metaphor Theory*. Next, models and hypotheses from *cognitive linguistics* that endeavor to explain how people process idioms will follow. The most relevant of these cognitive studies address L2 learners’ acquisition of idioms (Abel, 2003; Titone & Connine, 1999), although studies that influenced subsequent theory and investigations are included regardless of the fact that the participants were native speakers of English (Bobrow & Bell, 1973; Gibbs & Nayak, 1989; Gibbs, Nayak, & Cutting, 1989; Swinney & Cutler, 1979). Many of these studies are primarily based on clinical research; they endeavor to explain how the learner is able to comprehend the idiom and the steps in his/her mental process. Theories from *cognitive linguistics* that indirectly apply to the comprehension of idioms will be discussed. Next, this researcher will explain an educational theory that applies more broadly to education but is highly applicable to the results of this study, specifically, *Cognitive Load Theory* (CLT: Sweller, 1988; Sweller, Ayers, & Kalyuga, 2011). After that, the researcher will briefly elaborate on the hypotheses and models that pertain most closely to this study, notably *The Noticing Hypothesis* (Schmidt, 1990) and *The Idiom Diffusion Model of L2 Acquisition* (Liontas, 1999, 2002, 2017a, 2017b). After reviewing the theories, hypotheses, and models that apply to how L2 learners acquire VP Idioms, this researcher will present and discuss the studies that involved instructional interventions and pedagogical recommendations based on them. Finally, the
literature review will explore what has been written about the competency that enables L2 learners to understand and be able to produce idioms.

**Learning Theories Relevant to Idiom Instruction**

To provide background information for this research, the researcher will explain learning theories that are relevant to it, particularly as they apply the effectiveness or ineffectiveness of the three instructional interventions. Paivio’s (1971, 1990) *Dual Coding Theory* is a thread that runs throughout this study, from the choice of instructional interventions, to the analysis of the results, to the pedagogical implications. *Conceptual Metaphor Theory* (1980, 2003), albeit less relevant to the current research than the others reviewed herein, merits concise review due to the frequency with which previous researchers have employed it. This theory, which arose from cognitive science, has been cited extensively in studies that use etymologies in eliciting awareness of idioms in L2 learners. Though not explicitly stated as a theory, Schmidt’s (1990) *Noticing Hypothesis* has implications for instruction that are relevant to the production of idioms in their target form.

**Dual coding theory.**

Paivio’s (1990) *Dual Coding Theory* (DCT) postulates that in the human brain, two channels (or subsystems) exist; one channel processes the images, and the other processes verbal information. The learner’s mind codes the sense data; images are processed into an Imaginal Code, and verbal input is processed into the Verbal Code. Paivio argues that learning is enhanced when these codes operate simultaneously, wherein the learner’s mind forms a referential connection between the word or phrase and its complementary image. In fact, *Referential* is one of the three channels of cognitive processing, according to DCT. These channels are: (1) the *Representational*, wherein the verbal input is cognized; (2) the *Referential*, wherein the
reader/listener uses pictures paired with the words or phrases to aid in comprehension; (3) the Associative. This third channel applies to mental associations between words, as in collocations, such as “once upon a time.” For example, after hearing “once upon,” most L1 English speakers anticipate “a time.” This third channel applies to mental associations between images as well as to mental associations between words. The association between words that enables a listener or reader to anticipate what is coming next has been referred to as the Lexical Priming Effect (Carrol & Conklin, 2017), although Paivio did not use this terminology. Finally, he shows how physical actions create a cognitive pathway through which the learner can grasp concepts.

Both Non-Verbal Transformations, wherein a cognitive channel that was forged by physical activity becomes navigable to verbal processes, and The Referential Level of Processing (Paivio, 1990) apply to the current research. One of the functions of referential processing is mnemonic, suggesting that associated imagery enhances recall of vocabulary, phrasal or otherwise. Paivio also explains that Non-Verbal Transformations occur when a physical activity precedes the verbal concept. For example, a person can compute many calculations in the four basic processes (add, subtract, multiply, divide) by physically working out the problem with an abacus or another manipulative material prior to having the ability to perform such operations abstractly. Similarly, the DCT posits that Non-verbal Transformations are traces of physical acts that have been frozen into a mental process. In explaining this theory, Paivio (1990) states that “all mental transformations engage motor processes that derive originally from active manipulation of the referent objects and observations of perceptual changes in objects as they move or are manipulated by others” (p. 72). Phrases such as “come out of the closet” or “do a deal under the table” have a figurative meaning that could have been abstracted from a physical act of hiding.
It should be noted that even though Paivio’s research offered some pedagogical advice, it centered mostly upon cognition. Later researchers have applied his ideas in studies that investigate the use of Learner-Generated Images (Chen & Lai, 2013; Freyn & Gross, 2017; Vasiljevic, 2012) because of the logical link between having an image held within the mind and creating a tangible artwork through which others can perceive it. Nevertheless, Paivio (1990) emphasized mental imaging. Research has found a correlation between objective memory and the vividness of the learner’s mental images (Cooper, Kensinger, & Richey, 2019). It appears that both imagery that is associated with a target verbal formula and manual activity aid comprehension and recall (Baddeley & Andrade, 2000). The relationship between words and images has implications for instruction and has been cited in a plethora of studies wherein the learners are exposed to images (Andareb & Rouhi, 2014; Aydin, 2017; Fotovatnia & Khaki, 2012; Vasiljevic, 2012) or images and etymologies (Hagshenas & Hashemian, 2016; Tabatabaei & Mirzaei, 2014).

**Conceptual metaphor theory.**

Research in cognitive science by Lakoff and Johnson (1980) led to the development of the Conceptual Metaphor Theory. Lakoff and Johnson believe that metaphors are a lens through which people see their world. Any given idiom reflects these metaphors, which in turn reflect the human experience. Lakoff and Johnson explain that conceptual metaphors have two domains. The first is the source, which is the more tangible part of the metaphor, represented by “money” in the metaphor TIME IS MONEY. The other word, represented in this example by “time,” is the target domain that the interlocutors are trying to ascertain. The metaphor guides the listener/reader to map these ideas across domains and to become aware of the similarities between the two domains. The foundation of the metaphor is the shared cultural belief in the
relationship between the target and domain within a metaphor, which, in turn, can be conveyed by words.

Lakoff and Johnson (2003) explain that metaphors are beliefs about the nature of reality that are widely held by members of a culture who share a language. These beliefs may extend beyond the culture group; many of the primary metaphors, such as ANGER IS FIRE, seem to exist in widely divergent cultures and languages. These forms are rarely, if ever, openly articulated by the native speakers or by those who try to adopt the language and culture as their own. Cognitive linguists gleaned the abstract existence of these forms (metaphors) through induction. After analyzing idioms grouped by topic, the metaphoric generalization emerged. Hence, VP Idioms such as __subject__ “makes my blood boil,” or “fanned the flame of” __noun phrase____, etc. can be classified as motivated by the ANGER IS FIRE metaphor. Boers (2003) explains that there are primary conceptual metaphors that are often universal because they map an abstract concept on to a physiological experience. The source domain (often from the physical body) is equated with a hypothetical construct, emotional state, etc. The BODY IS A CONTAINER FOR THE EMOTIONS has idiomatic instantiations in many languages, including Chinese (Carrol & Conklin, 2014; Chen & Lai, 2013; Gan, 2014), Arabic (Galal, 2014), Dutch (Boers et al., 2004), and English. Then there are secondary conceptual metaphors, which are more likely to be culturally specific. LIFE IS A JOURNEY can be induced from idioms in English, such as “We have come to the end of the road” (Boers, 2003). Given that idioms are deeply embedded in culture, familiarity with the ethos and worldview of the L1 speakers of the target language, which are crystallized in the conceptual metaphors, is conducive to the acquisition of L2 idioms.
The pedagogical application of this is that instructors can present students with the metaphors and group the idioms according to the conceptual metaphor with which they align (Boers, 2003; Boers et al., 2004; Galal, 2014; Vasiljevic, 2015b). In contrast to the common belief that idioms are often arbitrary, idioms are “motivated” in that it may be possible to infer the figurative meaning of an idiom based on the metaphor and other factors, such as context. Many researchers recommend using conceptual metaphors as a means to teach the idioms (Boers et al., 2004; Carrol & Conklin, 2014; Chen & Lai, 2013; Galal, 2014; Liontas, 2015; Samani & Hashemi, 2012; Vasiljevic, 2015b). The use of conceptual metaphors does not necessarily result in accurate production of the L2 idiom, however. It is essential that the learners not only grasp the meaning of the idiom but notice it in its correct form, which eventually leads to the ability to produce it correctly and independently.

**The noticing hypothesis.**

In two often-cited case studies, Schmidt (1983, 1986) explores the acquisition of L2 in naturalistic settings. What emerged from his data has had a major impact on theory in *Second Language Acquisition* (SLA). In his 1983 “Wes study,” Schmidt’s participant was a Japanese learner of English who had been living in Hawaii. His participant’s ability to communicate enabled Wes to sell his artwork, achieve a comfortable level of financial success, and integrate with the society. Despite Wes’s long residence in Hawaii, however, there were errors in production that seemed intractable to correction even after being pointed out by Schmidt. To use the framework of Canale and Swain (1980), Wes had achieved *Communicative Competence* even though he lacked grammatical competence. His use of non-standard but comprehensible phrases indicated strategic competence, another one of the four components of this competency. Schmidt observed that Wes showed socio-linguistic competence through the graciousness and ease of
communication that he had with his clients. The question of why the participant seemed unaware of his non-standard usage continued to perplex Schmidt and led to further research. In 1986, Schmidt explored the process of language learning by using himself as the participant (Schmidt & Frota, 1986). While living in Brazil, Schmidt formally studied Portuguese for merely five weeks but continued to learn through naturalistic conversation. Frota was indispensable in recording one of the main data sources, the audiotapes of Schmidt’s conversations in Portuguese. Additionally, Schmidt daily recorded his reflections on what he had learned in a journal. For data analysis, Schmidt compared his notes on his Portuguese language learning process with taped transcripts of himself speaking with other interlocutors (usually dyads).

According to Schmidt (1990), the process of language learning follows a sequence of perception, noticing, and understanding. Language stimuli (known as input) occur in the environment, and the learner hears it. Simply hearing the input is perception, but much of what is perceived does not enter the working memory. For example, like Schmidt (in the early stages of learning Portuguese) and Wes, the learner may grasp the meaning of an utterance but not notice its form. (2) Next, if the learner notices it, the input becomes intake. This means that the learner has become aware of the lexis and/or grammar, pronunciation, etc. Learning is entirely contingent upon first noticing. Schmidt and Frota (1986) note that “a second language learner will begin to acquire the target like form if and only if it is present in comprehended input and ‘noticed’ in the normal sense of the word, that is consciously” (p. 311). Environmental stimuli can serve as triggers to noticing, whether this is in a formal learning setting or not. Schmidt (1990) suggests that adult L2 learners must attend to “redundant grammatical features” (p. 149) in the language in order to learn them. Understanding comes with rehearsal, be it naturalistic or classroom-based, but noticing must precede it. This means that the learner has processed the
language input and stored what is essential in his/her long-term memory. Given the necessity of attention and awareness, Schmidt claims that subliminal learning does not exist. It is possible for individuals to learn implicitly, but this is not an intuition of universal grammar. Rather individuals become aware of patterns that recur over and over in the input and start to use them. Within the framework of Schmidt’s hypothesis, understanding results from a process that begins with perception and continues through noticing, followed by attention to the task and the target form. Even though attention and awareness differ between individuals, these factors must be considered in designing instruction.

Schmidt provides pedagogical advice based on his findings. He writes that one condition that may facilitate incidental learning in an adult language learner is task-based instruction. He claims that if the demands of a task necessitate the skill, the person will learn it. One way that an effective instructor can facilitate noticing of the correct form in the input to use Focus on Form (Longman, 1991) or another strategy to elicit noticing of the target form.

**Cognitive load theory.**

While Schmidt’s (1990) Noticing Hypothesis applies to language learning, the next theory to be explained focuses upon cognitive processes in learning, regardless of the subject, and in how to align the instructional design with the way that the human brain processes information. According the Cognitive Load Theory (CLT: Paas, Renkl, & Sweller, 2003; Sweller, et al., 2011), various types of cognitive load exist: Intrinsic Cognitive Load, Extraneous Cognitive Load, and Germane Cognitive Load. When a task itself is multi-faceted and requires pre-requisite skills, it may strain the working memory of the learner. The working memory, which handles the new input, can only cope with three to four unique and unfamiliar concept or skills at a given time. The long-term memory holds schema, that is, frameworks of information
that have been organized cognitively and may be hierarchical, into which the learner can integrate new information that has passed through the working memory.

Intrinsic Cognitive Load describes the result on cognition when a learner meets an innately complex task. Such tasks, which have *High Element Interactivity*, have many components and prerequisite skills, without which the student cannot successfully complete the task. Nevertheless, it may be difficult for instructional designers to simplify it without neglecting important components of the skill or concept. Paas et al (2003) explain that in some cases the skill can be analyzed so that the requisite skills are segmented and can be taught sequentially, in separate lessons. This may facilitate the integration of the material into existing schema in the student’s long-term memory or lead to the construction of new schema. Extraneous Cognitive Load happens when the instructional design unnecessarily complicates the learning task. The learners may be required to do unnecessary searches, for example. These inadequately designed lessons may include other activities required for assignment completion that are irrelevant to the internalization of new concepts or skills that are the aim of the instruction. In the case of simple tasks, these unnecessary complications do not detract from the learning, but they can promote frustration if the tasks have High Element Interactivity. *Germaine Cognitive Load* obtains when the learning tasks have been shrewdly designed, without superfluous searches, and with awareness of the multiple facets of a complex skill (Paas, Renkl, & Sweller, 2003; Sweller, et al., 2011). In well-designed learning tasks, the amount of cognitive load stimulates learners rather than overwhelming them. CLT is relevant to this study in that the second experimental condition, the Authentic Contexts condition, exposed learners to three audio-visual clips, two of which had High Element Interactivity. High elementary interactivity can strain the cognitive resources of the learner because it requires too much information to be held in the working memory. The
“working memory,” which is an integral part of cognitive processes according to those who ascribe to CLT, contrasts with *Levels of Processing Theory*, to be described next.

**Levels of processing theory.**

The theory proposed by Craik and Lockhart (1972) challenges the paradigm of working memory and poses that memory cannot be subdivided neatly into working memory, short-term memory, and long-term memory. They conceptualize memory as a more continuous process, which is greatly contingent upon the activity that the learners engage in while attempting to memorize. Such activities, which Craik and Lockhart call “orienting tasks,” make a tremendous difference regarding memory storage. Particularly for adult learners, it matters whether their effort to learn is intentional, which means that the participants know they will be tested on the information, or incidental, meaning that the subjects do not know there will be a test, nor do they think the information is essential to remember. Childhood and early childhood are commonly known as the stages of life wherein incidental learning occurs. Nevertheless, even adult learners, given the optimal orienting tasks, can memorize words and phrases more readily than intentional learners to whom irrelevant tasks have been assigned. These cognitive researchers claim that when people learn via a deep level of processing, they are able to activate their prior knowledge and access previously learned rules. This results in higher retention since the target words or concepts are being handled efficiently, compared to learning at a more superficial level. Craik and Lockhart (1972) observe that well-designed orienting tasks facilitate retention of idioms, such that “highly familiar, meaningful stimuli are compatible, by definition, with existing cognitive structures. Such stimuli (for example, pictures and sentences) will be processed to a deeper level more rapidly than less meaningful stimuli and will be retained… Retention is a function of depth, and various factors, such as the amount of attention devoted to stimulus, its
compatibility with the analyzing structures, and the processing time available, will determine the depth to which it is processed” (Craik & Lockhart, 1972, p. 676).

The authors claim that exposing learners to Form Focused activities does not lead to a deep level of processing; therefore, they do not advocate their use. In contrast, engaging students in a meaningful task elicits such processing. Nonetheless, many of the researchers who have cited this theory (Boers et al., 2007; Boers et al., 2004; Kim & Nam, 2017; Lontas, 2015; Stengers, DeConinck, Boers, & Eyckmans, 2016) suggest that instructors should use both form-focused and meaning-focused activities so as to engage the deeper level of processing, while also ensuring that the learners remember the exact form of the target phrase.

Despite Craik and Lockhart’s (1972) claims, there are approaches wherein the learners participate in a meaning-focused lesson and yet receive instruction on the key points of grammar, vocabulary, or phrasal composition that are prone to error. As mentioned above, one such approach is Focus on Form (FonF: Long, 1991; Gass & Selinker, 2008). FonF has also been referred to as Form Focused Instruction – Integrated (FFI-Integrated). Spada and Lightbown (2008) describe FonF as follows. First, the instructor engages students in a conversation or reading activity followed by discussion within the classroom, so the major thrust of the lesson is comprehension and/or meaningful communication. Then, the students receive spontaneous or semi-spontaneous lessons in grammar or another linguistic feature based upon their output. The instructor integrates these mini-lessons within a meaning-based activity within the framework of Communicative Language Teaching. The instruction may involve recasts (wherein the instructor repeats the student’s statement, preserving the meaning but stating the form correctly), prompts, wherein the instructor hints at the error and tries to elicit self-correction from the student, or less commonly, direct feedback (wherein the instruction provides the correct form). While FonF is
well-known as an approach for grammar instruction, Ellis (2008) advises that FFI has broader applicability in the L2 classroom beyond teaching and remediating students’ grammar. FFI can be used to teach vocabulary, pronunciation, or another linguistic form that has been recognized as essential to acquiring the target language. In the case of idioms instruction, the vocabulary is phrasal and prone to errors in the choice of the component words, given the mostly inflexible nature of these phrases, what Fernando and Flavel (1989) call “transformationally deficient” or in spelling when the error changes the meaning.

The broad theories of learning reviewed above provide a framework for the interpretation of the results in the current study. However, their broad applicability must be supplemented by hypotheses and models that more specifically apply to language learning, particularly in L2.

**Hypotheses and Models Regarding the Processing of Idioms**

A plethora of research has been conducted to ascertain the cognitive processing involved in recognizing and comprehending idioms. It is noteworthy that some of these theories do not distinguish between the L1 learner, who may be a child, and the L2 learner, who may be an adult. First of all, Bobrow and Bell’s (1973) *Idiom List Hypothesis*, also known as the *Literal First Hypothesis*, involved native speakers of English and is believed to provide evidence that separate modes of processing exist for idiomatic and figurative. Their study involved two investigations, which aimed to discover whether, given an ambiguous sentence containing an idiom, a native speaker would interpret it first literally or interpret it first figuratively and whether there were separate modes of processing between literal and idiomatic. Participants were divided into three groups. In the literal bias condition, each student was shown four sentences with literal meaning, followed on the next page by an ambiguous sentence. For the idiomatic bias group, the four preceding sentences were idiomatic, followed by an ambiguous sentence. Finally,
there was a control, “no set” group. Participants in all three groups had to report on their reaction to the ambiguous sentence, whether they saw the idiomatic or literal meaning first. The data was entirely self-reported by participants. The results were analyzed with Chi-Square to ascertain whether there was a bias effect from the preceding sentences. Eighty four percent of the students in the idiomatic condition recognized the idiomatic meaning first, while 57% of participants in the literal condition reported having seen idiomatic meaning first. The second experiment was similar to Experiment #1, except there were three treatment groups, each with a slightly different condition, and a control “no set” group. The literal bias group was divided into two: one was exposed to sentences with lexical ambiguity. The other was exposed to sentences in which the ambiguity was based on structural differences. Results revealed that 50% of the participants in the idiomatic condition saw the idiomatic meaning first. For the literal/lexical, 26% saw the idiomatic meaning first, while for the literal/structural ambiguity group, 19% saw the idiomatic meaning first. Analysis with Chi-Square showed a statistically different proportion of “saw idiom first” between the “no set” and the idiomatic set groups. Otherwise, no significant differences were found. The researchers concluded the literal or figurative nature of the preceding sentences bias the reader’s interpretation of an ambiguous sentence containing a possibly idiomatic phrase. In their conclusion, Bobrow and Bell (1973) claim that literal and figurative are separate modes of processing.

Another perspective, called the *Lexical Representation Hypothesis* claims that both the literal and the figurative meanings can be accessed together (Swinney & Cutler, 1979). Their experiment presented pairs of phrases, with one phrase used in an idiomatic sense and the other in a literal sense. Swinney and Cutler’s results show a faster recognition of the idiomatic strings in a very short story context. Gibbs (1980) proposed a hypothesis that states that learners can
access the figurative meaning without first comprehending the literal meaning. The applicability of Gibb’s *Direct Access Hypothesis* is contingent upon adequate and appropriate context, which enables the reader/listener to retrieve the meaning successfully. These four models posit a separate channel of processing for the literal meaning and the idiomatic one.

In contrast to the previous four hypotheses, the *Hybrid Model of Idiom Comprehension* (Titone & Connine, 1999) states that learners can access both figurative and literal meanings while processing; one does not depend on the other. This model and other hybrid models propose “the parallel availability of two processing routes, namely, the direct route for holistic retrieval of highly automatized phrases and the compositional route for a word-by-word analysis of less familiar sequences” (Cieslicka & Heredia, 2017, p. 82). The supposition based on the *Hybrid Model of Idiom Comprehension* is that decomposable (somewhat compositional) idioms take longer to process. Titone and Connine (1999) sought to “determine the degree to which idiomatic and literal meanings are initially computed during idiom processing” (p. 1668). Despite the small sample size of 24 students, the results of their eye-tracking study confirm the hypothesis that activation of the literal and figurative senses of an idiom can co-occur, but non-compositional idioms take longer to process.

Similar to the Hybrid Model, the *Configuration Model* proposes that both figurative and literal processing can occur simultaneously (Cacciari & Tabossi, 1988). The researchers conducted three experiments with approximately 30 participants each. They used idioms for which there is no literal counterpart, such as “shoot the breeze” and “build castles in the air.” All of the target idioms were verb phrases, and it would have been possible for the participants to interpret the target idiom (idiomatic string) literally until they arrive at the last word. The response time was an essential source of data, as was the ability to interpret the idiom. Results
were consistent for each of the three studies. In the last word of the idiomatic string, the participants were able to grasp both the idiomatic and the literal meanings, having had a time lapse. The authors theorize that when there is enough context in the sentence, the learner recognizes a word that clues him/her that the meaning is not literal. This word is a “key,” and an idiom can have more than one key. In other words, the learner accesses the meaning based on the component words and the syntactic structure. Cacciare and Tabossi (1988) explain that according to their hypothesis, “a configuration, i.e., an idiom, cannot be recognized before a certain amount of information has been received. But how can this amount be specified? … Every idiom has such a part, which we will refer to as the key of the string, and that the string cannot be recognized until its key has been accessed from the mental lexicon” (p. 678). The learner’s recognition is based on where the key occurs vis-à-vis the idiom and where the idiom occurs in the context. The student processes the string, but only after s/he becomes aware of the key and pulls the associated lexical information from his/her memory. This enables the learner to recognize the configuration.

Similarly, Abel (2003) proposes the Model of Dual Idiom Representation (DIR), which is applicable to L2 learners. Abel built upon the work of Titone and Connine (1994, as cited in Abel, 2003), using the results of their study, which investigated L1 English speakers’ comprehension and judgments of decomposability of idioms, along with her data that measured the familiarity and decomposability of idioms by L2 learners whose native language was German. According to this model, some idioms are entirely non-decomposable and require an “idiom entry” to be understood. The classic example is “kick the bucket.” Others that may be partly decomposable are constituent entries, which the learner can figure out. In both cases, the “entries” are into the mental lexicon of the learner. The results of Abel’s study suggest that
whether an “idiom entry” is formed in the learners’ mind is also impacted by frequency. She notes that the way the learner registers the idiom may change over time. With familiarity and increasing awareness of idiom usage in the L2, many of the constituent entries become idiom entries.

The researchers who devised the Configuration Model (Cacciari & Tabossi, 1988) recognize a critical point the cognitive process, which occurs at the point at which the learner recognizes that the phrase is not literal. According to Cacciari and Tabossi (1988), this critical point occurs when the reader/listener encounters the idiomatic key. After that, s/he goes to the memory banks to retrieve information that enables him/her to grasp the idiom’s meaning. If the prior knowledge is inadequate, the idiom is not understood. It is not clear how this process can occur for a second language learner, as his /her awareness of the cultural context may be inadequate. In contrast to the research by Liontas (1999, 2002, 2017b), Cacciari and Tabossi do not explore the role of context although they acknowledge this as a limitation. Furthermore, they do not mention the possibility that some of the knowledge that the learner accesses may be coming from the L1. Everyone has a vast storehouse of L1 idiomatic knowledge, much of which was conveyed in early childhood (Prodromou, 2003). Even a sophisticated language learner lacks much of this cultural information, given at the time when his/her mind can absorb it most easily (Montessori, 1969). Unlike other theories, Liontas’ Idiom Diffusion Model gives relatively less importance to whether the learner decodes the literal or the metaphoric meaning first. Rather he emphasizes the learner’s reliance on L1 and context in processing the figurative meaning. The point at which the learners’ processing begins is when s/he first recognizes that the phrase is idiomatic.
The Idiom Diffusion Model of L2 Processing.

Liontas (1999, 2002, 2017) *Idiom Diffusion Model of L2 Processing* posits that the learner delves into his/her memory and then makes a comparison between what appears on the page (or in the spoken dialogue) with what has been imprinted upon his psyche regarding idioms, their form, and their meaning. This model categorically states that context is the most powerful key to comprehending the idiom’s meaning. The first step is the recognition by the L2 learner that the phrase is an idiom and not meant literally. Liontas’ Idiom Diffusion Model does not support Bobrow and Bells’ (1973) hypothesis even though he states that the learner at first attempts a literal reading of the text. Rather, he emphasizes that learners use their knowledge of idioms in L1 to process idioms in L2. Liontas (2017b) claims that unlike native speakers, “L2 learners must create a new idiomatic meaning in their mind and juxtapose that meaning against one from their native language. It is through comparison and contrast that the L2 idiomatic meaning is created (in many cases for the very first time) in parallel to the text the learner reads” (p. 99). In other words, the learner uses prior knowledge, particularly from the L1, to comprehend the input in L2 for which a literal reading makes no sense. Sometimes the learner makes an incorrect inference and interprets the phrase incorrectly despite context clues. Following Liontas’ model, the idioms may be assimilated or adapted to fit the learner’s communicative needs, even though sometimes frustration can occur, especially when encountering idioms that are entirely dissimilar from those in the learners’ L1.

Liontas offers four hypotheses as a corollary to the *Idiom Diffusion Model*. First, there are three types of relationships between the idiom that the L2 learner encounters and idioms in his/her L1, which he refers to as levels. The relative similarity or difference between idioms in the learner’s L1 and a given idiom determines the Conceptual Semantic Image Distance. The
relationship between L1 and L2 idiom can be established at the **Lexical Level** (LL); that is, the meaning of the L2 VP Idiom is the same, or almost the same, as that in the L1. The relationship between L1 and L2 idioms can also be established at the **Semi Lexical Level** (SLL). Here, the meaning of the L2 VP Idiom applies the same concept as that in the L1 but the idiom itself is expressed with similar, but not the same (translated) words. Finally, the relationship between L1 and L2 idioms can be established at the **Post-Lexical Level** (PLL). Here, too, the same figurative concept is expressed with a very different mental image. At each level, context plays a notable role. The **Lexical Level Hypothesis** states that learners need very little context to comprehend an LL idiom in the L2 because they use positive cross-linguistic transfer to interpret the meaning. The **Semi-Lexical Level Hypothesis** states that in interpreting an SLL idiom, the L2 learner must have adequate contextual support. Since fewer clues from L1 exist, the learner will need to make more inferences. The **Post Lexical Level Hypothesis** asserts that in order to grasp the figurative meaning, the L2 learner will need not only ample contextual support but also scaffolding since the L1 provides no idiomatic equivalent or has equivalent ideas that are expressed with an entirely different image (Liontas, 1999, 2017b). A detailed account of Liontas’ research regarding the **Idiom Diffusion Model** and the development of **Idiomatic Competence**, which have been the theoretical bases for numerous research studies (Al-kadi, 2015; Freyn & Gross, 2017; Khoshnevisan, 2019; Khonbi & Sadeghi, 2017; Rohani, Ketabi, & Tavakoli, 2012; Tabatabai & Hajizadeh, 2015; Tran, 2013) appears below. The studies following Liontas that have the greatest relevance to the current research will be reviewed in detail.

**Research investigating the Idiom Diffusion Model.**

Liontas’ (1999) investigation of L1 English learners’ reading processes when they encounter L2 idioms in Spanish, German, or French added a new model of L2 acquisition, the
*Idiom Diffusion Model*, and has pedagogical implications, to be explained. The main idea behind this model and the related hypotheses is that the cognitive semantic image difference between the readers’ L1 and the target language will determine the degree of markedness and how much contextual support will be needed for him/her to interpret the idiom correctly. Liontas explains that knowledge of most of the constituent words in a Lexical Level idiom (LL) will enable the learner to figure out the idiom’s meaning quickly. For Semi-Lexical Level idioms (SLL), the time needed to grasp the meaning will be greater. Recognition of key lexis within the idiom will result in recalling a similar L1 idiom and then comparing and contrasting it with the L2 idiom to be learned. If the idiom is Post Lexical Level (PLL), the learner might struggle to decode it. Suppose the learner encounters a PLL idiom and first reads it; if s/he can identify the key lexeme, it will increase his/her likelihood of success. The learner will generate mental images of the idiom, which will help this person to make restricted guesses, which, lacking adequate background knowledge or context, amount to little more than wild guesses. In either case, it is unlikely the reader will decode the PLL idiom independently.

The complex experimental design of Liontas’ (1999) research included participants from two universities, all of whom were L1 English learners of German, Spanish, or French. The material for the intervention included texts containing the target idioms in the aforesaid languages plus English translations. All target idioms were classified as LL, SLL, or PLL with reference to English. The idioms themselves, the texts from which they were drawn, the English translations, and pertinent examples of the L2 idioms, were all added into the *It’s All Greek to Me* software, which Liontas had designed. The participants completed the experimental tasks via this interactive program. The smaller treatment group also had direct interaction with Liontas for clarification of their think-aloud comments. For all students in each language group, the same
number of idioms and texts appeared on the screen but in a different order. There were thirty idioms selected for each of the three languages. Fifteen were used for the Idiom Detection Task and fifteen for the Zero Context and Full Context tasks.

All participants were in one of two treatment groups and passed through the following experimental procedures. The Computer Assisted Interactional + Video (CMIV) group did the activities with target idioms delivered via the It’s All Greek to Me software but also had to do a think-aloud task simultaneously. The computer program not only delivered the content but also measured the time that each participant took to make his/her response and recorded the think-aloud data. The treatment for both the Computer Mediated Interactional (CMI) group and the CMIV group is described as follows. For the Idiom Detection Task, students were exposed to texts, each of which contained only one idiom. Participants read each text and highlighted what they thought was the idiom. For the Zero Context Task, the students were shown only the idiom. The participants had to try to infer the meaning of an LL, SLL or PLL idioms without any contextual support. For the Full Context Task, the students were shown the same idioms as had appeared in the Zero Context Task, but each idiom was now embedded in an authentic text from which it was previously extracted. Only after completing all the tasks, was it possible for each participant to see the correct answer. The first day, the study’s participants answered a 25-item pre-questionnaire to discover their self-assessment of L2 fluency and prior knowledge of idioms. Then the participants did the Idiom Detection. On the second day, the participants completed the Zero Context and Full Context tasks, after which they completed a post-task survey. The latter was a survey on a 5-point Likert scale which aimed to elicit reflection of the learning tasks and the participant’s attitude.
The results were impressive, confirming almost all of Lontas’ (1999) hypotheses. For the Idiom Identification Task, evidence strongly suggests that participants in both the CMI and CMIV groups used reading strategies to ascertain that a phrase was an idiom after having first tried to read it literally. Preferred strategies were translation, contextual support, and the literal meaning of the idiom. Participants in the CMIV group reported that they had made the decision as to which phrase was the idiom before having finished the text, in approximately 86% of the cases. Lontas posits that there are strategies for recognizing and decoding idioms that are applicable to Indo-European languages based on the results of his (1999) study and his previous (1997) investigation into the process for learning idioms in Modern Greek. The results of the Zero Context and Full Context tasks were similarly in alignment with his predictions.

For the Zero Context Task, the participants rarely achieved success in ascertaining the meaning of the Post Lexical Level idioms in all three languages under investigation, with the lowest recognition rate for French, 9.17% for PLL, compared to a somewhat higher score for Spanish PLL (17.14%) and much higher for German PLL (50%). In all three languages, the percentage of idioms correctly detected was higher for SLL than PLL and highest for LL. For example, results from the French group showed SLL (35%) and LL (73.33%). Similarly, the processing time was the longest for the PLL, followed by the SLL, followed by the shortest time for LL, regardless of L1. CMIV data reveals that the most used strategies were translation, guessing, and guessing of key words, respectively. What emerged from Lontas’ qualitative analysis of the comments regarding PLL idioms was that learners look to the lexis and translate these key words and then “try to make some kind of connection or association with their own L1 idiomatic knowledge. Without the presence of context, however, their decisions as to the interpretation of an idiom are merely guesses . . .” (p. 265). In absentia of context, such efforts at
decoding rarely lead to successful interpretation of the metaphoric meaning of the idiom. The data show that the idioms most quickly and easily interpreted under the ZCT condition were those at the LL.

For the Full Context Task, the rate of correct recognition for all target idioms was 78% for the CMI group. As could be predicted based on Liontas’ model, the greatest improvement between the ZCT and the FCT scores was for the PLL idioms, which revealed an average increase of 42.38%. For the differences between lexical levels insofar as correct interpretation, the difference between LL and PLL falls slightly short of statistical significance. For all three language groups, the preferred strategy was “context helpful” although some participants report that it “context did not help” (even at the FCT) or was not needed (especially with some LL and SLL idioms due to the CSI distance present in those languages). The results of this study and similar studies by Liontas (2002, 2003, 2007) that refined the concepts have inspired many researchers to conduct their own investigations.

As a result of his early investigations, Liontas coined the term, *Idiomatic Competence*. Liontas (2015) adapted the definition of *Communicative Competence* (Canale & Swain, 1980) to fit the acquisition of L2 idioms. The components of Communicative Competence shown below manifest in a person who has fluently acquired L2. Communicative competence has four subsidiary competencies: (1) grammatical competence, (2) sociolinguistic competence, (3) discourse competence, and (4) strategic competence (Canale & Swain, 1980). Clearly, *Grammatical Competence* means an ability to use the correct grammar, including mechanics, such as punctuation and spelling. *Sociolinguistic Competence* has to do with pragmatics; it means that the learner can produce utterances that are appropriate to the occasion and to the relationship between the interlocutors in terms of social conventions. *Discourse Competence*
implies an ability to be part of the conversational event, to speak lucidly enough to be understood, and to grasp the meaning of the conversation partner(s) in real time. Regarding writing, especially, it has to do with cohesion and coherence. Although this later became a separate competency, this was at first classified under Sociolinguistic Competence. *Strategic Competence* means that the interlocutor can repair breakdowns in communication. The L2 interlocutor can negotiate the meaning through requests for clarification when not able to comprehend; regarding production, s/he can re-phrase his/her own output when it is unsuccessful in conveying meaning. According to Liontas (2015), these apply to one’s fluency in idioms; particularly, *Sociolinguistic Competence* aligns most closely with what Liontas calls *Idiomatic Competence*. A person with Idiomatic Competence can, with minimal effort and smooth social skill, use idioms both appropriately and accurately in authentic contexts. *Idiomatic Competence* has served as the theoretical basis of numerous studies (Al-kadi, 2015; Khoshnevisan, 2019; Khonbi & Sadeghi, 2017; Rohani et al., 2012; Tabatabai & Hajizadeh, 2015; Tran, 2013). These and others have followed Liontas’ pedagogical advice (Freyn & Gross, 2017). A review of research conducted by those who follow Liontas theory and/or pedagogical recommendations will be reviewed under “Pedagogy based on Theory” below. First, specifically what is meant by Idiomatic Competence should be explained.

**Defining the Competency that Enables Individuals to Understand L2 Idioms**

The *Idiom Diffusion Model of L2 Acquisition* and the related terminology, such as idiomatic competence, arose not from theoretical conjectures but rather from a perceived gap in how idioms are taught and a recognition of their vital importance (Liontas, 2002, 2008, 2015). Instructional interventions for teaching idioms to L2 learners have a goal of instilling an ability to comprehend these phrases and/or enable the learners to produce them. In other words, the
long-term goal is the development of *Idiomatic Competence* (Liontas 2002, 2003, 2008, 2015; 2017b). How the idioms are taught directly impacts the extent to which the learner will develop what Sinclair (1992) describes as full fluency. This means “a subliminal mastery of phraseology,” the skill of inferencing from textual or spoken input, and “knowledge of aspects of culture which are not signaled anywhere in the text, but which are nonetheless known” (Sinclair, 1992, as cited in Prodromou, 2003, p. 45). The fluent use of Vivid Phrasal Idioms requires an understanding of hidden meaning, embedded in culture, expressed in a figurative way.

The competency that is essential to reaching Sinclair’s definition of full fluency has been given various names, conceptual fluency (Al-Mohizea, 2017; Aydin, 2017; Danesi, 1995) and idiomatic competence (Liontas, 1999, 2002, 2003, 2008, 2015, 2017a, 2017b). While these competencies, as defined by the researchers who coined each of these terms, may not be identical, considerable overlap exists, and all emphasize the importance of an ability to use the idioms appropriately and spontaneously in the moment. For Danesi (1995), *Conceptual Competence* is manifested in an L2 speaker who grasps and exploits for communication the L2 culture’s beliefs and assumptions, as manifested in language, including metaphors. This conceptual structure is the filter through which native speakers (NS) and fluent L2 speakers perceive their reality. This manifests in written and verbal expression and even in how events are interpreted. Fluency, therefore, includes accommodating within the mind the deep culture of the speakers of the language. This, in turn, manifests as native speaker-like production. The process of attaining such ability has not been successfully elicited in second and foreign language education (Al-Mohizea, 2017; Liontas, 2008; Samani & Hashemi, 2012). Liontas’ *Idiomatic Competence* includes additional components and places a heavy emphasis on culture.
Idiomatic Competence is the ability to use idioms appropriately and accurately, without undue hesitation, in authentic contexts. Specifically, Lointas (2003) defines idiomatic competence as “… the ability to understand and use idioms appropriately and accurately in a variety of sociocultural contexts, in a manner similar to that of native speakers, and with the least amount of mental effort” (p. 299). Previous research, including corpus evidence, suggests that idioms are an integral part of spoken English, having high frequency in non-academic contexts (Cooper, 1999; Karlsson, 2013; Liu, 2008). However, Biber, Johansson, Leech, Conrad and Finegan (1999) found that idioms (as such), not multi-word sequences, were NOT frequent in the Longman Corpus of Written and Spoken English (academic). In fact, they occurred < 5 times per million words. Likewise, research by Moon (1998) confirms that of the idioms used in her study, 8% occurred once 1-2 per million words, 2% occurred 3-4 times per million words, and only 1% occurred five or more times in the Hector Pilot Corpus. Nevertheless, there is evidence to suggest that some idioms have more formal usage and are applicable to academic writing and successful passage of the TOEFL (Stirling, 2015) and International English Language Testing System (IELTS: Five Formal Idioms, 2018). Furthermore, those who would master the L2 are not only interested in writing and publishing but also in communicating orally and by email. Furthermore, politics and other newsworthy events communicated orally, online, in broadcast media convey facts and ideas through a mode of communication that is neither informal nor fully academic (Myers, 1996). Idioms are replete throughout the presentational mode (exemplified by new reports and politics speeches) and the conversational mode (used in conversation and email), not to mention the academic mode (scholarly writing). Therefore, those who would possess a sophisticated native speaker like fluency must master all three modes. As such, institutions that
prepare L2 English students to enter English-language universities, especially in the U.S., U.K., Australia, or Canada, should endeavor to teach this important aspect of language.

**Pedagogical Research Inspired by Liontas**

The impact of Liontas work (1997, 1999, 2001, 2002, 2003, 2008, 2015, 2017a, 2017b) on idioms, which began with empirical investigation, and led to the generation of his *Idiom Diffusion Model of L2 Acquisition*, and more specific terminology, such as Vivid Phrasal Idiom and Idiomatic Competence, has influenced numerous other researchers (Al-kadi, 2015; Alshaikhi, 2018; Asl, 2013; Carrol et al., 2018; Freyn & Gross, 2017; Khonbi & Sadeghi, 2017; Khoshnevisan, 2019; Li, 2019; Rohani et al., 2012; Tran, 2013; Wong & Looi, 2010). Prominent among Liontas’ detailed advice on how to teach idioms, is his assertion that L2 students have exposure to authentic contexts wherein the Vivid Phrasal Idioms are used.

In addition to the extensive pedagogical research that has been conducted by Liontas (1997, 1999, 2003, 2008, 2015, 2017b), there have been investigations of the impact of using etymologies on the acquisition of L2 idioms. These studies are grounded in theories, such as DCT (Paivio, 1971,1990) or Conceptual Metaphor Theory (Lakoff & Johnson, 1980). These studies replicate or partly replicate early studies by Boers (2003) and Boers et al. (2004), which use his *Idiomteacher CALL* tool. Their aim is to hone practical approaches for raising learners’ awareness of idioms, the ability to comprehend them, and competence in producing them. These pedagogical studies can be classified into five categories. (1) One approach includes presenting learners with images depicting the literal meaning of the idiom. (2) Another approach is to teach students the etymologies of the idiom. In some cases, the associated figurative meaning is conveyed through direct instruction (Chen & Lai, 2013; Freyn & Gross, 2017; Shirazi & Talebinezhad, 2013), while in other cases the learners are asked to infer the figurative meaning.
based on the literal (see Boers, 2003; Boers et al. 2004, 2007, 2009). (3) Sometimes in combination with etymologies or associated images, the students are taught the Conceptual Metaphors. Researchers such as Boers (2003), Samani and Hashimi (2012), Chen and Lai (2014), Galal (2014), and Vasiljevic (2015b) have suggested that conceptual metaphors may help L2 learners to comprehend idioms because the metaphors are less specifically the possession of a language and culture group than are the idioms themselves. (4) A few studies have investigated the efficacy of using traditional attention-raising techniques. These included bold-facing the text (Alshaikhi, 2018; Pam & Karimi, 2016; Peters, 2019; 2012, as cited in Boers & Lindstromberg, 2012), comparing direct instruction delivered via textbook with CALL infused instruction using the WeChat application (Li, 2019), and having the students copy the idioms for memorization (Stengers et al., 2016). (5) Finally, researchers whose studies investigated both etymologies and images grounded their analyses in Paivio’s (1971, 1990) DCT (Boers et al., 2004; Hagshenas & Hashemian, 2016). It is believed that the etymologies elicit the formation of an image of the literal meaning, which is usually synonymous with its etymology, within the learner’s mind. Those studies investigating the effects of using pictures included a few studies wherein the learners were charged with creating their own images (Chen & Lai, 2013; Freyn & Gross, 2017; Vasiljevic, 2015a) along with studies in which the images were provided (Andareb & Rouhi, 2014; Boers, Piriz, Stengers & Eyckmans, 2009; Fotovatnia & Khaki 2012; Hagshenas & Hashemian, 2016; Tabatabaei & Mirzaei, 2014).

**Studies that investigate the use of authentic contexts.**

The theoretical and pedagogical work of Liontas has been followed by numerous researchers, in part because Liontas’ (2002, 2008, 2015, 2017b) provides clear and detailed pedagogical advice for what he calls *Idiom Training*. Chronologically ordered, the effectiveness
of using authentic contexts for the presentation of idioms to L2 learners has been investigated by Wong and Looi (2010), Rohani et al., (2012), Asl (2013), Freyn and Gross (2017), Khonbi and Sadeghi (2017), and Khoshnevisan (2019). A detailed review of Freyn and Gross’ (2017) study, involving both learner-created collages and authentic contexts is reviewed under the Learner-Generated Images section.

Khonbi and Sadeghi (2017) investigated the effects of three instructional interventions following the advice of Liontas (2002, 2008, 2015). Given that their goal was to measure the development of idiomatic competence, their participants had intensive idioms’ instruction over the course of one month. They included 47 participants, all of whom were enrolled in one of two Iranian universities. Their research design had four groups; each group was taught idioms in a different way. (1) The first group, with 10 participants, watched film clips. The researchers required the (2) second group of 15 participants to write sentences containing the target idioms. Then the instructor read their sentences and provided feedback. (3) The researchers provided students in the third group with the definitions on a PowerPoint. (4) The fourth group of 10 people engaged in role-plays wherein the target idiom(s) were spoken. Their method is explained more specifically due to its relevance to the results of the current study. The Movie Clip Group (#1) saw the film clip and had to guess the idiom’s meaning. After that, they read a sentence containing the idiom along with an illustration of it. As with Boers’ (2004, 2007, 2009) etymological elaboration, the students had to engage in making an inference for each of the idioms’ meanings. However, the researchers later gave them the definition and Farsi translation. For the Sentence Writing Group (#2), the idiom was given, followed by the direction to reflect on its possible meaning. Then each student worked with a partner to write two sentences containing the idiom. Participants were given instructor feedback and had an opportunity to
revise their sentences. At last, the teacher provided the definition. Here again, the definition was only provided after the elicitation of learners’ inferences about the idiom’s meaning. The PowerPoint Group (#3) was given an idiom and depiction, asked to brainstorm and write it in Farsi, and then given the definition. For the Role-play Group (#4) – students were given a written dialogue containing an idiom. Then they were asked to read and later perform it. Students in the role-play group had to find the meaning in English and Persian. After the classmates performed it, the student audience guessed the idiom and its possible meaning, finally, the idiom was explained, and the Farsi equivalent was given. The pretest and posttest were an identical multiple-choice test of 45 items. Using a one-way ANOVA, they found a significant difference between the groups, F = 18.506. Of the two highest scoring groups, the mean score for the role-play group was 17.6, and the mean score for the movie group was 14.4. The test results for Khonbi and Sadeghi’s study strongly suggest that the two most effective ways to teach idioms so as to develop idiomatic competence are through having students do role-plays and by exposing them to film clips.

A recent study by Khoshnevisan (2019) suggests that a multi-modal approach, including the use of film clips, is partly effective although his participants relied upon translations. He administered a survey as well as testing the effects of the intervention. The 26 participants had access to a website that provided videos as well as definitions and translations into L1 Farsi. The participants freely selected any mode of learning idioms that the website afforded, then reported their strategies as part of the survey results. While a majority of students (96%) reported that they enjoyed learning through exploration of the instructional website, and 80% opined that the videos were instrumental in gleaning the figurative meaning of the idiom, using multi-media resulted in a correct interpretation only for the lexical level idioms. For the semi-lexical and post-
lexical idioms, participants had to rely on the definition and the translation to figure out the meaning. Khoshnevisan concludes that a multi-modal approach supplemented by translation may be the most effective.

Two other studies that follow Lontas’ (2002, 2015, 2017b) pedagogical advice and are grounded in his theoretical claims confirm the interest of students in learning idioms but do not establish any particular instructional approach as superior. First, Tran’s (2013) descriptive case study was based on a survey of 54 Vietnamese university students, followed by a conversation with a small focus group. She sought to find out participants’ attitudes toward learning English idioms and to what extent they already knew them. The three instruments were: (1) a test of knowledge of idioms that had gap-filling and matching of the idiom with the definition, followed by two questionnaires, (2) one measuring how often the participants used the idioms and the other (3) their attitude toward learning them. Test scores reveal that her participants lacked prior knowledge of idioms. For the 50 idioms on the test of knowledge, only about 12% of them were answered correctly. Nevertheless, the questionnaire on attitude and the focus group results suggest that the students were keen to learn these idioms. Using a survey adapted from Lontas (2002), the researchers in Rohani et al. (2012) ascertained the positive attitude of students toward idioms. Their study included two groups of students enrolled at a university in Iran, from whom the researchers collected data on the use of authentic context in teaching L2 idioms. The 23 idioms selected were high frequency according to the Collins Cobiuld (2002) Idioms Dictionary. The authentic context was an animated video “Symphony in Slang” (Avery, 1951). Both groups had a list of definitions for the idioms and the printed script of the video, but the comparison group did not see the video. Results revealed no significant difference between groups on the immediate posttest. The results of a delayed posttest administered one month later indicate
greater retention by the experimental group, which included those who had seen the video, with a statistical difference between groups.

Finally, there is a study inspired by Liontas (2003), which compares how using extended context, limited context, or no context impacts L2 learners’ ability to comprehend idioms. Asl (2013) began by selecting 40 commonly taught English idioms from English Listening World, a source for which no end of text citation appears. Her participants were 60 secondary school students, all of whom native speakers of Farsi, living in Iran and studying English as a Foreign Language (EFL) as part of the regular curriculum. Asl posed research questions aiming to discover whether having a context for the idiom would impact the learner’s comprehension of it and the extent to which context served a facilitative role. Her participants, divided into three groups, learned idioms under one of the following conditions: the No Context condition (Group 3), wherein students were given only the idioms and its definition, served as the control. The Limited Context Condition (Group 2) students were exposed to examples of idioms in sentences, whether there was a sample sentence for each was not explained. The Extended Context Group (Group 1) had examples of the idioms in a short story. All participants were provided with the definitions for each of the 40 target idioms. Asl explained that she used an online teaching source, English Listening World for the target idioms and contexts, but also consulted Longman (2009) Longman’s Dictionary of Contemporary English. Asl did not mention anything about authenticity. Analysis of the test results led Asl (2013) to reject the null hypotheses for all six of her research questions since the posttest scores showed a statistical difference between Group 1 (Extended Context), Group 2 (Limited Context), and Group 3 (No Context). This statistical difference could be found in both the immediate and the delayed post-tests.
The researcher gently offers skepticism regarding Asl’s (2013) results for the following reasons. Liontas (2002, 2008, 2015, 2017b) emphasizes the need for authentic contexts and criticizes L2 texts wherein the samples contain a non-native speaker-like overuse of the target idioms. Of the sources from which Asl drew her idioms and context material, only Longman (2009) claims to have corpus-based, authentic examples. Inferring from the evidence provided in her article, the extended contexts that Asl used might not have been. The evidence of this is the sample “short story” extended context provided in the appendix to her article, which the researcher finds to be non-native speaker-like in that several of the target idioms were written into one paragraph. Furthermore, the 25-item multiple-choice pretest/posttest might not have been adequate to measure the participants’ comprehension of 40 idioms. Although she cites Liontas (2003) extensively, this Iranian researcher seemed not to realize the importance of authenticity in the choices of contexts.

Most of the studies that investigate Liontas’ recommendation to use authentic contexts and his theoretical claims substantiated by empirical data confirm the efficacy of using authentic contexts for teaching VP Idioms. Nevertheless, other approaches for teaching L2 idioms have been investigated.

Studies on Etymological Elaboration

Boers and colleagues (2004) used a CALL tool, Idiomteacher, which was piloted in 2002 and 2003, both for instruction and data collection. During the pilot tests, the students could use this online learning resource in an uncontrolled manner in terms of task completion and supervision. In later studies, the participants had to complete each set of idioms in the classroom, and all the tasks had to be done in the same 50-minute class period. The participants were 200 students whose L1 was Flemish Dutch. These participants had an instructional intervention that
was administered entirely through the CALL tool, *Idiomteacher*. Researchers used the comprehension test as a pretest. Then there was the “identify the source” activity, which was a multiple-choice task requiring the test-taker to match each idiom with four possible etymologies. If the student could identify the source with a single click, then it was considered *transparent for that student*. As feedback, the students received the actual etymology for the idiom after each response. Finally, the participants did a gap-filling activity, in which they had to type the idiom into a cloze passage. Unlike several studies reviewed by the researcher in which all participants were provided with the definition of the idiom (Aydin, 2017; Hagshenas & Hashemian, 2016; Khabiri & Masoumpanah, 2012; Razmjoo, Songhori, & Bahremond, 2016; Shirazi & Talabinezhad, 2013), Boers and colleagues refrained from providing the exact figurative meaning of the idioms. This means that the learners had to use inferential reasoning and clues from the feedback so as to do the final gap-fill exercise. The term *Etymological Elaboration*, which was defined above, emerged from the results of this research. The researchers concluded that students could more readily learn both the opaque and the transparent idioms through etymological elaboration. They advise that the elaboration be brief for the transparent idioms since the learners may be able to guess the meaning and seem engaged by trying to do so. The opaque idioms require more detailed etymological elaborations than transparent idioms. The authors concluded that *Idiomteacher*, in the absence of any explicit instructor from a teacher, works best for transparent idioms.

The rationale for using the etymological elaboration is twofold. First, etymologies are important so that the learners can develop their own mental image of the idiom’s literal meaning. The DCT (Clark & Paivio, 1991; Paivio, 1990) explanation above offers credence to the importance of having such an association. Furthermore, requiring learners to figure out the
figurative meaning based upon the etymology and the matching exercise stimulates a deeper level of thinking. This type of involvement tends to elicit retention of the meaning of the idiom, as found in previous research (Boers et al., 2007; Boers et al., 2004; Stengers et al., 2016). Although a learner’s attention is not directed to the exact form, s/he becomes engaged in higher-order thinking to pull up the meaning, which s/he can use to complete the gap-filling exercise. The fact that etymological elaboration may not elicit noticing of the correct form (Boers et al., 2009) led to a study by Stengers et al. (2016), to be reviewed in the next section, wherein the intervention aimed to address this weakness.

Boers, Eyckmans, and Stengers (2007) extended the investigation into the etymologies as conveyed through the Idiomteacher tool. In this study, Boers and colleagues wanted to ascertain whether etymological elaboration aids in the comprehension and production of idioms. This question follows directly from the previous research (Boers, 2003; Boers et al. 2004). They also aimed to discover if it helps learners to grasp the registers of usage, that is, the level of formality of the idiom. The participants were Dutch learners of English in their second year (one group) and third year (another group) of university study. Unlike in previous studies, the researchers did a follow-up experiment with a group of participants who did the same activities on paper, without the benefit of the CALL tool because the researchers wanted to know whether the non-computerized condition would affect the results. They used the Oxford Dictionary of Idioms (Speakes, 1999) as the source for the 30 target idioms which were presented through their CALL tool and in the follow-up experiment. All of these idioms had known etymologies. These were presented in sets of ten, so there were three “trials” for this experiment.

The instructional intervention for Boers et al. (2007) was similar to their 2004 study but with an additional task to address the second research question. Following the pretest, there were
three main tasks, which the participants did: (1) identify the meaning, a multiple-choice activity wherein they match the idiom with the correct figurative meaning. The correct answer appeared as feedback for those items that the participant had selected the incorrect choice. (2) Another activity was labeled as “identify the source,” which was also presented through multiple-choice items. This was the point at which they were supposed to identify the conceptual metaphor and/or historical root of the idiom, such as “ARGUMENT is WAR.” The actual etymology [metaphor] appeared as feedback. (3) Next, there was a gap-filling exercise, which the participants had to type in the correct idiom into the cloze passage. (4) Finally, there was a task where they had to identify the informal idiom from a set of four by guessing. The “experimental” group did the “identify the source” activity first. The “control” group did these activities in the order listed above. The researchers inferred that after matching the words with their etymologies and the conceptual metaphors, the learners would use this knowledge in identifying the meaning. Since there were 30 idioms, the instruction was provided in three separate trials for each group.

Results of the comprehension test for both groups appear to affirm the efficacy of teaching the etymology of the idioms before teaching the figurative meaning, which answers RQ1. The experimental group had higher scores in each of the three sets of idioms, for both the second year and third-year students. There was a statistical difference in scores for four of the six trials. In both cases, this was the first two sets of idioms for both the second year and third-year students. The results pertinent to the second research question (regarding the usage restrictions) are less promising. This was measured by the delayed production test. The control group scored higher on one of the tests although there was no statistical difference in scores. The authors conclude that learning idioms before identifying the meaning promotes the learners’ comprehension of the idioms but not their awareness of usage restrictions. As mentioned above,
numerous replications of this study have occurred using participants with different L1 backgrounds.

The results of replication studies (Bagheri & Fazel, 2010) and studies testing etymological elaboration without the CALL tool (Baleghizadeh & Bagheri, 2012; Noroozi & Salahi, 2013; Tabatabaei & Mirzaei, 2014) tend to confirm that etymologies aid the learner in comprehension. One such study used the identical CALL tool with 50 L1 Farsi students in Iran (Bagheri & Fazel, 2010). Here, as with Boers et al. (2004, 2007), the researchers wanted to ascertain the efficacy of using etymological elaboration in teaching idioms. Specifically, they aimed to find out if etymological elaboration increases students’ comprehension and retention of idioms. Even though Bagheri and Fazel used the Idiomteacher CALL tool, their method differed from Boers et al. (2004) in that the control group did not do any online activity with the etymologies. Only the experimental group matched the idiom with the etymology. The procedures were as follows: the students in the control group took a test in which they had to match the definition of an idiom with the target idiom. They were shown the correct responses later but could not change their answers. One week later, the participants took the production test, described above. The experimental group took a total of three tests, with instructive feedback as given above. First, they took a test in which they had to match the idiom with the etymology (historical background story from which it originated). Then, they took the same matching test as with the control group, matching the definition to the idiom. Finally, one week later, they took the productive test. The treatment group outperformed the control group considerably. The results of this study showed that the experimental group’s mean scores were higher than those of the control group, to a statistically significant extent on both the comprehension multiple-choice and the delayed cloze test. The mean for the comprehension test
(experimental) was 9.84. The mean for the control was 6.96. \( t = 4.14 \). For the delayed test, the mean for the experimental group was 10.72; the mean for the control was 6.48; \( t = 4.243 \). The researchers concluded that learning the etymologies facilitated the comprehension of idioms. These statistically significant results confirmed their hypothesis that learning etymologies would foster the comprehension and production of idioms.

Two of the *other* studies involving Iranian students achieved similar results to those of Boers and colleagues (Baleghizadeh & Bagheri, 2012; Noroozi & Salahi, 2013). Baleghizadeh and Bagheri’s (2012) study, which found that teaching students etymological elaboration promotes receptive understanding of idioms, was conducted with 32 Iranian students. The aim of their study was to ascertain the effects of using etymological elaboration upon students’ comprehension and retention of idioms. The participants were taught 30 English idioms, which had been selected because the results of a pretest showed that 90% of the participants did not know these idioms. All target idioms, selected from the *Oxford Dictionary of English Idioms* (Speakes, 1999), had a known etymology. During each of six class periods, students in both the control and the experimental groups were given five idioms, each embedded in a meaningful context. The participants had to write a definition of the idiom in English. The experimental group differed in that the researchers supplied the etymologies for them. The researchers found a statistical difference between the scores of the group that received the etymological elaboration and the group that did not.

Noroozi and Salahi (2013) investigated the effects of etymological elaboration on comprehension of idioms, comparing this approach to memorization. They used a variety of sources for their target idioms, including *A New Approach to Idioms* by Birjandy and Shahidy (2009), *A Dictionary of the Origins and Stories of English Idioms* by Golshan (2009), and
Preparation Course for the TOEFL by Phillips (2003). Their participants were 60 Iranian females at a university who were charged with learning 45 target idioms. Despite the use of somewhat questionable measurement, in that the pretest and posttest were not the same and may not have been equivalent, the results are encouraging. The outcome measure included 12 items for matching the idioms with their definitions and 23 for writing the translation in Farsi. The experimental group had a statistically significant improvement in scores from the pretest to the posttest. The mean for the posttest was 38.57, and the mean for the pretest was 25.24; \( t (29) = 9.39, p < .05 \). As analyzed through an independent means t-test, the difference between groups was also statistically significant. The mean for the experimental was 38.57, and the mean for the control was 27.27; \( t (58) = 6.22, p < .05 \). The researchers reported the effect size as \( r = .63 \).

Replication of this study using identical pretest and posttest measures with a different group of participants could help to confirm that etymological elaboration compares favorably with rote memorization.

**Empirical Research Grounded in DCT that Investigates the Use of Images**

**Teaching idioms with pictures.**

In addition to studies grounded in Paivio’s *DCT* that seek to ascertain the efficacy of using conceptual metaphors and etymologies, there are those that investigate the potential benefit of using images. These studies include those for which the instructor supplies the idiom (Andareb & Rouhi, 2014; Fotovatnia & Khaki 2012), but the comparison, if any, is between the use of pictures and more traditional teaching methods. They also include those studies that compare the use of pictures with etymological elaboration (Boers et al., 2009; Hagshenas & Hashemian, 2016) and those wherein the learners are required to make the pictures themselves (Chen & Lai, 2013; Freyn & Gross, 2017; Vasiljevic, 2015a). The studies by Hagshenas and
Hashemian (2016) and Tabatabaei and Mirzaei (2014) were unique in that the participants in one of the three treatment groups were exposed to both images and etymologies.

The efficacy of using pictures in instruction was confirmed in some of the research studies (Andareb & Rouhi, 2014; Fotovatnia & Khaki 2012; Freyn & Gross, 2017; Tabatabaei & Mirzaei, 2014), while in others, the use of pictures seemed to have mixed results (Boers et al., 2009; Vasiljevic, 2015a). It is noteworthy that most of those studies whose authors conclude that pictures should be used in idiom instruction did not measure production, only receptive comprehension of idioms. Andareb and Rouhi (2014) used Howard Gardner’s (1993) Multiple Intelligences as the theoretical basis of their study on the effectiveness of using pictures in Idiom instruction. The participants were 76 Iranian female university students. Students were given instruction on idioms twice a week over three months. The posttest, which was identical to the pretest, measured the students’ comprehension of 20 target idioms. A t-test was run to compare the control and experimental groups, while the differences between the three different levels of spatial intelligence, within each group, were analyzed with a one-way ANOVA. Data analysis confirmed their hypothesis. The researchers concluded that learners benefit from having pictures associated with the target idioms. This approach benefits those students whose primary “intelligence,” based on Gardner’s theory, is spatial. It is noteworthy that the outcome measure tested only recognition of idioms, not production. The length of the treatment, three months, may have contributed to the success of the intervention.

Another study with Iranian university students likewise confirmed that providing pictures associated with the idioms facilitates student’s comprehension of idioms. The researchers aimed to compare the efficacy of using pictures to other, more traditional approaches. Fotovatnia and Khaki (2012) included 68 Iranian female university students in their study. They compared three
instructional conditions. One group was exposed to the target idioms with their definition in English; a second group met the target idioms with the meaning of each translated into L1 Farsi; a third group read the target idioms, each of which were accompanied by an associated picture. The students took a pretest to measure their receptive and productive knowledge of idioms. Then they received the instruction on 20 idioms, ten of which were decomposable, as described above. Finally, there was an immediate posttest. The researchers did not reveal how long after the instruction the delayed posttest took place. The group that had the accompanying pictures out performed the other groups. Although the mean score of the picture group was higher than the other groups on both the immediate and delayed posttest, there was only a statistically significant difference for the immediate production test regarding form, meaning the precise wording of the idiom. This appears to contradict the findings of Boers et al. (2009), which suggest the pictures help students remember the meaning of the idiom, but not the exact form.

Boers, Piriz, Stengers, and Eyckman (2009) sought to find out whether pictures aided in the comprehension of idioms. They observed that teaching materials for idioms generally have pictures that show the literal and supposedly original meanings of idioms. Their investigation followed from their research questions addressing both the efficacy of using pictures and whether learning style interacts with this factor. The participants were 38 Belgian college students whose L1 was Dutch, except for those whose dual native languages were French and Dutch. They used survey data to designate groups of “high imagers” (based on self-report) and “low imagers.” They started with 100 high-frequency idioms from Collins Cobuild Dictionary of Idioms (Sinclair & Moon, 2002). Only 60 of these counted because they wanted ones with consonance and assonance; examples included “rule the roost” and “too close to call.” Thirty of the items had an associated picture, and 30 did not. The researchers were scrupulous in ensuring
the equivalence of the matched sets of idioms. Both had the same number containing Dutch cognates, both had the same number of idioms exemplifying consonance and assonance. They also included 40 filler items. Participants received an explanation of the etymology for all of the 60 idioms. The researchers decided against having an experimental and a comparison group due to the fact that the participants were enrolled in an open-access college, so their English proficiency scores were not available. Thus, the equivalence of the two groups could not have been established. Instead, all the participants were exposed to the full set of idioms, only half of which were illustrated. After exposure to the idioms, in sets of 25, the students took a multiple-choice test to measure receptive knowledge of idioms and a gap-filling test to measure their production.

Their results required a nuanced interpretation. First, the pictures did elicit comprehension of the idiom as evidenced by the multiple-choice test scores. Following Boers et al. (2008), they found the mean for the picture group to be 80%, while the mean for the non-picture group was 76%. However, on the production test, the mean score of the items that had associated pictures was lower for accuracy. For the exact production of the idiom, the means for the picture group was 71%, while the mean for the non-picture group was 75%. Participants in the picture group sometimes substituted a synonym into the idiom, such as “play second violin” instead of “play second fiddle.” As explained above, idioms have little flexibility. Even if not entirely fixed, they are “transformationally deficient” (Fernando & Flavell, 1981, p. 17). In other words, these word substitutions resulted in Non-Native Speaker-like pseudo-idioms that were judged as incorrect.
Effects of using both etymologies and pictures.

As one of the main points of DCT, Paivio (1971, 1990) argues that images leave a powerful trace in the brain that is stronger than the mental trace drawn within the mind by words, and he provides empirical support for this assertion. If the learner can associate the images with the words, it vastly increases the likelihood of memorization. What is meant by stimulus in the case of idioms is the literal meaning of the idiom, and what is meant by response is the figurative meaning. Clark and Paivio (1991) explain that the stimulus should have an associated image; having an image for the response is less important. Instructors are advised to explicitly tell students to form an image within their minds for the literal meaning of the idiom, likewise for a non-idiomatic vocabulary word, as a strategy for learning. Both studies wherein learners have been asked to create their own depiction (Chen & Lai, 2013; Freyn & Gross, 2017; Vasiljevic, 2015a) and studies wherein the image is provided (Andareb & Rouhi, 2014; Aydin, 2017; Boers et al., 2009; Fotovatnia & Khaki 2012; Hagshenas & Hashemian, 2016; Tabatabaei & Mirzaei, 2014) have used Paivio’s (1971, 1990; Clark & Paivio, 1991) DCT and its practical implications as the rationale for their research method. Studies by Hagshenas and Hashemian (2016), Vasiljevic (2015a), and Tabatabaei and Mirzaei (2014) include among their research questions an investigation of the effectiveness of using both pictures and etymologies. An earlier study by Vasiljevic will be discussed in detail under the section on Learner-Generated Images.

Hagshenas and Hashemian (2016) study investigated the effects of three interventions, a comparison between pictorial representation, etymological representation, both types of representation, and a control group. Their participants were 80 Iranian female students between the ages of 16 and 24. The source of idioms was the Collins Cobuild Dictionary of Idioms (Sinclair & Moon, 2002). The researchers carefully chose the target idioms by frequency but
culled them after a pretest that they administered to ascertain any idioms that the participants already knew. This process led to the selection of 20 target idioms. The procedure was as follows: all four groups received the definition of the idiom and examples. The three treatment groups had additional input in the form of viewing the associated pictures (Group 1), reading the associated etymologies (Group 2), or both (Group 3). Results showed a statistical difference between all the experimental treatments and the control. The mean score for the control group, which had neither pictures nor etymologies, was 11.6. The mean score for the etymological treatment was 16.75. The mean score for the associated picture treatment was 17.95, and the mean score for both types of intervention was 23.4. These results lend strong support for the efficacy of using pictures and etymologies. The most effective treatment appears to be a combination of both.

While Vasiljevic (2015a) did not include any investigation into the effects of using a combination of both pictures and etymologies, she did compare whether using etymologies or the learners’ self-generated images would more successfully elicit both productive and receptive knowledge of idioms. Vasiljevic’s participants were 34 L1 Japanese learners of English whose proficiency was lower intermediate. They were not divided into experimental and comparison groups. Since there was no comparison group, the design was split halves. This means that the students were presented with half of the target items under the first condition (pictorial) and the other half of the idioms under the second condition (etymological). A total of 30 target idioms were taught, with five in each of the six instructional sessions. The instructional sequence began the same for both conditions; the instructor explained the meaning of each idiom, by speaking in L1 and/or L2. Next, the picture group did the matching of the idiom to the definition, which was followed the learners generating their own illustrations of the literal meanings and writing a
phrase beneath. Finally, they took the posttest, receptive and productive. The etymological group learned the etymologies before matching the idioms with their definitions. Thereafter, the students took the posttest. The posttest for receptive knowledge of idioms revealed that the etymological elaboration was more effective, in that the mean number of phrases recalled for the etymological group was 62, compared to 58.7 for the group that generated their own pictures. The difference between groups did not reach the level of statistical significance. (t (33) = -1.76, p < 0.08). The posttest for productive knowledge of idioms told a different story. The mean score for the pictorial group (50.6%) was higher than the etymological group (40%) on the immediate posttest for production. Comparing the consequences of two instructional interventions on production, the statistically significant results were [t (33) - 13.53, p < .0001]. Such results contradict the findings of Boers et al. (2009), whose research suggests that pictures benefit receptive knowledge of idioms but not precise and accurate production.

The validity of Vasiljevic’s results could possibly be questionable due to the fact that the picture group and the etymology group used different idioms instead of the same idioms under two different conditions. Vasiljevic shrewdly avoided having two small groups, which would have obtained if she had divided the participants since that would have lessened the validity of the statistical analysis. She employed a systemic approach by checking the Vocabulary Profiler online interface (University of Hong Kong, 2001) for word frequency to ensure that most of the constituent words that comprised the target idioms were high frequency. Vasiljevic’s (2015a) analysis revealed that “phrase constituents in both conditions were mostly high-frequency words. In the pictorial support condition, 94% of words came from the 2,000-word high frequency band, whilst five words were classified as low frequency items. For the phrases taught through etymology, 87% of the constituent words belonged to the first 2,000-word frequency range, and
nine words were classified as off-list items” (p. 28). The researcher did not explain why she chose to focus upon the frequency of the constituent words but not upon the frequency of the idioms, as whole phrases. Future researchers could partially replicate this study, first by using idioms that frequently occur in a reference corpus as whole phrasal units. If they proceeded to use two different groups of learners and the same set of idioms for both instructional interventions, the results might confirm her research or lead to new areas of inquiry.

**Teaching idioms via learner-generated images.**

The studies in this section are unique in several ways. First of all, Chen and Lai (2013) investigated L2 writing. Their choice of genre was narrative, a genre of writing used less often in academic prose than other genres that appear more often in L2 writing research (Zhu, 2001), such as argumentative. Knowledge of the usage restrictions for idioms may have informed this choice. The evidence from the corpora that this type of phraseology is rare in academic writing (Karlsson, 2013; Moon, 1997) may have influenced Chen and Lai (2013) to select narrative. A study by Vasiljevic (2015a), reviewed in detail in the previous section, was preceded by another study by the same researcher, which focused on the relative effectiveness of using instructor-supplied images versus Learner-Generated Images to illustrate the original and literal meanings of the target idioms (Vasiljevic, 2012). Finally, Freyn and Gross (2017) investigated using cutting edge instructional approaches, which included having the students create collages to represent the idiom’s meaning, write dialogues that used two of the target idioms, and even film themselves enacting their dialogue.

Some research studies rationalize the use of pictures in idioms instruction because the meaning of an image is more salient to a language learner than the associated phrase in L2 (Al Mohizea, 2017; Tabatabaei & Mirzaei, 2014). Not only language but also culture can interfere
with decoding an idiom’s meaning. The difficulty of making English idioms comprehensible to students whose first language and culture differ vastly from English has been discussed widely in the literature (Boers, 2003; Kong, 2014; Lontas, 2015; Prodromou, 2003; Yagiz & Izadpanah, 2013). Chen and Lai (2013) acknowledge the fact that cultural differences between their Taiwanese participants and Americans could inhibit comprehension of English language idioms. Their qualitative study explores ways to bridge the culture gap that makes idioms in English difficult for L1 Chinese students to comprehend and use in their writing. The participants in this study were nineteen students in Taiwan who were not English majors but had high intermediate proficiency and were enrolled in an English writing course. The source for the idioms was Cheng (2000) Chinese Equivalents to English Idioms. The researchers used the metaphor of ANGER IS FIRE and related epistemic mappings of slow burning fires that suddenly flare up and cause danger. They taught metaphors that liken human behavior to such fires, as some people can suddenly become violently angry after having had a mild resentment (or harboring an offense) for a long time. Prior to the treatment, one of the researchers, who was the instructor, assigned students to write a short essay about an experience that made them angry. Then, the instructor read a passage on the theme of anger that contained many of the target idioms. After a class discussion, students drew images of the idioms relevant to the conceptual metaphor. A set of keywords (explode, heat, fire) emerged from the group process. Finally, the students wrote the final draft of their narrative essay, incorporating as many of the idioms as would be appropriate to convey their ideas. Researchers, who did not reveal their coding scheme, evaluated the results. According to their evaluation, the final draft essays had some mixed metaphors. Students did not use the metaphoric mapping of “anger is a hot fluid in a container” very effectively. This may be L1 transfer because in Chinese cultures, the secondary metaphor is not ANGER IS HOT
LIQUID in a CONTAINER, but rather ANGER IS HOT STEAM IN A CONTAINER. The primary conceptual metaphor, EMOTIONS ARE FLUIDS IN A CONTAINER, is alleged to exist in cultures whose L1s are Hungarian, Japanese, or English although this differs from the Chinese conceptualization of anger as trapped steam (Kövecses, 1995). Consistent with Lakoff and Johnson (1980), the secondary metaphor was more culturally specific, which interfered with correct production in an authentic task.

The efficacy of using hypertext, including both images and definitions that pop-up, was investigated by Tabatabaei and Mirzaei (2014). Their participants were 60 Iranian university students who had been selected from among a larger group according to their scores on the Nelson test, which had to be within one standard deviation of the average score. Participants had taken this placement test to ensure that their proficiency was mostly equivalent. The idioms were selected from Pocket English Idioms (2007). The researchers designed an experiment having four groups. There were three treatment groups, each of which had hypertext links for the idioms. Specifically, the first group had a hyperlink on the idioms; a click on the idioms would pull up words-only definitions. Then, there was a group that had hyperlinks that provided them with a picture of literal meaning for all the idioms. Finally, there was a group whose hyperlinks pulled up both a written definition and a picture. The control had neither links nor any other type of instruction. The instructional sequence was as follows. Students had to read passages that contained the image online. The participants read the first set of three passages on their computers during a single session. The glosses were provided for the experimental groups. Four days later, the students read three different written passages that contained the same idioms. This time they read them on paper with no hyperlinks. Finally, they took a posttest, which had a reliability score and had been validated. Regarding data analysis, they used both a t-test and
ANOVA. One-way ANOVA was used for a comparison of the mean scores between four groups: three treatment and one control. The t-test was used to compare the experimental groups (lumped together) with the control group. The results suggest the superiority of using hyperlink “glosses” that provide both a picture and definitions. Even though the hyperlink plus picture group had the highest mean posttest score, there was no statistical difference between the three treatment groups. All the hypertext (experimental) groups outperformed the control group to a statistically significant extent.

While the focus of Vasiljevic’s (2015a) study was on comparing etymological elaboration with the use of pictures, in a previous study, Vasiljevic (2012) focused upon comparing the efficacy of using pre-made pictures with having the learners create their own. The participants in this research were 53 freshman university students in Japan. All were L1 Japanese, had scored between 430 and 545 on TOEIC, and were non-English majors. The researchers selected 30 idioms based upon frequency, as established through the Vocabulary Profiler online tool. The images for half of the idioms were taken from Collins Cobuild Idioms Workbook (Goodale, 1999). After exposure to the idiom, both groups had to match the idiom with its definition, written in Japanese. This came after drawing the image of each idiom by themselves, without the help of online tools. The results of this study, which also surveyed the cognitive styles of the learners, were as follows. For production, the mean for the self-generated pictures was 12.26, while the mean for the teacher-provided picture was 8.56, \( t(52) = -10.293 \), \( p < .05 \). Even though the difference between groups is less striking for receptive knowledge of idioms, the difference is statistically significant. These findings suggest that the process of creating self-generated pictures elicited both greater improvements in comprehension and
productive knowledge of idioms than learning idioms through a relatively more passive approach.

**Teaching idioms through traditional attention-raising techniques.**

In some cases, direct approaches to instruction, wherein the instructor presents the content with explanation, and the learners do practice activities with pencil, paper, text, can be effective in conveying content or skills. Several research studies investigated the effects of using time-honored ways, such as emboldening text, of acquiring vocabulary, phrasal, or otherwise. Most of the literature explores the “traditional” approaches, often not clearly defined, with the use of etymological elaboration (Razmjoo et al., 2016; Stengers et al., 2016), pictures (Tabatabaei & Mirzaei, 2014), or other approaches (Li, 2019; Samani & Hashemi, 2012; Shirazi & Talebinezhad, 2013). Among the few exceptions is the following study by Pam and Karimi (2016) that investigated the effects of textual enhancement, meaning highlighting or emboldening the text. Razmjoo et al. (2016) sought to compare the relative effectiveness of text enhancement and etymological elaboration on learning idioms. Although the researchers did not specifically explain what is meant by traditional methods, Samani and Hashemi (2012) compared the teaching of idioms through using conceptual metaphors to providing instruction through traditional methods. In a recent study, Alshaikhi (2018) compared the effects of textual enhancement on the comprehension of both non-idiomatic multi-word expressions (MWEs), which he referred to as collocations, and idioms. The *Textual Enhancement* (TE) that was used included highlighting, bold-face, and italics. Alshaikhi’s twenty-six participants were Arabic speaking adults, all of whom were associated with a university. They read excerpts of 20 magazine articles. For the experimental group, the text had been enhanced. For the control group,
the text was unmodified. His results indicate that TE is effective for L2 learners in facilitating their comprehension of VP idioms but not for collocations.

Li’s (2019) investigation compared the effects of teaching VP idioms through textbook instruction delivered face-to-face with having students learn idioms via the WeChat (2013) mobile application. His dissertation research also investigated the students’ attitudes toward using this mobile application to learn English language idioms. Data sources were pretest-posttest, an attitudinal survey and semi-structured interviews. The participants in Li’s (2019) research were 55 English majors who were studying English at a university in China. Both the control group (N = 30) and the experimental group (N = 25) were taught by the same instructor and learned the same idioms. Under the researcher’s guidance, the instructor taught the control group students traditionally, using both direct instruction with the textbook and small group collaboration, face-to-face. For the experimental group, the instructor introduced the target idioms in a whole group classroom setting. After that, students in the experimental group engaged in learning activities students remotely, in small groups, using the WeChat app. Both groups collaboratively write a dialogue containing idioms and performed it, in the classroom (for the control group) or online via the WeChat app (for the experimental group). The pretest-posttest instrument was the VP Idiom Learning Achievement Test designed by Li, who established equivalence between the groups prior to the eight-week treatment by giving a pretest, the results of which revealed no significant difference between groups. Conversely, the post-test results showed a statistical difference between groups in knowledge of idioms. The mean for the experimental group = 18.92, with SD = 4.39. The mean for the control group = 14.67, with SD = 2.93. Results, analyzed through SPSS, revealed that the $p$-value ($<$ .0001) was smaller than the alpha level set by the researcher, which was .05. Survey results and interview data reveal an
increase in motivation to learn idioms and positive attitudes toward the use of the WeChat mobile app for this purpose.

Stengers et al. (2016), informed by previous research by Boers and his colleagues (2004, 2007, 2009), suggests that when L2 learners infer the meaning of idioms based upon the conceptual metaphor, the students gain receptive knowledge (i.e., comprehension) but are not able to produce them precisely in writing. Having identified this gap, Stengers et al. investigated the efficacy of having students manually copy each of the idioms as a means to remember their correct form. The study by Stengers et al. (2016), for which they selected 25 idioms and conducted an instructional intervention, will be explained in greater detail below.

Samani and Hashemi (2012) investigated the efficacy of using conceptual metaphors to teach idioms and compared this approach with having students memorize the target idioms and definitions. For example, they used ANGER is HEAT as a conceptual metaphor and grouped idioms that are relevant to this together for a thematic grouping. Their participants were 71 Iranian adults who were enrolled in a course at Islamic Azad University of Khorasgan and Shahrekord at the junior level. The instruction lasted across the course of a semester, for 90 minutes per week. The treatment group was exposed to a metaphor during each session and the specific idioms that align with it. Then the class discussed the idioms. After each session, the participants were required to write a paragraph using some of the new idioms. Students in the control group were guided to memorize the idioms, using any strategies that they knew. There was a statistically significant effect for the treatment as compared to the control group. The results confirmed their hypothesis in that difference in mean scores between the pretest and posttest for the students in Group 1 (the experimental condition) revealed a statistically significant difference ($t = -20.822, df = 39, \alpha = 0.05, p = 0.00$). The within group change in mean
scores from pretest to posttest for the treatment group suggests that the conceptual metaphor approach was effective.

In their 2016 study, Pam and Karimi investigated the effects of using *Input Enhancement* (Sharwood-Smith, 1993). Input enhancement can take many forms, but in all cases, the instructor or material designer makes the input, meaning the target words or phrases, more salient; therefore, uptake is more likely to occur. They explained how Sharwood-Smith had divided salience into *External Salience*, which is under the control of the instructor and relates to methods and modification of materials. The other is *Internal Salience*, which has to do with learner motivation, L1 cross-linguistic influence, and other factors. In other words, internal salience resides within the learner. Their study focuses on the former, using 40 participants from Iran. It included a true control group, as only the 20 students in the treatment group received any type of instruction on idioms; the control group was simply told to memorize them. The treatment group received input enhancement in the form of idioms the researchers had emboldened within the text. The source of the idioms was Huizinga and Huizinga (2005) *Can you Believe it?* The instrumentation was institutionalized, having its reliability established by the measurement company. Results showed a significant main effect for treatment, which would suggest that the input enhancement was effective [$F (1, 37) = 51.192, p = 0.000, p < 0.001, \text{Eta} = 0.580]$.

Other studies have contrasted the efficacy of using traditional ways to make students notice the input with another type of instruction. One such study is by Razmjoo et al., (2016), who sought to find out the best way to teach idioms through comparing text enhancement with etymological elaboration. The theoretical bases from which they worked were both Paivio’s (1990) *DCT* and *Levels of Processing Theory* (Craik & Lockhart, 1972). The target idioms were
selected based upon frequency, following the advice of three idiom dictionaries, including the *Oxford Dictionary of English Idioms* (Speakes, 1999). Then, they were double-checked for frequency by searching in the COCA (Davies, 2008). The participants were given an hour of instruction. These participants, 60 Iranian adults, were divided into three groups. Each group read the same text, which contained the 16 target idioms. One group also had a PowerPoint that elucidated the etymologies. One group had bold-faced and red print for the idioms. The control group had the text containing the idioms only with no markup or PowerPoint. ANOVA was used for data analysis due to the varying data collection times, pretest, posttest, and delayed posttest. The highest posttest and delayed posttest scores were for the etymological elaboration, which had been conveyed via ppt. The text highlighted group also showed improvement, but not to the same extent. The delayed posttest results were noticeably different for the three groups. The mean score for the control group was no higher than their pretest.

The team of researchers who collaborated in investigating idioms through Boers’ *Idiomteacher* (2003) CALL tool aimed to find out whether adding a manual copying task to the sequence of instruction guided by *Idiomteacher* would help the learners to remember the idioms’ correct form. Previous research had shown that even though etymological elaboration helped students to comprehend the meaning of the idiom, it did not necessarily lead to correct production (Boers et al., 2004, 2007, 2009). Stengers and colleagues (2016) aimed to address this need by having students copy the idioms as a mnemonic aid. All 42 participants were L1 Dutch university students who had scored B1 on the Common European Framework of Reference (CEFR). There were 25 idioms, selected from *Collins Cobuild Dictionary of Idioms* (Moon, 2002). The intervention involved two groups. The comparison group did the matching exercise with the etymology, followed by a multiple-choice to associate the target idiom with its meaning,
and finally, the gap-filling exercise wherein useful context was provided. They were told to “contemplate the idiom’s usefulness.” The experimental group completed these activities, but its participants were required to copy each of the idioms, using pencil and paper, to remember the precise wording.

Despite the usefulness of the learning activities, the results showed no significant difference between groups, suggesting that copying the idiom does not sufficiently elicit learner awareness of its form. The researchers referred to Transfer Appropriate Processing Theory (TAP) to explain this. This theory posits that “the nature of a learning experience will determine the nature of the resulting knowledge representation. TAP accounts for practice-test congruency effects. If processes engaged at the time of learning are the same as those called upon in a memory test, then this will increase participants’ test performance” (Morris, Bransford, & Franks, 1977, as cited in Stengers et al., 2016, p. 296). The delayed posttest, which the researchers administered, required students to type the appropriate idiom into the cloze passage. This activity may have been too dissimilar from manually copying the idioms. The researchers concluded that students need both semantic elaboration and attention to the form of the idiom.

**Research-Based Recommendations for Teaching Idioms**

No consensus currently exists as to how best to teach idioms and to what extent they should be emphasized. Survey data suggest that the learners themselves are keen to learn them and recognize their value (Al-Khawaldeh, Jaradat, Al-Momani, & Bani-Khair, 2016; Chuong, 2013; Khan & Daskin, 2014; Liontas, 2002, 2003; Tadayyon, 2014) but feel that the teaching materials do not address learners’ communicative needs (Bouherar, 2017; Liontas, 2002). Liontas (2002) reports on survey data that reveals students’ frustration with learning idioms from books in which the dialogues containing the key idioms are inauthentic and non-native speaker-
like. For example, Liontas (2008) explains that in a textbook, the sample dialogues for learners of German and learners of English may contain several different idioms within the same conversation, which is rare in native speaker speech. Research into the pedagogy of teaching idioms echoes Liontas’ concern about the inadequacy of teaching materials or the absence of any reference to idioms in pedagogical material (Irujo, 1986; Khan & Daskin, 2014; Liontas, 2008, 2015). Instructors who intend to teach idioms but lack pre-made materials featuring them (or reject the given materials as inadequate) may create materials based upon their own intuitions of learners’ needs. However, they do not necessarily intuit what is conducive to learning idioms when designing their own teaching materials. Khan and Daskin found that trainee-ESL teachers who were L1 Turkish tended not to include idioms in the materials that they designed. In some cases, idioms were included, but the implementation of the text in the classroom did not include any role-plays or practice activities that would elicit authentic production. Other studies have reported a lack of cultural awareness in the instructor, who may not be a native speaker or an NNS fully fluent by Sinclair’s definition (Kong, 2014; Prodromou, 2003; Shirazi & Talebinezhad, 2013).

Liontas (2002, 2008, 2015) advised how to teach idioms, so as to develop idiomatic competence. The studies below, which have the stated or implied goal of developing idiomatic competence, can be seen through the lens of his pedagogical recommendations. Whether enrolled in a formal educational institution or not, learners must pass through the process of idiomatization in order to acquire this competency. Liontas stated that an individual progressing from a novice to an expert user of idioms goes through the following stages. (1) \textit{Declarative} – The learner has receptive knowledge; s/he can identify an idiom and mostly knows what it means. (2) \textit{Associative Stage} - In addition to declarative knowledge, the learner can control
his/her use partly. (3) Autonomous Stage – The learner can call to mind and produce the idiom when and where it fits within a communicative interaction. Instruction facilitates this process of idiomatization and acculturation. It is essential to plan and provide appropriate practice activities to enable the learner to advance from the declarative to the associative stages and beyond. First, structured presentation of idioms is needed, but the instructor should recognize learner interests. Next, teachers should be aware of the proficiency level and appropriateness of materials and have both “consciousness raising” activities and practice. Long (1991) Interaction Hypothesis emphasizes that language is best learned through communicative events. In other words, the students make greater learning gains from attempting to use the L2 for communication than through rote activities. The syntactic structure of the language must be learned, but the instructor should mostly give mini-grammar (and vocabulary) lessons to students as the need for them arises, within the course of having a conversation. This approach to grammar, called Focus on Form, makes students aware of the target lexicogramatical structure, in this case, idioms, and how the idioms function within it. Having authentic conversations interspersed with mini-grammar lessons enables the students to test and confirm or revise their own hypotheses regarding how fluent speakers use the idiom. Liontas advises that practice should include some pushed production and authentic dialogue. Finally, regarding feedback, the instructor must observe and provide both positive reinforcement and corrective feedback as needed. Learners may benefit from the metalinguistic information that accompanies indirect feedback (Liontas, 2015). Instructors must not allow students to remain passive but should instead try to push students to produce idioms in a natural way that is both accurate and appropriate, and that serves distinct discursive functions.
Further pedagogical advice from Lontas (2008, 2015) research includes his assertion that idiomatic competence will grow in a soil of shrewdly selected learning activities and student empowerment, an environment that takes into consideration the students’ interests and delegates to them some control over the process of assessment. At the same time, Lontas (2015, 2017b) insists that idioms’ instruction must be systematic and thorough. In selecting material, the instructor or curriculum coordinator should select material that will challenge the learners’ intellectual maturity without overwhelming them. In other words, s/he must thoughtfully consider not only students’ L2 proficiency level but also their previous exposure to idioms in the target language. Following Long (1991), Lontas claims that pushed output is essential for learning L2 vocabulary, particularly idioms. The instructor must employ learning activities both for practice (acquiring the correct form) and for fluency (practicing the correct form). By using specific approaches recommended by Lontas (2008, 2015, 2017b), the instructor can gradually elicit from students the production of idioms for authentic purposes. Further details on Lontas’ pedagogical advice, as it applies to the current research, will be offered in the discussion section.

**Effective strategies for teaching idioms to L2 learners.**

The following studies use a multi-modal approach, following many of the recommendations for instruction given by Lontas (2008, 2015, 2017b) above. In Shirazi and Talebinezhad (2013), the participants received direct instruction in the idioms, followed by discussion, analysis, and role-plays. Freyn and Gross (2017) used cutting edge instructional approaches, which included having the students create digital collages and write their own dialogues using the target idioms. Their instructional intervention follows many of the recommendations of Lontas (2008, 2015), such as presenting idioms via authentic materials, inclusion of role-plays, and having the learners generate their own images, namely collages, by
using digital tools. Unfortunately, few studies that include innovative and multi-modal approaches appear in the available research to date, to the best of the researcher’s knowledge. This may provide an opportunity for replication or amplification of Freyn and Gross’ exemplary intervention. The current research aims to address this gap.

The goal of the instructional intervention in the research conducted by Shirazi and Talebinezhad (2013) had as its goal the learners’ development of Conceptual Fluency, which has been explained above. The researchers explain that Danesi’s (1995) Conceptual Fluency Theory rests on the assumption that “underlying any given linguistic system is a conceptual system which operates as the source not only for language, but also for cognitive functioning in general: it is in terms of our conceptual system that we speak, think, perceive, and interpret the world. Therefore, to acquire another language, L2 learners ought to express themselves in the target language (TL) while applying the L2 conceptual system in a truly native-like situation” (p. 136). As in Liontas’ VP Idioms-based theory, intimate awareness of the L2 culture is one of the prerequisites to full, native-like proficiency. The instructor may help to elicit such awareness through teaching idioms, within the proper context, and using authentic materials since idioms are a distillation of much cultural information.

Following Liontas’ (2002, 2015) advice, Shirazi and Talebinezhad (2013) selected four topics based upon the students’ interests. The sixteen target idioms were categorized according to these topics although the article does not inform the reader what these topics were. Before having any instruction in the specific idioms, the instructors guided the students in a discussion of the topic. After the instruction on the idioms and role-plays, they discussed the topic again. The instructional sequence began with (1) direct instruction in the idiom to convey its meaning. This was followed by (2) analysis of its form. After hearing examples of how idioms are used from
the instructor, students worked with partners to (3) generate sample sentences containing the target idioms, followed by a dialogue. The students then had to (4) perform their dialogue for others, followed by an oral explanation of their idiom use. In the last session, they had to (5) discuss (again) the topic, and their voices were recorded. This sequence was repeated for each of the other topics. The results showed a statistically significant difference between the pretest and posttest scores for all four topics. This study would have been stronger if more of the qualitative data, such as the contents of the role-plays, had been reported.

Students in Freyn and Gross’ (2017) study actively learned idioms while working with other students in groups in order to create their own digital collages and dialogues. The researchers aimed to ascertain whether a multimodal approach to teaching idioms, as advocated in previous research (Cakir, 2011; Liontas, 2008, 2015), would be more effective than traditional instruction in these formulae. The participants were 81 Ecuadorian students, between 18 and 21, whose native language was Spanish. The source of the twenty target idioms was *Speak English Like an American* (Gillett, 2004). Each of the students participated from one of four intact classrooms, two each for experimental and control. The instructional intervention began with simple direct instruction for both groups; students were given the list of 20 target idioms with definitions and examples. The control group was told to memorize them. The experimental group began a series of interactive tasks, beginning in the role of an observer, as they watched YouTube videos that featured the idioms and read comic strips where these idioms appeared. Then, the students were guided to apply this knowledge, using 21st century tools to create their own illustrations of the idioms. Working in partners, each team of students created a digital collage to represent one of the target idioms. These collages were shared with the classmates in the same section. Finally, each team selected two idioms, which they used within a learner-
generated role-play. This required them to write, collaborate, and learn how to make a digital film. Previous research suggests that “by constructing the role-plays as digital videos, the students must combine a variety of traditional and new literacies to create their multimodal project. The students also engaged in higher-order thinking (e.g., critical, reflective, creative thinking) to understand, synthesize, evaluate, and make use of the information to create the digital video role-play content” (Sadik, 2008, as cited in Freyn & Gross, 2017). These activities elicited not only learner engagement with the task but also synthesis of what they had learned about the idioms and online media production. The control group had to learn the same idioms without the benefit of authentic materials, such as TV clips, or an opportunity to generate their own collages and original dialogues. The pre-test and post-test measures were a test of recognition of idioms. Results showed a significant difference between the control and the experimental groups on the outcome measure \( t = -6.97, p = .00 \). The Control group had thirty-seven participants and the following mean score \( n = 37, M = 13.30, SD = 3.83 \). The Experimental group had forty-four participants, with a higher mean. \( n = 44, M = 18.39, SD = 2.46 \). Data analysis revealed the difference to be statistically significant, providing strong support for the effectiveness of the treatment. A large effect size \( d = 1.58 \) was also reported. A replication of this study could include a survey and other qualitative data to measure the level of learner engagement with this task. The design of this study and some aspects of the instructional intervention could serve as a model for 21st century instruction in idioms. Freyn and Gross’ (2017) study exemplifies a multi-media approach to teaching idioms in which students actively produce their own associated images after having been exposed to authentic You-tube dialogues. Future researchers could expand and modify the instructional intervention pioneered by these researchers to explore the effects of such an intervention.
Summary of the Literature Review

In sum, the extant literature pertinent to the proposed research on idioms has provided background into what has been conducted in this field. There has been ample research using both L1 and L2 English participants in the process of acquiring idioms. Subsequently, numerous theories have been generated (Bobrow & Bell, 1973; Cacciare & Tabossi, 1988; Gibbs, 1980; Swinney & Cutler, 1979; Titone & Connine, 1999). Additionally, researchers have investigated the effects of various pedagogical interventions, including the use of conceptual metaphors (Razmjoo et al., 2016; Samani & Hashemi, 2012), associated visual images (Andareb & Rouhi, 2014; Aydin, 2017; Fotovatnia & Khaki, 2012; Hagshenas & Hashemian, 2016; Tabatabaei & Mirzaei, 2014), self-generated images (Chen & Lai, 2013; Vasiljevic, 2012), authentic contexts (Freyn & Gross, 2017, Khonbi & Sadeghi, 2017; Rohani et al., 2012; Tran, 2013; Wong & Looi, 2010) and input enhancement strategies (Alshaikhi, 2018; Pam & Karimi, 2016; Stengers et al., 2016) to ascertain what works the best in teaching these phrases to students. As a result of such studies, researchers and educators have articulated strategies for effective teaching of idioms to L2 learners. The dissertation research described herein builds upon the pedagogical implications of previous studies, particularly Lontas (2015, 2017b) and Vasiljevic (2015b), in teaching Vivid Phrasal Idioms to L2 English learners.
Chapter III: Methodology

While the importance of idioms to full native-like proficiency has been established (Liontas, 2002, 2008, 2015; Prodromou, 2003; Shirazi & Talebinezhad, 2013), there as yet exists no consensus on how to teach these phrases. After reflecting upon the approaches described above, the researcher selected two instructional interventions and implemented them with an intact class of advanced EAP students. The first intervention aimed to elicit the participants’ creativity and association of a mental image with one of the target VP Idioms by having them make a digital representation of the idiom’s literal meaning. The second intervention employed audio-visual materials through which the participants could hear the idioms spoken in authentic contexts. The second intervention followed the pedagogical guidelines outlined in Liontas (2008, 2015, 2017a) and Cakir (2011) by using authentic materials to teach English idioms. The researcher also elicited (1) production in the form of dialogues, as recommended by experts and practitioners (Cakir, 2011; Khonbi & Sadeghi, 2017; Liontas, 2015; Shirazi & Talebinezhad, 2013) and (2) Learner-Generated Images, as recommended by Liontas (2017a) and Vasiljevic (2012). Adapting some of the approaches used by Freyn and Gross (2017), the researcher developed an instructional intervention wherein a single group passed through three interventions: (1) the control, wherein only the instructional website was used, (2) the Learner-Generated Images condition, wherein students produced their own depiction using the Paint program, (3) and the Authentic Contexts condition, wherein the students were exposed to VP Idioms as they occurred in YouTube videos. These alternative approaches to the status quo address a perceived gap in the effectiveness of how idioms are currently being taught. Previous
research suggests that students encounter, within material presented during instruction, idioms that are used in an unnatural way, remote from how a native speaker would use them (Liontas, 2002, 2008, 2017a). The availability of computers within the classroom make it possible to implement a study wherein the input is authentic, and the learners are pushed to produce dialogues containing the target formulae. The digital learning environment additionally made it possible for learners to use an instructional website, designed by the researcher, which provided student learning materials and an organizing framework for the instructional intervention even though the instruction took place in a face to face setting. Details regarding the sequence of instruction for the intervention and the website(s) itself are described below. In a nutshell, this study aimed to ascertain the effects of two interventions, Learner-Generated Images and Authentic Contexts, and discover how these approaches compare with having the participants learn the idioms through the website only.

**Research Design**

The study included a single group of eleven learners, who participated in research activities, beginning with a pre-test, once a week for seven weeks. Due to limitations imposed by the research site, the researcher collected data from only one in-tact *Academic Vocabulary 5-6* classroom. Therefore, the researcher guided the same students through all three conditions, one of which was the control. After the pre-test had been completed, the process began with the introduction to the learner website, including the rationale and the first three target idioms “cross the Rubicon,” “put the cart before the horse,” and “bite the bullet.” Then students wrote a short dialogue using one of these target VP Idioms. On the due date, these VP Idioms disappeared from the learner website and the second three became available. For the second condition, the students had access to the relevant pages of the website and the visiting instructor/researcher.
This was augmented by a hands-on learning experience that endeavoured to elicit a deeper understanding of the idiom’s meaning. The researcher demonstrated how to create an image with Paint; the website provided YouTube links for how to use Paint and a rubric to guide them to successful task completion. Students worked individually to generate their own visual representation of one of the following: “have a silver lining,” “pass with flying colors,” or “once in a blue moon.” This approach is supported by Paivio’s (1990) Dual Coding Model, which posits that a deeper level of cognitive processing occurs when the learner simultaneously employs two channels of encoding information. Through completing this task, students may have unknowingly employed the Referential Level of Processing, that is, if the idiom is coded into the learner’s brain through both image and verbal form, it increases the likelihood that s/he will comprehend it and retain its meaning (Paivio, 1990).

Part three of the instructional intervention took two full class periods. The target idioms became available along with background information and links for the audio-visual material after each student had submitted his/her dialogue based on the previous set of three idioms. This researcher, aided by the website, guided the students through hearing and seeing idioms in two authentic contexts, reading scripts of these oral presentations, and discussing the meanings. “Test(ing) the waters,” and “the lion’s share” were taught in this way. One YouTube video was “A Message from the Future with Alexandria Ocasio-Cortez” (Klein, Lewis, Ocasio-Cortez, & Crabapple, 2019), and the other was a campaign speech by Oprah Winfrey in support of Stacey Abrams (CNN, 2018); both will be described in greater detail below. Students viewed the short clip for “Taking the bull by the horns” independently. As with the control and Learner-Generated Images conditions, the students worked in pairs or singly to write a dialogue containing one the target idioms presented during part three of the instructional intervention. Three objective post-
tests were administered, each of which contained only the items taught under one condition (see Appendix B).

The intervention began with the pre-test on May 30, 2019, which was followed by five, 1-hour and 15-minute class periods for instruction. The pre-test, post-test, and control conditions took one class period each. The cooperating instructor graciously assented to allow the researcher to continue both the Learner-Generated Images and Authentic Contexts conditions beyond the confines of one class. The qualitative data included the learner-generated dialogues and the sample illustrations. The former was intended to reveal the extent to which the learners were able to produce the idioms in a naturalistic way. The latter was an artifact of the process for the first experimental condition. The pre-test and all three mini-post-tests were taken under controlled conditions and with the researcher present.

The required curriculum for EAP students at the research site does not emphasize idioms. However, there is an elective course at Level Three, *Idioms and Slang Three*, in which high frequency, informal idioms are taught (J. Harvey, personal communication, November 27, 2018). This researcher aimed to avoid duplicating the high-frequency idioms that were specifically taught in the elective course, which participants may/may not have taken. At the time of data collection, the participants were enrolled in an advanced vocabulary course, which used *Essential Academic Vocabulary* (Cengage, 2018) as the textbook. This book draws the key vocabulary from Coxhead (2000) *Academic Word List* (AWL) and provides learners with academic texts and activities that highlight vocabulary in context, from comprehension exercises and corpus extensions, to applications such as role-plays (Cengage, 2018). The materials that were used to teach VP Idioms in lieu of textbooks will be described next.
Materials Description

As explained above, participants investigated the target VP Idioms, most of which were verb phrases, with the exception of “once in a blue moon” and “the lion’s share.” The following idioms were presented: “take the bull by the horns,” “put the cart before the horse,” “bite the bullet,” “have a silver lining,” “test(ing) the waters,” “cross the Rubicon,” “once in a blue moon,” “pass with flying colors,” and “the lion’s share.” These idioms were selected based upon three criteria: (1) frequency in the Corpus of Contemporary American English (COCA: Davies, 2008) and The TV Corpus (TV: Davies, 2019); (2) imageability, as described above; and (3) academic appropriateness. For the latter criteria, idioms were compared to a list of idioms that have been identified as more academic or have appeared in previous versions Test of English as a Foreign Language (TOEFL: ETS, 2018). One of the idioms thus selected appeared only six times in the TV corpus, “cross the Rubicon,” and three of the entries were from the identical episode of “American Idol” wherein the contestant was singing a song that repeats this VP Idiom in the refrain of the lyrics. Another one, “testing the waters,” had low frequency. These idioms are frequent, however, in presentational speech, as verified by their presence in the COCA (Davies, 2008). A search of the COCA revealed that these phrases frequently occurred in the media, such as TV News broadcasts, magazine articles, newspaper articles, and editorials. In order to convey the meaning of the idioms to the participants, the researcher used an instructional website, which she designed for the purpose of the research. All student materials were accessible via the website https://idioms.sitey.me/.

Instructional website description.

The “Understanding and Using Vivid Phrasal Idioms” instructional website guided students through eleven pages that provide both information on how to complete the tasks and
the background information. Three of these pages had the target idioms for each of the three instructional conditions through which the participants in this study passed, the control, the learner-generated images condition, and the authentic context condition. During each phase of the instructional intervention, the participant saw only the home page, the VP Idioms page and the task pages that were relevant to that instructional condition. The pages for the other conditions were hidden. With the exception of the “home,” “overview,” and “writing a dialogue” pages, which were open throughout the intervention, the idioms and instructions relevant to the other tasks were visible to the user only at the appropriate time.

Each page on the site is explained sequentially, with the name for the page given on the button on the website toolbar shown in quotation marks. On the “Home” page, the learner finds the purpose of the website, the definition for Vivid Phrasal Idioms, and a list of the target idioms. The students’ ability to define this term was not required for successful completion of this unit but it was made available for those who desired further background information. The second page, “First 3 Idioms” has these VP Idioms, “cross the Rubicon,” “bite the bullet,” and “put the cart before the horse,” the definition, and an image for each. The images that appear on the instructional website were downloaded from creative commons or captured by the researcher. A link to historical background information on Julius Caesar can also be found on the “First 3 Idioms” page. Users of this site could click on the definition to get an attached document with the full figurative definition and the source from which it was taken. The third page, “Task 1 and Overview,” briefly explains what happened on each day of instruction and what the participant was expected to do. The fourth page, “Dialogues,” explains the writing aspect of the intervention. Participants had to write a dialogue for each set of three idioms, classified under one of the three conditions, the control, the Learner-Generated Images, or the Authentic
Contexts. This informational page, like the homepage, remained available throughout the instructional intervention. The fifth page, “Second Three Idioms” features the next three VP Idioms, “pass with flying colors,” “once in a blue moon,” and “have a silver lining,” as well as the definition and the associated image for each. The sixth page, “Task 2,” has a detailed explanation of what the student was expected to do and links to sites that explain how to use “Paint” (Microsoft, 2010). It also contains a rubric for the VP Idiom image, which the visiting instructor/researcher used to evaluate each image.

Task 3 required more background information; consequently, it had more links than tasks 1 or 2. Hence, four pages were devoted to the experimental condition for authentic context. As above, the site has a page displaying the last three target idioms (page 7) and another for instructions (page 8). The page displaying the target idioms had a link to Woody Guthrie’s (1972) song, This Land is Your Land which conveys cultural information that the researcher deemed to be relevant, explained in greater detail below. Page 9 focused on background information for the Green New Deal. A video explaining the Green New Deal, entitled, “A Message from the Future with Alexandria Ocasio-Cortez” (Klein, et al., 2019) provided the authentic context for the VP Idiom, “the lion’s share.” A link to this video, its script and background information on Ocasio-Cortez can be found on page 10. For “testing the waters,” the authentic usage occurs in a video of Oprah Winfrey’s speech in support of the candidacy of Stacey Abrams for the governor of Georgia (CNN, 2018). The researcher had planned to have students watch only a seven-minute clip of her speech but ended up airing most of it per the students’ request. Information on Winfrey, a link to this YouTube video, and the script for the speech are available on page 11. The students watched these clips together during the class
period on the fourth and fifth days of the intervention. The video clip for “take the bull by the horns” was viewed by the students independently.

The complexity of the speaking in the authentic contexts and the speed of delivery influenced the researcher to provide the printed scripts for “testing the waters” and “the lion’s share.” They were available as paper handouts, to avoid the necessity of having multiple windows open while watching the video, and as attachments on the website, pages 10-11. The sources of the authentic contexts for these two target VP Idioms will be described next.

The first video addressed the issue of Global Climate Change and a possible solution for it. One could argue that the issue of reversing Global Climate Change and preventing the consequential environmental and human disaster is the foremost challenge of the 21st century. A scientific consensus exists regarding not only the severity and potentially catastrophic effects of this phenomenon but also the human causes for it (IPCC, 2018; Miller & Croft, 2018). The video “Message from the Future with Alexandria Ocasio-Cortez” (Klein, et al., 2019) explains a possible strategy for addressing global climate change, a cutting-edge topic that impacts students’ lives. The manner of presentation of the material, providing an audio-video context in which the words are embedded along with full L2 captions, was anticipated to elicit acquisition of L2 vocabulary (Montero Perez, Peters, & Desmet, 2018; Peters, 2019). This seven-minute video, which is an ideal length for airing in a class session, has paintings by Molly Crabbapple to illustrate each of the main points. The video aims to explain the following facts within a narrative context: the history of climate change denial, some of the severe effects of global climate change, and the Green New Deal. The latter was presented as though it had already become a public policy. As Ocasio-Cortez narrated the story, the historical facts and the anticipated future implementation of the Green New Deal were depicted via water-color images.
seemingly in the process of being painted at a speed to match the dictation. This enabled the students to associate an image with most of the concepts or events that the narrator recounted by using the referential channel, per Paivio’s DCT (Clark & Paivio, 1991; Paivio, 1990). This means the imaginal sensory input, as shown throughout the clip, may have stimulated the verbal representational system. Despite the complexity of the content of the video, the researcher decided that the mode of presentation would make it comprehensible to these advanced EAP students.

The narrator, while conveying a story of past events, facts, and future predictions, employed five idioms: “go to bat for someone,” “kick-off,” “double down,” “aim for the fence,” and “the lion’s share.” Of those, one was eliminated because of its relative infrequency, “aim for the fence.” Two others, “double down” and “kick off” were eliminated because they are phrasal verbs, a type of phrase that does not fit Liontas’ (2002) definition of VP Idioms. Furthermore, the origins of “kick off” are from American football. That may be why the British author and editors of one of the quintessential idiom sources for this study, The Collins-Cobuild Idioms Dictionary (Sinclair, 2011), had an entry for “kick-off” which does not align with the researcher’s intuitions of how this idiom is used in American English. “Go to bat for someone” has frequent usage in the COCA corpus and imageability although it could be difficult for novice artists to depict. “The lion’s share” has high imageability, somewhat frequent usage in the corpora, and a rich etymology. A few non-target idioms, such as “double down” and “kick-off” were essential enough to understanding the video that the researcher front-loaded their meaning for the participants. Preparation for viewing was completed by students’ independent listening to an audio recording of Aesop’s fable “The Lion’s Share,” available as a link on the instructional website, which provides the historical and cultural origins of this VP Idiom.
As explained in the literature review, ample documentation exists regarding the benefits of using etymologies to teach idioms to ELLs (Aydin, 2017; Bagheri & Fazel, 2010; Baleghizadeh & Bagheri, 2012; Boers et al., 2004; Boers et al., 2007; Noroozi & Salahi, 2013; Tabatabaei & Mirzaei, 2014). The use of the etymology aligns with Paivio’s DCT. Paivio (1990) explains how the processing of information via dual channels facilitates deeper cognitive processing and increases the likelihood that the learner will remember the word or phrase. High-imagery words tend to elicit a switch within the learner’s mind from the verbal system to the imaginal system (Clark & Paivio, 1991). Aesop’s fables, which convey a story through human-like animal characters, easily call to the mind images of the narrative events that are intended, as with any fable, to teach a lesson. Another advantage to exposing students to the fable behind the idiom helps to build their cultural capital. This fable was made available as a link on the instructional website (page 9) so that students could both hear it narrated and read the words. Among hundreds of fables accredited to Aesop, this one is believed to be the origin of “the lion’s share,” according to Sinclair (2011).

The Lion went once a-hunting along with the Fox, the Jackal, and the Wolf. They hunted and they hunted ’til at last they surprised a Stag, and soon took its life. Then came the question how the spoil should be divided. "Quarter me this Stag," roared the Lion; so, the other animals skinned it and cut it into four parts. Then the Lion took his stand in front of the carcass and pronounced judgment: The first quarter is for me in my capacity as King of Beasts; the second is mine as arbiter; another share comes to me for my part in the chase; and as for the fourth quarter, well, as for that, I should like to see which of you will dare to lay a paw upon it." “Humph,” grumbled the Fox as he walked away with his
tail between his legs; but he spoke in a low growl. "You may share the labors of the great, but you will not share the spoil." (Aesop’s Fables, 2001)

After reading and hearing the story of the hunters described above, the learners had exposure to an etymology from which s/he could possibly infer the meaning even before finding it explicitly given on the website, which is why the researcher selected “the lion’s share.” Additionally, the participants received a written script of the text of the “A Message from the Future” video, which explains four major tenets of the Green New Deal, a proposal for combating Global Climate Change, which Ocasio-Cortez, an elected representative in the U.S. Congress, has assertively promoted despite the fact that she is not its original author.

Political campaigns often elicit the expression, “testing the waters,” based upon the frequency of occurrence of this idiom in speeches available through the Corpus of Tagged Political Speeches (CORPS: Guerini, Strapparava, & Stock, 2008). Even though this researcher avoided any political bias in this research study, a speech by Oprah Winfrey in support of a candidate, given on November 1, 2018 brilliantly and authentically employed a VP Idiom, “testing the waters” although Winfrey preferred a slight variation, “testing any waters.” In Oprah’s speech on behalf of Stacey Abrams’ gubernatorial campaign, she touches on themes of equality, citizenship, empowerment of minorities. As part of the background information to prepare the participants for Oprah’s speech, the researcher showed a national parks video wherein Guthrie’s (1972) This Land is Your Land was sung. This song has been sung in opposition to social injustice, beginning in the late 1960s (Jackson, 2002) and to recent changes to U.S. immigration policies (Partridge, 2019). The lyrics of this American folk song, wherein the “land” described is the United States, imply inclusiveness in the refrain, “This land is your land; this land is my land.” Students listened to this song as an opening activity prior to hearing
Oprah’s (2018) speech. While the whole speech and script remain available on the website, its length, at over one hour, made a full, in-class screening seem largely impractical. However, Winfrey’s speech seemed to generate rapt attention and several students requested that we continue to watch it until the end. The speech contained the recently coined buzzword “woke” in its idiomatic usage and some *African American Vernacular English*. In anticipation of this, the researcher provided cultural and historical background information before airing part of the speech that contained the idiom. During her speech, the famous media mogul used the target VP Idiom to explain that she is not running for president.

Three corpora that reside within the Brigham Young University (BYU) suite of corpora were essential for the selection of the target idioms and materials development. Firstly, the *Corpus of American Soap Operas* (SOAP: Davies, 2011), upon which the researcher relied heavily in the early stages of VP Idiom selection and materials development, exists within the family of corpora developed under the auspices of Brigham Young University by Dr. Mark Davies. SOAP contains 100,000,000 words from 22,000 TV episodes. This corpus was created to document very informal English language as exemplified by TV soaps that originally aired between 2001 and 2012. The researcher searched the SOAP (Davies, 2011) to find occurrences of the target idioms and verify frequency. Two other materials that the researcher employed to figure out the frequency of occurrence, to find contexts and to aid in refining the selection of target idioms were the COCA (Davies, 2008), described previously, and *The TV Corpus* (TV: Davies, 2019). COCA provided the contexts for the objective tests. The TV Corpus, which launched in 2019, contains the scripts of TV programs that aired between 1954 and 2018, a treasure trove of 325 million words used in the 75,000 episodes. Those who require more information can click on the link to the IMDB entry for each episode (Davies, 2019). For
researchers, the newest addition to the BYU Suite is an invaluable resource for extracting authentic contexts wherein informal American English is used.

**Selection of Target Idioms**

While the selection of “the lion’s share” has been explained above, the main selection process for all target idioms must be transparent. All the target idioms had to appear in *The Collins Cobuild Dictionary of Idioms* (Sinclair, 2011), which ensured that no colloquial phrases would be included. During the *first phase* in the key VP Idiom selection process, the only criteria were frequency and imageability. The researcher considered the frequency of the idiom’s occurrence in the SOAP (Davies, 2011). The researcher used the *Collins Cobuild Dictionary of Idioms* to find the etymologies, which are directly relevant to imageability. This broader list contained some idioms that native speakers of English use almost exclusively in informal speech, such as “don’t look a gift horse in the mouth.” The list was further refined to accommodate the needs of the participants, all of whom were advanced students enrolled in an *English for Academic Purposes* (EAP) program designed to prepare them for the university. This Vocabulary 5-6 course emphasizes words and phrases that students are likely to use in the academic disciplines; it also prepares them to pass the TOEFL examination successfully. The final list of target idioms includes idioms that are used in conversational, presentational, and academic modes. Eight of these idioms had high frequency in the COCA family of corpora, “take the bull by the horns,” “put the cart before the horse,” “once in a blue moon,” “have a silver lining,” “the lion’s share,” “bite the bullet,” “pass with flying colors,” and “test the waters.” The researcher also included a low frequency idiom, “cross the Rubicon,” among the target idioms due to its appropriateness in academic contexts. Included among the target VP Idioms were several that an expert on TOEFL preparation had recommended that students learn:  

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“have a silver lining,” “bite the bullet,” “pass with flying colors,” “test the waters,” “once in a blue moon,” and “cross the Rubicon” (Stirling, 2015). Only three of the target idioms, all of which are common in the target corpora and highly imageable, are not among those recommended.

The rationale for including these informal idioms into the intervention is as follows. The instructional intervention lasted only seven weeks, with the research activities taking place in one of the three scheduled class periods per week. Staying within the time constraints imposed by the research site required the researcher to be shrewd in selecting the most essential target VP Idioms. Pedagogical advice from several studies encourages instructors to select idioms on the basis of frequency (Hagshenas & Hashemian, 2016; Karlsson, 2013; Liontas, 2002). Liontas (2002) emphasizes the need to teach the high-frequency idioms first as part of the process of idiomatization. Despite the recommendations of some previous researchers, who advise grouping the idioms according to conceptual metaphor (Boers, 2003; Boers et al., 2004; Carrol & Conklin, 2014; Chen & Lai, 2013; Galal, 2014; Samani & Hashemi, 2012; Vasiljevic, 2015b) or topic (Liontas, 2015), the current study used frequency and imageability as the main selection criteria, and the appropriateness of the idiom to the task of taking the TOEFL as a secondary criterion for inclusion as one of the target idioms.

In addition to frequency and TOEFL test appropriateness, the criteria of imageability had to be met in order for an idiom to be selected. Since the participants were required to create the images themselves, the origins of the idioms had to be traceable, so that learners could create a depiction of the literal meaning. According to Paivio (1971), it is important to have a visual image of the stimulus, which in this case is the literal meaning, rather than the response (the figurative meaning). Selecting idioms with a known etymology was also expedient for the
researcher in materials design. The images were downloaded from Google.com. Liontas (2008, 2015) also emphasizes that the instructor should expose learners to these phrases through authentic communicative contexts, in which they actively participate. The students’ output of these target VP Idioms consisted of writing a dialogue for three of the nine idioms.

Participants

The participants were eleven EAP students enrolled in a Vocabulary 5-6 course in an English for Academic Purposes (EAP) program. This language institute is situated on the campus of a university in the South-Eastern United States yet exists as an independent entity. The method of ascertaining the proper level placement of students who apply to this language institute is two-fold. The Oxford Online Placement Test (OOPT: Oxford University Press, 2018) is used to ascertain each prospective student’s skill in speaking, listening, reading and grammar. As part of the entrance examination, this language institute also requires students to take a writing assessment. The student’s writing skill is measured through a written essay, based upon a given prompt, and assessed according to a rubric. Two staff members read and assign a holistic score based on a five-point scale, the average of which becomes the score for the student. If there is more than one score point difference between readers then the score needs to be negotiated between them, and the essay may be read by a third reader. Based on the results of these tests, the language institute places each of the students into a particular level.

The participants had the following nationalities and L1 backgrounds. The students were from Northeast Asia or the Middle East, predominantly from China (5) and Saudi Arabia (4). There was one student from Japan and one from Kuwait. Their L1s were Arabic (5), Mandarin Chinese (4), Japanese (1), or Cantonese (1). As an introductory “getting to know you” activity, the researcher invited students to share idioms (and some proverbs) from their native languages.
She had already mentioned a few very high-frequency English idioms as examples to the students. Because their contributions were rich, the researcher asked them to write them in L1 and in English translation (see Table 1). Although only two are VP Idioms, they reveal students’ prior knowledge of figurative language.

**Table 1: Prior Knowledge of L1 Idioms**

<table>
<thead>
<tr>
<th>Idiom or Proverb L1</th>
<th>English Translation</th>
<th>Meaning</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>壞事和好運總是一步步發生。</td>
<td>Bad things and good luck always happen step by step.</td>
<td></td>
<td>Mandarin Chinese</td>
</tr>
<tr>
<td>لعله خير</td>
<td>Who knows what good lies beneath.</td>
<td></td>
<td>Arabic</td>
</tr>
<tr>
<td>إذا كنت تحب شيئا ما، فستبالتغ فيه وتنسي شروره.</td>
<td>If you love something, you will only notice the good things about it and forget its evils.</td>
<td></td>
<td>Arabic</td>
</tr>
<tr>
<td>両親のサメの咬傷</td>
<td>Parents’ the shark bite.</td>
<td>Being dependent on parents</td>
<td>Japanese</td>
</tr>
<tr>
<td>薩特先生丢了馬,但不要以為這是一件可怕的事</td>
<td>Mr. Sat lost his horse, but don’t think it’s a terrible thing.</td>
<td>Seemingly unfortunate events may turn out to be lucky.</td>
<td>Mandarin Chinese</td>
</tr>
<tr>
<td>坐山观虎斗</td>
<td>Sitting on the mountain watching tigers fighting</td>
<td>A negotiation is happening, but the speaker is not yet involved; rather, he is waiting for the most opportune time</td>
<td>Mandarin Chinese</td>
</tr>
<tr>
<td>إن أحببتك عيني، ما ضاملك الدهر.</td>
<td>If I loved you, no harm would fall upon you.</td>
<td></td>
<td>Arabic</td>
</tr>
</tbody>
</table>
The student who offered #3, when asked why he had decided to study in the U.S. instead of another English-speaking country, replied that he came for the social life. Providing elaboration in the form of a VP Idiom, the student opined, “In the U.K., they roll up the sidewalks after dark,” revealing his prior knowledge.

**The Researcher**

This researcher, who functioned as the instructor throughout the intervention, has approximately eleven years of experience in teaching English as a second language and 13 years of experience in teaching Montessori Elementary education. Her background in Montessori education is relevant to the analysis of data because, as Crotty (1998) explains, humans naturally view and interpret experiences through the lens of their culture, yet a qualitative researcher tries to minimize these effects, and see the data in an unbiased way. The researcher reflected upon and processed the rich qualitative data, mostly in the form of students’ written dialogues, generated throughout this study, giving it equal importance to the test scores. Given this fact, the researcher must reveal and try to minimize his or her biases, through what Crotty (1998) has called “bracketing.” Although the current study is mixed method rather than phenomenological, as an ethical researcher, the researcher was obligated to put in place some safeguards against personal or cultural bias. As mentioned, the researcher-investigator has training and experience in Montessori education, so she admits to a possible bias in favour of the “hands-on” intervention, that is, the Learner-Generated Images. An effort to control this was made through having the course instructor read and score a few of the dialogues, without her knowing how the researcher had scored them. The cooperating teacher read one dialogue each for the control, the first experimental, and the second experimental conditions. As there was a consensus, no specific calculation of inter-rater reliability was ascertained.
Both the regular instructor and the visiting instructor-researcher have advanced degrees that make them qualified, along with their professional experience, to be teaching the EAP students. The researcher holds master’s degrees in English education and elementary education and is currently working on a Ph.D. in Second Language Acquisition and Instructional Technology (SLAIT). The cooperating instructor holds master’s degrees in TESOL, English Education, and Psychology. Although her teaching career was interrupted by a ten-year stint in the business world, the cooperating instructor has taught EAP at both the community college and university level for a combined 13 years.

**Further Details in the Instructional Sequence**

What follows provides details of how the intervention proceeded, day by day. The instructional intervention began with the pretest on Day 1. Each of the following days was for one of the three conditions: control, creation of learner-generated images, and exposure to an authentic context. During the first day of instruction, the researcher provided an orientation to the instructional website, which guided the intervention throughout all the following days and was accessible for students who did not complete their dialogue during the class period. Then, she proceeded with a somewhat *traditional* approach. The instructional website displayed an image of each of the 1st three idioms (“bite the bullet,” “put the cart before the horse,” “cross the Rubicon”) along with its definition. The students did *not* have any authentic context or opportunity for hands-on creation of their own visual representations of the idiom’s literal meaning. For each particular idiom, the instructor spoke the target idiom, and the learners repeated. Then, to complement the information provided on the instructional website, she gave a few contrived examples. Finally, students wrote a short dialogue for one of the three idioms presented on that day. On the second day of instruction, the students were introduced to the next
three target idioms via the website and the researcher. Additionally, they received the definition for the next three target VP Idioms, as above. One difference was the fact that the visual representation of these idioms, which currently appears on the instructional website, was removed. The purpose of this is so that the learners could first develop their own picture of what the idiom means before seeing the image created by someone else. Next, each student generated a digital image to represent his/her idea of the literal meaning of that particular idiom. Only one of the students chose to depict “have a silver lining;” three painted “pass with flying colors.” The majority of the images created depicted “once in a blue moon.” Yao (pseudonym) and Jung-Min (pseudonym) each independently created images for “once in a blue moon” and “pass with flying colors.” All students used the online software and worked individually when crafting their visual representations. The following class period was scheduled for students to continue with writing dialogues, having finished their Paint program images of them. The students submitted their completed written dialogues through Canvas. A detailed analysis of students’ use of these VP Idioms appears in the results section.

The fourth day of the intervention required more instructional support and background information due to the complexity of the content of the first authentic context, “A Message from the Future” (Klein, et al., 2019). After some warm-up activity, the instructor turned off the lights to capture their attention regarding the necessity of electrical power. Then, “The grid” and “Smart Grid” were explained along with a link that depicted how the process works, https://www.smartgrid.gov/the_smart_grid/smart_grid.html. This link was provided also for students on the instructional website page for the “Third Three Idioms.” Although the facts given were credible and thoroughly explained, the researcher preferred to provide her own simplified explanation orally, while projecting the smart grid video on to the screen so as to reduce the
cognitive overload. The authentic context itself contained ample, sophisticated vocabulary and concepts such as lobbying and corporate interference in public opinion. Students only needed an image and a concise explanation to build background information in understanding the complexity of the changes that would happen if the Green New Deal were implemented, as Ocasio-Cortez describes in her “Message from the Future.” The researcher explained that except for the very beginning, the first four paragraphs described events that had already happened and contained verifiable facts. The rest of the authentic context explained scenarios that were hypothetical, a possible future. Some of the students chose to follow the script through the first viewing although the visiting instructor encouraged them to watch and alerted them to the presence of the online link. Further review of non-idiomatic vocabulary came after the initial viewing of authentic context by the whole class. A few students commented immediately after the viewing, mostly in support. One student expressed his opinion that doing without coal for power would not be possible due to the U.S.’s enormous need for electricity. The visiting instructor reiterated that the purpose of using this authentic context was to learn idioms while viewing Crabapple’s depictions simultaneously with the spoken words. His right to disagree with Ocasio-Cortez’ message was respected. Students reviewed the audio-visual material with reference to the script and with the optional subtitles available via YouTube. The class discussed the meaning of “lion’s share” with reference to a pizza which had been drawn on the dry erase board. This followed a brief audio of “The lion and the hunters,” which provided the etymology for this idiom. The students worked independently exploring the website, going at their own pace. The researcher provided a bit of background information on bullfighting for the idiom, “take the bull by the horns,” which each student viewed independently. Finally, the participants
wrote sentences containing “Take the bull by the horns” and “the lion’s share” and posted them to Canvas. These sentences, written by individual students, are included in the Results Section.

On the fifth day of instruction, the students began by exploring the phrases, definitions, and images of the last two idioms, “take the bull by the horns,” and “testing the waters,” on the website. This was augmented by a video (for “testing the waters”) or video clip (for “take the bull by the horns”). For “take the bull by the horns,” the video featured a dialogue in which an actor spoke the VP Idiom. For “testing the waters,” students watched a video clip in which a narrator spoke the VP Idiom within her campaign speech. This viewing was then repeated, accompanied by a script. When the speaker who claimed not to be “testing any waters” uttered this VP Idiom, it served the discourse function of “stance,” enabling her to identify herself as an advocate for the candidate who was running and not a prospective candidate herself. Following the advice of Pam and Karimi (2016), the idiom was shown in boldface within the script. After the second viewing, the class discussed the meaning, and the instructor encouraged the learners to guess. In other words, they were to make an inference based on context clues. The rationale for this comes from Levels of Processing Theory (Craik & Lockhart, 1972), to which numerous researchers on idioms have referred (Boers et al., 2004, 2007; Razmjoo et al., 2016; Szczepaniak & Lew, 2011; Stengers et al., 2016). As explained in the literature review, this theory posits that deeper levels of cognitive processing occur, resulting in greater retention, when there is cognitive effort. The researcher aimed to elicit cognitive effort in accordance with this theory, reasoning that deeper processing would be more likely to happen if students hypothesized the meaning of an idiom based on an image or an audiovisual scene in which the target idiom occurs than if they passively received the definition. However, due to the fact that idioms – by definition – are to
varying degrees opaque, the researcher provided the figurative meaning later, after students had tried to guess at it.

**Details regarding the learner-generated image.**

The creation of a digital “painting” to represent how each student envisioned the idiom required less training in how to use some of the online tools than the researcher originally anticipated. The researcher selected the Paint Program (Microsoft, 2010) for the students to make their own pictures due to its flexibility for the user in creating his/her own designs. Students received directions both directly from the instructor and via the instructional website. Non-tech savvy students were given the option of making a paper and pencil drawing to depict their mental imagery of the meaning of the idiom, particularly the literal meaning. Students were informed of the requirement to have the associated idiom typed below or within the image that they created to artistically materialize their mental representation (see Appendix D for the original images made by the participants).

**Assessments**

**Objective test of comprehension of the target VP idioms.**

In order to measure the student’s knowledge of each of the target VP Idiom’s definitions, this researcher designed an objective assessment, containing 30 items. The students’ ability to associate the correct definition of the idiom for each of the nine target idioms and to select the most appropriate context into which the idiom might fit was tested in a multiple-choice format that also included items requiring the students to find the definitions for twelve filler idioms. The online quiz, through which this was administered, is available through the learning management system of the university. This test, which was used as the pre-test (see Appendix A), included non-target, filler items for which the students were asked to select the definition. For the post-
test, there were three short (six-item) tests, one for each condition. For example, there was a short post-test containing items for “cross the Rubicon,” ‘bite the bullet,” and “put the cart before the horse.” Another short post-test tested the three VP Idioms presented during the experimental condition wherein the learners generated their own images. A third post-test had only items to test the last three VP Idioms, “testing the waters,” “the lion’s share,” and “take the bull by the horns.” Each of the post-tests had multiple-choice definition items and association of the idiom with the context items, one for each target VP idiom.

Criteria for Evaluating the Idioms’ Dialogues

As explained above, the participants had the option of working in teams of two to create the dialogues although several of them preferred to work alone. Students had to write at least one dialogue for each set of three target VP Idioms. Instructions for how to write and to perform such dialogues were given both in the classroom and as advice within the instructional website. These dialogues were scored according to the appropriateness of idiom use, the inclusion of introductory background information, and writing skills. The writing skills include things like sentence construction, grammar, choice of vocabulary (not including the target idiomatic phrases). Although the current study did not include the oral presentation of the dialogues as part of the data, students were aware that they would be performing their dialogues for their peers. The oral delivery skills included: speed, prosody, appropriate volume, and eye contact with other speaker who is performing the dialogue (see “Qualitative Analysis” below and the Dialogue Rubric in Appendix C).

Criteria for evaluating the learner-generated images.

The students were provided with ample information on how to create their visual image of the literal meaning of the target idioms. The visiting instructor also demonstrated how to use
the Paint program. The basis of evaluation of each learner-generated image was described in the rubric in Appendix D. The criteria for evaluation were: (1) the inclusion of the neatly printed and correctly spelled idiom, (2) the appropriateness of the visual representation, and (3) timely project completion. Even though art skills were modelled, the focus of the course is upon language, so having artistic craftsmanship at the novice level did not prevent the student from succeeding.

Data Analysis

The researcher strived to maintain the most transparent reporting of research results and the best statistical analysis to answer the proposed questions. After initial analysis, the results were viewed through the critical lens of Paivio’s (1971, 1990) DCT, Sweller’s Cognitive Load Theory (CLT: 1988), and Schmidt’s (1990) Noticing Hypothesis. For the first research question, the students’ idiom dialogues were assessed qualitatively by using an analytic rubric, which was adapted from Jacobs, Zingraf, Wormuth, Hartfiel, and Hughey’s (1981) rubric. A rubric also guided the evaluation of Learner-Generated Images. Even though the learner-generated images may not directly provide evidence of ability to produce idioms, their production was a product of the treatment for the first experimental intervention. Furthermore, whether or not the student’s image matched the idiom about which s/he chose to write was part of the data analysis.

Descriptive and inferential statistics were employed in answering the second research question, as described in detail below. Before the instructional part of the intervention, the students took a pre-test, which had a dual purpose. Clearly, it was intended to measure their knowledge of the target VP Idioms before the beginning of instruction. Additionally, the researcher wanted to have data to form a broader picture of students’ knowledge of VP Idioms than would be possible with a test of only target idioms. Their prior knowledge of idioms was meagre; no students passed the
pre-test. Given the fact that the only VP Idiom with which the students were familiar was “wild
goose chase” (a filler item), the original choice of VP Idioms was maintained.

<table>
<thead>
<tr>
<th>Table 2: Pre-test Results including Filler Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VP Idiom</strong></td>
</tr>
<tr>
<td><strong>Definition Items</strong></td>
</tr>
<tr>
<td>Silver lining</td>
</tr>
<tr>
<td>Don’t look a gift horse in the mouth</td>
</tr>
<tr>
<td>Cross the Rubicon</td>
</tr>
<tr>
<td>Pass with flying colors</td>
</tr>
<tr>
<td>Put the cart before the horse</td>
</tr>
<tr>
<td>A wolf in sheep’s clothing</td>
</tr>
<tr>
<td>To have someone over a barrel</td>
</tr>
<tr>
<td>Take the bull by the horns</td>
</tr>
<tr>
<td>Make Waves*</td>
</tr>
<tr>
<td>Jump the gun</td>
</tr>
<tr>
<td>Don’t cry over spilt milk</td>
</tr>
<tr>
<td>Bite the bullet</td>
</tr>
<tr>
<td>Test the waters</td>
</tr>
<tr>
<td>Miss the boat</td>
</tr>
<tr>
<td>A wild goose chase</td>
</tr>
<tr>
<td>Once in a blue moon</td>
</tr>
<tr>
<td>Jump on the bandwagon</td>
</tr>
<tr>
<td>The lion’s share</td>
</tr>
<tr>
<td>Go to bat for someone*</td>
</tr>
<tr>
<td><strong>Idiom in Context Items</strong></td>
</tr>
<tr>
<td>Silver lining</td>
</tr>
<tr>
<td>Put the cart before the horse</td>
</tr>
<tr>
<td>Cross the Rubicon</td>
</tr>
<tr>
<td>Pass with flying colors</td>
</tr>
<tr>
<td>Bite the bullet</td>
</tr>
<tr>
<td>Take the bull by the horns</td>
</tr>
<tr>
<td>Test the waters</td>
</tr>
<tr>
<td>A wolf in sheep’s clothing</td>
</tr>
<tr>
<td>Once in a blue moon</td>
</tr>
<tr>
<td>Go to bat for someone</td>
</tr>
<tr>
<td>The lion’s share</td>
</tr>
</tbody>
</table>

*Asterisk items – one participant did not attempt to answer the item.

**Qualitative Data Analysis**

**Research Question #1:** Does the use of multisensory tools and sources (i.e., authentic
video clips, definitions, websites, images) impact the learner’s production of vivid
phrasal idioms? If yes, in what specific ways is the learner’s production of such idioms ascertained? If not, what explanations can be offered to uphold the lack of such an effect on learner’s production of vivid phrasal idioms? The learners’ use of the target idioms within each of their written dialogues provided evidence of production.

To answer this question, this researcher closely read and analysed the dialogues, taking note of when the student’s image represented the same idiom as his/her dialogue for the second instructional intervention. She also read sentences containing one of the target idioms for the Authentic Context Condition that students had posted to Canvas. The written dialogues were evaluated based on the appropriateness of the use of idioms, the overall content and naturalness of the dialogue, the grammatical accuracy. The rubric for the idiom’s dialogue helped the researcher to reflectively ascertain which of the three interventions resulted in the most authentic production of the target VP Idiom. The artistic representations of the literal meanings of the idioms were evaluated based upon their neatness, appropriateness, creativity and inclusion of the written idiom below the image or legibly typed within a box in his/her Paint program depiction.

The researcher later reviewed the paintings by each student to see if they complemented the written dialogue. This means that the student’s choice of VP Idiom to depict did not necessarily match the dialogue that the student wrote.

Quantitative Data Analysis

Research Question #2: Does a multimodal approach to idiom instruction compare with that of a traditional approach? If yes, in what ways specifically? If not, what explanations can be offered? This research question investigates the learners’ ability to comprehend Vivid Phrasal Idioms. Post-test scores for the Control, Authentic Contexts, and Learner
Generated Images conditions are analyzed to ascertain differences. Thus, the relative effectiveness of each treatment may be inferred.

Results of the three post-tests were the main source of data used to answer this question. After each phase of the instructional intervention, as described above, the students took one mini-post-test that measured only the items taught under that condition. Each of these items had appeared on the pre-test in combination with other filler items. Descriptive statistics for the results of each of the post-tests appears in Table 5. The goal of this part of the investigation was to discover the difference in effectiveness between treatments. As such, the analysis focused upon the scores for the two experimental and one control condition. The three VP Idioms taught under the Control condition “cross the Rubicon,” “bite the bullet,” “put the cart before the horse” appeared on one mini-post-test. The three VP Idioms taught under the Learner-Generated Images condition “to have a silver lining,” “once in a blue moon,” “pass with flying colors” were assessed via a second mini-post-test. The three VP Idioms taught under the Authentic Context condition, “testing the waters,” “the lion’s share,” and “take the bull by the horns,” were on a third mini-post-test.

This researcher used a repeated measures ANOVA to ascertain the difference in effectiveness of the three instructional interventions, with the post-test scores being the evidence of effectiveness. SPSS statistical software facilitated the calculation of the analyses. Following Larson-Hall (2010), the p value was set at p = .10 to reduce the probability of Type II error. Larson-Hall explains that in statistical analysis, researchers try to avoid both Type I and Type II errors, the former being an interpretation of results that is “gullible” in that the researcher rejects the null hypothesis when the treatment actually has no effect. As a counterbalance, researchers
should avoid a type II error wherein an over-cautious researcher fails to see a relationship between the treatment and the dependent variable when such a relationship exists. In other words, a type II error means the treatment has been (at least partly) effective except in a possible but highly unlikely situation wherein the treatment did harm. It is common to set Type II error level at .20, so the power would be .80 and the possibility of making a Type II error is 20%. A 20% chance of making a Type II error is higher than a 5% (if p = .05) or 10% (if p = .10) chance of making a Type I error. Hence, some statisticians have argued that researchers should use p = .10 (Kline, 2004; Murphy & Myors, 2004). In deciding whether to follow this advice, this researcher reflected upon the fact that when the probability of making a Type I error increases, the probability of making a Type II error decreases and vice-versa. As such, it may be a balancing act.

**Pilot Test**

In the spring of 2019, fourteen adult, immigrant students, who were attending a community college, encountered six target VP Idioms via the instructional website. The participants’ nationalities were primarily Cuban, South American, and Vietnamese. The intervention did not include the production of learner-generated images, meaning that this researcher’s students passed through the Control and the Authentic Context conditions. As such, the target idioms were as follows: “bite the bullet,” “cross the Rubicon,” and “put the cart before the horse” for the Control condition, and “kick-off,” “the lion’s share,” and “go to bat for someone” for the Authentic Context condition. The latter three idioms occurred in “Message from the Future with Alexandria Ocasio-Cortez” (Klein et al., 2019). The students were exposed to the control idioms via the instructional website with the instructor-researcher present. For the Authentic Image condition, only pages relevant to the authentic image were visible on the
instructional website (see screenshot in Appendix F). This page had the definitions for the three idioms, images of each, plus background information on Ocasio-Cortez and a link to an audio-visual for “the lion’s share.” As with the dissertation research, the students wrote one dialogue after each of the conditions. The pilot test did not include a pre-test. A concise post-test, containing only six items, was administered. Evidence of appropriate use appeared in the sample dialogues. Analysis of post-test scores revealed no difference between groups. Despite the quantitative results, some valuable insights were gained from the pilot testing, one of which was to ensure the post-test had ample items.

**Summary of the Methods**

This section has provided a detailed description of the methods that were used in the current investigation of the acquisition of nine target VP Idioms by eleven participants, all of whom were enrolled in an EAP program. There were three instructional interventions, the Control condition, the Learner-Generated Images condition, and the Authentic Context condition. Both qualitative and quantitative data were collected in appraising the relative effectiveness of these approaches. This researcher has offered a glimpse of the instructional website that guided the students through the study and served as the organizational framework for the materials and sequence of instruction. The details of each condition have been explained, including the fact that each intervention was followed by an online objective assessment in multiple-choice form. From a qualitative standpoint, the dialogues the students wrote after each of the interventions shed some light on their developing idiomatic competence, at least with regard to the target phrases. From a quantitative standpoint, the online objective tests measured their comprehension of each VP Idiom’s meaning and awareness of its appropriate context. The data analysis for production was mediated by the analytic rubric adapted from Jacobs et al.
(1981). Regarding the data analysis for the comprehension of VP Idioms, a repeated measures ANOVA was selected as the most appropriate statistical analysis, enabling this researcher to explore the effects of three interventions in spite of having only one group of eleven learners. In the following chapter, this researcher provides an analysis based upon the results that suggestions how the interventions have affected students’ comprehension and ability to produce VP Idioms.
CHAPTER IV: Results and Discussion

This investigation into VP Idioms aimed to ascertain the effectiveness of three instructional interventions on students’ comprehension and productive knowledge of VP Idioms. Its results, while limited in generalizability due to the small sample size and inclusion of only one group, reveal a difference in effectiveness for one of the experimental instructional interventions, the Learner-Generated Images condition. The evaluation of the production aspect of this study, RQ#1, entailed judgments based upon the established criteria of the rubric and the definition of each target idiom, as seen in Sinclair and Moon (2011) Collins Cobuild Dictionary of Idioms. The results require a nuanced interpretation in that dialogues produced under both the Control condition and the Learner-Generated Images condition manifested superior use of the target idioms, “bite the bullet,” for the Control and “once in a blue moon” for the Learner-Generated Images. In both cases, 83% were deemed to be appropriate and a few native speaker-like. The dialogues produced under the Authentic Contexts condition were overly brief and in 40% of the cases, fell short of the appropriate use of the target idiom, “testing the waters.” Both the quality of the dialogues and the statistical difference in test scores between the Control and the Learner-Generated Images condition suggest the possible effectiveness of the second instructional intervention and its superiority to the other approaches.

In analyzing and coming to possible explanations for the results, the questions posed to guide the research must be re-visited. The first research question pertains to production. Does the use of multisensory tools and sources (i.e., authentic video clips, definitions, websites, images) impact the learner’s production of vivid phrasal idioms? If yes, in what specific ways is
the learner’s production of such idioms ascertained? If not, what explanations can be offered to uphold the lack of such an effect on learner’s production of vivid phrasal idioms? While the main source of data remains the written dialogues, additional evidence, such as the researcher’s own observations of the process of making the Learner-Generated Images and a few comments that students made in the classroom, will be included. In assessing the written dialogues, the benchmarks for appropriateness, as they appear on the rubric, are (paraphrased) as follows. “All the following are addressed: appropriate length (at least five turns per speaker). The dialogue engages the reader with seemingly authentic conversation and avoids non-native speaker-like use of multiple idioms. The choice of VP Idiom fits the context precisely, and the student observes rules regarding how the target idiom can be transformed.” A detailed explanation of the findings below are followed by pedagogical advice adapted from researchers, such as Liontas (2015, 2017b), Vasiljevic (2015b).

**Qualitative Results**

The evidence of production, as can be seen in the written dialogues, revealed considerable individual differences. The main part of this question was, “Does the use of multisensory tools and sources (i.e., authentic video clips, definitions, websites, images) impact the learner’s production of vivid phrasal idioms?” Before writing the dialogues, the students had an opportunity to practice writing the idioms in sentences, as shown in Table 3, which they posted to the discussion board on Canvas so as to receive feedback on their production before attempting the full dialogue. All of the sentences submitted by students and posted on Canvas appear in the Table below.
Table 3: Sentences Containing a VP Idioms from Authentic Context Condition

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant 6</td>
<td>My sister grabbed the lion’s share of the pizza. Yao claimed the lion’s share of the money for her success at the concert.</td>
</tr>
<tr>
<td>Participant 3</td>
<td>One of the Apple company’s strength [sic], is taking the bull by the horn [sic] in the bad economic. Yes [sic] the bank will give you a loan to fund your business, but most likely it will get the lion share [sic] of the profits for at least 5 years.</td>
</tr>
<tr>
<td>Participant 8</td>
<td>This company had made a lot of money by publishing some cheap but advanced items, and got the lion’s share.</td>
</tr>
<tr>
<td>Participant 10</td>
<td>Yao’s dad ate the lion's share of pizza. Yao's mom have to [sic] take the bull by the horns and know Yao is her only kid, she can't beat her just because Yao get [sic] bad grade.</td>
</tr>
<tr>
<td>Participant 11</td>
<td>We’ll have to take the bull by the horns and tackle the Medicare questions. The lion's share of its library and all its new releases will be open to the public.</td>
</tr>
<tr>
<td>Participant 5</td>
<td>I ate the lion's share of the cake on my birthday. Jax took the lion's share of the lottery winnings. You have got to take the bull by the horns in order to create a new idea.</td>
</tr>
<tr>
<td>Participant 1</td>
<td>Last semester, I took the bull by the horns when I was working on the final project in the GRE class.</td>
</tr>
<tr>
<td>Participant 4</td>
<td>I took the bull by the horns and told him to leave due to his disrespectful behavior. I paid the lions share for my friend’s dinner yesterday.</td>
</tr>
</tbody>
</table>

Students also had access to the rubric, the benchmarks of which were explained above. Given the option of completing a dialogue with a partner or individually, the following number of dialogues were submitted for each intervention.

Table 4: Number of Texts (Dialogues)/Number of Students

<table>
<thead>
<tr>
<th></th>
<th>Individual</th>
<th>Partner</th>
<th>No Submission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>2 / 2</td>
<td>4 / 8</td>
<td>0 / 1</td>
</tr>
<tr>
<td>Learner-Generated Images</td>
<td>1 / 1</td>
<td>4 / 8</td>
<td>0 / 2</td>
</tr>
<tr>
<td>Authentic Context</td>
<td>2 / 2</td>
<td>4 / 8</td>
<td>0 / 1</td>
</tr>
</tbody>
</table>
While the full dialogues appear in Appendix G, examples of dialogues wherein the VP Idiom was used appropriately, a few dialogues wherein the usage was non-standard, and commentary based on the criteria of the rubric and previous research follow. This rubric, which includes benchmarks for content, appropriateness of idiom usage and context, and grammar, appears in Appendix C. In one of the texts given as evidence for proficiency, the grammar criteria affected the meaning, lowering the participant’s score, in spite of his otherwise appropriate usage of the idiom. For this text, the researcher corrected the grammar before including it in this dissertation. For the others, the texts appear as submitted, with the errors marked. Even though the results section touches on all three, the discussion focuses upon the second condition, “Learner-Generated Images,” for which four examples of appropriate idiom use, out of five submitted, were produced.

**Control condition.**

Students relied primarily upon the instructional website itself, which included a button with a link to detailed information on Julius Caesar as well as the definition and depictions for all three idioms, as can be seen on the “First Three Idioms” page [https://idioms.sitey.me/first-3-idioms](https://idioms.sitey.me/first-3-idioms). This researcher provided a detailed historical background for “bite the bullet” and “cross the Rubicon.” A map of Italy showing the River Rubicon was also projected in the classroom. Students were given approximately 40 minutes of the class period to write and had the option of completing their dialogues from home. Only one student included “put the cart before the horse,” while six dialogues were submitted that used the VP Idiom “bite the bullet.” Excerpts from these submissions appear below. The inclusion of the images throughout the instructional website may have influenced the developing capacity to produce these idioms based on the fact that pictures were shown to promote accurate production of idioms in previous research (Fotovatnia & Khaki,
2012; Szczepaniak & Lew, 2011). Another factor may have been the inclusion of etymologies to accompany the images for each of the VP Idioms under the control condition. The full dialogues appear in Appendix G.

*Participants #6 and #10 - “bite the bullet.”*

**Introduction:** Mehtap and Yao are best friends; they are talking about TOEFL. Mehtap has concern about how she will pass it and get a high score, so she has this conversation with Mehtap while they are sitting in the coffee shop. Let’s see what will happen.

**Yao:** I’m facing a difficult situation with my study. I should join in the University this semester. But they said I must take the TOEFL, do you have any idea about it?

**Mehtap:** Ohhh…..yes, dear. I have taken last semester [sic]; it was a nightmare for me. You should prepare to pass it. As they said you should *bite the bullet* because having a high education asks for a lot.

**Yao:** Yeah, I have heard about it, but I’ve never imagined it that way.

**Mehtap:** Yeah . . . honey. If you’re going to pass it, you have to work hard to study.

This dialogue exemplifies an authentic use of the idiom and appropriateness because the participants’ description of the diligent effort required to pass the TOEFL aligns with the definition given for the idiom. “If you *bite the bullet*, you accept a difficult situation or force yourself to do something unpleasant” (Sinclair & Moon, 2011, p. 61). The content of the dialogue itself was deemed to be naturalistic in that a conversation about grades on a high-stakes test could elicit the VP Idiom, “bite the bullet.” Liotas (2002, 2008, 2015) encourages instructors to consider learner’s interests while providing *Idiom Training*. One of the students who wrote the dialogue above aptly provided an opportunity to do this by asking the researcher before class about two large universities in the same state wherein data collection took place. The
student and her peers talked about the necessity of taking the TOEFL and the difficulty of this test. This discussion may have facilitated the association between the VP Idiom “bite the bullet” and preparing to take TOEFL. In their written response, the student and her partner scored 8/8 for their appropriate use of the idiom. While the dialogue lost a few points for errors in punctuation and sentence construction, these errors did not detract from the meaning. The introduction was brief but adequate. The next two participants, shown below, used a very different context wherein the VP Idiom could be used.

**Participants #1 and #4 - bite the bullet.**

**Introduction:** Sharif and Omar are friends. Sharif has an electronics store, and he is facing some problems. Omar gives him helpful advice.

**Omar:** Hello Sharif. It has been a long time since we have met.

**Sharif:** Yeah, I am physically fine, but mentally I feel I am losing my composure and many things have changed.

**Omar:** Oh not the thing I wanted to hear. . . I hope it is not that bad.

**Sharif:** The thing is that I hired new staff at my store in order to increase production rates; however, the demand had fell dramatically last month. So, now I have to pay to everyone even though they have not worked lately.

**Omar:** This reminds me of my friend Aseel, he had the same situation 2 years ago. He lost huge amount of money but he made it through.

**Sharif:** I have been thinking for [sic] a solution every day and night and I have not come up with effective and affordable solutions.
**Omar:** I can give a piece of advice that would help you if you are willing to pay more money. All you have to do is increase your budget for marketing and release commercials more often. It sounds more costly solution; however, it will get you through the situation.

**Sharif:** Oh my god, I knew that I have to pay more money. I guess I have to *bite the bullet* this time and wish for the best.

**Omar:** I am pretty sure you will do great just have faith in what you do, and you will be fine [sic].

**Sharif:** Thank you for the advice I really needed it [sic]. You are a true friend.

Despite a few errors in sentence construction and punctuation, the student writers employed the VP Idiom in a way that was judged to be appropriate based on the benchmarks established by the rubric. As such, this dialogue scored 8/8 for appropriateness of the idiom usage. Having to shell out more money to cover the expenses of advertising would constitute a problematic situation to be endured.

*Participant #8 - “put the cart before the horse” and “bite the bullet.”*

The student attempted to use two of the key VP Idioms even though the rubric, to which students had access before writing, and the visiting instructor advised against using more than one. This participant only partially met the criteria set by the rubric for “cart before the horse,” and did not use the latter VP Idiom appropriately, resulting in a score of 5/8 for appropriateness.

**Background:** Two international students study abroad. Incensia is a hard-working girl while Yamato is a playboy. One day, Incensia felt worried about Yamato’s study, so she provided some suggestions with [sic] her friend.

**Yamato:** I drank a little too much last night with some friends.

**Incensia:** Oh my God, have you finished your homework?
Yamato: No, not at all.

Incensia: You are really putting the cart before the horse.

Yamato: Yes, but as an international student, I’m really biting the bullet, sometimes I feel tough and lonely.

Incensia: You should study with friends rather than just play with them.

Yamato: Ok, I got it, thanks for your care.

This dialogue received partial credit for authenticity and appropriateness. The first reason for this evaluation is based on how well the idiom fits into the context. Sinclair and Moon (2011) define “putting the cart before the horse” as follows. “If you criticize someone for putting the cart before the horse, you think that they are making a mistake by doing things in the wrong order” (p. 57). Possibly, this participant intended to say that one should study first and socialize later, but this is not explained within the dialogue. The student’s use of “biting the bullet” did not meet the criteria set by the rubric for authenticity. Even though it could be argued that being an international student is a difficult situation, over-imbibing in alcohol and neglecting homework do not qualify as “enduring a difficult situation.” Therefore, the dialogue suggests that the student has only gained partial command for the production of these two idioms.

Another reason was this dialogue was judged as only partly authentic and appropriate was the idiom over-use; having idioms in two adjacent lines of the script resulted in a non-native speaker-like conversation. Liontas (2008) explains that oftentimes, the material used for teaching idioms to students presents them with dialogic examples wherein the speakers use excessive idioms, which is non-native speaker-like. Researchers have reported on the inadequacy of the contexts in which idioms appear in textbooks for L2 learners or their complete absence (Bouherar, 2017; Khan & Daskin, 2014; Vasiljevic, 2015b). Other studies have critiqued the
instructors in EFL courses for their lack of awareness of the culture associated with the target language (Bouherar, 2017; Prodromou, 2003). While the researcher did not administer any survey regarding the participants’ previous exposure to idioms in an instructional context, it is possible that this student had read inauthentic examples of idiom usage in a course in which he had previously been enrolled. A lack of cultural awareness in a text or as an instructor’s example may have had an influence, although this cannot be verified. The purpose of employing idioms is to convey ideas and/or feelings clearly for communicative purposes, not to play with the language by fitting many idioms into one paragraph as grammatically possible.

The excerpt above was the only dialogue for the control condition in which the learner’s use of VP Idioms was not appropriate. Probing the writing for the texts produced under the Control condition, the researcher judged 83% of them to have used the VP idiom appropriately. One explanation for this could be the presence of the etymologies. Many researchers have used Etymological Elaboration as a means to elicit comprehension of the meaning of an idiom (Bagheri & Fazel, 2010; Baleghizadeh & Bagheri, 2012; Boers et al., 2004; Boers, Eyckmans, & Stengers 2007; Noroozi & Salehi, 2013; Razmjooolal, 2016). Most of these studies followed the research done by Boers and colleagues (2004) in which the students met the etymology first before having had any input as to the idiom’s meaning. Unlike the control condition in the current research, the participants only received information guiding them toward the definition as part of the feedback. This means that the participants had to use inferential reasoning to figure out the idiom’s meaning. Boers’ (2003) Idiomteacher CALL tool begins with the etymological elaboration, followed by a multiple-choice assessment of the student’s inference as to the idioms’ meaning, followed by a cloze task. This implies that the effectiveness of this approach may have to do not only with offering the etymologies to the learners, but with the fact the students had to
infer the meaning based on the clues given. To the researcher’s knowledge, no study has been conducted that makes a comparison between the effects of exposing students to etymologies without any need for induction with etymological elaboration. The website for the current study offered the etymological information but did not involve etymological elaboration per se. However, “cross the Rubicon” and “bite the bullet” were taught within a rich historical context, along with having the definition and picture provided. These etymologies, given by the instructor and reinforced by the instructional website, may have aided students in producing the target VP Idiom, “bite the bullet” correctly.

Since the participants in two of the conditions (the Control and the Authentic Contexts) had access to both pictures and etymologies, previous research that investigated the effectiveness of using both pictorial elucidation and etymology in idioms’ instruction (Hagshenas & Hashemian, 2016; Szczepaniak & Lew, 2011) may be relevant to the fact that well-written dialogues were produced by students under both of these conditions. Hagshenas and Hagshemian’s (2016) study offers support for this claim. The researchers carefully controlled variables to test the effectiveness of using only pictures, only etymologies, both, or neither. All groups received the definition, including the control group, which was exposed to neither etymologies nor depictions. Hagshenas and Hashemian (2016) found a statistical difference for the “both” group and the “pictures” group, with the most potent effect for the former. Participants under the control condition in the current study had access to the instructional website that showed both an image for each of the target VP Idioms and its etymology. The results of Szczepaniak and Lew’s (2011) study suggest that pictures of idioms aid comprehension and production even if etymologies without the images do not. Although the etymologies had no measurable effect on either comprehension or production for Szczepaniak
and Lew’s (2011) participants, the pictorial elucidation seemed to help them with understanding and producing the target idioms. The results of these studies provide evidence for the effectiveness of using images, in particular, and etymologies, in some cases. In the current investigation, the fact that 83% of the participants under the control condition were able to write VP Idioms into an appropriate and naturalistic dialogue could be attributed in part to their exposure to the detailed etymologies and the pictures.

**Learner-Generated Images condition.**

With the exception of one participant who declined to make a digital image, all students crafted digital paintings to depict one of the target idioms through the tool of Windows 10 Paint program. Having the same participant make a depiction of an idiom followed by a dialogue using the same VP Idiom would align with DCT (Clark & Paivio, 1991; Paivio, 1990). This theory explains the verbal channel and the imaginal channel as streams of cognitive energy that are mutually supportive and impact the learning process. Clark and Paivio (1991) state that “DCT explains psychological phenomena by the collective action of nonverbal and verbal mental systems that are specialized for the processing of imagery and linguistic information, respectively” (p. 150). In other words, the integration of verbal and non-verbal mental systems (or cognitive channels) promotes cognitive processing. Paivio (1990) argues that making an association between an image (within an individual’s mind or literally depicted) and verbal data serves a mnemonic function. When the learner’s mind marries image with verbal input, “the result is a dual trace consisting of the representation that is automatically activated by the input item and the referentially related representation that the subject generates to the input item” (p. 76). Applied to the current study, students (“subjects”) who painted and wrote about the same idiom, may have merged the channels of verbal and imaginal processing, activating the dual
trace existing in their minds. This merging of channels, in turn, may have facilitated their ability to write dialogues containing “once in a blue moon” appropriately.

However, in some cases, students’ written dialogues featured a different VP Idiom than they had drawn. This might be attributable to the fact that while everyone worked individually on the drawing, only two of the participants worked individually to write the dialogue for the second instructional intervention. For the first example below, both student partners had depicted “once in a blue moon.” The next two examples provide evidence for appropriate production of the VP Idiom even though the idiom depicted by one of the partners and their jointly written dialogue did not match. In the third example shown below, the students seemed aware that their self-generated images of “once in a blue moon” complemented the dialogue. The implementation of the data collection, wherein the student had the option to write his/her dialogues collaboratively, resulted in a few cases wherein both partners wrote about a different idiom than either of them had depicted. The quality of these short dialogues was as inferior to that of those wherein at least one of the partners had illustrated it in advance. Finally, the researcher shares a dialogue wherein the student writer used the idiom in a semantically appropriate way yet miswrote it as “the sliver lining.” The researcher infers that his misspelling was not just a typographical error since it was consistently misspelled in both the dialogue and its title. Examples are shown below. The intention of the second instructional condition, as discussed in the methods and in greater detail following the quantitative results, was the formation of a dual trace in the student’s mind wherein his/her image of the VP Idiom and its definition are referentially associated, following Paivio’s (1990) DCT. Possible ways to address errors in the form will be discussed.
Participants #7 and #11 – “once in a blue moon.”

Introduction: Sam and Jung-min are friends. They are meeting at the dining hall and talking about the breaking news of this week. On TV, one of them had heard an OB-GYN named Donna explaining to one of her patients that she had just helped to deliver a healthy baby.

Jung-min: Hi, Sam. Long time no see. How’s it going?

Sam: Not bad.

Jung-min: Did you heard [sic] the big news in our city this week?

Sam: I think I probably heard that.

Jung-min: Someone had a baby at the age of sixty. Can you believe that?

Sam: Really? It is not easy for mother and the baby. Are they all healthy?

Jung-min: Yeah. What a miracle.

Sam: That was something that happened once in a blue moon.

Jung-min: Absolutely!!!

Sam: Thank you for telling me this. I’ll see you later.

This dialogue employs “once in a blue moon” to discuss a rare event, which fits the definition given by Sinclair and Moon (2011). Both of these student writers crafted an image depicting a blue moon, although one of them had also painted “pass with flying colors.” Given the short time of data collection, the researcher cannot infer with adequate empirical evidence the development of idiomatic competence. Nevertheless, it may be applicable in this situation that two of the aspects of idiomatic competence are “the ability to understand and use idioms appropriately ... in a manner similar to that of native speakers, and with the least amount of mental effort” (Liontas, 2003, p. 299). This writing sample might suggest the nascent development of idiomatic
competence in that these students were able to write efficiently, completing and submitting the
dialogue during the class period, which fits Liontas’ (2003) definition above. Furthermore, the
native speaker-like use of “once in a blue moon” hints equally at the possible development of
this competency regarding this particular VP Idiom.

Participants #1 and #4 – “once in a blue moon.”

The rarity of having a visitor from Turkey, whose intentions do not include international
business or study, is expressed in the following excerpt from a dialogue, wherein “once in a blue
moon” appears. This fits with the simple definition given by Sinclair and Moon (2011). If
something happens “once in a blue moon,” it happens rarely.

Introduction: Abdul-Aziz and Alsaad are having a phone call. They used to be best
friends when they were in high school. Now they study in different universities.

Sharif: Hello Omar. How have you been?

Omar: Hey. I am great. How about you my friend?

Sharif: I am fine. I am calling you because I want to invite you for a party this Saturday.

Omar: Oh okay. What is the occasion?

Sharif: My uncle is visiting from Turkey. He only comes once in a blue moon, so my
family and I want to welcome him with a celebration, and we would love to have you
with us.

This essay was evaluated as having 6/6 for context appropriateness of the VP idiom usage and
8/8 for idiom usage. The rarity of the event and the likelihood that this idiom use could occur
between native speakers contributed to this evaluation. Only one of these students had depicted
the blue moon; the other partner had depicted “flying colors.” The student authors of this
dialogue did not use any of the suggestions that the visiting instructor had made in response to
their peers’ request for advice on appropriate topic choices. Their writing process may have engaged what Hulstijn and Laufer (2001) refer to as “evaluate,” which is one aspect of their Involvement Load Hypothesis pertaining to vocabulary acquisition. “Evaluation” herein implies that the learner ascertains whether a word (or phrase) fits in a specific context and ponders multiple meanings. As with other VP Idioms, a literal meaning for the phrase exists, but these student writers did not write about the celestial phenomenon of a blue moon. They independently considered possible contexts to fit the figurative usage and made an appropriate selection.

Participants #6 and #10 – “once in a blue moon.”

The following conveys an authentic after-shopping conversation. Before writing, both the participants had depicted, using Paint, what they had imagined and submitted the images separately, as the researcher requested. Then, after writing this VP Idiom into their dialogue, they included both of their illustrations below, seeming to grasp the purpose of having made the images.

**Introduction:** Mehtap and Yao went to International Mall to do some weekend shopping. They had a great time. When they got tired and spent all their money, they went back to Yao’s apartment. They were starving and had this conversation. However, Yao’s mom is a healthy person who prefers to not eat fast food.

**Mehtap:** Yao, dear. Do you have anything to eat? I'm starving.

**Yao:** Oh...OMG sorry. I just finished all food last night.

**Mehtap:** Really? It’s strange! Because I know your mom always keeps something healthy to eat, but she thinks pizza is not that good for us.

**Yao:** I know......but yesterday we ordered a pizza from outside.

**Mehtap:** It's impossible! It's just you or with your mom?
Yao: No...It's [sic] my mother’s suggestion.

Mehtap: I couldn't believe that [sic]! You must have forced her to do that.

Yao: No. Yesterday we were tired, and she could not even move...so she said just order a pizza.

Mehtap: And what did you do?

Yao: Then I ordered the pizza.

Mehtap: Honestly! It's happened [sic] Once in a Blue Moon.

In this dialogue, the participants played out a conversation between themselves that had actually occurred. They are young college students who had returned from an outing and wanted to eat. This dialogue showed a few errors in verb tense and contractions, but the rater awarded full points for authenticity for “once in a blue moon.” The quality of this dialogue may have been impacted by the Learner-Generated Images, which they chose to include on the bottom of the page. Their dialogue was scored at 8/8 for appropriate use of the VP Idiom (see Appendix G). Having produced an image of the idea before having written about it may have elicited what Paivio (1990) called a Dual Trace within the mind. According to DCT, a Dual Trace happens when cognitive processing occurs at the Referential Level, wherein the learner associates the verbal word or phrase with its image. From a cognitive standpoint, the brain encodes images as Imagens, i.e., codes formed by the brain in response to images but encodes words or phrases as Logogens. When the human brain forms a mental association between these codes, it vastly increases the likelihood of memorization. Clark and Paivio (1991) emphasize the effectiveness of exploiting the mental association between image and verbal input for educational purposes. Tabatabaei and Mirzai’s (2014) study was designed to encourage this cognitive association, and its results point to its effectiveness. Working in an Iranian EFL context, these researchers
employed hypertexts and hyper-images with the contexts containing the target idioms that were assigned to the participants. Some of the participants had only clickable images, some had hypertext definitions, and some had both. Their results show a statistical difference between the control group, which had neither, and the experimental groups, with the highest scores for those that had both the hyper-images and the hypertext. In the current study, the student writers did not embed hyper-text into the document for their dialogue, but the fact that they inserted into the document the images they had made with Paint was conducive to establishing a referential connection between the images and the VP Idiom. This spontaneous decision to include miniature depictions of “once in a blue moon” may have facilitated their appropriate use of this target idiom.

Participant #8- “the silver lining.”

In many ways, the student who submitted the following dialogue wrote well, choosing an appropriate context for the target VP idiom, including some sophisticated vocabulary, and realistic dialogue. However, in this case, his consistent misspelling of “silver” changed the meaning.

**Idioms:** a sliver [sic] lining

**Characters:**

Mario: A man whose company unfortunately went bankrupt.

Rafael: The [sic] friend of Mario

**Background:** Mario’s company went bankrupt; he felt so sad. His friend Rafael tried to comfort him and provided him with some suggestion.

**Rafael:** My friend, are you all right? You look so sad.

**Mario:** I am very disappointed now, and I don’t know how to deal with my problem.
**Rafael:** What’s wrong?

**Mario:** My company went bankrupt, I lost my company and lot of money.

**Rafael:** Oh my god, I’m really sorry to hear that.

**Mario:** I don’t know what should I [sic] do now, and I also don’t know how to face my fault. I made misjudgement [sic] of market situation, so I made a wrong decision which made me couldn’t afford deficit.

**Rafael:** Take it easy my friend, I know this thing have [has] dealt a heavy blow to you, but I believe that there will still have a sliver [sic] lining.

**Mario:** Really? I can’t see any hope.

**Rafael:** Of course, your company went bankrupt, but you still have chance to rebuild it again even though you have lost a large sum of money, but you still have enough money for entrepreneurship.

What’s more, you can learn many things and gain experience from this failure, so you will never make same mistake.

**Mario:** You’re right; I should bestir myself and have another try, I will never give in to my unfortunate destiny.

The researcher infers that the student writer made an effort to include vocabulary words, such as “bestir” and “entrepreneurship” to precisely fit the meaning that he intended to convey. The context in which the VP Idiom was used was judged to be perfectly appropriate.

Nevertheless, the erroneous form detracts from conveying the meaning. Even after the researcher pointed out the misspelling to the student writer, he did not seem to notice it. Previous research has investigated ways to make the students aware of their errors. In the *Noticing Hypothesis* (Schmidt, 1990) makes the assertion that features of the language will not be acquired correctly
unless the learner first notices them. For input to become intake, the student must be aware of the linguistic feature, which applies to the spelling as well as grammar. Schmidt argues that individual differences have a major impact on attention; nevertheless, instruction that arouses interest is more likely to elicit awareness of the target linguistic features. Research has investigated possible ways of making the students notice the composition of target idioms, with inconclusive results (Pam & Karimi, 2016; Stengers et al., 2016). The website for the current investigation did not anticipate misspelling. Possibly, given the apparent effectiveness of using pictures, the inclusion of a non-example such as a depiction of a tiny, sharp piece of wood lodged into human skin, captioned with “sliver” would have been helpful. Following the advice provided by Vasiljevic (2015b) may be a way to facilitate the students’ noticing and subsequent production of an idiom in its exact form.

Based on many years of research, Vasiljevic (2015b) comprised recommendations for teaching idioms to EFL/ESL students. Her recommendations build upon Schmidt’s (1990) Noticing Hypothesis, including attention and awareness, which are integral to L2 language learning. Attention and awareness are particularly essential in acquiring idioms since an L2 learner is likely to commit an error in the form of an idiom, even if s/he comprehends it (Liontas, 2008; Stengers et al. 2016; Vasiljevic 2015b). Given the fact that natural human conversation emphasizes meaning “if the idiom meaning is inferred correctly … it is unlikely that learners will pay attention to the exact wording of the phrase” (Vasiljevic, 2015b, p. 3). This precision in wording is indispensable, given the fact that idioms are transformationally deficient, especially in regard to lexis (Fernando & Flavel, 1981). According to Vasiljevic (2015b), vocabulary learning entails all of the following: noticing, encoding, storage, and retrieval. Planned and appropriate learning activities are needed to set in motion this process of effective vocabulary learning.
Along with optimal instruction, attention and awareness within the individual student provide a fertile ground for acquiring L2 idioms.

Among the researchers who have provided specific pedagogical advice for teaching idioms to L2 learners, Vasiljevic’s (2015b) advice includes ways to counteract the students’ tendency to make errors in form even when they grasp the meaning. She emphasizes the need for *explicit* instruction because the lexicogramatical properties of idiomatic phrases are not obvious to them. The speaker/writer is limited insofar as his/her choice of words and some syntactic properties. As noted previously, idioms reflect culture and history; learners may have insufficient awareness of the target culture and its history to aid in inferring the idiom’s meaning. She recommends the following to elicit *noticing*. Design task-based instruction since previous research suggests that students retain in memory that which they need for project completion. For example, Vasiljevic (2015b) advises the instructor to present the target idiom within a question. To facilitated *encoding*, s/he should group idioms according to conceptual metaphor. Numerous idioms could be categorized under the metaphor, IDEAS ARE FOOD, such as “food for thought” and “to sink one’s teeth into something.” She rationalizes this through Lakoff and Johnson’s (1980) work wherein they explain *Conceptual Metaphor Theory*, including their premise that metaphors arise due to human experience in the body and in interaction with others. The language reflects such underlying and usually unspoken experiences and beliefs. According to Vasiljevic (2015b), the approach of presenting idioms as groups organized by conceptual metaphor has resulted in greater retention. She also makes reference to research previously cited for the current study that suggests the efficacy of designing instruction with the *DCT* (Paivio, 1990) in mind. Vasiljevic recommends showing the students pictures associated with the target idioms *and* explaining the etymologies, as this will stimulate the development of a mental image.
for the idioms. She argues that the use of images and etymologies elicit memorization, referred to here as *storage*. This approach has been shown to promote comprehension and recall.

Regarding retrieval, instructors must review previously taught idioms since repetition brings out the learners’ ability to pull information back into conscious awareness (Tulving, 1967, as cited in Vasiljevic, 2015b). Frequent and short lessons, followed by a review of previously learned material, facilitate *retrieval*. Vasiljevic’s targeted recommendations explained above have influenced the researcher’s conclusion, wherein she integrates it with the advice of Liontas (2008, 2015). Such suggestions may also apply to the presentation of VP idioms within an authentic context.

**Authentic contexts condition.**

The complexity of the related concepts and facts necessary for comprehension of the first authentic context, “Message from the Future,” (Klein, et al., 2019) necessitated two full class periods. Initially, the researcher had intended to use excerpts from soap operas because they contain ample occurrences of VP Idioms; this assumption was tested and confirmed by searching for the occurrence of VP Idioms in the SOAP (Davies, 2011). Additionally, soap operas rarely use sophisticated academic or professional jargon. The uncomplicated vocabulary that conveys the emotions and thoughts of the interlocutors in the soap operas fits the context since these TV programs have no intended educational purpose. Rather, they entertain by dramatizing human relationships. These generalizations align with the purpose of soap operas given by Greg Meng (2015), a longtime producer of the American soap, *Days of Our Lives*. Nevertheless, the students enrolled in the EAP program from which the researcher drew participants had specific goals for higher education and presumably expected to have academic content. After using discernment, neither the director of the language institute nor the researcher could find any instructional value
in the soap operas other than the occurrence of the VP Idioms, unique phrases that can be found in factual texts or those of more considerable cultural significance. This influenced the researcher’s decision to change the authentic context. The alternative audio-visual context is a 7-minute YouTube, “Message from the Future with Alexandria Ocasio-Cortez” (Klein et al., 2019), the content of which addresses a critical issue of our time, *Global Climate Change*, and how to fight it.

The comprehensibility of this text was enhanced by the YouTube video itself, wherein each of the main points of the narrator is depicted as her story proceeds. The researcher endeavored to invest adequate time and supplementary material to teach the related and possibly requisite concepts of carbon-neutral energy, the smart grid, and the effects of Global Climate Change that have already been documented. While viewing and listening to the video, students had the option of using the closed captions in English. The decision to allow students to use the associated captions was influenced by research, the results of which revealed that both associated imagery and on-screen text facilitate vocabulary acquisition (Peters, 2019). Participants in Peters’ (2019) study viewed a short film in the target language under three conditions, (1) captions in the target language (2) sub-titles in the L1, (3) neither. The results of their multi-factorial analysis show that watching videos with captions in the target language is more conducive to vocabulary acquisition than having L1 sub-titles or no associated words. Learning vocabulary in the current study meant acquiring the meaning of the VP Idioms despite the fact that many non-idiomatic words were introduced in the course of providing necessary background information.

A few of the participants in the current study chose to base their dialogue on the target VP Idiom, “the lion’s share,” which occurred in the context of “A Message from the Future”
(Klein, et al., 2019). Despite the illustration of the audio-text, the pre-teaching of non-VP idiom vocabulary, and prerequisite mini-lessons relevant to clean energy, 40% of the dialogues that included “the lion’s share” failed to meet the criteria for appropriate VP idiom use. The intrinsic cognitive load of this task may have detracted from the students’ success in grasping the meaning of the three target idioms taught under this condition, which will be elucidated in the discussion following the quantitative results. The first example shown below falls within the range of appropriateness set by the benchmarks of the rubric.

Participants #8 and #9 – “the lion’s share.”

Characters are Jack (a student) and Bob (the [sic] friend of Jack).

Background: After vacation, Jack and Bob get together talk about their experience.

Jack: Hello Bob, how’s it going?

Bob: Fine, thank you, what about you?

Jack: Not bad, I had experienced a fantasy but busy holiday. . .

Bob: It’s really a good trip, but why you feel busy. [sic]

Jack: Because the time is a little tight and I spent many hours on the road, [sic] that made me feel very tried. What did you do during your vacation?

Bob: I went to some interesting place and held a party.

Jack: It must be unforgettable vacation, what about your party?

Bob: Of course, it’s a nice party, I held the party in my apartment and purchased some food and beer.

Jack: Cool, you must have drunk lots of beer.

Bob: No, I only drank a little, but I ate the lion’s share of food because I’m [sic] hungry.
Sinclair and Moon (2011) define “the lion’s share” as follows. “If you get the lion’s share of something, you get the biggest part of it” (p. 280). The etymology refers to Aesop’s (2001) fable ‘The Lion and his Fellow Hunters,’ in which a lion goes hunting with several other animals and takes everything that they catch for himself, instead of sharing it with them” (p. 280). The conversation above discusses the participant’s greed at his own party, which earned 8/8 points based upon the criteria explained on the rubric and aligned well with the definition.

**Participant #3 – “testing the waters.”**

Despite the following participant’s refusal to edit for grammar, he captured the meaning of the VP Idiom, “testing the waters.” Unlike other examples in this dissertation, the following has been edited for grammar.

**Background:** Whab is like an expert when it comes to talking to girls and knowing when a girl is open for a chat. The conversation goes between Whab and Abdul-Aziz. Abdul-Aziz wanted to learn from him. This talk happened in a coffee shop.

**Abdul-Aziz:** Hey, tell me how you always know when and how to start talking to the girls. How do you do that?

**Whab:** When it comes to girls, both sides will test the waters; they want to make sure that the other person is giving them signs. This is the key.

**Abdul-Aziz:** Most of the time it’s confusing. Suppose she is already smiling. If I make a move in the wrong way, I will lose the chance.

**Whab:** Of course, you are right. You will not make your move at all until you sure (at least 70%) that she is ok with it.

**Abdul-Aziz:** Teach me.
Whab: Start with some looks and then smile. If you have the chance to make a complement, do that or make her laugh.

Abdul-Aziz: And then?

Whab: If she responds, start to talk and try to listen carefully to what she says. That is the key.

Abdul-Aziz: Thank you so much.

Whab: You’re welcome buddy.

Sinclair and Moon (2011) define “testing the waters” as follows. “If you test the waters, you try to find out people’s opinions about an idea or plan before you put that idea or plan into practice” (p. 476). Abdul-Aziz planned to connect with a potential girlfriend and sought advice from a friend on how to do it. Whab’s advice about being sure the potential girlfriend “is okay with it, at least 70%,” listening, and watching for “signs” could be considered ways to ascertain the feelings and disposition towards a friendship on the part of the intended object (the girl). In other words, Abdul-Aziz’s friend wanted him to “test the waters” of a possible date before he asked for it. This scenario occurs in an authentic context, within which the idiom is written. In the researcher’s judgment, the idiom “testing the waters” fits into the dialogue precisely.

“Testing the waters” occurs not in the “Message from the Future” (Klein et al., 2019) but rather in the second authentic context, Oprah Winfrey’s (CNN, 2018) speech in support of the candidacy of Stacy Abrams for governor of Georgia. The students’ demonstrated interest in this speech led the visiting instructor to air more of it than originally planned. A great deal of new vocabulary (in addition to the idioms) may have complicated this task for the participants, leaving fewer attentional resources remaining to grasp the VP Idioms. Both the qualitative results
presented above and the quantitative results should be viewed through the lens of CLT (Sweller, 1988; Paas, Renkl, & Sweller, 2003), which will be discussed below.

**Quantitative Results**

The results evoked a nuanced interpretation. As mentioned above, the ideal research design would have included three separate classrooms with a minimum of 20 students each. This was not possible due to constraints imposed by the research site. Given one classroom during the summer session in which fewer students are enrolled, the researcher proceeded with the instructional interventions and collected data from a sample of eleven students, all of whom passed through each of the three conditions: control, Learner-Generated Images, and Authentic Contexts. Hence, the researcher chose to use a repeated measures ANOVA.

By using the repeated measures ANOVA and a Greenhouse-Geiser correction, the researcher ascertained that post-test scores differed significantly between types of treatment \( (F(1.326, 13.260) = 3.367, p = .80) \). As advised by Larson-Hall (2010) and explained in Chapter 3, alpha had been set at \( p < .10 \). Thus, the \( p \) value suggests that a statistical difference exists when one compares all three tests. Next, the researcher ran Mauchly’s test of sphericity. Sphericity based on this data set, however, cannot be assumed because the significance = .041, which is less than .10. Research question #2 calls for a comparison of each type of treatment with control (i.e., traditional) approach, in other words, the pairwise comparisons. Bonferroni correction was used in Post hoc tests although, given the small number of comparisons, an LSD test may have been more appropriate.
Table 5: Post-test Results

<table>
<thead>
<tr>
<th>Type of Intervention</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>11</td>
<td>3.09</td>
<td>1.221</td>
</tr>
<tr>
<td>Learner-Generated Images</td>
<td>11</td>
<td>4.18</td>
<td>.751</td>
</tr>
<tr>
<td>Authentic Contexts</td>
<td>11</td>
<td>3.18</td>
<td>1.722</td>
</tr>
</tbody>
</table>

A rationale for using a Bonferroni correction, which is one of several possible post-hoc tests, is offered. When a researcher conducts multiple tests, the probability of committing a Type I error increases. In other words, the researcher runs a greater risk of concluding that there is a statistically significant difference when none exists. The method devised by Bonferroni minimizes this risk by dividing the alpha level by the number of tests (Bland & Altman, 1995). Both Bland and Altman (1995) and Larson-Hall (2010) note that the Bonferroni test is conservative and most appropriately selected for comparisons of greater than three. Whatever the case, the decision to use this type of correction, was made before the researcher conducted the tests, as recommended by Glass and Hopkins (2008).

Table 6: Pairwise Comparisons

<table>
<thead>
<tr>
<th>Source – Method</th>
<th>Type 3 SS</th>
<th>df</th>
<th>Mean SS</th>
<th>F</th>
<th>Sig. Squared</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sphericity Assumed</td>
<td>8.061</td>
<td>2</td>
<td>4.03</td>
<td>3.367</td>
<td>.055</td>
<td>.252</td>
</tr>
</tbody>
</table>

The slight difference in mean scores between the Authentic Contexts condition and the Control anticipated what the statistical analysis confirms. The results show that the Authentic Contexts condition had a minuscule effect (if any) on receptive knowledge in comparison to the Control Condition (3.09 +or- 1.22 versus 3.18 +or- 1.72). This was not statistically significant. (p=1.000). The pairwise comparison between the Control Condition and the Learner-Generated Images condition leads to the cautious interpretation that the Learner-Generated Images
condition may have been more effective in eliciting comprehension of idioms compared to the Control Condition based upon the post-test scores (p=.094). Using SPSS statistical software, the researcher ascertained a moderate effect size, $d = .252$. Conceding a 10% possibility of committing a Type 1 error, one may infer from the results an affirmative answer to RQ#1, “Does a multimodal approach to idiom instruction compare with that of a traditional approach?” This difference applies only to the Learner-Generated Images.

In sum, the quantitative results need to be replicated with a larger group and the most appropriate post-hoc tests in order to be stated with certainty. With alpha set at .10, the null hypothesis can be rejected insofar as the relative effectiveness between the Learner-Generated Images Condition and the Control (i.e., Traditional) Condition. Reasons that may explain why the Authentic Context Condition did not significantly differ from the Control Condition will be discussed in terms of CLT (Sweller, 1988; Sweller, et al., 2011).

**Discussion of Results**

A review of CLT theory may aid in seeing how it applies to the results of the current study. CLT theory posits that there are three types of cognitive load, only one of which, *Germane*, is facilitative to learning. Of the other two, *Intrinsic Cognitive Load* obtains when the task inherently places a burden on the learner’s working memory simply because the task itself is complex or multi-faceted. *Extraneous Cognitive Load* occurs when the instructional intervention unintentionally creates difficulty for students by requiring them to do unnecessary searches or tasks that are non-essential to acquiring the target skill or concept. Intrinsic Cognitive Load is implicit in the task itself, whereas Extraneous Cognitive Load is created by errors in instructional decisions.
A characteristic of some learning tasks, *High Element Interactivity*, often co-occurs with Intrinsic Cognitive Load. High element interactivity, which may have been a characteristic of the authentic contexts selected by the researcher, characterizes the task itself rather than the learner’s cognitive response. It describes project completion tasks for students wherein they must employ multiple prerequisite skills or concepts in order to grasp the material and/or successfully complete the task (Paas, Renkl, & Sweller, 2003). For example, to make a website without using a website maker application, the designer needs to have skills of using code, selecting images with the appropriate number of pixels, and the like. Sweller (1988) states that tasks with high element interactivity tend to be more difficult and potentially frustrating under most learning conditions. This may apply to the authentic contexts for the current research in that that ample prior knowledge regarding Global Climate Change and the infrastructure changes needed to avert it may have constituted an intrinsically complex task. However, Sweller (1988) states that if the educator designs the instruction in an optimal way, to complement how the brain cognizes material, tasks with intrinsic cognitive load can be mastered without frustration.

To comprehend the video, “A Message from the Future” (Klein et al., 2019), the students’ working memories had to grapple with several new concepts and the related vocabulary. The concepts include the relationship between coal/oil production and Global Climate Change, the massive changes in the infrastructure needed to implement a carbon-free future, the relevant vocabulary, not including the VP Idioms themselves. For Oprah Winfrey’s (CNN, 2018) speech, awareness of American culture insofar as the ethos of equal opportunity, expressed in the song “This Land is Your Land” (Guthrie, 1972), a bit of African American vernacular English, and some awareness of the history of racial discrimination in the U.S. were intended to enable the students to grasp the meaning of this speech. The visiting
instructor/researcher ensured that students had exposure to this requisite knowledge before hearing the speech in its entirety. Applying CLT (Paas, Renkl & Sweller, 2003; Sweller, 1988) to the data, the presentation of these contexts may have necessitated students’ full attention, leaving limited attentional resources to grasp the meaning of the new VP Idioms. The apparent lack of any measurable effect that the Authentic Contexts condition may be rationalized as such, but the reasons for the moderate effectiveness of the Learner-Generated Images intervention should be explored.

Following Paivio’s DCT (1990), recent research has investigated the effectiveness of eliciting the creation of a Dual Trace, which not only facilitates memorization by getting the student to form mental images but also by enabling him/her to outwardly paint or draw what his/her mind’s eye sees. Focusing on cognition rather than pedagogy, Paivio’s (1990) theory posits that when a learner cognitively processes sense data through the Referential Level of Processing, s/he creates a mental image to align with a verbal or mathematical construct. Paivio (1990) states that this Referential Processing creates within the learner’s mind, “a dual trace consisting of the representation that is automatically activated by the input item and the referentially related representation that the subject generates to the input item” (p. 76). In other words, one’s mental image can trigger a memory of the word or phrase. Paivio claims that when the brain cognizes an image, the trace that it leaves in the brain is twice as deep as its verbal equivalent. This, in turn, makes it easier for the thinker to recall the image, which has implications for instruction. Clark and Paivio (1991) explain that images have unique properties and easily form a link with verbal input. As such, according to DCT, “the probability and ease of image arousal play an important role in the representation of text meaning. This hypothesis is clearly supported by research on word meaning, text comprehension, and related phenomena” (p.
Instruction ought to complement the natural workings of the human brain, which performs a mnemonic function via its process of coding, storing, and retrieval of perceptual data. More detailed pedagogical advice will appear in the conclusion section.

**Summary of Results and Discussion**

The results of the current study tenuously support the effectiveness of having students create outward manifestations via the Paint program of their own mental image of an idiom’s literal meaning. This aligns with the findings of Vasiljevic (2012), in an investigation prior to her literature review (2015b) wherein she gave copious pedagogical advice. Vasiljevic’s (2012) investigation led her to conclude that having students create their own images is superior to allowing them to view images in a text or on a PowerPoint passively. Vasiljevic, whose research was theoretically grounded in DCT, conducted research to ascertain the effectiveness of eliciting the production of images from adult EFL learners in Japan. The results of this study support the assertion that when learners generate images by the effort of their own hands and imagination, they are more likely to retain the new vocabulary than if they passively receive images to complement target phrases. Having to exert effort to complete the task of Painting on the computer may have deepened their focus. This follows not only Vasiljevic’s study but also the “search” aspect of the *Involvement Load Hypothesis* (Hulstijn & Laufer, 2001). Of the three aspects of vocabulary learning that they flagged as beneficial to vocabulary learning, “need,” “search,” and “evaluate,” search involves having to use a dictionary, an online tool, and/or the teacher’s knowledge to complete a task involving the vocabulary word. The students made ample use of websites that provide instruction on how to use the Paint program (Microsoft 2010) and asked for guidance from the researcher. The classroom on that day of the intervention seemed like a creative workspace for language learners engaging in a craft to augment their idioms’
acquisition. On a cognitive level, Paivio (1990) refers to the inner process linking a verbal target, such as a word or phrase with an individually contrived image as a “workspace” wherein imagens (mental codes for pictures) are activated with reference to logogens (mental codes for words). As a learner imagines his/her unique picture of the VP Idiom’s literal meaning, and then actively manipulates the drawing tools, his/her mind creates a dual trace that associates the image with the VP idiom. As a result, both the recall of the idiom’s meaning and the skill of writing it are likely to manifest.
CHAPTER V: Conclusion

This dissertation research explored the effects of three instructional interventions on students’ ability to comprehend and produce idioms in light of DCT (Clark & Paivio, 1991; Paivio, 1971, 1990), The Noticing Hypothesis (Schmidt, 1990), and CLT (Sweller, 1988; Paas, Renkl, & Sweller, 2003). While limited in generalizability, this study investigates instruction in VP Idioms via a multi-modal approach and offers tentative conclusions. For the Control Condition, students used the instructional website, including definitions, images, and etymologies for each of the target VP Idioms. For the Learner-Generated Images Condition, the learners’ use of the instructional website was augmented by a hands-on production of his/her idea of the literal meaning of the VP Idiom. Finally, in the Authentic Contexts Condition, students had the affordances offered by the website in addition to watching and listening to three authentic contexts in which the target VP Idioms were spoken. Under all conditions, the instructional website provided definitions and ample supplementary information. After each treatment, the participants wrote a dialogue, which formed the primary basis upon which the researcher inferred their productive ability. Despite some limitations to the study, which are explained below, the researcher tentatively concludes that the multi-modal approach to instruction in VP Idioms, including definitions, websites, Learner-Generated Images, had a positive effect on both production and comprehension of VP Idioms. Given the quantitative results, however, the null hypothesis cannot be rejected for the use of authentic video clips, the effects of which seem to be negligible. These results seem to contradict the finding of several other studies that involved the use of authentic contexts (Freyn & Gross, 2017; Khonbi &
Sadeghi, 2017; Khoshnevisan, 2019; Wong & Looi, 2010) and pedagogical advice provided by Lontias (2008, 2015, 2017a) and Cakir (2011). The researcher has suggested possible reasons why the current implementation of authentic contexts fell short of effectiveness. One reason could be the lack of adequate time for students to complete the writing task. Although the researcher would have preferred more time, the course instructor had a syllabus to follow and the researcher preferred to respectfully remain within the time limits that had been permitted by the research site. Another reason pertains to the Modality Effect, in that the students, especially for the “Message from the Future with Alexandria Ocasio-Cortez” (Klein et al., 2019), simultaneously had a visual depiction of the narration, audio narration, and a written script. In deciding to use the scripts and captions, the researcher followed numerous studies, the results of which suggest that using both L2 audio and L2 captions with video promotes English language learners’ vocabulary acquisition (Fazilatfar, Ghorbani, & Samavarchi, 2012; Hui, 2007; Montero-Perez, Noortgate, & Desmet, 2013; Montero Perez, et al., 2018; Peters, 2019). Such an approach could be called into question by experts in multimedia learning. Instructional designers who follow Mayer’s (2005) *Cognitive Theory of Multimedia Learning* may argue that the use of visuals, text, and narration together is likely to increase the cognitive load. According to this theory, the learners’ visual modality should attend to the illustrations while their aural modality attends to the words conveyed in the spoken narration (Koscianski & Zanotto, 2014; Mayer, 2005). However, according to Mayer (2012), this principle does not apply when the students are non-native speakers. Given the fact that all participants in the current study were non-native speakers of English, the researcher infers that the task complexity (i.e., the intrinsic cognitive load of the texts provided for the students) hampered students’ efforts to acquire the target idioms. In other words, the authentic contexts were substantially too complex in vocabulary and
semantic content. Following *Cognitive Load Theory* (Sweller, 1988), the researcher concludes that the participants’ attentional resources were engaged to full capacity in processing the content, leaving inadequate attentional resources for the acquisition of the target VP Idioms.

**Effects of the Multi-Modal Approach upon Production**

Regarding production, 83% of the submissions for both the Control and the Learner-Generated Images Condition manifested appropriate usage of the VP Idioms. A few students made errors in the form of the idioms “have a silver lining” and “testing the waters.” They wrote, “have a sliver lining,” or “testing the water.” Overall, the accuracy of the participants’ production of idioms seems to have varied more between individual writers, or teams of writers, than between instructional interventions. Reasons why the Learner-Generated Images intervention positively affected production and why students under the control condition composed native-like dialogues for *one* of the VP Idioms have been discussed. After gleaning the main points from previous research that applies most closely to the current study, the researcher reflected upon the pedagogical advice of Liotas (2015, 2017b) and Vasiljevic (2015b). The researcher’s synthesis and reflective judgment based on these studies and the outcomes of the current study have led her to suggest a research-based approach for Idiom Training that simultaneously monitors and addresses errors in form.

The scholarly work of past researchers (Hagshenas & Hashemian, 2016; Tabatabaei & Mirzaei, 2014) sheds light on the reason why many students who learned the VP Idioms taught under the Control Condition were able to write dialogues in which the VP Idiom was used appropriately. With one exception, all students wrote about “bite the bullet.” Both “bite the bullet” and “cross the Rubicon” had rich historical background information, provided on the instructional website and enhanced during face-to-face instruction by this visiting researcher.
While the learning activities of this research study did not require any induction, as with the studies following Boers et al. (2004) that employed etymological elaboration, the students had access to the etymologies via the website and the visiting instructor. Numerous studies have confirmed the effectiveness of etymological elaboration (Bagheri & Fazel, 2010; Baleghizadeh & Bagheri, 2012; Boers et al., 2004; Boers et al., 2007; Noroozi & Salehi, 2013). Furthermore, the definitions of the target VP Idioms were given together with images. This means that participants in the current study had both the associated images and the etymologies, an approach that has been found to be highly effective, perhaps more so than either in isolation (Hagshenas & Hashemian, 2016; Tabatabaei & Mirzaei, 2014). The researcher may have introduced a confounding variable in providing both.

Regarding receptive knowledge of the VP Idioms, the evidence suggests that eliciting Learner-Generated Images, in combination with using the instructional website, had a positive effect, given the statistical difference in test scores between this condition and both the Control and the Authentic Context conditions. Pairwise comparisons of post-test scores reveal that only the Learner-Generated Images condition had an effect that was measurably different from the Control Condition, that is, it showed a statistical difference in mean scores, with a moderate effect size, $d = .252$. While some caveats exist, the fact that the results lead to the rejection of the null hypothesis, but only for the Learner-Generated Images condition, leads to cautious optimism and plans for future implementation.

**Pedagogical Recommendations & Limitations to the Study**

**Limitations to the study.**

The researcher concedes limited generalizability based upon the small sample size ($n=11$) in this study, which compared the effects of three instructional interventions. Other limitations to
the study include the choice of authentic materials, the lack of a specific calculation of inter-rater reliability, the inadequacy of the feedback, and a misjudgment regarding the statistical analysis, to be explained in turn. The sample size and the fact that all participants passed through each of the three conditions, rather than having participants in three or more groups wherein each experienced only one of the interventions, was an area wherein the current research design could have been improved. Given the availability of participants and practical collaboration with the research site, a less thorough, and possibly less valid research design, was deemed to be adequate even if the findings are not conclusive. Another limitation to this study was the absence of inter-rater reliability. While the cooperating instructor read a few of the submissions, one each for the control, the Learner-Generated Images, and the Authentic Contexts, the study would have been stronger if more texts had been read and a quantitative analysis of reliability been calculated. The researcher and the second reader (instructor) achieved perfect agreement on scores but only three dialogues were double read.

It must be acknowledged that the researcher’s choice of Authentic Contexts may not have been appropriate for the participants, in light of CLT (Pass, Renkl, & Sweller, 2003; Sweller, et al., 2011). As explained in detail in the discussion, the results for the Authentic Contexts condition seem to contradict the findings of numerous other studies (Freyn & Gross, 2017; Khonbi & Sadeghi, 2017; Khoshnevisan, 2019; Rohani, et al.; Wong & Looi, 2010). Why? The pedagogy of CLT addresses how to align the informational structures with the cognitive architecture so that the new information can be processed and fit into an existing information structure. Learning happens when the cognitive load does not exceed the limits of the working memory (Paas et al., 2003). In Message from the Future (Klein et al., 2019), the students’ minds had to process new vocabulary and concepts such as the “smart grid,” “Global Climate Change,”
“The Green New Deal,” and more. For Winfrey’s speech in support of Abrams’ 2018 gubernatorial candidacy (CNN, 2018), the learners had to grapple with some African American vernacular English and the history of racial oppression in the U.S. The intrinsic cognitive load of these authentic contexts may have overwhelmed the students’ working memory, interfering with their ability to encode the new target phrases, i.e. the VP Idioms.

In the design of future studies or of implementation of Idioms Training in the classroom, the instructor/researcher should ensure that the material is level appropriate. To avoid overwhelming students with complex audio-visual materials containing target idioms, the researcher in the current study could have used authentic contexts from TV soap operas, wherein the plot mainly revolves around relationships, romance, and human misunderstandings, such as could occur elsewhere in the world. This type of context needs little (if any) background information or new vocabulary beyond the VP Idioms. If future researchers choose to use authentic contexts that provide academically worthwhile material, which often includes unfamiliar vocabulary, they ought to dedicate ample time to building requisite background information and vocabulary needed to grasp it. During the implementation, future researchers should also probe to check comprehension. Given the lack of homework in the summer course, in which the data collection took place, more than two days for the Authentic Image Condition would have been more facilitative in ensuring that learners had adequately digested the background information before going on to the target idiom and the context itself.

The inadequate feedback and the choice of Bonferroni correction must be noted. The course in which the data collection took place was a summer course, in which students had been promised by the director and the cooperating teacher that there would be no homework. Revealing their diligence and willingness to cooperate with the researcher, several of them spent
extra time outside of the classroom in order to finish their dialogues. However, students only submitted one draft. Upon request, the researcher provided feedback in person to three of the participants who wanted to have her check their use of the idioms. Students were also invited to submit a draft via email for the same purpose. The latter resulted in corrections by one student, and the former resulted in corrections by two students. Nevertheless, the face-to-face mini-conference on the dialogue containing the erroneous phrase, “the sliver [sic] lining” fell on deaf ears, so to speak. It would have been helpful to use a picture of a finger with a sliver stuck in the skin, labelled “sliver.” This could have been contrasted with a picture of a silver item or even the silver in the sample illustration created by the researcher in guiding students to use the Paint program. This could have been followed by a minimal pairs exercise to emphasize the slight difference in pronunciation (as well as spelling) between “sliver” and “silver.” As noted in the results and discussion, the conservative Bonferroni correction was less appropriate than an LSD test would have been. Furthermore, no empirical data was provided to support the researcher’s intuition that students were overwhelmed by the intrinsic cognitive load of the authentic texts.

Questions that emerged from reflection upon research design.

It has been said that conducting research elicits as many questions as it answers. Questions that arose from this research study could possibly be addressed in future investigations. The following have been posed partly as limitations and partly as directions that future researchers could take in investigating how best to teach VP Idioms to non-native speakers of English.

(1) In the current study, L1 speakers of four different languages (Arabic, Mandarin Chinese, Japanese, Cantonese) were in one in-tact classroom; their dialogues and test scores were only sorted by the type of intervention. Suppose that researchers
conducted the identical instructional intervention as in the current study, but afterward sorted the data according to L1? This would not require multiple classrooms. This means that there would be pre-test scores, post-test scores, and one dialogue per student for each type of intervention, but these would be sorted into data sets according to students’ L1s. For example, there may be data regarding the major L1 groups that comprise the class, such as Arabic, Mandarin Chinese, and so on, based on students’ self-report. Clearly, the selection of language groups to be analysed would depend upon the population under investigation. Such an approach would aim to discover if there is an interaction effect between type of treatment and L1.

(2) How would using authentic contexts that required only general knowledge and little (if any) novel vocabulary, except for the target VP Idioms, affect the post-test scores? For example, short clips from American soap operas could replace the clips by Klein et al. (2019) and Oprah’s speech (CNN, 2019), which contained academic vocabulary. How would the use of soap opera clips for the intervention affect the quality of the student dialogues that were written under the Authentic Contexts condition? This change in the instructional intervention could reveal whether avoiding instructional materials that have High Element Interactivity (Paas, Renkl, & Sweller, 2003) helps students to comprehend VP Idioms taught via authentic contexts.

(3) Providing that an adequate number of participants were available, what would be the effects of planning the research study to be quasi-experimental? In other words, the instructional activities for each type of intervention would happen in a separate
classroom. This would investigate the same questions as posed in the current study but provide more robust statistical results.

**Pedagogical Recommendations**

After reflecting upon the results, recommendations emerged that are influenced by *The Noticing Hypothesis* (Schmidt, 1990), and DCT (Paivio, 1971, 1990; Clark & Paivio, 1991), with specific strategies influenced by Lontias (2008, 2015, 2017b) and Vasiljevic (2012, 2015b).

**Pedagogical advice regarding errors in form.**

Unlike researchers in studies who anticipated that students would make errors in form and therefore experimented with a way to prevent them (Alshaikhi, 2018; Kim & Nam, 2017; Pam & Karimi, 2016; Stengers et al., 2016), the current study lacked a planned strategy to ensure that learners would observe the correct form of the idiom. The correct form includes choice of words, grammar, and spelling. For example, suppose that a word choice error interferes with the meaning of the idiom “play second fiddle.” If the learner were to write or speak, “play second violin,” it fails to convey the idiomatic meaning because this phrase, in the researcher’s judgment, conveys exclusively a literal meaning, unlike “play second fiddle,” which can have either a literal or figurative meaning. The fact that the strategies attempted by the above researchers did not have the intended result, preempting errors in the form, means that the instructor should explore other way(s) to address this problem. In the current research, two of the participants wrote “sliver” instead of “silver” for the VP Idiom, “have a silver lining” although a hint from the instructor caused one of them to notice and correct his mistake before submitting his assignment through Canvas. Another group wrote, “testing the water” instead of “testing the waters.” This non-standard usage changes the meaning somewhat. “Testing the water” is something scientists do to ascertain water quality or would-be swimmers might do in the spring.
Here again, the misspelled phrase that the student intended to be idiomatic conveys a literal meaning. “Sliver” has an entirely different meaning from “silver,” resulting in a non-native speaker-like attempt at employing a VP Idiom. Spontaneous oral feedback prevented one of these errors, but since the students only submitted one draft of their dialogues, the opportunity to give written feedback came only if the student requested it. The advice of two experts who specialize in idioms may offer ways that future instructors can elicit the production of the correct form.

Liontas’ (2015) investigation was forthright in providing specific and practical ways to teach idioms, that is, *Idioms Training*. While reading independently, the L2 learner’s first step in comprehending the idiom’s meaning is to notice the figurative language. The learner must recognize that the idiom is not to be understood literally. In instructed learning settings, the teacher’s presence expedites this since s/he can use strategies to make the learner aware of the idiomatic vocabulary. In addition to traditional textual enhancement, the instructor must stimulate the students’ attention. In this regard, Liontas’ (2015) advice can be synthesized with that of Vasiljevic (2015b), who argues that students’ interest should be stimulated within a supportive and encouraging environment, wherein there is minimal stress. This stimulating but emotionally safe environment facilitates attention to the task at hand. Liontas (2015) urges practitioners to pay attention to the following essential components of Idiom Training. (1) Teachers must find material that is level-appropriate, and (2) engage student interest. Liontas’ (2015) sequence for practitioners continues with: (3) being aware of students’ proficiency levels and the appropriateness of materials. (4) While teaching, the instructor must have both “consciousness raising” activities (Smith, 1981, as cited in Liontas, 2015) and practice. The former makes students aware of idioms and how they are used. To use Schmidt’s (1990)
terminology, these activities elicit *Noticing*. Lontas further advises that practice should include some pushed production and authentic dialogue. (5) The instructor who is *on his/her toes* is aware of the learners’ output and re-directs them if errors in form occur. The instructor must observe and provide both positive reinforcement and corrective feedback as needed. Lontas (2015) reminds practitioners that learners may benefit from the metalinguistic information that accompanies indirect feedback. He also states that after adequate input and idiom training, the student must be pushed to produce the idioms. In fact, results of several studies wherein the students were pushed to speak the idioms in oral interactions suggest that this strategy may be effective in eliciting correct production (Khabiri & Masoumpanah, 2012; Khonbi & Sadeghi, 2017; Shirazi & Talebinezhad, 2013). Lontas’ approach, when implemented effectively, arouses students’ attention, which is requisite to language learning. He provides further advice on how to make the learners notice the target idiom, including its precise form.

As an integral part of this training, Lontas (2008, 2015) recommends having *Focus on Form* activities. Following Long’s (1991) *Output Hypothesis*, Focus-on-Form entails embedding mini-grammar lessons within an authentic conversation in the target language for communicative purposes, as explained above. In the case of idioms instruction, this means that the instructor must find ways to make the students notice the precise wording of the idiom, including spelling, since incorrect spelling can impact the meaning. Previous researchers have acknowledged that students who grasp the idiom’s meaning may not be able to produce it correctly, yet their interventions have not resulted in making the participants aware of the correct form (Kim & Nam, 2017; Pam & Karimi, 2016; Stengers et al., 2016). Hence, this researcher endorses Lontas’ (2015) advice that instructors who plan to teach VP Idioms use *Focus on Form* (Long, 1991) to elicit noticing and error correction. As Schmidt (1990) concluded in his much-cited case
study, the learner who is unaware of a grammatical feature is unlikely to produce it correctly. Along similar lines, Vasiljevic (2015b) writes that conversation emphasizes meaning; therefore, “if the idiom meaning is inferred correctly . . . it is unlikely that learners will pay attention to the exact wording of the phrase” (p. 3). Precision in wording is indispensable given the fact that idioms are transformationally deficient, especially in regard to lexis. Applying the Noticing Hypothesis (Schmidt 1990) to the current study, the researcher infers that noticing followed by attention and awareness may be an indispensable first step in the process described by Vasiljevic (2015b) that results in memorization of the phrase. Still, noticing is a necessary but insufficient condition for the acquisition of VP Idioms.

Along with her ample pedagogical advice, Vasiljevic (2015b) offers directions on how to stimulate L2 students’ interest in idioms and guide them through a process that leads to memorization. Vasiljevic recommends that idioms be presented in sets, grouped according to the conceptual metaphor. The metaphors, she argues, embed much cultural and historical information, the understanding of which many researchers, including Kövecses (1995), Liontas (2017b), and Boers et al. (2004) view is essential to idiomatic competence. Vasiljevic urges instructors to guide L2 learners through a process of Noticing, Encoding, Storage, and Retrieval. To facilitate noticing, Vasiljevic recommends that the instructor pose a question with the idiom embedded in it, such that the students must figure out the idiom before being able to answer. Even if they cannot do so without outside resources, it is unlikely that they will ignore the novel phrase. Teachers can help students to encode the information, Vasiljevic advises, through the use of conceptual metaphors. Following Lakoff and Johnson (2003), she claims that knowing the metaphor helps to rationalize the choice of words in an idiom. For example, there are numerous expressions that can be classified under the metaphor, TIME IS MONEY, such as “to buy
(yourself) time,” “(to hit) the big time,” “not to give someone the time of day,” (Sinclair & Moon, 2011, pp. 450-451). If time is money, then one could infer that not to give someone time indicates disapprobation and that “hitting the big time” means success. The teacher can elicit storage through activities that require repetition. She cites studies by Vasiljevic (2011) and Boers (2001). In both cases, participants who had been exposed to the idioms in conceptually grouped sets scored higher on the outcome measure. As with the current study, offering student pictorial support and the etymologies promotes their memorization. Finally, Vasiljevic emphasizes the importance of the affective factor in encoding. McPherron and Randolph (2014 as cited in Vasiljevic, 2015b) explain “that a positive classroom environment and students’ interest in the materials stimulate activity in the frontal lobes and the release of endorphins in the brain, which increases students’ attention to the input and optimizes learning” (p. 11). The importance of preparing and maintaining such a conducive learning environment should not be minimized since Schmidt’s (1990) research has shown that attention and awareness are absolutely essential to the understanding of the words, phrases, or concepts that have been perceived. Vasiljevic (2015b) cites Paivio (1990) in arguing that the association of words and images promotes storage and retrieval. Practical and time-honored strategies for eliciting retrieval include frequent and short periods of practice and review. This practical advice on teaching idioms would complement the participants’ generation of via the Microsoft Paint (2010) digital images that appeared to be effective in the current study. The ambiance of independence and productivity that the researcher observed on the day that students were creating the learner-generated images complements the positive classroom climate that some researchers (Clark & Paivio, 1991; Vasiljevic, 2015b) feel is conducive to learning. This researcher suggests that the making images of VP Idioms with Microsoft Paint, following the advice of Liontas (2017b), fosters students’ interest, their manual
activity, and the association of the logogen with the imagen. Meanwhile, to help students store idioms in their long-term memory, the researcher suggests that future instructors consider adopting Vasiljevic’s (2015b) strategies, which would increase the likelihood of encoding, storage, and retrieval of the target phrases.

This researcher has been influenced by the work of Lontas (2002, 2008, 2015, 2017b) and Vasiljevic (2012, 2015a, 2015b), but would like to infuse insights from corpus linguistics into the selection of prompts and other instructional material. To augment the practical and research-tested advice of Lontas and Vasiljevic, this researcher’s advice to instructors begins with the selection of discussion prompts. An instructor could assign discussion prompts to students in a face-to-face setting. The selection of the prompt should be systematic and not based on the instructor’s assumptions about the contexts in which the phrase is commonly spoken. Clearly, the intention is to elicit from students the appropriate usage of the target idiom(s). This implies the need to select discussion topics wherein a native speaker (spontaneously conversing on said topics) would be likely to use the target idiom(s). A corpus search of the COCA (Davies, 2008) would facilitate the selection of appropriate prompts based on concordance lines, thus reflecting real life speech. This means that the instructor/researcher should enter the target idiom as a query into the box for search and limit the terms to filter out “academic,” so as to avoid overly dense vocabulary and intrinsic cognitive load. After analyzing the hits from the concordance lines that appear, the researcher could find themes that would be narrowed down to topics. What follows is an example using “on the bandwagon” that models the process which this researcher recommends. “On the bandwagon” was selected because it is an idiom considered to be more academic (IELTS, 2018). She entered it into the search box on the COCA (Davies, 2008) interface (see screenshot in Appendix H). After the researcher set the search limits to
include academic, magazine, newspaper, spoken, but to exclude fiction, the result was 204 hits (see Appendix H). The themes that emerged were “marketing new products,” “buying new products,” and “accusations of assault.” Clearly, the latter would be too controversial, but the product themes have potential and appropriateness for classroom use. Armed with this information, the instructor/researcher could write a prompt that would be likely to elicit a dialogue approximating that which had appeared in the COCA (Davies, 2008). In this way, the learners would be guided to produce the language in ways that approximate the truly authentic contexts to be found in the corpus.

Students should be invited to participate in such a dialogue only after the instruction on the idiom’s definition, examples, and the like had been provided. Then the students could engage in a spontaneous dialogue rather than, as in the current research study, a planned dialogue, typed with a word processor. If the assignment requested verbal discussion, the students could make an audio-recording, providing it was made in the classroom with a computer or cellular phone, not as a rehearsed presentation. Alternatively, they could engage in online discussions wherein responding to the conversation in real time as in text messaging is required. This means the scenario would be on the discussion board, and the members of a small group could have an online dialogue, at the same time, if not the same place, and respond to each other’s comments. Suppose that “on the bandwagon” was the target VP Idiom. The instructor could present students, in small groups of no more than four, with a scenario likely to elicit this VP Idiom. “Imagine that you are in a coffee shop talking with your friends about a new product that many of your peers have bought. This could be a product about which you have recently read about or heard advertised through media sources such as the internet, TV, radio, etc. Include in your conversation one of the key idioms that our class has been studying this week.” The instructor
would monitor these dialogues, so that s/he could evaluate and later draw the interlocutors’ attention to both the errors and the positive points in how the students used the VP Idiom. Implementation of this small group discussion based on a prompt, as described, might create a workspace in which the instructor could employ Focus on Form in addressing learners’ real or anticipated errors. Such an approach would follow Lontas’ (2002, 2015, 2017a) advice that students use the idioms in authentic contexts, such as in the study by Fotovatnia and Khaki (2012). Additionally, this approach would follow Lontas’ (2015) pedagogical advice that the instructor provide planned and appropriate practice activities, using authentic interaction that leads to the proceduralization of the idiomatic knowledge, wherein the learners have progressed from merely declarative knowledge of the idiom, and can use it for communicative purposes.

**Holistic Contributions of the Study**

The effectiveness of the Learner-Generated Images condition supports the findings of previous instructional interventions (Freyn & Gross, 2017; Vasiljevic, 2012), pedagogical advice by Lontas (2008; 2015; 2017b), and Paivio’s (1990) DCT. When students draw or paint their own images of the VP Idioms, this action complements and extends the process of forming their own mental images. Through this action, learners bring into concrete realization the image imagined. Such a materialized abstraction has a powerful effect on memory. The ability to recall the definitions of the idioms and associate them with an appropriate context, as measured by the posttests, rests primarily upon memory. Paivio (1990) observes that various factors impact the individual mental process leading to memorization and comprehension, such that “the overall probability of the activation and use of verbal and nonverbal representations is a function of the combined effect of stimulus attributes, instructional and other contextual stimuli, and individual differences” (pp. 68-69). While individual differences cannot be controlled by an instructor, s/he
can maximize the extent to which the learning environment supports the acquisition of idioms, through appropriately designed learning activities (Liontas, 2015, 2017b) and an approach to interactions between instructor and students that empowers students and minimizes anxiety, as recommended by Vasiljevic (2015b). Based on the results of research by Aydin (2017), Cieslicka (2013), and Liontas (2015, 2002, 2001, 2017a), the importance of providing appropriate and naturalistic contextual stimuli for the idioms should not be underestimated.

Finally, the reasons as to why the Authentic Contexts Condition had little effect on students’ acquisition of VP Idioms, while the Learner-Generated Images Condition was relatively more effective should be summarized. Ample sources confirm the indispensability of appropriate context in the comprehension of idioms by L2 learners (Karlsson, 2013; Liontas, 1999, 2001, 2002, 2015, 2017a; 2017b; Rohani et al., 2012). Nevertheless, the authentic contexts provided in this study did not appear to facilitate uptake regarding the target VP Idioms, based on the posttest data. Meanwhile, both the dialogues that were written under the Learner-Generated Images condition and the posttest scores suggest that this strategy was effective. The likelihood that students encountered extraneous cognitive load, which caused an interference, leaving too few attentional resources available for learning the target VP Idioms, has been discussed. Similarly, it has been empirically established that making an association between the image and the phrase promotes comprehension (Andareb & Rouhi, 2014; Aydin, 2017; Fotovatnia & Khaki 2012; Saffarian, Gorjian, & Bavizadeh, 2013; Tabatabaei & Mirzaei, 2014). The relatively fewer studies that employed Learner-Generated Images did not emphasize the importance of manual activity to learning (Chen & Lai, 2013; Freyn & Gross, 2017; Vasiljevic, 2012). The manual activity of making one’s own image may have cognitive benefits beyond that of passively receiving an image to complement an idiom that has been supplied by a textbook or
other course material. Based upon her own systematic experimentation and observation, Maria Montessori (1967, 1969) came to believe that cognitive work and manual work are mutually reinforcing, and promote the development of intelligence, not only in childhood but throughout life. This Italian medical doctor who became a pedagogue argued that early childhood development is about self-construction based on experiential activity, especially with the hands. She explains that the child constructs the human being whom s/he is to become “by means of his hands, first through play, then through work. The hands are the instruments of human intelligence” (Montessori, 1967, Chapter 3). To some extent, the current research involving Learner-Generated Images can be viewed through the lens of Montessori theory. Obviously, the participants were not children, yet this Italian educator claims in a later work, The Formation of Man (Montessori, 1969), that not only learning but optimal character development are likely to occur when manual activity and physical activity are integrated. She states that the streams of energy (both mental and physical) must be united for optimal learning and human development. In Montessori’s (2002) opinion, the imbalance in society between “men without hands and men without heads” was a source of many societal ills. Furthermore, throughout the lifespan, the streams of energy, mental, physical, and affective, should be unified insofar as possible. If Montessori ideas may be applied to the current study, the effectiveness of the Learner-Generated Images intervention may be due to the fact that these images were not manufactured externally but flowed from the creative collaboration between the hand and the mind within each participant. Similarly, Paivio (1990) and his colleague (Clark & Paivio, 1991) posited that transformations between systems (such as the verbal and imaginal) have as their foundation physical action. Clark and Paivio (1991) claim that the theory of DCT and empirical evidence in its support “are relevant to various aspects of human cognition, as well as emotion, motor skills,
and other psychological domains” (p. 150). In conclusion, the motor skill of producing images of VP Idioms may even support the cognitive process of memorization within a supportive learning environment, leading to the comprehension of VP Idioms in L2 learners.
References


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Appendix A: Objective Pre-test

Knowledge of Idioms Assessment

Directions: For each of the following idioms there are four possible figurative meanings. You should select the one that best describes the meaning.

Example << A stitch in time >>

a. If someone says __________________________, they mean that it is better to deal with the problem in its early stages, in order to prevent it from getting worse.

KEY
b. If you describe a very quiet period as _________________________, you mean that it is likely to be followed, or was followed, by a period of trouble or intense activity. (the calm before the storm)

c. If you are ____________________________, you are under great pressure and your future success is being threatened. (under the gun)

d. If you say someone is wearing ________________________, you mean that they are deliberately making their own life unnecessarily unpleasant or uncomfortable, especially by not allowing themselves any luxuries. (a hair shirt)

Since the correct answer is “a,” you would click this within the online quiz.

(1) <<a silver lining>>

a. If you talk about ______________________, you are referring to the most important and powerful people in an organization. (big guns)

b. If you talk about the ______________________, you mean the best people or things in a particular set or group. (cream of the crop)

c. You can refer to a group of people as ______________________ when they have worked in a situation or an organization for a long time. (old guard)

d. ________________ is one good aspect of a situation that is otherwise bad. KEY

(2) <<(don’t) look a gift horse in the mouth.>>

a. If you warn someone not to ____________________________, you are warning them not to reject something completely just because parts of it are bad, as you think that other parts of it are good. (Don’t throw out the baby with the bathwater.)
b. If you say ___________________________, you mean that you should accept something that is offered to you, or take advantage of an opportunity, and not try to find faults or difficulties. KEY

c. People say ___________________________ to warn you that someone or something may not be as good or as valuable as they first appear. (All that glitters is not gold)

d. People say ___________________________ when they want to point out that although something good has happened, the situation may not continue to be good, and you cannot rely on it. (one swallow does not make a summer)

(3) <<cross (crosses) the Rubicon>>

a. If you ___________________________, you make an important decision which cannot be changed, and which will have very important consequences. KEY

b. If you ___________________________, you get involved in something or experience something for the first time. (get your feet wet)

c. If a person ___________________________, they start to behave in a better way than before. (turn over a new leaf)

d. If people (or a person) _____________________________, they leave the situation that they are in, often because they want to have more freedom or want to do something different. (fly the coop)

(4) <<pass with flying colors>>

a. If you ___________________________, you create a role or an opportunity for yourself, especially at work, by doing a particular thing very well. (carve out a niche for yourself)
b. If you ________________, you gain enough experience to deserve a particular job or position. (earn your stripes)

c. If you __________________________, you achieve your goal and are very successful. KEY

d. If a person or their opinion ____________________ in a competition or an argument, they win it. (carry the day)

(5) <<put/s the cart before the horse>>  <<putting the cart before the horse>>

a. If someone who is involved in an activity ______________________, they stop using one method or thing and start using another one, or they stop supporting one person and start supporting someone else. (change horses in mid-stream)

b. If you say that someone is ______________________, you mean that they are doing or saying something which is the opposite of what most other people are doing or saying. (swim against the tide)

c. If you ________________________, you do things in the wrong order. KEY

d. If you ________________________, you try to do a task that is too big for you or too difficult. (bite off more than you can chew)

(6) <<Take the bull by the horns>>

a. If you ________________________, you accept a difficult or unpleasant situation. (bite the bullet)

b. If you ________________________, you try hard to solve a problem by thinking about it. (put on your thinking cap)

c. If you ________________________, you discover that you are naturally good at it and find it very easy to do.
d. If you ______________________, you act decisively and with determination in order to deal with a difficult situation or problem. KEY

(7) <<a wolf in sheep’s clothing>>

a. If you say that a man thinks he is ________________, you mean that he behaves as if all women find him attractive, and you find this very irritating. (God’s gift to women)
b. If you say that someone is ________________, you mean that they are very kind, friendly, and charming. You usually say this when their behavior is not what you expect, or when it contrasts with their behavior at other times. (sweet as pie)
c. If you refer to someone or something as a ________________, you mean that although they appear harmless or ordinary, they are really very dangerous and powerful. KEY
d. If you describe a policy or activity as ________________, you mean that it seems harmless, but it is likely to damage or destroy something important. (Trojan horse)

(8) <<have someone over a barrel>> <<has someone over a barrel>>

a. Suppose that two people are having a discussion or a negotiation. If you say that one person ________________________________, you mean that the person who is winning the argument has put the other person in a position where s/he cannot possibly win. KEY
b. If you say that you ________________, you mean that you can make them do anything you want them to. (twist someone around your little finger)
c. If you say that someone __________________________ you mean that they have
got themselves into a difficult situation which may have serious or unpleasant
consequences for them. (skate on thin ice)

d. If you __________________________, you try to persuade that person to do something
by offering him/her a reward for it. (dangle a carrot in front of someone)

(9) <<make waves>>                              <<is making waves>>

a. If someone __________________________, they surprise you by doing something
unexpected and perhaps putting you at a disadvantage. (throw someone a curve ball)
b. If you say that someone __________________________, you mean that they are disturbing a
situation by changing things or by challenging the way things are done. You
sometimes use this expression to suggest that this is making things better or more
exciting. KEY
c. If someone __________________________ they are successful in a task or activity and defeat
all their rivals. (carry all before you)
d. If someone or something __________________________ in a situation, they stop it
from being as successful or as enjoyable as it might be. (put a damper on something)

(10) <<jump/s the gun>>

a. If you __________________________, you put a plan or idea into action. (get your show on
the road)
b. If someone __________________________, they do it before the right time. KEY
c. If you __________________________, you start a new activity with a lot of energy and
enthusiasm, and do not waste any time. (hit the ground running)
d. If you ____________________, you act quickly, while there is the best chance of succeeding at something. (strike while the iron is hot)

(11) <<don’t cry over spilt milk>> <<cry over spilt milk>> << not to cry over spilt milk>>

a. If you say ________________, you mean that bad events or situations often have unexpected good effects. (it’s an ill wind / It’s an ill wind that blows no good.)

b. If you tell someone, ____________________, you are telling them that it is pointless to worry or be upset about something that has happened and cannot be changed. KEY

c. If you tell someone ____________________, you mean that a bad experience happened a long time ago, so they should not feel upset or worried about it now.

(water over the dam/under the bridge)

d. If you say ____________________, you are reflecting on your own past behavior, recognizing that your decision was not the right one. However, you did not have this insight at the time of the choice. (hindsight is 20/20)

(12) <<bite the bullet>>

a. If you ________________, you deal with the main or most difficult part of a task.

(break the back of something)

b. If you ________________, you stay up very late at night in order to finish a piece of work. (burn the midnight oil)

c. If you ________________, you experience a very difficult period in your life with many problems. (go through the mill)

d. If you ____________________, you accept a difficult or unpleasant situation. KEY
(13) <<test(s) the waters>>

a. If you ____________, you do something that you have to do or are expected to do, but without any real effort or enthusiasm. (go through the motions)

b. If you ____________, you carefully try to find out about other people’s feelings or plans, so that you will know what to do next. (put out feelers)

c. If you ________________, you try to find out people’s opinions about an idea or plan before putting that idea or plan into practice. KEY

d. If you ________________, you try to find out if the water is warm enough for you to go swimming. (literal)

(14) <<miss(es) the boat>>

a. If you ________________, you have something more important, interesting, or profitable to do. (to have bigger fish to fry)

b. If an event or an attempt to do something ____________, it is completely unsuccessful. (falls flat)

c. If you ________________, you fail to act in time to take advantage of a situation. KEY

d. If something ________________, it makes it seem worthless and foolish. (make a mockery of something)

(15) <<a wild goose chase>>

a. If you say that you have gone on ________________, you mean that your action was a waste of time and that you found nothing, usually because the information you were given was wrong. KEY
b. If you have gone on ____________________, you were sent out to search for something that is fictitious, non-existent, elusive, or illusory. (a snipe hunt)

c. If a person or an organization is on _______________________, they are very close to failing or being defeated. (thin ice)

d. If you say that someone leads you on ________________________, while you are trying to achieve something, they cause a lot of problems for you, often by doing something to trick you. (a merry chase)

(16) <<once in a blue moon>>

a. If something happens ______________________, it happens only very rarely. KEY

b. If you talk about what you will do ______________________, you mean what you will do when you become rich and successful.” (___ verb ___ when your ship comes in)

c. If you say that something happens ________________________, you mean it is very unlikely to happen. (not in a month of Sundays)

d. People say that something will happen or be done _____________________ to mean that in reality, it will never happen or be done. (when pigs fly)

(17) <<jump (jumps) on the bandwagon>>

a. If you say that someone ________________________, you mean that they are copying other people without thinking about what they are doing. (monkey see, monkey do)

b. If someone ________________________, they suddenly become involved in an activity because it is likely to succeed, or it is fashionable. KEY

c. If you ________________________, you become crazy. (lose your marbles)
d. If you ____________________, you include a larger number of people or things. (cast a wider net)

(18) <<the lion’s share>>

a. If someone takes ____________________, they selfishly consider their own needs and interests and no one else’s.

b. If you talk about ____________________, you mean the best people or things in a group. (the cream of the crop)

c. ____________________ is an extremely large sum of money. (a king’s ransom)

d. If you take ____________________ of something, you take the largest part of it.

KEY

(19) <<go to bat for someone>>

a. If you ____________________, you give them your support or help. KEY

b. If you ____________________, you do something before them and so gain an advantage over them.

c. If you ____________________ someone, you like them when you first meet them, often in a romantic way. (take a shine to ______)

d. If you ____________________, you start doing their job for them instead of them. (step into someone’s shoes)

The idiom in context. In the following items, select the item in which the Vivid Phrasal Idiom is used most appropriately.

(1B) A/THE SILVER LINING
a. One of the differences between the collegiate level and the NFL level is the complexity. The second thing is, these guys come into the league and they're __________________________ coming out of college. But in the National Football League, (NFL), they're playing against the best of the best. (Cream of the crop)

b. Everybody is hoping the economy will turn around in the new year, but the reality is, there isn't enough stimulus within the economy. "Even bank failures have __________________________. A company that has made a name for itself over the last 26 years providing signs for other businesses is now creating signs used by banks that take over failed banks.” KEY

c. Goldman Sachs' shares increased in value due to investors' hopes that he would remove costly financial regulations. However, the bank's earnings show that the President's promises have not been a __________________________ for the economy. (silver bullet)

(2B) PUTTING THE CART BEFORE THE HORSE / PUT THE CART BEFORE THE HORSE

a. SENATOR: For these companies to survive, they need to undergo fundamental, core restructuring, and this plan is not that. This plan is giving them $15 billion. And then, after $15 billion, they would begin to develop a detailed plan. That is __________________________. KEY

b. Since we live in times that are informal, he who would stand out should __________________________ be a little bit formal and sincere. Speak with a trace of courtliness." In our "Yo, bro" age, old-fashioned phrases like, "I beg
your pardon" and, "I hope I haven't disturbed you," mark you as a gentleman. (swim against the tide)

c. The Nike guys were athletes -- most of them former competitive runners -- and through their athletic pursuits they had acquired "authenticity." The company is powered to this day by a belief in authenticity. “Authentic shoes for authentic athletes.” . . . Nike has grown up to be a large institution. The company is dedicated to gifted athletes who _________________________________. (swim against the tide)

(3B) CROSS THE RUBICON / CROSSED THE RUBICON

a. HOROSCOPE:

The good news is that your life will finally change directions by the 27th. In the meantime, though, you must continue to hold steady and stay focused on your goals. Crucial relationships are in transition this month, and the pressure is on. Be ready to ________________ and let go of the past. You are on the brink of a happier era. (turn over a new leaf)

b. On June 23, 2016, a majority of citizens in the United Kingdom voted for Brexit. The U.K. ______________________. Its relationship to the European Union will never be the same. KEY

c. Behavior that (30 years ago) might have seemed like a selfish male fantasy, such as serial monogamy, no-fault divorce . . . now seems inappropriate to many men.

Promise Keepers provides a safe space for men to ________________________________, to experience a tough-love message that helps them start over. (turn over a new leaf)
### (4B) **PASS(ED) WITH FLYING COLORS**

a. Mr. G. was backed by the loyal political outsiders within T.'s inner circle. But his candidacy faced challenges, including questions about potential conflicts raised by the work his consulting business did on behalf of foreign governments. Mr. G. "was vetted by our team for any possible conflicts and ________________________________," Mr. P. said. KEY

b. Michael Crichton wrote and directed the original *Westworld*, a sci-fi/western thriller film that came out in 1973 (more than a decade before his blockbuster hit *Jurassic Park*). A sequel, *Futureworld*, came next. The question now is whether HBO will ______________________ on its own adaptation, which many people think will be next big hit. (strike gold)

c. According to Elizabeth Warren, a judges' bill "was widely debated in Congress and, although it failed to ________________________, it strongly influenced the shape of the final bill.” (carry the day)

### (5B) **BITE THE BULLET**

a. Get your beauty rest. Many people stay up late into the night thinking that, if they _________________________________, they finally will be able to catch up on their to-do lists. While it is true that you may be able to accomplish more by pushing your bedtime back a few hours, it also is inevitable that you will be less than effective the next day. (burn the midnight oil)

b. Boys and girls learn their lessons with solemn reverence for the written word, and doctoral students ________________________________ in single-minded pursuit of the degree that will set them apart from the toiling masses forever. (burn the midnight oil)
c. That's the only thing I could see, at this point, which could motivate Senate Republicans to ______________________ and approve an Obama nomination to the Supreme Court. Especially if it starts looking like Democrats are going to win big in November. KEY

(6B) TAKE THE BULL BY THE HОРNS

a. But are you in charge of your e-mail, or is it in charge of you? "There comes a time," as W. C. Fields once said, "to ______________________ and face the situation." In your email inbox, advertisements and other uninvited garbage appear with messages you really need. KEY

b. When the Congress works to decide on government spending, they should continue despite their disagreement until the decisions are made. Budget cuts will automatically appear if the politicians delay or refuse to compromise in making the deal. OBAMA: My hope is that over the next several days, the Congress will go ahead and ______________________ do what needs to be done. (bite the bullet)

c. For much of the week, I thought that there was pressure coming for a compromise. But then part of what has forced the Democrats to really ______________________ and be tough about it is the split and pressure coming from unions. The unions want more numbers for people who would be applying for temporary worker status. (tow the line)

(7B) TESTING THE WATERS / TEST THE WATERS

a. If you can't stand the heat," said President Harry Truman, "get out of the kitchen." Don't expect Santorum to do so. People in New York think that he's already ______________________ about a possible presidential bid. (putting out feelers)
b. Our round table is here to break it down, Andrea Mitchell, David Brooks, E.J. Dionne and Maria Bartiromo. And Ms. Hillary Clinton, continuing to ________________ for a presidential run. [She will tell us] why it is her first public campaign stop! In a while, we'll have our round table talk. KEY

c. HANSEN: I want to know what happened. How did you two get the music on NPR Sunday? STAMBERG: Well, producer Kitty Ferguson and I ________________ and asked people we knew: "Who do you know who's very good at jazz or classical music and can play it under pressure?" (put out feelers)

(8B) A WOLF IN SHEEP'S CLOTHING

a. When you appoint executives from the industry they are supposed to regulate, you end up with the proverbial _________________. What results is new drugs being approved without proper testing, so they end up killing us, beef which is unfit for human consumption making its way to our dinner table, cracked jets flying millions of passengers. [fox guarding the henhouse]

b. As a political philosopher said, "Liberty for wolves is death to the lambs." Unless it starts taking the promotion of justice more seriously, the United States is destined to be seen by many as the _________________. (wolf at the door)

c. In one of his complaints against these companies, he is saying, you're basically a _________________. You pretend you're not a gambling site, but you are a gambling site. KEY

(9B) ONCE IN A BLUE MOON
a. Sprague remembers riding his bicycle as a boy out to the Northville area, where he could enjoy the hills. "________________________, I would see another car," he said. "That's how rural it was back then." (KEY)

b. The trend toward using barnyard animals in tourism has been growing. Even vegetables -- do they really think corn on the cob will bring visitors to Bloomington, Illinois? And will potatoes bring tourists to Rhode Island? As they say, that will happen __________________. (when pigs fly)

c. Some are more concerned with preserving in the public imagination, which romanticizes Eva Peron, rather than revealing the link between Peron and Nazism. "He lamented that "past experience suggests that some perceptions will change, __________________ to conform to inconvenient historical facts." (not in a month of Sundays)

(10B) GO TO BAT FOR ____________ (SOMEONE)

a. These letters are telling us that they will ___________ us with our loan company, get a permanent rate reduction, drop our interest rate or payment so they're able to help us keep our home. But those people are charging upwards of $2,000 for them to ___________ us when we're already behind. KEY

b. Maybe it's difficult for Edward to see Bella as an equal because Bella has almost no personality. Meyer writes on her website that she "left out a detailed description of Bella in the book so that the reader could more easily ______________ her.” But Bella is a blank slate, with few thoughts or actions that don't center on Edward. (step into someone’s shoes)
c. In late December, when General Jackson first attacked the approaching British, Daniel went down with a bullet through his calf. It was the second week of January now, and he was getting well. Still, someone had to _________________ him, and there wasn't anyone except Paul. (step into someone’s shoes)

(11B) THE LION’S SHARE

a. People who are in the upper-income groups should pay _________________ of taxes. That’s where the money is. That’s where you have to go to get the tax money. KEY

b. Park supervisors are doing their best to avoid cutting the activities and services that are most important to visitors. "With a lot of hard work, you can disguise the significant lack of funding for a long time" he said. "But eventually, you have to pay _________________ . Some visitors have started to notice. (the piper)

c. The reality is that we've been abusing the environment for a lot of years, and now it's come time to pay ________________ . When you overuse a resource, at some point you run out. (the piper)

Appendix B: Objective Post-tests for Each Condition
Objective Post-test – Control Condition

Knowledge of Idioms Assessment

Directions: For each of the following idioms there are four possible figurative meanings. You should select the one that best describes the meaning.

Example << A stitch in time >>

a. If someone says ____________________________ , they mean that it is better to deal with the problem in its early stages, in order to prevent it from getting worse. KEY

b. If you describe a very quiet period as ____________________________, you mean that it is likely to be followed, or was followed, by a period of trouble or intense activity. (the calm before the storm)

c. If you are ____________________________, you are under great pressure and your future success is being threatened. (under the gun)

d. If you say someone is wearing ____________________________, you mean that they are deliberately making their own life unnecessarily unpleasant or uncomfortable, especially by not allowing themselves any luxuries. (a hair shirt)

Since the correct answer is “a,” you would click this within the online quiz.

(1) <<cross (crosses) the Rubicon>>

a. If you ____________________________, you make an important decision which cannot be changed, and which will have very important consequences. KEY

b. If you ____________________________, you get involved in something or experience something for the first time. (get your feet wet)
c. If a person __________________, they start to behave in a better way than before. (turn over a new leaf)

d. If people (or a person) ______________________, they leave the situation that they are in, often because they want to have more freedom or want to do something different. (fly the coop)

(2) <<bite the bullet>>

a. If you __________________, you deal with the main or most difficult part of a task. (break the back of something)

b. If you __________________, you stay up very late at night in order to finish a piece of work. (burn the midnight oil)

c. If you ______________, you experience a very difficult period in your life with many problems. (go through the mill)

d. If you ______________________, you accept a difficult or unpleasant situation. KEY

(3) <<put/s the cart before the horse>>  <<putting the cart before the horse>>

a. If someone who is involved in an activity __________________ , they stop using one method or thing and start using another one, or they stop supporting one person and start supporting someone else. (change horses in mid-stream)

b. If you say that someone is ________________, you mean that they are doing or saying something which is the opposite of what most other people are doing or saying. (swim against the tide)

c. If you ________________________, you do things in the wrong order. KEY
d. If you ______________________, you try to do a task that is too big for you or too
difficult. (bite off more than you can chew)

The idiom in context. In the following items, select the item in which the Vivid Phrasal Idiom is
used most appropriately.

(4) PUTTING THE CART BEFORE THE HORSE / PUT THE CART BEFORE THE
HORSE

a. SENATOR: For these companies to survive, they need to undergo fundamental, core
restructuring, and this plan is not that. This plan is giving them $15 billion. And then,
after $15 billion, they would begin to develop a detailed plan. That is
_______________________________. KEY

b. Since we live in times that are informal, he who would stand out should
______________________________ be a little bit formal and sincere. Speak
with a trace of courtliness." In our "Yo, bro" age, old-fashioned phrases like, "I beg
your pardon" and, " I hope I haven't disturbed you," mark you as a gentleman. (swim
against the tide)

c. The Nike guys were athletes -- most of them former competitive runners -- and
through their athletic pursuits they had acquired "authenticity." The company is
powered to this day by a belief in authenticity. “Authentic shoes for authentic
athletes.” . . . Nike has grown up to be a large institution. The company is dedicated
to gifted athletes who ____________________________. (swim against the
tide)

(5) CROSS THE RUBICON
a. **HOROSCOPE:** The good news is that your life will finally change directions by the 27th. In the meantime, though, you must continue to hold steady and stay focused on your goals. Crucial relationships are in transition this month, and the pressure is on.

Be ready to ________________ and let go of the past. You are on the brink of a happier era. (turn over a new leaf)

b. On June 23, 2016, a majority of citizens in the United Kingdom voted for Brexit. The U.K. _________________. Its relationship to the European Union will never be the same. KEY

c. Behavior that (30 years ago) might have seemed like a selfish male fantasy, such as serial monogamy, no-fault divorce . . . now seems inappropriate to many men.

*Promise Keepers* provides a safe space for men to

______________________________, to experience a tough-love message that helps them start over. (turn over a new leaf)

(6) **BITE THE BULLET**

a. Get your beauty rest. Many people stay up late into the night thinking that, if they ________________________, they finally will be able to catch up on their to-do lists. While it is true that you may be able to accomplish more by pushing your bedtime back a few hours, it also is inevitable that you will be less than effective the next day. (burn the midnight oil)

b. Boys and girls learn their lessons with solemn reverence for the written word, and doctoral students ________________________ in single-minded pursuit of the degree that will set them apart from the toiling masses forever. (burn the midnight oil)
c. That's the only thing I could see, at this point, which could motivate Senate Republicans to ____________________________ and approve an Obama nomination to the Supreme Court. Especially if it starts looking like Democrats are going to win big in November. KEY
Objective Post-test for Learner-Generated Images

Knowledge of Idioms Assessment

Directions: For each of the following idioms there are four possible figurative meanings. You should select the one that best describes the meaning.

(1) <<a silver lining>>

a. If you talk about ___________________, you are referring to the most important and powerful people in an organization. (big guns)
b. If you talk about the ___________________, you mean the best people or things in a particular set or group. (cream of the crop)
c. You can refer to a group of people as ___________________ when they have worked in a situation or an organization for a long time. (old guard)
d. ______________ is one good aspect of a situation that is otherwise bad. KEY

(2) <<pass with flying colors>>

a. If you ___________________, you create a role or an opportunity for yourself, especially at work, by doing a particular thing very well. (carve out a niche for yourself)
b. If you ___________________, you gain enough experience to deserve a particular job or position. (earn your stripes)
c. If you ____________________________, you achieve your goal and are very successful. KEY
d. If a person or their opinion ____________________________ in a competition or an argument, they win it. (carry the day)

(3) <<once in a blue moon>>
a. If something happens __________________, it happens only very rarely. KEY

b. If you talk about what you will do ____________________________, you mean what you will do when you become rich and successful.” (when your ship comes in)

c. If you say that something happens ____________________________, you mean it is very unlikely to happen. (not in a month of Sundays)

d. People say that something will happen or be done ____________________________ to mean that in reality, it will never happen or be done. (when pigs fly)

The idiom in context. In the following items, select the item in which the Vivid Phrasal Idiom is used most appropriately.

(4) A/THE SILVER LINING

a. One of the differences between the collegiate level and the NFL level is the complexity. The second thing is, these guys come into the league and they’re ____________________________ coming out of college. But in the National Football League, (NFL), they're playing against the best of the best. (Cream of the crop)

b. Everybody is hoping the economy will turn around in the new year, but the reality is, there isn't enough stimulus within the economy. “Even bank failures have ____________________________. A company that has made a name for itself over the last 26 years providing signs for other businesses is now creating signs used by banks that take over failed banks.” KEY

c. Goldman Sachs’ shares increased in value due to investors' hopes that he would remove costly financial regulations. However, the bank's earnings show that the
President's promises have not been a _________________ for the economy. (silver bullet)

(5) PASS(ED) WITH FLYING COLORS

a. Mr. G. was backed by the loyal political outsiders within T.'s inner circle. But his candidacy faced challenges, including questions about potential conflicts raised by the work his consulting business did on behalf of foreign governments. Mr. G. "was vetted by our team for any possible conflicts and ________________________," Mr. P. said. KEY

b. Michael Crichton wrote and directed the original Westworld, a sci-fi/western thriller film that came out in 1973 (more than a decade before his blockbuster hit Jurassic Park). A sequel, Futureworld, came next. The question now is whether HBO will ________________________ on its own adaptation, which many people think will be next big hit. (strike gold)

c. According to Elizabeth Warren, a judges' bill "was widely debated in Congress and, although it failed to ________________________, it strongly influenced the shape of the final bill." (carry the day)

(6) ONCE IN A BLUE MOON

a. Mick Sprague remembers riding his bicycle as a boy out to the Northville area, where he could enjoy the hills. "______________________, I would see another car," he said. "That's how rural it was back then." (KEY)
b. The trend toward using barnyard animals in tourism has been growing. Even vegetables -- do they really think corn on the cob will bring visitors to Bloomington, Illinois? And will potatoes bring tourists to Rhode Island? As they say, that will happen ________________________ (when pigs fly)

c. Some are more concerned with preserving in the public imagination, which romanticizes Eva Peron, rather than revealing the link between Peron and Nazism. "He lamented that "past experience suggests that some perceptions will change, ________________________ to conform to inconvenient historical facts." (not in a month of Sundays)
Knowledge of Idioms Assessment

Directions: For each of the following idioms there are four possible figurative meanings. You should select the one that best describes the meaning.

(1) <<Take the bull by the horns>>
   a. If you ________________________, you accept a difficult or unpleasant situation. (bite the bullet)
   b. If you ________________________, you try hard to solve a problem by thinking about it. (put on your thinking cap)
   c. If you ________________________, you discover that you are naturally good at it and find it very easy to do.
   d. If you ________________________, you act decisively and with determination in order to deal with a difficult situation or problem. KEY

(2) <<test(s) the waters>>
   a. If you ______________, you do something that you have to do or are expected to do, but without any real effort or enthusiasm. (go through the motions)
   b. If you ______________, you carefully try to find out about other people’s feelings or plans, so that you will know what to do next. (put out feelers)
   c. If you _______________, you try to find out people’s opinions about an idea or plan before putting that idea or plan into practice. KEY
   d. If you ________________________, you try to find out if the water is warm enough for you to go swimming. (literal)

(3) <<the lion’s share>>
a. If someone takes _____________________, they selfishly consider their own needs and interests and no one else’s.

b. If you talk about _____________________, you mean the best people or things in a group. (the cream of the crop)

c. _____________________ is an extremely large sum of money. (a king’s ransom)

d. If you take _____________________ of something, you take the largest part of it.

KEY

The idiom in context. In the following items, select the item in which the Vivid Phrasal Idiom is used most appropriately.

(4) TAKE THE BULL BY THE HORN

a. But are you in charge of your e-mail, or is it in charge of you? "There comes a time," as W. C. Fields once said, "to _____________________ and face the situation." In your email inbox, advertisements and other uninvited garbage appear with messages you really need. KEY

b. When the Congress works to decide on government spending, they should continue despite their disagreement until the decisions are made. Budget cuts will automatically appear if the politicians delay or refuse to compromise in making the deal. OBAMA: My hope is that over the next several days, the Congress will go ahead and _____________________ do what needs to be done. (bite the bullet)
c. For much of the week, I thought that there was pressure coming for a compromise. But then part of what has forced the Democrats to really ________________ and be tough about it is the split and pressure coming from unions. The unions want more numbers for people who would be applying for temporary worker status. (tow the line)

(5) TESTING THE WATERS / TEST THE WATERS

a. If you can't stand the heat," said President Harry Truman, "get out of the kitchen." Don't expect Santorum to do so. People in New York think that he's already ________________ about a possible presidential bid. (putting out feelers)

b. Our round table is here to break it down, Andrea Mitchell, David Brooks, E.J. Dionne and Maria Bartiromo. And Ms. Hillary Clinton, continuing to ________________ for a presidential run. [She will tell us] why it is her first public campaign stop! In a while, we'll have our round table talk.

KEY

c. HANSEN: I want to know what happened. How did you two get the music on NPR Sunday? STAMBERG: Well, producer Kitty Ferguson and I ________________ and asked people we knew: "Who do you know who's very good at jazz or classical music and can play it under pressure?"

(put out feelers)

(6) THE LION’S SHARE
a. People who are in the upper-income groups should pay

______________________________ of taxes. That’s where the money is. That’s where you have to go to get the tax money. KEY

d. Park supervisors are doing their best to avoid cutting the activities and services that are most important to visitors. "With a lot of hard work, you can disguise the significant lack of funding for a long time" he said. "But eventually, you have ________________________________. Some visitors have started to notice. (to pay the piper)

e. The reality is that we've been abusing the environment for a lot of years, and now it's come time ________________________________. When you overuse a resource, at some point you run out. (to pay the piper)
## Appendix C: Rubric for the Idioms Dialogues

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Dialogue</th>
<th>Rubric</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction to the Dialogue</strong> (5 points)</td>
<td>The writers give a brief overview of who the characters are, what the setting is, and how the plot has unfolded before the conversation that the audience is about to read/hear occurred.</td>
<td>The there is no explanation of the characters, plot, setting.</td>
</tr>
<tr>
<td><strong>Authenticity and appropriateness</strong> (9 points)</td>
<td>All the following are addressed: appropriate length (at least five turns each) / Engaging and seemingly authentic conversation / The idioms are not over-used.</td>
<td>The dialogue may be too short, and not contain any idioms. The dialogue may have wrong word choices or be pragmatically inappropriate.</td>
</tr>
<tr>
<td><strong>How well the idioms fit into the context</strong> (7 points)</td>
<td>The idiom is used in a way that suggests strong command of English. The choice of VP Idiom fits the context precisely. NOTE: Student used in a way that suggests strong command of English. Engagement and seemingly authentic conversation / The idioms are not over-used.</td>
<td>The idioms are not appropriate to the context, written incorrectly. Two idioms may appear together in the same sentence.</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
<td>[For feedback purposes only]</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Oral Delivery, including speed, prosody, eye contact with the other speaker  ... OPTIONAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentence structure (3 points)</td>
<td>All sentences are well-constructed.</td>
<td>Most sentences are well-constructed.</td>
</tr>
<tr>
<td>Capitalization &amp; Punctuation (2 points)</td>
<td>Writer makes no errors in capitalization or punctuation, so the essay is exceptionally easy to read.</td>
<td>Writer makes 1 – 2 errors in capitalization or punctuation, but the essay is still easy to read.</td>
</tr>
<tr>
<td>Spelling &amp; Grammar (3 points)</td>
<td>2 or fewer spelling errors that impede meaning. All words which are used in the novel repeatedly are spelled correctly.</td>
<td>Writer makes 3 – 5 errors in grammar or spelling that impede meaning.</td>
</tr>
<tr>
<td>Other – including but not limited to formatting 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix D: Rubric for Student-Created Visual Representations of the Idiom

<table>
<thead>
<tr>
<th>Category</th>
<th>Accomplished</th>
<th>Developing</th>
<th>Partial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Materials Application and Techniques</strong>*</td>
<td>10 - 7</td>
<td>6 - 4</td>
<td>3 - 1</td>
</tr>
<tr>
<td>Demonstrates qualities and characteristics of media, techniques and processes</td>
<td>Demonstrates some qualities and characteristics of media, techniques and processes</td>
<td>Lacks demonstration of qualities and characteristics of various media, techniques and processes.</td>
<td></td>
</tr>
<tr>
<td><strong>Understanding of Content – meaning of the idiom</strong></td>
<td>30 - 24</td>
<td>23 - 16</td>
<td>15 - 6</td>
</tr>
<tr>
<td>The finished product clearly represents the idiom that the student artists intended.</td>
<td>The finished product is neat and appropriate, but a naïve viewer would not be able to figure out what idiom it represents.</td>
<td>The product is unfinished, sloppy, or inappropriate with no evidence of having sought assistance on how to complete it.</td>
<td></td>
</tr>
<tr>
<td><strong>Craftsmanship</strong></td>
<td>15 - 11</td>
<td>10 - 6</td>
<td>5 - 1</td>
</tr>
<tr>
<td>Artwork reflects deliberate control having good craftsmanship</td>
<td>Artwork reflects adequate control having some craftsmanship</td>
<td>Artwork appears to be a work in progress with little control of the craftsmanship.</td>
<td></td>
</tr>
<tr>
<td><strong>Details</strong></td>
<td>15 - 11</td>
<td>10 - 6</td>
<td>5 - 1</td>
</tr>
<tr>
<td>Artwork includes a clear label – the idiom, which is spelled correctly, placed appropriately and emboldened.</td>
<td>Artwork includes a label – the idiom, which is spelled correctly, but may be too small, too light, or placed over the image.</td>
<td>Artwork may/may not include a label. The label is either not the idiom or it is misspelled.</td>
<td></td>
</tr>
<tr>
<td><strong>Overall Subjective attractiveness</strong></td>
<td>5</td>
<td>4 – 3</td>
<td>2 - 1</td>
</tr>
</tbody>
</table>
Appendix E: Images of VP Idioms Created by Students using Paint
Once in Blue Moon

Pass with Flying Colors
Once in a Blue Moon

Amazing

Strange
with flying colors
Pass with Flying Colors

Once In a Blue Moon
Pass With Flying Colour
Once in a blue moon
Once in a blue moon

RUN!!!!!!!!!

What is that????!!!!
every cloud has a silver lining
Appendix F – Screenshot of Instructional Website for Pilot Test
Appendix G: Student Dialogues in Full

Control Condition - Participants #1 and #4

Sharif and Omar are friends. Sharif has an electronics store and he is facing some problems. Omar gives him a helpful advice.

**Omar**: Hello Sharif. It has been a long time since we have met.

**Sharif**: yeah, I am physically fine, but mentally I feel I am losing my composure and many things have changed.

**Omar**: oh not the thing I wanted to hear. I hope it is not that bad.

**Sharif**: the thing is that I hired new staff at my store in order to increase production rates; however, the demand had fell dramatically last month. So, now I have to pay to everyone even though they have not worked lately.

**Omar**: this reminds me of my friend Aseel, he had the same situation 2 years ago. He lost huge amount of money but he made it through.

**Sharif**: I have been thinking for a solution every day and night and I have not come up with effective and affordable solutions.

**Omar**: I can give a piece of advice that would help you if you are willing to pay more money. All you have to do is increase your budget for marketing and release commercials more often. It sounds more costly solution; however, it will get you through the situation.

**Sharif**: oh my god, I knew that I have to pay more money. I guess I have to bite the bullet this time and wish for the best.
Omar: I am pretty sure you will do great just have faith in what you do and you will be fine.

Sharif: thank you for the advice I really needed it. You are a true friend.

Control Condition

Participants #5 and #8

Including idioms: put the cart before the horse, bite the bullet

Character: Yamato, Incensia

Background: Two international students study abroad. Incensia is a hard-working girl while Yamato is a playboy. One day, Incensia felt worried about Yamato’s study, so she provides some suggestions with her friend.

I: Hi! how’s it going?
Y: Not bad, but I feel a little tired.
I: Why?
Y: I have drunk a little too much last night with some friends.
I: Oh my god, have you finished your homework?
Y: No, not at all.
I: You are really putting the cart before the horse.
Y: Yes, but as an international student, I’m really biting the bullet, sometimes I feel tough and lonely.
I: You should study with friends rather than just play with them.
Y: Ok, I got it, thanks for your concern.
I: That’s ok and remember studying hard.
**Control Condition – Participants #6 and #10**

Mehtap and Yao are best friends; they are talking about TOFEL. Yao has concern about how she will pass it and get a higher score, so she has this conversation with Mehtap while they are sitting in the coffee shop. Let’s see what will happen.

**Yao:** Hey, Mehtap, how are you?

**Mehtap:** I’m doing well thank you, how about you?

**Yao:** Great.

**Mehtap:** Where have you been?

**Yao:** I’m being busy with several things.

**Mehtap:** Oh really what kind of things?

**Yao:** I’m facing a difficult situation with my study. I should join in the University this semester. But they said I should take the TOEFL, do you have any idea about it?

**Mehtap:** Ohhh……yes, dear. I have taken last semester; it was a nightmare for me. You should prepare to pass it. As they said you should *bite the bullet* because having a high education asks for a lot.

**Yao:** Yeah, I have heard about it, but I’ve never imagined it that way.

**Mehtap:** Yeah…..honey. If you’re going to pass it, you have to work hard to study.

**Participants #7 and #11**

Tom and Jack are college classmates who have graduated for half a year. Today, they met at the Tampa City Square, so they chatted at the coffee shop next to the square.

**TOM:** Hello, how are you doing recently? You got a job yet?

**JACK:** I found a job. I am moving the goods at the factory now.

**TOM:** Why do you do this job? This job is not in line with your major.
JACK: There is no way. I only **bite the bullet** do this work because I am short of money.

TOM: You can ask me to borrow money.

JACK: Thank you, I think I can make money myself.

TOM: If you need money, please contact me.

JACK: Ok. Thank you.

TOM: No thanks, have a good day!

JACK: You too!

**Learner-Generated Image Condition Dialogues**

**Participants #6 and #10**

**Introduction:** Mehtap and Yao are great friends. They went to International Mall to do some weekend shopping. They had a great time; they bought a lot of things such as make-up and perfumes. When they got tired and spent all their money, they went back to Yao’s apartment. They were starving and had this conversation. However, Yao’s mom is a healthy person who prefers to not eat fast food.

Mehtap: Yao, dear. Do you have anything to eat? I'm starving.

Yao: Oh...OMG sorry. I just finished all food last night.

Mehtap: Really? It’s strange! Because I know your mom always keeps something healthy to eat, but she thinks pizza is not that good for us.

Yao: I know......but yesterday we ordered a pizza from outside.

Mehtap: It's impossible! It's just you or with your mom?

Yao: No...It's my mother’s suggestion.

Mehtap: I couldn't believe that! You must have forced her to do that.
Yao: No, yesterday we were tired, and she could not even move...so she said just order a pizza.

Mehtap: And what did you do?

Yao: Then I ordered the pizza.

Mehtap: Honestly! It's happened Once in a Blue Moon.

Yao: Yes, it is. Let’s order a pizza.
Learner-Generated Images Condition (continued)

Participants #7 and #11

Scenario #2 Once in a blue moon

**Introduction:** Sam and Jung-min are friends. They are meeting at the dining hall and talk about the breaking news of this week.

An OB-GYN named Donna explained to one of her patients that she had just helped to deliver a healthy baby. The friend asks why this is a miraculous occurrence, as Donna had said. Donna tells her that the mother of the baby was 60 years old.

**Jung-min:** Hi, Sam. Long time no see. How’s going?

**Sam:** Not bad.

**Jung-min:** Did you heard the big news in our city this week?

**Sam:** I think I probably heard that.

**Jung-min:** Someone had a baby at the age of sixty. Can you believe that?

**Sam:** Really? It is not easy for mother and the baby. Are they all healthy?

**Jung-min:** Yeah. What a miracle.

**Sam:** That was something that happened once in a blue moon.

**Jung-min:** Absolutely!!!

**Sam:** Thank you for telling me this. I’ll see you later.

**Jung-min:** Bye.

Learner-Generated Image Condition - Participant #8

**Idioms:** a sliver lining

**Characters:** Mario: A man whose company unfortunately went bankrupt. Rafael: The friend of Mario
**Background:** Mario’s company went bankrupt; he felt so sad. His friend Rafael tried to comfort him and provided him with some suggestion.

**Rafael:** My friend, are you all right? You look so sad.

**Mario:** I am very disappointed now, and I don’t know how to deal with my problem.

**Rafael:** What’s wrong?

**Mario:** My company went bankrupt, I lost my company and lot of money.

**Rafael:** Oh my god, I’m really sorry to hear that.

**Mario:** I don’t know what should I [sic] do now, and I also don’t know how to face my fault. I made misjudgement of market situation, so I made a wrong decision which made me couldn’t afford deficit.

**Rafael:** Take it easy my friend, I know this thing have dealt a heavy blow to you, but I believe that there will still have a sliver [sic] lining.

**Mario:** Really? I can’t see any hope.

Rafeal: Of course, your company went bankrupt, but you still have chance to rebuild it again even though you have lost a large sum of money, but you still have enough money for entrepreneurship.

What’s more, you can learn many things and gain experience from this failure, so you will never make same mistake.

**Mario:** You’re right; I should bestir myself and have another try, I will never give in to my unfortunate destiny.
Learner-Generated Image Condition

Participants #1 and #4

Sharif and Omar are having a phone call. They used to be best friends when they were in high school. Now they study in different universities.

**Sharif**: Hello Omar. How have you been?

**Omar**: Hey. I am great. How about you my friend?

**Sharif**: I am fine. I am calling you because I want to invite you for a party this Saturday.

**Omar**: Oh okay. What is the occasion?

**Sharif**: My uncle is visiting from Turkey. He only comes *once in a blue moon*. So my family and I want to welcome him with a celebration and we would love to have you with us.

**Omar**: Ohh awesome. I would love to join you and your family. I have always admired your family. What time is it?

**Sharif**: the party starts at 5:00 but you could come earlier if you want.

**Omar**: I will try to come early and help you with preparations. Is anyone of our friends coming too?

**Sharif**: No, it is just my family and you. You know my family loves you. right?

**Omar**: I am flattered. Can’t wait for the party. See you on Saturday.
Student Dialogues

Authentic Context Condition – Participants #8 and #9

Idioms: the lion’s share

Character:

**Jack:** A student

**Bob:** The friend of Jack

**Background:** After vacation, Jack and Bob get together talk about their experience.

**Jack:** Hello Bob, how’s it going?
**Bob:** Fine, thank you, what about you?
**Jack:** Not bad, I had experienced a fantasy but busy holiday.
**Bob:** Wow, that sounds great, what did you do?
**Jack:** I went to another city to visit my old friend, we talked about some past events and he showed me some scenic spots, what’s more, we went to a restaurant to have dinner.
**Bob:** It’s really a good trip, but why you feel busy.
**Jack:** Because the time is a little tight and I spent many hours on the road, that made me feel very tried. What did you do during your vacation.
**Bob:** I went to some interesting place and held a party.
**Jack:** It must be unforgettable vacation, what about your party?
**Bob:** Of course it’s a nice party, I held the party in my apartment and purchased some food and beer.
**Jack:** Cool, you drank a lots [sic] of beer.
**Bob:** No, I only drank a little but I ate the lion’s share of food, because I’m hungry.
Learner Dialogues

Authentic Context Condition – Participant #5

Ann: Hi Grace. How’s it going?

Grace: Well, not so well.

Ann: What’s wrong?

Grace: I’m having trouble making a career decision.

Ann: What kind of job do you want to get?

Grace: Hmmm… I might want to become a children’s doctor but im not sure...

Ann: Oh, I didn’t know you put it in perspective. But you still not sure?

Grace: Yeah.. I’m not sure if the job suits me.

Ann: Oh, in that case, I have an idea. you should definitely do an internship. You can TEST THE WATERS of a job by being an intern first to see what the job is like before you get a degree in it.

Grace: Hey, that’s a good idea! I am free today, so I think I’ll go and check it out.

Ann: yeah take your time

Grace: Thanks for the advice, I’ll let you know what happens.

Authentic Context Condition – Participant #3

Background: Whab is like an expert when it comes to talking to girls and knowing when she is open for a chat. The conversation goes between Whab and Abdul-Aziz. Abdul-Aziz wanted to learn from him. This talk happened in a coffee shop.

Abdul-Aziz: Hey, tell me how you always know when and how to start talking to the girls. How do you do that?
**Whab:** When it comes to girls, both sides will **test the waters**; they want to make sure that the other person is giving them signs. This is the key.

**Abdul-Aziz:** Most of the time it’s confusing. Suppose she is already smiling. If I make a move in the wrong way, I will lose the chance.

**Whab:** Of course, you are right. You will not make your move at all until you sure (at least 70%) that she is ok with it.

**Abdul-Aziz:** Teach me.

**Whab:** Start with some looks and then smile. If you have the chance to make a complement, do that or make her laugh.

**Abdul-Aziz:** And then?

**Whab:** If she responds, start to talk and try to listen carefully with [sic] what she says. That is the key.

**Abdul-Aziz:** Thank you so much.

**Whab:** You’re welcome buddy.

**Authentic Context Condition – Participants #7 and #11**

**Introduction:** Yi and Jung-Min are friends. They discuss future investment plans at Starbucks.

**Jung-Min:** Hi, Yi. Long time no see. How’s going?

**Yi:** Not bad.

**Jung-Min:** What are you working on recently? I heard that you are going to buy stocks.

**Yi:** Yeah. I am researching Apple stock recently.

**Jung-Min:** really? I am also very optimistic about Apple's stock because Apple has a lot of great products.

**Yi:** Are you planning to buy shares in Apple?
Jung-Min: No, I am going to test the water electronic currency.

Yi: Cool, do you want to buy Bitcoin?

Jung-Min: Yeah.

Yi: I wish you all the best for your investment.


Yi: Bye.
Appendix H: Screenshot of COCA Search Page with Genre Limits Selected
### Appendix I: COCA Hits for “On the bandwagon”

<table>
<thead>
<tr>
<th>Source</th>
<th>Context</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>CBS</em></td>
<td>Ford created a group dubbed Team Edison to deliver thirteen new models over the next five years. These developments follow news that China intends to ban gas-powered cars in the future. CBS News contributor and Wired editor-in-chief Nicholas Thompson is with us. Good morning. <strong>NICHOLAS-THOMPSON</strong># Good morning, Charlie. <strong>CHARLIE-ROSE</strong># So why are we seeing this happen? Is it simply that that is where the action is and that's simply where the world is going in terms of electric cars and you better get on the bandwagon now? <strong>NICHOLAS-THOMPSON</strong># Yes. And the reason why that happened is, one, Tesla. Tesla showed you can make a better car. Electric cars aren't toy cars, they can go zero to sixty faster, they can handle better, there are huge advantages to having a battery in the middle of the car instead of a big explosion engine in the front of the car.</td>
<td>Oct. 4, 2017</td>
</tr>
<tr>
<td><em>Huffington Post</em></td>
<td>A Definitive List of The Best Albums of 2015 # 2015 has been the year of vinyl. It's funny to watch this transition happen, especially as a person who has jumped on the bandwagon. There is something fulfilling about listening to an entire album, like you would with a record. # A monthly Spotify Premium membership is about as expensive as buying a singular record a month, so why do we do it? Well, my friend, it seems that aesthetic trumps efficiency and frugality. I love listening to an album all the way through, to hear the tracks as the artist wanted them to be heard, as pretentious as that sounds.</td>
<td>Jan. 4, 2016</td>
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<td><em>Fox News The Five</em></td>
<td><strong>GUILFOYLE</strong># Well, these are -- 39 women are saying that he defamed them, because he's admitted that he, in fact, used narcotics to be able to have sex. However, two of the women have even said that they had consensual sex. So I'm not saying that 39 women he committed acts of rape. Each case needs to be individually investigated. Do you know how many people are going to say, &quot;Oh, I knew him, too,&quot; like get in on the bandwagon. You don't know. It doesn't matter. Doesn't excuse the behavior that he has already admitted to. And some of these girls were underage. It's very troubling for everyone involved.</td>
<td>July 7, 2015</td>
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<td><em>Fox News The Five</em></td>
<td><strong>BOLLING</strong># So you have the climatology -- yes, thank you. So the climatologists have to support the research. They have to play that game. They have to talk about global warming while it's not warm enough. So let's call it climate change. Everybody knows what climate change is. But also, the politicians, too. There are a lot of politicians who are on the bandwagon, because they're environmentalists. Tom Stier (ph) for one may be anti-fossil fuel. But that means they'll -- if you jump on that bandwagon, they'll support your campaigns. And you're on that bandwagon. . . So follow the money, and you can usually see where</td>
<td>Nov. 19, 2014</td>
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<td><strong>ABC The View</strong>&lt;br&gt;Hot Topics</td>
<td>... guilty because once it's out, once somebody accuses you of this, that's what you are. And so it's very... ROSIE O'DONNELL (&quot;THE VIEW &quot;) And it's harder when 13 women accuse you. Well I don't know. I mean, I look at all the people who accused Tiger Woods. ROSIE O'DONNELL (&quot;THE VIEW &quot;) Of rape? Of having sex with him. ROSIE O'DONNELL (&quot;THE VIEW &quot;) Rape is different than having sex. My point is, people jump on the bandwagon. Okay. People tend to jump on the bandwagon. Now I know you have very different feelings about it, which you are entitled to.</td>
<td>Nov. 20, 2014</td>
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<td>Magazine&lt;br&gt;<strong>Esquire</strong>&lt;br&gt;The Life Cycle of a Trend</td>
<td>it's when the pocket square started to make regular, unremarkable appearances on red carpets and award shows (its unremarkableness a sign of its increasing regularity); it's when it reemerged on James Bond's person (in Quantum of Solace) after a decade of mostly languishing in his top left-hand dresser drawer. Retailers of every size and most sensibilities either introduced them on their shelves or ramped up their offerings to meet the demand of the early majority, the 34 percent of trend adopters who hop on the bandwagon while the wagon is still accelerating. It then caught on with the late majority (34 percent of trend participants) and the late adopters (16 percent), and by 2010 the pocket square had gone fully mainstream.</td>
<td>Sept. 2015</td>
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<td><strong>CNN Newsroom</strong>: Going Gluten Free</td>
<td>But as, you know, these products are becoming more mainstream and the gluten-free food segment is growing by leaps and bounce, the prices might start to come down and certainly there's more variety available for those who need to be gluten free, which is great. WHITFIELD: So do you see this as a trendy kind of thing or is it really here to stay? I mean, especially - of course it is if you have a medical condition. But for everybody else who's kind of on the bandwagon right now, is this kind of a trendy thing or, you know - TEH: There's certainly a trend to it. I think there are a lot more people. It's in the media</td>
<td>May 28, 2011</td>
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<td><strong>The Christian Science Monitor</strong>: The Culture</td>
<td>Piriz: Emily, who lives in Orlando but is from Miami wasn't about to waste her opportunity to represent for the Latinos (and earn Jennifer's favor) by reminding the audience that she's Cuban and then choosing Jennifer Lopez's. &quot;Let's Get Loud.&quot; Much like Jena's performance, Emily was drowned out by the music and the production. Although Jennifer was over the moon for Emily's performance and Keith jumped on the bandwagon, Harry kept things in perspective by astutely pointing out that the song she chose had people excited before she even started singing because it's a big song;</td>
<td>March 6, 2014</td>
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<td><strong>Sunset Magazine</strong>: How Sweet it is</td>
<td>Retailers took one look at the pale, bumpy-skinned fruit and passed. So he loaded up his station wagon and hit the road, pitching Pixies to whoever would listen. The key, he figured, was to get people to peel back the suspect skin and taste the sweetness inside. Once they bit into the fruit, the Pixies would sell themselves. # And they did. Word got out, direct sales picked up, and it wasn't long before other citrus farmers jumped on the bandwagon. In 1987, Churchill rallied a group of local farmers to form the Ojai Pixie Growers Association. Today, more than 40 family farms coordinate marketing efforts and share tips on</td>
<td>April, 2014</td>
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<td><strong>Denver Post</strong></td>
<td>Very little was going on east of Federal until Wally Hultin developed the Overlook in the late 1990s. Then, three other projects followed: Tamburello developed Highland Lofts, Loup Development did Shoshone Lofts, and Engleberg &amp; Wright developed Highland Crossing -- all multiunit condo buildings. &quot;On the bandwagon&quot; In 2003, Tamburello and then-partner Stephanie Garcia teamed up on the redevelopment of a portion of the old Olinger Mortuary complex at West 30th Avenue and Tejon Street in what Realtors refer to as Lower Highland. The result: two restaurants -- Vita and Lola -- and the Little Man ice-cream shop. &quot;That Jan. 6, 2013</td>
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<td><strong>NPR Fresh Air: Following Garbage’s Journey Around the Earth</strong></td>
<td>So it's actually kind of a marshaling of market forces in a way to make the consumer economy less wasteful as opposed to having no incentive or not much of an incentive in our country to reduce some of the wasteful qualities of products because that's going to be paid for by the consumer or by taxpayers. And it's actually - it's a pretty cool idea. And then there's, you know, the Patagonia Company, for instance has really sort of gotten on the bandwagon for this and because they make outdoor wear and other products and they're - Patagonia is telling its customers hey, when you're done with something you bought from us, and we don't care if it's worn out or you don't like it anymore or whatever, when you're done with it send it back to us and we'll make something else out of it. And that is really an interesting metamorphosis of the way we normally do business. April 26, 2014</td>
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<td><strong>ACADEMIC Questions: Who Best to Tame Grade Inflation?</strong></td>
<td>The fight against grade inflation must be led by tenured professors, and especially those of the highest stature in their respective institutions, who must make a conscious decision to act as leaders, inspire others to recognize the importance of bringing back meaningful standards in higher education, and protect those who are vulnerable should they choose to get on the bandwagon. When the time comes to evaluate junior colleagues for tenure, senior professors must defend rigorous grading as a value rather than a liability. It may well be that professors who choose to fight grade inflation might bear some personal cost in terms of loss of reputation and loss of merit pay increases. The question is whether some commitment to the values of academic integrity can supercede professors' rational choices to protect those things that are most valuable to them: their reputations and their incomes. 2003</td>
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<td><strong>ACADEMIC Journalism and Mass Communication Quarterly Scandal 2.0: How Valenced Reader Comments Affect Recipients' Perception of Scandal</strong></td>
<td>By making use of heuristics, individuals can form opinions in an efficient way, even if they can only refer to a limited amount of knowledge on a complex subject (the emerging scandal; Sniderman, Brody, &amp; Tetlock, 1991). According to Sundar and Nass (2001), one of the most prevalent heuristics in connection with online news is the bandwagon heuristic. Based on the bandwagon effect (Nadeau, Cloutier, &amp; Guay, 1993), online recipients tend to concur with other users' judgments and selection decisions (Bellur &amp; Sundar, 2014). In the study by Sundar and Nass, all participants first read the same online news article. The corresponding source, allegedly having chosen this news article, had been systematically modified (editor, computer, other users, or participants themselves). September, 2016</td>
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signaled to restaurants and retailers that something was going on in Highland and that they had better get on the bandwagon."

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<th>Magazine: Tech Crunch</th>
<th>Top VC firms like Andreessen Horowitz and Index Ventures have jumped on the bandwagon by launching sector-specific funds dedicated to life sciences. In the case of Andreessen Horowitz, the Sand Hill Road powerhouse launched a $200 million a16z Bio Fund last year, which invests in mostly early-stage startups at the intersection of computer science and life sciences.</th>
<th>Sept. 4, 2016</th>
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<td>Magazine: America</td>
<td>But one pressing item related to climate change has so far escaped serious discussion among international policymakers: how to respond to potential waves of &quot;climate refugees,&quot; people forced from their homes because of climate change. If even moderate effects from climate change occur as predicted, millions of people will be uprooted in the near future by rising sea levels, extreme weather events, droughts and water scarcity. When it comes to climate-change migration &quot;everybody jumps on the bandwagon and waves their own agenda,&quot; said Professor Frank Biermann, an expert in global environmental governance, in a keynote presentation at a recent conference on the issue in Geneva, Switzerland.</td>
<td>May 24, 2010</td>
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<td>Magazine U.S. News and World Report</td>
<td>But then people started asking for them in colors. And then the kids came in. And now, well, you don't even want to get near that corner of the store when the new Crocs products come in. The initial buzz -- spread almost entirely via word of mouth -- quickly became deafening. Iron Chef Mario Batali showed off his orange pair to TV audiences. (He's since entered into a partnership with Crocs.) Jack Nicholson sported a blue pair, Faith Hill a tan pair, and when Britney Spears jumped on the bandwagon, she reportedly bought the shoes in every color. (There are 27 currently available.)</td>
<td>Sept. 2007</td>
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<td>Magazine American Heritage</td>
<td>Kim Novak was one of the first celebrities to hawk diet soda: this advertisement is from 1956. Before Pepsi had a diet line of its own, it tried to get on the bandwagon by pretending it was slimming, despite the hefty dose of sugar each bottle contained. Diet Rite, opposite, was the second contender in the new field, and soon became hugely successful.</td>
<td>July 2006</td>
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