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**THE EFFECTIVENESS OF USING MULTIMEDIA FOR TEACHING PHRASAL
VERBS IN COMMUNITY-COLLEGE ESL CLASSES**

A Dissertation Presented
to
The Faculty of the School of Education
Learning and Instruction Department

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Guohua Fu
San Francisco
May 2021

THE UNIVERSITY OF SAN FRANCISCO

Dissertation Abstract

The Effectiveness of Using Multimedia in Teaching Phrasal Verbs for Community-College ESL
Classes

This mixed-methods study investigated the effectiveness of multimedia instruction for phrasal-verb education with community-college English as a second-language learners (ESL) in Northern California. Previous researchers have found that ESL learners have difficulties and barriers in learning phrasal verbs, and other researchers have found that how using multimedia teaching techniques in different fields of education have been effective, but no studies have investigated using multimedia instruction with community-college ESL students in learning phrasal verbs for second-language acquisition.

In this mixed-methods research, there were 35 community-college ESL students, including 22 students in the multimedia-treatment group and 13 students in the text-based-comparison group, who participated in this study. The multimedia-treatment group was instructed through the phrasal-verb multimedia lessons for 12 sessions with 48 new phrasal verbs. The text-based-comparison group was instructed through the phrasal-verb text-based lessons for 12 sessions with the same 48 new phrasal verbs. Two-way analysis of variance was used to analyze the pretest, posttest, test-score difference, questionnaire, and engagement data. All participants' learning interest, usefulness, and success were measured through the MUSIC model questionnaire and individual interviews.

The quantitative findings revealed a statistically significant difference in terms of prior knowledge and learning engagement between the comparison and treatment groups. Qualitative findings revealed that students in the multimedia-treatment group had positive opinions about the phrasal-verb multimedia lessons. Most participants enjoyed the phrasal-verb multimedia lessons and

expressed interests in using multimedia techniques for furthering their English learning. Thus, the qualitative and quantitative findings suggested a new conceptual framework in second-language acquisition. Based on the evidence of this dissertation's research, the text-based techniques had positive effects on the community-college ESL students' phrasal-verb learning.

This study has implications for the fields of distance learning and English phrasal-verb instruction. Additional research on using multimedia instruction, such as using comics, pictures, music, animation, and movies, for different age ranges and different ESL group levels, and for online-synchronized and asynchronized class settings would further expand the current findings of the effects on phrasal-verb multimedia instruction.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctoral of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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CHAPTER I

STATEMENT OF THE PROBLEM

Phrasal verbs are defined as “a verb + a particle combination that functions as a single verb, both parts giving up meaning in order to form a new lexical item” (Darwin & Gray, 1999, p. 65). White (2012) contended that phrasal verbs are difficult for English as a Second Language (ESL) learners to learn because their meaning change constantly depending upon the situation, sometimes the meaning can be literal and other times can be idiomatic. For example, the truck picked up speed slowly. In this sentence, pick up is the phrasal verb and it means to increase speed. Let’s pick up where we left off yesterday. In this sentence, pick up means to do something again after an interruption. The meaning of pick up change depending upon the situation and it can be literal and idiomatic. As one researcher acknowledged, “the phrasal verb is a syntactic oddity in the language world” (Darwin & Gray, 1999, p. 65).

Phrasal verbs are not common in every language. For example, Hebrew and Chinese do not use phrasal verbs whereas Dutch and Swedish do (Liao & Fukuya, 2004). If students’ first language uses phrasal verbs, then phrasal verbs come more naturally when they think about and use them in the second language. If students’ first language does not use phrasal verbs, then phrasal verbs do not come naturally when they think about and use them in the second language, thus causing second-language learners frequently to make mistakes when they use phrasal verbs. Students take a long time to learn phrasal verbs. The positive of rule govern is to learn ground rules. If there is no room for learning, students need to acquire knowledge. Phrasal verbs are not rule governed. Students can learn phrasal verbs by being exposed repeatedly with different means and media. (Chan & Liou, 2005).

The syntactic structure of idiomatic expressions is very challenging to second-language learners. For example, there are particles that can move in some two-word verbs but some cannot. There are two types of phrasal verbs: transitive phrasal verbs and intransitive phrasal verbs. Intransitive phrasal verbs cannot take direct object. For example, I get up at 6:00. In this sentence, get up is the intransitive phrasal verb because get up cannot take direct object. Transitive phrasal verbs can take a direct object. There are two types of transitive phrasal verbs: inseparable and separable phrasal verbs. For example, I will look after him. In this sentence, look after cannot be separated. There is no rule and inseparable transitive phrasal verbs must be memorized. Another example is turn off the TV and turn it off. Turn off is separable so we can add pronouns between the verb and the preposition. When the object is a pronoun, it must come between the verb and the preposition. For example, we can say a friend called her up at work but we cannot say a friend called up her at work. Second-language learners tend to avoid using two-word verbs because of their complexity. Adding to the complexity, phrasal verbs are two or more prepositional phrases contain multiple meanings, which lead to problems with translation and interpretation for many second-language learners (Dagut & Laufer, 1985; Hulstijn & Marchena, 1989; Jahedi & Mukundan, 2015; Laufer & Eliasson, 1993; Mart, 2012; Thom, 2017).

The acquisition of phrasal verbs and the practice of using lexical items in a meaningful way is a critical component of the process of language learning. Consider the following sentences: “Angela and Rambo ran up the hill.” “Angela and Rambo ran up the bill.” As mentioned above, the meaning of ran up in the first sentence is literal and meaning of ran up in the second sentence is idiomatic. Determining the verb phases in sentences like these can be problematic for not only second-language learners but also second-language teachers. For example, I took an aspirin because I had a terrible headache. Took aspirin means eat aspirin.

Take off your coat! It's too hot here. Take off means remove clothing. The difference between take and take off is the preposition word off. The preposition words in phrasal verbs are important because they completely change the meaning. For example, get up means get out of bed. Get away means escape. And get on with someone mean one likes being with someone. Well-designed pedagogical strategies that help ESL students understand and use phrasal verbs (Fromkin, Rodman, & Hyams, 2011).

Many studies have linked phrasal-verb knowledge to success in second-language vocabulary learning, reading comprehension, and speaking practice (Hu & Nation 2000; Qian 2002). Although important, the difficulty in teaching and learning phrasal verbs leads second-language learners and second-language teachers' to avoid them (Chen, 2007). A particular problem second-language teachers avoid phrasal-verb education in speaking practice. With insufficient knowledge of phrasal verbs, second-language learners cannot express their opinions in their spoken and written languages (Fauziati, 2005). Moreover teachers and researchers have described English as a foreign language (EFL) students as rote learners who learn mechanically without meaningful understanding. Memorization or repetition, however, does not help second-language learners learn phrasal verbs (Ballard & Clanchy, 1984; Bradley & Bradley, 1984; Chen, 2007; Girgin, 2019; Marashi & Maherinia, 2011; Samuelowicz, 1987).

Memorizing lists of phrasal verbs does not help second-language learners learn phrasal verbs. Lists are not effective educational methods. There is a need for second-language educators to develop more effective teaching methods in phrasal-verb education. Using contextualization methods with multimedia instruction can help second-language learners learn vocabularies and improve their second-language acquisition (Hu & Nation 2000; Lai, 2016; Mayer, 2005; Mayer & Moreno, 2003; Nation, 2006; Qian, 2002; Richardson, 2009; Teng, 2016).

There is little or no research around the successfulness, usefulness, and effectiveness of using multimedia to teach English phrasal verbs in ESL settings. Nonetheless, studies exploring the relationship or the differences between students' motivation for furthering their learning of lexical phrasal-verbs knowledge and using multimedia intelligences are limited. Thus, there is a need to compare the roles of using multimedia for phrasal-verbs knowledge and how it is acquired in second-language education. This study explored the effectiveness of the multimedia approach on improving community-college second-language learners' phrasal-verbs learning competence.

According to Sanchez and Pulles (2019), particularly at community colleges in California, there were more than 58,000 students registered for one or more English as a second language (ESL) classes. Rodriguez, Bohn, Hill, and Brooks (2019) claimed that the largest population of adults second-language learners came from community-college ESL classes. Community-college second-language learners need practical English so that they can use English fluently and proficiently for their daily jobs and lives. Phrasal verbs appear frequently in daily conversations. Understanding the multiple meaning of idiomatic expressions can be beneficial for community-college second-language learners. Many beginner level community-college second-language learners, however, have no prior knowledge of two-word verbs and they often misunderstand the multiple idiomatic meanings; thus, they try to avoid using two-word and three-word verbs (Beam, Morris, & Rodriguez-Kiino, 2019)

Chen (2007) pointed out, "societal factors, institutional factors, teacher and learner factors as well as ineffective curriculum documents are related to the avoidance of English phrasal verbs" (p. 249). First, one of the societal factors is that Chinese English learners learn and practice phrasal verbs only in English classes with teachers and classmates. Second-language

learners cannot practice using idiomatic phrases on a daily basis. Moreover, EFL teachers do not use phrasal verbs to teach English. Only ESL teachers who teach English in English-speaking countries use phrasal verbs in their English courses (Chen, 2007). Students are not confident using phrasal verbs in communications because students lack practice, even though they have learnt the relevant language knowledge. Using and practicing communicative phrasal verbs builds up students' confidence in learning English and should not be avoided.

Second, there are insufficient educational resources for both EFL educators and second-language learners. Chen (2007) addressed second-language learners cannot identify phrasal verbs with limited knowledge of prepositional verbs in the English reading textbooks. Second-language learners tend to avoid the preposition verbs that appear in the reading materials. Therefore, if second-language learners practice reading prepositional verbs, it can be helpful for second-language learners improve reading comprehension skills.

Third, first language has influence in gaining a second language. Unintentionally, ESL learners always translate English into their first language. The problem is that English is different from their first language. Translating phrasal verbs cannot generate the correct idiomatic or authentic meaning for one single academic word. For example, Chinese English learners prefer to translate every Chinese word phrases (e.g., “renshou”) into one English word (e.g., “tolerate”) rather than using a phrasal verb to express the meaning (e.g., “put up with”) because for native Chinese speakers, they speak out every single word in their sentence, and every single word stands for a specific meaning. Native Chinese speakers avoid using two-word phrases naturally and subconsciously. It is difficult for some English language learners to translate phrasal verbs word by word to understand the phrasal verbs' meaning (Chen, 2007).

Chen (2007) investigated why Chinese English learners avoid learning English phrasal verbs. Maherinia (2011) implied educators can guarantee students' efficient learning using effective instructional materials. Encouraging ESL educators to develop and deliver effective lessons on phrasal verbs is one way to avoid the ignorance of learning phrasal verbs. One of the most effective and famous teaching strategies is multimedia instruction using pictures, comics, music, animation, and videos.

Multimedia instruction activates different learning modalities. The use of pictures, comics, music, animation, and video learning modality for second-language learners is supported by the Cognitive Theory of Multimedia Learning (CTML, Berk, 2009; Dikilitas & Duvenci, 2009; Mayer, 2009). According to Leong, Abidin, and Saibon (2019), multimedia instruction can motivate second-language learners learn English. Their study investigated how digital multimedia teaching methods effect young Malaysian second-language learners learn English vocabulary. They found that using multimedia techniques activated different learning modalities and benefited ESL learners' learning process.

Using video games as a multimedia technique in language learning also motivates students to learn more. According to Gortari and Griffiths (2015), digital video games create second-language learners' interest in learning English. According to Horowitz (2019), the online informal setting of provides second-language learners a comfortable environment to use English and at the same time activate their motivation to practice English. The researcher investigated a group of ESL community-college students from Puerto Rico on how playing multimedia video games motivate students learning and improve their communication skills. The researcher found a statistically significant relationship between students' motivation and learning outcomes that

extended CTML studies on using video games to create the learning confidence for community-college ESL learners.

Based on the application of multimedia learning and CTML, many researchers (Lin, 2018; King, 2002, 2010; Wang, 2019) have investigated ESL vocabulary teaching and learning. There is little research, however, on the learning of phrasal verbs in digital storytelling, video games, films, and YouTube videos to teach ESL idiomatic expressions to community-college students. Aside from the studies mentioned above, very few studies have directly investigated the effect of using multimedia techniques to teach phrasal verbs in ESL classrooms. The shortage and limitations of such studies pose a research problem. Although there are plenty of existing phrasal-verb memorization lists, exercise books, and vocabulary teaching methods, investigating engaging and useful phrasal-verb instruction not only can help second-language learners learn more effectively but also fill a gap for current literature.

The researcher of this study proposed new techniques based on the theory of cognitive load of multimedia methodology (Mayer, 2005, 2014, 2018) and investigated how effective are these techniques to further second-language learners' learning on phrasal verbs through multimedia instruction. According to Mayer (2001, 2004, 2005, 2008, 2014, 2018, 2019), multimedia instruction is one of the tools that benefits the language-learning process. The question of how multimedia affects second-language learners' phrasal-verb competence is essential for the meaningful understanding of an important aspect of second-language learning and teaching.

Purpose of the Study

The purpose of this mixed study was threefold: (a) to investigate the effectiveness of using multimedia to teach two-word phrasal verbs to community-college adult ESL learners, (b) to

investigate the motivation of community-college ESL learners learning two-word phrasal verbs actively by using multimedia, and (c) to study the relationship between ESL learners' motivation and interest for furthering their learning.

The researcher taught a 6-week 12-session ESL class at a community college by using the phrasal-verb multimedia instruction. The researcher conducted comparison research, which included a multimedia-treatment group and a text-based comparison group. The researcher conducted the multimedia instruction using pictures, songs, and videos intervention with the treatment group and the traditional text-based lecturing instruction intervention with the comparison group. The students' learning was measured by a pretest and a posttest for both comparison group and treatment group. All students responded to a questionnaire after the posttest. Students who volunteered from the treatment group participated in the individual interviews. The research methodology was mixed method. Quantitative data were collected to measure the effectiveness of the phrasal-verb multimedia instruction and the effect of the phrasal-verb multimedia instruction on the students' learning. Qualitative data were collected to measure the students' learning interests, usefulness, and success.

Significance of the Study

Previous research into multimedia as an instructional strategy has centered on vocabulary and reading-comprehension instruction (Amir, 2017; Mayer, 2008; Raniah, 2018; Tariq, 2019, Yangting, 2019; Younes & Seifert, 2017; Yu-Feng, 2018). Little research has been conducted using the multimedia techniques in phrasal-verbs education for community-college ESL students, and little quantitative research has been conducted in phrasal-verb education. Conversely, there is little or no known studies applying multimedia instruction to ESL phrasal-verb education. This mixed-method study of multimedia instruction of using pictures, songs,

animation, and videos provided crucial research on phrasal-verb education for community-college ESL students. This study also offered empirical and quantitative information on multimedia instruction research by using community-college ESL classrooms during distance learning.

Moreover, this study extended previous CTML research by (a) conducting the comparison study in the community-college ESL distance learning classrooms and (b) covering the multimedia instruction on phrasal-verb knowledge teaching to investigate if multimedia instruction of phrasal verbs effectively support differentiated instruction in ESL content.

Apart from the theoretical importance, this study contributed a new fashioning and research-based solution for second-language learners. This study inspired ESL and EFL educators to apply more engaging educational technology, such as software tools, platforms, apps, to facilitate teaching process and at the same time to motivate students to learn, to build up students' learning interest, and to promote their learning success. This study brought valuable insights into using multimedia instruction in distance learning for ESL and EFL practitioners. This comparison research not only provided effective and engaging phrasal-verb multimedia instruction and interactive activity elements but also opened the gate for educators to embrace online technical education for current distance learning.

Theoretical Framework

This dissertation drew on Mayer's (1997, 2003, 2005, 2014) cognitive theory of multimedia learning (CTML), which stated that students have limited capacity of working memory when they try to learn new knowledge (Baddeley, 1986; Baddeley & Hitch, 1974; Miller, 1956). With limited capacity of working memory, added the basic premise of CTML is that people learn more deeply from words and pictures than from words alone.

The Cognitive Theory (CLT, Chandler & Sweller, 1991, 1998) and the Cognitive Learning Theory (Mayer, 2001) build into CTML. In cognitive theory, prior knowledge is known as an individual's schema and internal structure of known knowledge. An individual's working memory can hold up to about five to nine pieces of information, or schemas, at a time, averaging about seven. If presenting the six letters in a string M,E,M,O,M,R,Y, and see these letters as a recognizable word. Memory is a structure of letters that allows us to draw from prior knowledge, a schema. Because the word itself is one schema, one still has available working memory. This is the cognitive theory in general.

The Cognitive Load Theory is rooted in the idea that the learner will recall information from prior knowledge, or those schemas in long-term memory. To attain meaningful understanding of new information, the learner's knowledge integrates with their schemas and their existing knowledge in long-term memory (Kalyuga, Ayres, Chandler, & Sweller, 2003; Renkl & Atkinson, 2003). Then, there is a baseline for the CLT and cognitive learning theory to understand the CTML. Multimedia learning is about understanding how a learner mind works. The understanding of CTML allows instructional designers, educators, and curriculum developers to design meaningful learning experiences for students.

CTML was first presented by Mayer and Moreno (2003) and Paivio (1986) as an extension of the dual coding theory. CTML follows the three basic assumptions about what one knows about cognitive science. The first assumption is the dual-channel assumption. Individuals are thought to process information through two channels. One is the auditory channel for processing auditory inputs and verbal languages. The other channel is visual for processing everything one see and pictorial representations. The next assumption is limited capacity that was referred to earlier. Even though auditory and visual channels are on high input alert, limited

capacity assumes we can only process about five to nine bits of information at a time, an average of seven. The third assumption is active processing. This processing is a little bit more involved suggesting that for active processing to work, both auditory and visual channels must be engaged, which assumes that in multimedia learning there needs to be five additional cognitive processes engaged all at the same time for active processing to work, that is specifically focusing on what is seen more than what is heard (Mayer, 2001; Mayer & Moreno, 2002; Plass, Chun, Mayer, & Leutner, 1998, 2003).

The first active process is visually selecting words from the screen viewing presentation. Visually selecting images or photos from the screen, organizing those selected words, organizing those selected images, and finally integrating all those selections and comparing them with one's prior knowledge, which is large amount of brain power going on just to retain new presented information. Mayer and Moreno (2002) developed a model to help better illustrate how all this brain power works (see Figure 1). All parts of the process start with an online course eLearning or some other type of multimedia learning experience. This model represents two rows of information processing: the auditory channel and the visual channel or words and images, which is the tool channel assumption. In order to select words and or images, one needs eyes, ears, and sensory inputs. Once learners begin processing those inputs from the two channels, they go into working memory, which is where the second assumption of limited capacity is addressed. Learners hear the words of a narrator or even background music that can aid in setting the mood and tone of the instructions. This is what Mayer and Moreno (2002, 2003) referred to in deep working memory as the verbal mental model. Learners also see words on screen as well as any visual such as images or photos or any other visual representation that is not represented as written language, which are placed in its corresponding channel as the pictorial model in deep

working memory, all of which is continued inside the learners working memory (Mayer, 2001, 2005a).

Last, in the CTML model, is the prior knowledge or the long-term memory. In Figure 1, multimedia learning consumes much cognitive processing of both channels all at the same time. Working memory has to make representations of what is heard and what is seen. Deep working memory is putting all channels into mental models, and long-term memory is searching the database of one's minds looking for and retrieving relevant known knowledge. All these processing overload the brain. make brain is begin to hurt. As mentioned, active processing involves those five cognitive processes of collecting words, images, and integrating with prior knowledge, which is all known as essential processing and is part of the total cognitive demand that the learners endure. Words to eyes represent text on screen the learner reads. Words to ears represent spoken words heard by a narrator, and images to eyes represent the images that are graphics the learner sees on the screen. This is when essential processing goes by accident to one's working memory. The brain selects whether one hears sounds or whether one sees images. Two of those cognitive processes in selecting words and selecting images. Then, one pushes these inputs into deep working memory and start organizing everything into mental models where in the verbal model or in the pictorial model, organizing words, and organizing images is to cognitive processes. For active processing to occur those five cognitive processes need to be engaged. Just think how fast all the processes happen multiple times in a matter of a second. Finally, the integration process occurs in this model representing the merging of all those verbal and pictorial mental models with prior knowledge (Mayer, 2001). All of it connects together until one processes and say "Ah, here is something relevant that I already knew let me match this

with that new stuff” or “Hmm, I didn't know that let me store that in long-term memory for later use.”

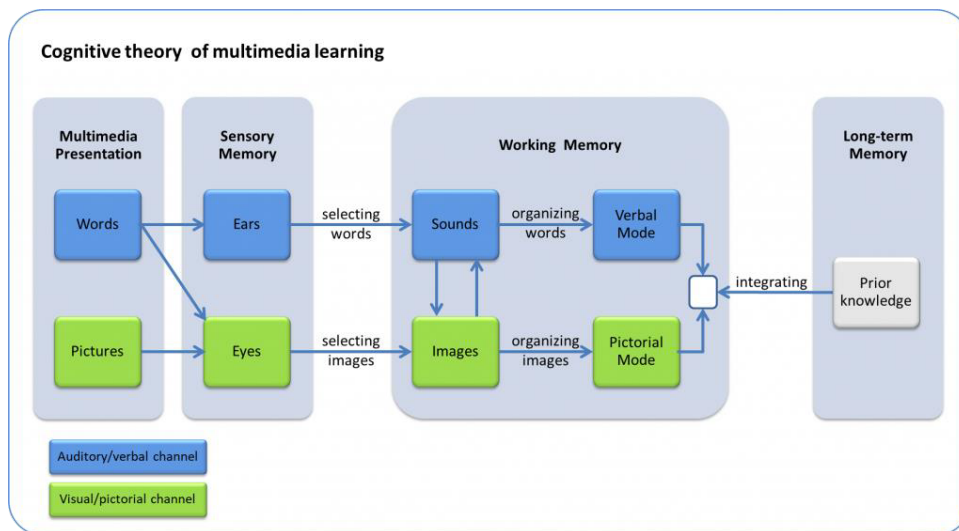


Figure 1. Mayer's CTML model (Mayer, 2001, p. 44).

Cognitive demand essentially is combining all three processes. Problems occur when one put demand that exceeds the capacity. Three principles to be aware of are the capacity for representing words and images is unlimited, the capacity for storing knowledge and long-term memory is unlimited, the capacity for mentally holding words and images in working memory is, however, limited. If one knows working memory has a limited capacity, then as instructional designers, educators, and curriculum developers, one should be conscious of where one places the learners' ability to present information. Otherwise, there will be a cognitive overload and working memory will be exceeded. How can this problem be avoided? For instructional designers, educators, and curriculum developers, to avoid cognitive overload, a learner's cognitive processing or demand needs to be or is greater than the learner's cognitive capacity (Mayer, 2001, 2014).

In meaningful learning, however, learners' cognitive capacity of the working memory is greater than the learners' cognitive processing or the demand. Basically, too much information

plus too many formats all at the same time result in cognitive overload. The solution to reducing cognitive overload in multimedia learning experiences is spreading out the balance of essential processing by default representational holding. Multimedia gives description on using words and pictures concurrently to deliver learning materials (Mayer, 2001, 2003, 2005a).

Mayer (1999) and his associates demonstrated that well-designed multimedia instruction could better support the cognitive process of low-prior-knowledge learners than the high-prior knowledge-learners. According to Kalyuga (2003),

design principles for multimedia learning environments depend on the prior knowledge of the learner that help low-knowledge learners may not help or even hinder high-knowledge learners. Experienced or high-knowledge learners are considered learners who have substantial previously acquired knowledge in a specific domain and who are involved in learning relatively new, more advanced information in this domain. (p. 325)

According to Kalyuga, Chandler, and Sweller (2000), multimedia design provides multiple recommendations for experienced or high-knowledge learners but not to the low-knowledge learners. If the multimedia instructional material is effective for low-knowledge learners, then the same material will not be as effective as for high-knowledge learners. The expertise reversal effect demonstrated the strength of the multimedia learning material changes depending on the different knowledge levels of learners. The working memory of low-knowledge learners creates cognitive overload when they learn new knowledge (Kalyuga, Ayres, Chandler, & Sweller, 2003).

To reduce the cognitive load, one of the most effective teaching methods is using multimedia instruction—such as pictorial representations with verbal representations—when low-knowledge learners learn new knowledge together (Kalyuga, 2007; Kalyuga & Renkl, 2010; Larkin & Simon, 1987; Sweller et al., 2011). The expertise reversal effect emphasized rich-information instruction can be more useful and valuable to low-knowledge learners than high-

knowledge learners because high-knowledge learners learn less new knowledge when they learn the same material with the low-knowledge students. Educators should note that expert learners do not necessarily perform worse in absolute terms compared with novices. Rather, experts' performances are worse in relative terms, when compared with other experts who learn the new material using an alternative format (Kalyuga et al., 2003). Prior knowledge principle in the CTML design was targeted in this study.

ESL learners can learn phrasal verbs more effectively when multimedia instruction provides more modalities than single modality or two modalities. Low-prior-knowledge ESL students can learn more successfully than the high-prior-knowledge ESL students by using the same multimedia instruction. CTML can be explained in reference to multiple intelligences. The multiple intelligences activate different learning modalities because the CTML subscribes to the multiple intelligence. Furthermore, using multiple intelligences is the best way to teach. The effective approach to teach is to use a multisensory approach. Multimedia promotes the multisensory approach. The multisensory approach is the most effective way to teach because every person has a preferred way of learning. When teachers use a multisensory approach, their instruction will reach out to every student not to just one person.

In this study for the treatment group, a multisensory approach was used to activate different learning modalities with the multimedia-instruction intervention. A multisensory approach of multimedia materials of pictures, songs, or videos was not used for the comparison group. The researcher used a traditional text-based instruction for the comparison group. The multimedia instruction not only activated the visual, auditory, and kinesthetic but also activated interpersonal, intrapersonal, analytical, and so on. Multimedia instruction brought videos from YouTube, animation, audio to provide for enthusiastic students' learning interests (Elyas &

Kabooha, 2018; Tsai, 2017). Using multimedia instruction activated different learning modalities and brings variety and enthusiasm for the students to learn more (Wang, 2019).

Second-language learners can learn new information more effectively by implementing the multimedia instruction rather than the text-based instruction (Mayer, 2014). Literature about the CTML suggested using digital storytelling, digital video games, animations, TED talks, and YouTube videos with illustrated texts can be very useful, helpful, and valuable in education (Butcher, 2014, 2006; Fletcher & Tobias, 2005; Mayer, 2005, 2001).

Background and Need

A phrasal verb consists of a verb and a preposition or adverb or both. The meaning of a phrasal verb can be completely different from the base verb. Such as, “look after,” “work out,” and “make up for” are all phrasal verbs (Koprowski, 2005). A phrasal verb consists of a lexical verb plus one or more particles. The meaning of a phrasal verb changes when the particle changes (Trask, 2000). Furthermore, phrasal verbs also are called two-word verbs, three-word verbs, prepositional verbs, and idiomatic expressions. The format of a phrasal verb is a verb plus a preposition or a particle (Darwin & Gray, 1999; Lewis, 1993; Wang, 2019). The literature showed that native speakers acquire phrasal verbs naturally and effortlessly and use them subconsciously in different conversational situations.

As mentioned above, one English phrasal verb often has different meanings depending on the prepositions and the particles. Some idiomatic verbs commonly have 5.6 meanings on average. Sometimes the phrasal verbs have literal meaning, the others have figurative meaning, and sometimes they have both meaning. Translating the meaning of phrasal verbs into one word or finding substitutes for phrasal verbs can be very difficult (Gardner & Davies, 2007). Students who cannot use phrasal verbs in oral context fluently is nonidiomatic because idiomatic

expressions popular are used in oral conversations (Siyanova & Schmitt, 2007). Second-language learners particularly prefer to avoid using idiomatic expressions in oral conversations because they often make mistakes or misunderstand the multiple meaning of a phrasal verb. Phrasal verbs are difficult to master. Second-language learners without authentic environment to practice using phrasal verbs makes the learning avoidance situations even worse (Liao & Fukuya, 2003).

Difficulty and avoidance

The avoidance of phrasal-verb education is common because phrasal verbs are not like verb tense or parts of speech in English grammar classes. Second-language learners often put more attention on verb tense or parts of speech learning than phrasal verbs. Many second-language learners' native language do not have phrasal verbs (Garnier & Schmitt, 2019). If second-language learners do not learn phrasal verbs, they will never acquire the phrasal-verb knowledge. When second-language learners learn phrasal verbs, they become confused easily by the multiple meaning of each phrasal verbs. Second-language learners potentially misunderstand the literal and figurative meaning of the idiomatic expressions during conversations. Thus, phrasal verbs are very difficult to learn. Moreover, second-language learners are not comfortable and confident when they use phrasal verbs with native English speakers. Therefore, the difficulty of learning phrasal verbs causes avoidance (Dagut & Laufer, 1985; Garnier & Schmitt, 2019; Hulstijn & Marchena, 1989; Laufer & Eliasson, 1993).

Many EFL and ESL educators use alphabetical phrasal-verb memorization lists to teach students phrasal verbs. EFL and ESL learners can easily memorize the lists, but they cannot use the lists when they talk to people in daily conversations. If students do not understand the different meaning of the phrasal verbs, they will make mistakes when they use the phrasal verbs

or they may misunderstand what other people say. As a result, students will memorize the phrasal-verb lists, but they may lose confidence in actively using the phrasal verbs in communications. Many ESL and EFL students like learning English but they do not like memorization or repetition. The lack of effective teaching methods and low interest in memorization cause the avoidance of learning phrasal verbs (Dagut & Laufer, 1985; Fu, 2015).

Chen (2007) stated that EFL or ESL students need encouragement to learn the phrasal verbs. One way to promote the positive effect is building up students' confidence by practicing phrasal verbs with methods that do not use memorization. The other way to promote a positive effect is providing sufficient resources to support student's phrasal-verb learning. A meaningful and well-designed phrasal-verb practice material is better than a memorization list. According to Chen (2007), phrasal verbs "are widely used because of their characteristics of flexibility, practicality, adaptability and efficiency for oral communication...[and] should be given a greater emphasis than before with the goal of achieving effective and efficient communication in the English speech community rather than the use of those much more academic words" (p. 349). Without an appropriate curriculum and learning material to practice phrasal verbs, it is impossible to accomplish effective teaching in the ESL classroom. More importantly, it is hard to guarantee students' efficient learning of phrasal verbs.

Avoidance of English phrasal-verb education should not be ignored. Second-language learners have multiple difficulties in learning phrasal verbs that cause the avoidance of learning. ESL and EFL students need sufficient phrasal-verb educational material, efficient practicing environment, and understand the English phrasal verb is different from their first language. Plus, more effective techniques to teach phrasal verbs are needed. There is a debate about whether ESL teachers should teach phrasal verbs or not, but there is little research on the issue. ESL and

EFL educators need encouragement to develop professional curriculum on phrasal-verb education to assist second-language learners to overcome the learning difficulties. There is a need for phrasal-verb education because native English speakers use phrasal verbs frequently in everyday conversational English, necessitating second-language students to become proficient and master phrasal verbs (Norman, 2010).

Multimedia instruction and success based on multimedia principles

Literature has shown that using pictures to teach English vocabulary is valuable in improving second-language learner's speaking skills. Second-language learners can memorize more vocabulary through pictures with text illustration. With greater vocabulary acquisition, students will have better speaking skills. One of the effective vocabulary teaching methods is using particular graphics with general explanation. Researchers found that second-language learners enjoyed guessing the meaning of the phrasal verbs in pictures or comics. Using visual representation, such as pictures and images, to teach ESL vocabulary can engage students in the learning process and result in greater vocabulary acquisition and improved speaking skills (Arndt, Schüler, & Scheiter, 2019; Hamid & Elaheh, 2011; Marashi & Maherinia, 2011).

The effectiveness of using pictorial methods to teach vocabulary is obvious. Effective multimedia teaching techniques should be applied in phrasal-verb education. Engaging pictures and images not only can increase second-language learners' interests but also can improve second-language learners' academic performance. Some useful pictorial educational technology such as Canva, Assembly, can be presented by ESL and EFL educators. There is an important difference between teaching phrasal verbs with pictures and without pictures.

There are studies that prove pictorial multimedia learning methods can be used effectively in ESL reading, writing, and vocabulary education (e.g., Arndt, Schüler, & Scheiter,

2019; Hamid & Elaheh, 2011; Marashi & Maherinia, 2011). Therefore, if pictorial multimedia learning methods can be used effectively in ESL reading, writing and vocabulary education, these techniques should be used in teaching phrasal verbs.

Using music in ESL education

CTML demonstrated visual and audio modalities activate learner's multisensory learning knowledge. One of the effective modalities based on the CTML is to combine audio and visual materials. Music with lyric-related writing activities can engage second-language learner's learning process. Using music and song lyrics to teach English vocabulary is valuable for second-language learner's meaningful learning (Beukes, 2019; Xie, 2019).

Kurubacak (2002) found that students learned more target words by listening to music, understanding lyrics, and watching TV programs. Wang (2019) investigated how well students learn new words through different media materials. The results showed that students learned better if they listened to music and sang with the lyrics more frequently than watched TV programs. ESL educators could find more proper music with lyric for learners to improve their phrasal-verb knowledge and practice pronunciation and speaking at the same time.

Music and music lyrics are two effective CTML-based multimedia teaching methods. Second-language learners have access to media like YouTube, and YouTube is easier for people to access a large number of English songs more frequently to practice and improve English speaking. Using YouTube music is encouraging and ESL educators should apply this technique in phrasal-verb teaching (Beukes, 2019). Mayer (2014, 2017) added to CTML theory, providing well-designed multimedia lesson plans is the key to help students learn successfully. A well-designed lesson plan should have both visual and audio, that is words and pictures, material. If

using music to teach English can improve students' speaking skills, it should be used in teaching phrasal verbs to improve students' speaking skills.

Using movies or videos in ESL reading and listening education

CTML demonstrated the well-organized instructional strategies should have both visual and auditory elements. Using visual methods and auditory methods in multimedia learning is effective and helpful in education. Additionally, CTML indicated that the integration of visual and auditory methods is more effective than using visual or auditory methods alone. Animation and movies (videos, video games, films) are perfect examples for an integration of visual and auditory methods in CTML principle. Akbary, Shahriari, and Hosseini (2018) conducted a quasi experiment to explore the principle and explained that watching English language movies is associated with the ESL learners' proficiency of reading and listening.

People spend more time watching movies, YouTube videos, and playing video games than before. Many educators find that it would be helpful to use videos in the educational field. Ramezanali and Faez (2019) found that students have more interest in learning by videos than learning through text-based readings. The result was advantageous for preservice teachers to teach ESL reading classes using videos. Chen, Hsu, Chen, and Todd (2021) reviewed studies using video games in the ESL classroom and found second-language learners felt comfortable using phrasal verbs in video games conversational context. The researchers also found the second-language learners responded that they were safe and confident in using English. The virtual reality of the video games lowered the second-language learners' anxiety and boosted their passion in using English. Movies and video games give students a relaxing environment and help students reduce learning anxiety and improve students' speaking confidence in using a second language. Fu (2015) demonstrated how to use music, U.S. sitcoms, and movie clips in

ESL phrasal-verb education. She found that ESL students have more interest and passion in learning English phrasal verbs with authentic materials related to their daily-life experience, and for teachers, she also provided a teaching handbook on how to use multimedia materials in ESL phrasal-verb class. It is very important for teachers to design an organized instructional curriculum to teach effectively. There are insufficient empirical articles on using movies and video clips for ESL education. Given that using CTML to teach other subjects is effective and can improve students' learning interest, therefore it may be used effectively in teaching language on phrasal verbs to improve students' speaking skills.

Research Questions

Based on the above description of the methodology and research focus of the study, these were the research questions that guided this study.

Research Question 1: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group for the pretest scores?

- A. To what extent, was there a difference between the levels of prior knowledge for the pretest scores?
- B. To what extent, was there an interaction between treatment and levels of prior knowledge for the pretest?

Research Question 2: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group for the posttest scores?

- A. To what extent, was there a difference for the levels of prior knowledge for the posttest?
- B. To what extent was there an interaction between treatment and levels of prior knowledge for the posttest?

Research Question 3: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group in the change from pretest and posttest scores?

- A. To what extent, was there a difference for the levels of prior knowledge for the change from pretest to posttest?
- B. To what extent was there an interaction between treatment and levels of prior knowledge for the change from pretest to posttest?

Research Question 4: To what extent was there a difference between students' motivation for furthering their learning for the comparison-text-based group and the treatment-multimedia group of the community-college students?

Research Question 5: What did the individual interviews indicate regarding the use of multimedia for learning phrasal verbs?

Definition of Terms

The following is a list of the definitions for the terms used in the study. There might be different definitions for these terms, but the definitions provided here were the ones that apply to the study.

Alphabetic language is a language in which the pronunciation is determined by symbols, such as English, Thai, Arabic, and so on (Han & Kim, 2017).

CALL stands for the Computer-Assisted Language Learning. It is the search and study for applications of the computer in language teaching and learning (Levy, 2015).

CLT stands for Communicative Language Teaching. *Communicative Language teaching* (CLT mainly focuses on the use of language rather than language itself (Alharbi, 2020).

CTML stands for Cognitive Theory of Multimedia Learning. A learning theory based on the assumption that people possess dual channels for processing verbal and visual information, that each channel is limited in how much information it can process, and that meaningful learning involves engaging and actively processing information appropriately (Mayer, 2009, 2014).

Dependent Variable is the test scores of two-word phrasal verbs, as measured by phrasal-verb pretest and posttest. Another dependent variable is the effectiveness and successfulness of using multimedia to teach two-word phrasal-verbs for community college adult ESL learners by using the MUSIC Model questionnaire and the individual interview data (Jones, 2019).

Dual Coding Theory is a learning theory that is based on the assumption that both visual and verbal information is processed along different channels in the brain (Paivio & Lambert, 1981).

EFL stands for English as a Foreign Language. It refers to the situation that English learners learning English in countries that do not use English as their first language (Bobkina, Romero & Ortiz, 2020).

ELL stands for English language learner. It refers to students who are unable to communicate fluently or learn effectively in English, who often come from non-English-speaking homes and backgrounds, and who typically require specialized or modified instruction in both the English language and in their academic courses (Bobkina, Romero, & Ortiz, 2020).

ESL stands for English as a Second Language. It refers to the situation where English learners learn English in countries that use English as their first language (Bobkina, Romero, & Ortiz, 2020).

GTM stands for the Grammar Translation Method. It is focused on grammar rules and sentence translation. (http://en.wikipedia.org/wiki/Grammartranslation_method)

Independent Variables are multimedia instruction or through text-based instruction for community college ESL learners and the levels of prior knowledge about phrasal verbs.

Interactive Multimedia is when the learner has the ability to control the pace and direction of the frames (segments); that is, the learner has the ability to pause-play, rewind, and fast forward and has direct access to a specific segment (Mayer, 2009).

Morphographic Language is a language in which the pronunciation is logographic and the meaning is pictographic. For example, Chinese characters are basic writing units and directly represent concepts and objects and also indicate ideas themselves (Huang, Itoh, Kwee, & Nakada, 2012)

Multimedia is a form of communication that uses words and pictures to foster meaningful learning (Mayer, 2009). Multimedia is a technology that is used to present learning material in two modes: visual mode and the auditory mode (Mayer, 2014). In the context of this research study, the researcher used Zoom to share the Google Slide presentation. In the presentations, there were comics, images, text demonstration, song lyrics, and movie transcript. The researcher used YouTube to play music, movies, American sitcoms, and TED Talks.

Multimedia Instruction (multimedia instructional message or multimedia instructional presentation) includes presentations with words and pictures or images for the purpose of promoting learning. This definition also refers to the design of multimedia presentations that facilitate the building of mental representations and consider how the mind processes learning material (Mayer, 2009).

Multimedia Instructional Material is a presentation that involves pictures or images, music or songs, videos or animation, and spoken words (Mayer, 2009).

Multimedia Learning is when learners learn from words and pictures or images (Mayer, 2009).

Multimedia Phrasal-Verb Instruction is a series of English phrasal-verb multimedia presentation that was presented by the researcher during the intervention phase. The presentations consist of pictures or images, comics, music, songs, videos, and texts. The researcher provides a verbal explanation on learning phrasal verbs through multimedia instructional materials (Mayer, 2009). The researcher has 20 minutes to teach each session for the treatment-multimedia group. There were 12 sessions in this research.

MUSIC Model Inventory is an acronym to help remember the five key components critical to motivating and engaging students: eMpowerment, Usefulness, Success, Interest, and Caring. The MUSIC Inventory measures the five primary components of the MUSIC Model of Motivation: empowerment, usefulness, success, interest, and caring (Jones, 2019).

Pinyin is a phonetic transcription system that uses Romanized spelling to assist students in learning pronunciation of Chinese characters. It is used commonly in Chinese textbooks for both first- and second-language learners. Diacritical signs marked above the vowels of a pinyin indicate the tone of the word. The same syllable with different tones is represented by different characters with different meanings (Huang, Itoh, Kwee, & Nakada, 2012).

Phrasal verbs are defined as “a verb + a particle combination that functions as a single verb, both parts giving up meaning in order to form a new lexical item” (Darwin & Gray, 1999, p. 65).

Prior Knowledge is the information and educational context a learner already has before he or she learns new information. A learner's understanding of educational material can be improved by taking advantage of his or her prior knowledge before dealing with the new material (Amadiou, Tricot, & Marine, 2009). For this research, low-knowledge is defined as a score of 9 or less on the pretest. And high-knowledge is the score on pretest is defined as a score greater than 9.

Prior Knowledge Principle: The design principle stating that most principles for multimedia learning environments depend on the prior knowledge of the learner, that is, principles that help low knowledge learners may not help or even hinder high-knowledge learners (Kalyuga, 2005)

SLA stands for Second Language Acquisition. Second language refers to any language that is learned in addition to a person's first language. The ultimate goal in this field is to explain and describe how second-language learners acquire the target language (Frawley & Lantolf, 1985).

Test of phrasal verbs is a 20-item multiple-choice test of two-word phrasal verbs. The number correct constituted the student's score on the test. The same test was used for the pretest and posttest.

Text-Based Phrasal-Verb Instruction in this study consists of a text-based explanation about phrasal verbs. The text-based phrasal-verb presentations use words and texts to illustrate how to learn two-word phrasal verbs. The researcher had 20 minutes to teach each session to the comparison-text-based group. There were 12 sessions in this research.

Usefulness, Success, and Interests are the three components of the MUSIC inventory. In the current study, the researcher focuses on understanding students' motivation for future learning in the content and instructional activities. There were 18 rating items, 3 open-ended

questions, and 10 individual interview questions focused on the usefulness, success, and interests in this study. As for the rating items, the participants were asked to rate the degree of usefulness, success, and interest for the two-word phrasal-verb instructions. For the 1 to 6 rating scale, students were expected to select each number along with the associated description with 1 being *strongly disagree* and 6 *strongly agree* (i.e., 1 = *strongly disagree*; 2 = *disagree*; 3 = *somewhat disagree*; 4 = *somewhat agree*; 5 = *agree*; 6 = *strongly agree*; Jones, 2019).

Summary

The researcher planned to investigate how multimedia instruction based on the theoretical framework of Mayer's (2005) CTML facilitated phrasal-verb acquisition. This study focused only on adult ESL students in a community college in Northern California. The multimedia instruction intervention assisted ESL or EFL teachers in creating lesson plans that helped students enhance their second-language skills. The mixed-method comparison research design focused on 5 research questions.

Even though the mastery of phrasal verbs for second-language students is extremely important, there has not been much research on the mastery of phrasal verbs. The majority of the studies on using CTML have been conducted in the area of teaching ESL or EFL listening, reading, and vocabulary, whereas much less research has been conducted regarding the phrasal-verb knowledge for ESL community-college students, and the relationship between ESL community-college students' phrasal-verb learning and their learning outcomes remained under researched. Moreover, previous research on phrasal-verb education was not conducted in an intensive second-language learning setting. Therefore, the current study was conducted to investigate the effect of multimedia instruction on phrasal-verb education for ESL community-college students. Review of literature relevant to the current study was synthesized and

summarized in chapter II. The research design of the study was described in chapter III. Results of the research are found in chapter IV with chapter V focusing on discussion and implications for research and instruction.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this comparison research study was to (a) to investigate the effectiveness of using multimedia to teach two-word phrasal verbs to community-college adult English as a second language (ESL) learners, (b) to investigate the motivation of community-college ESL learners learning two-word phrasal verbs actively by using multimedia, and (c) to study the relationship between ESL learners' motivation and interest for furthering their learning. This comparison research study filled the gap in the literature by exploring how to learn effectively two-word phrasal verbs by using multimedia instruction benefit ESL learners in community-college settings.

The history and development of current phrasal-verb education are reviewed the cognitive theory of multimedia learning (CTML) about second-language acquisition related to ESL or English as a foreign language (EFL) education are presented in this chapter. The literature review included barriers and difficulties in ESL phrasal-verb education; recent multimedia pedagogy in ESL education, particularly with regard to English vocabulary; and how the success and effectiveness of using multimedia instruction in ESL settings relate to the benefits of learning and teaching through multimedia.

Using media materials to teach English and culture in both ESL and EFL has become used widely in teaching English as a second or a foreign language (Chen, Hsu, Chen, & Todd, 2017). Media-material instruction has been a lead innovation in language teaching methodology since the 1970s (Sun & Cheng, 2000). Consequently, media-material instruction in second-language learning has effected phrasal-verb learning. EFL and ESL educators have found that English-language learners (ELLs) have difficulty and are uncomfortable when using phrasal

verbs with native speakers in oral forms. To help second-language learners overcome this language barrier, it is essential for these learners to be taught more effectively (Chen, 2007). And multimedia instruction is one of the ways educators have been putting overcome this language barrier into practice. Therefore, this literature review focused on these evidence-based practices.

The literature review for this study has four parts. The barriers and difficulties in English phrasal-verbs education are introduced in the first part. The application of multimedia instruction in ESL vocabulary education is presented next. The third part focused on the multimedia learning for individuals who are low-prior knowledge learners. The effective techniques and the benefits and success of using multimedia instruction in ESL education is reviewed in the last part.

Barriers and Difficulties in English Phrasal-Verbs Education

Because of the differences in cultural backgrounds, social factors, language environment, customs, language learning, and teaching practices, second-language learners have a difficult time using phrasal verbs when communicating with people in a different culture. For example, Daugut and Laufer (1985) stated misunderstanding phrasal verbs has concerned English-language educators in China. The reason why phrasal verbs are difficult to learn for second-language learners is related to the fact that most phrasal verbs have Latinate counterparts (e.g., “put off” vs. “postpone”; “call off” vs. “cancel”) that are often, but not always, used exclusively in more formal discourse. Thus, second-language learners know the more formal vocabulary but are at a loss when using phrasal verbs in informal conversation (Chen, 2007).

Hulstijn and Marchena (1989) further researched the avoidance of English phrasal-verb education based on the research Dagut and Laufer (1985). The researchers conducted experimental research based on three tests on intermediate and advanced Dutch and Hebrew

second-language learners. The difference between Dutch and Hebrew language is Dutch has phrasal verbs, whereas Hebrew does not have phrasal-verbs. The results indicated that both Dutch and Hebrew second-language learners avoid using phrasal verbs and the avoidance is not only because of the structural absence in the first language but also because of the semantic complexity of phrasal verbs.

Avoidance in English phrasal-verbs education

Nonnative speakers of English are different from native proficient speakers of English; native English speakers' knowledge of phrasal verbs come naturally when they use phrasal verbs in oral forms, but nonnative English speakers tend to avoid using phrasal verbs because of the lack structure of their first language and the structure difficulty of the phrasal verbs. Second-language learners prefer to use one-word equivalent (e.g., "investigate" instead of "look into") in both formal and informal writing, but native speakers prefer to use the one-word equivalent (e.g., "cancel" instead of "call off") in more formal business letters or academic writing (Inc., 2007; Liao & Fukuya, 2003).

Laufer and Eliasson (1993) conducted an experiment on advanced Swedish second-language learners through administered a multiple-choice test and a translation test. The results indicated that the avoidance of using phrasal verbs was due to first-language and second-language differences. If students' first language had phrasal-verb structure, the students used phrasal verbs to translate in the test. If students' first language had no phrasal-verb structure, the students used one-word translation more often. Chen (2001, 2004) and Mukundan's (2014) findings supported previous research that second-language teachers had various barriers and difficulties in teaching phrasal verbs. Because of the first-language and second-language

differences, second-language learners had barriers and difficulties in learning phrasal verbs, so they avoided and preferred not to use phrasal verbs.

EFL learners are influenced greatly by their mother language, such as Chinese or Arabic, in the process of learning English. In both ancient and modern Chinese, there are quite a few words or phrases that have the same composition as English phrasal verbs, a main verb plus one or more particles. For example, the two Chinese characters “renshou” share their single but very similar meaning of “tolerate” in the ancient Chinese language, whereas in the modern Chinese it is a combination with the single meaning “tolerate.” “Ren” and “shou” are both two verbs in ancient Chinese but only one word in modern Chinese. In English “tolerate” may sometimes be expressed in the form of a phrasal verb “put up” but in Chinese “renshou” can never be interpreted in a similar way. Clearly, the composition of the words meaning “tolerate” in the first language and second-language is completely different. The word “panwang” also can illustrate the same problem. “Pan” and “Wang,” two Chinese verbs, share the meaning “look” in ancient Chinese, but in modern Chinese the combination means “expect” or “look forward to” “Fu” means “again” but “xi” means study in ancient Chinese, whereas in modern Chinese, the word “fuxi” means “review” or “go over.” In reality, Chinese learners of English are influenced by the design features of the modern Chinese language; most modern Chinese words have one meaning even though they consist of two or more characters. In the Chinese context, the learners are more likely to translate consciously or transfer unconsciously every single Chinese word (e.g., “renshou”) into corresponding English expressions (e.g., “tolerate”) instead of (as) a phrasal verb (e.g., “put up with”), even on the occasions when phrasal verbs are more idiomatic or authentic than one word equivalents (Chen, 2007; Fu, 2015; Liu, 2003).

Siyanova and Schmitt (2007) studied how frequently native speakers and advanced nonnative speakers such as Arabic, Italian, and Russian, who had no phrasal verbs in the first-language structure use phrasal verbs in different settings. The researchers examined the use of phrasal verbs and single word through a questionnaire of 26 phrasal verbs and their equivalent single-word verbs in campus classrooms, and via e-mail. The results indicated that nonnative English speakers use phrasal verbs is less frequent in informal spoken contexts than native English speakers. Both native and nonnative English speakers use the single-word verbs more frequently in written contexts. Similarly, nonnative second-language learners avoid using two-word phrasal verbs and use one-word verbs instead of using phrasal verbs.

Chen (2007) conducted a survey in a Chinese university and investigated the reasons why EFL students avoid English phrasal verbs in oral communication. The qualitative data were collected from different academic levels of 240 non-English major students and 60 English major students. The results indicated that the students avoided using phrasal verbs because they lacked the knowledge of English vocabulary and that the students preferred to use formal single-word vocabulary not the phrasal verbs in any context. For example, many students knew the meaning of such difficult words as “accomplish,” “extinguish,” and “tolerate,” but they had difficulty in identifying the contextualized meanings of the corresponding phrasal verbs “carry through,” “put out,” or “put up with.”

Chen (2007) analyzed the results and came up with various aspects of issues in phrasal-verb avoidance. He explained that due to the social factors, institutional factors, teacher and learner factors, and ineffective curriculum that contribute to the avoidance of English phrasal verbs learning. Because the second-language learners had no English-speaking environment to practice and use phrasal verbs and they had very few opportunities to communicate in English

but only practice English in the EFL classrooms. The main issue of practice phrasal verbs in classroom is the practice material is not authentic, which means the learning is not meaningful. Although the second-language learners may use the phrasal verbs in class, they, however, cannot use effectively the phrasal verbs outside the classroom in the real world.

Research evidence has shown that communicative practice in the classroom is not sufficient to lead learners to a high degree of fluency and accuracy in all aspects of language production (Lightown, 2000). As one of the most important parts of communication (Hoey, 2005), phrasal verbs that native and proficient speakers naturally use are not used and are often avoided by the Chinese learners of English due to their lack of experience in the English-speaking environment. Living in a foreign-language context leads to the situation in which the language learners have little real or authentic context so that it is difficult for them to have a good command of English phrasal verbs. It is not appropriate to argue that a good mastery of phrasal verbs is the only important component of learning English well. Nevertheless, a mastery of phrasal verbs, especially those commonly used, is very important to being able to communicate effectively and naturally in spoken communication no matter what the language community context is. Therefore, from the perspective of learning a language, in order to communicate effectively and naturally, phrasal verbs should by no means be avoided.

There are agreements among most ESL and EFL educators that in this dramatic social and linguistic time, ESL and EFL educators should improve their teaching techniques to meet the learning goals and needs (Wang, 2019). Many employers in China complain that graduates who have passed College English Tests (CET) that are the nationwide examination usually used to gauge the English level of its examinees are unable to handle even simple situations and communicate with clients who speak only English. This situation indicated that educators should

reform the English education curriculum to develop more authentic learning materials.

Therefore, with the efforts and help of many English educators, administrators and experts, new College English Teaching Requirements (Ministry of Education of the People's Republic China, 2004) have been developed to reinforce the emphasis on listening and speaking. Communication skills are put in an exceptionally prominent place. There is, therefore, evidence that English phrasal verbs, which are important components in spoken communication, need to be emphasized in English-language teaching and learning.

Learning English is not about how many vocabulary words you can memorize. If the vocabulary memorized does not match the reading and speaking material, even if you have a large vocabulary, you can experience a mismatch between what you memorized and what you need to learn. which is one of the issues regarding second-language learners avoidance of using phrasal verbs. Second-language learners can memorize the phrasal verbs but without learning the phrasal verbs in a context, the learning is meaningless. For example, there are a huge number of Chinese EFL learners who can memorize 4,000 words to pass CET 4 and acquire a certificate to graduate from college English classes, but the memorization of the 4,000 words is not effective language learning. Second-language learners only memorize the words for the test and certificate (Chen, 2007). There is some mismatch between the vocabulary required for reading and those required for conversational discourse that is why sometimes second-language learners are called root learners. What is more important is that there is much less need for those academic 4,000 words in oral communication than in written communication (Chen & Liou, 2005; Mukundan, 2014).

Appropriate educational resources for phrasal-verb oral communication practice are very important to help second-language learners overcome the learning difficulties and barriers. Many

ESL and EFL educators preferred not to spend time teaching phrasal-verbs in their English classes. Educators tend to spend little time on teaching phrasal verbs--usually only when students have questions about phrasal verbs in reading and grammar classes. Educators understand phrasal verbs are important and difficult to teach (Chen, 2007). The main issue is educators need quality educational resources to teach phrasal verbs effectively and quickly when they lecture second-language learners to use phrasal verbs to communicate in the language. If educators have appropriate educational resources for learners in the 21st century, then educators will take time to develop the phrasal-verb lesson and efficiently teach the phrasal verbs. One of the issues that educators have insufficient educational resources is the weak points in producing tailored phrasal-verb teaching and learning materials in a large book market and the availability for teachers to have book, technology, and professional development resources. Without suitable resources for written and oral forms that guide learners to use phrasal verbs, effective teaching methods for learning vocabulary can hardly be employed in the classroom and efficient learning can never be guaranteed (Chen, 2007; Li, 2004; Mukundan, 2014).

Koprowski (2005) explored the usefulness of three contemporary phrasal-verb course books through corpus frequency and range data as the criteria for EFL learners. The findings indicated that there were no standardized criteria for choosing multiword items and the large percentage of selected multiword items had low frequency and range values. Moreover, the study claimed that selection of items was subjective and English language teaching materials developers selected the items based on their intuition that indicates that course books have limited pedagogical values to the second-language learners.

The disagreement over the relationship between phrasal-verb avoidance and levels of the second-language learners was not common (Liao & Fukuya, 2004). Houshyar and Talebinezhad

(2012) examined the relationship between intermediate- and advanced-level second-language learners and their frequency of using phrasal verbs. The researchers administered a placement test to identify the proficiency level of students and used multiple-choice test and translation test including 15 phrasal verbs. The results indicated that both intermediate and advanced learners of English tend to avoid using phrasal verbs; however, the intermediate learners' use of phrasal verbs is less frequent than for advanced learners. The study also found that there is no relationship between test type and avoidance of phrasal verbs.

According to the literature, phrasal-verb education has looked at how second-language learners passively use idiomatic expressions and why prepositional verbs are difficulty to learn; more recent studies have focused on the avoidance of phrasal-verb education. Second-language learners have difficulties in learning and practicing phrasal verbs. Most studies have discovered the barriers of learners in using phrasal verbs and passively learning phrasal verbs; however, few studies have focused on how to use effective techniques to help second-language learners actively learn phrasal verbs in ESL circumstances. Houshyar and Talebinezhad (2012) took one step forward of the previous literature on changing the passively phrasal-verb learning situation to actively phrasal-verb learning motivation.

Phrasal verbs are multiwords, prepositional verbs, and idiomatic verbs with multiple meaning. These are some reasons why learning phrasal verbs are difficult for second-language learners to practice in everyday life. Using different educational sources, such as movies, music, games, and e-learning books, can help second-language learners build up learning strategies and skills to learn English phrasal verbs. Using multimedia instruction might be a potential technique to active ESL students' multisensory and motivate students' phrasal-verb learning modalities.

Multimedia Instruction in ESL Education

The use of multimedia instruction has been acknowledged as a valuable resource by many researchers (Acha, 2009; Chan & Liou, 2005; Chun, 2012; Huke, Steinke, & Floto, 2010; Mayer, 2003; Sweller, 2005; Talsma & Woldorff, 2005; Xie, Wang, Zhou, & Wu, 2016). Several studies have emerged in exploring the effectiveness of the multimedia instruction in second-language teaching (Alimemaj, 2010; Alwehaibi, 2015; Broner & Tarone, 2001; Chen, 2012; Ghasemi, Hashemi, & Bardine, 2011; Ismaili, 2013; Kim, 2015; Mayer, 2005, 2008, 2009, 2014; Scheiter & Eitel, 2015). The majority of these studies have attempted to determine the effectiveness of the use of multimedia instruction on ESL vocabulary education (Al-Seghayer, 2001; Anderson & Freebody, 1981; Arndt & Woore, 2018; Kabooha & Elyas, 2018; Rassaei, 2018; Shabani & Zanussi, 2015). One of the English learning difficulties is vocabulary. Understanding the meaning of all vocabularies in English context is difficulty (Qian, 2002). The following articles addressed the value of multimedia instruction in ESL and EFL vocabulary education, listening comprehension, and reading comprehension.

Wang (2019) investigated the effects of different types of captions on English as a Foreign Language Learners' (EFL) vocabulary learning and comprehension. 80 students in a Chinese university participated. Students were divided into four groups with two classes of freshmen, one class of juniors, and one class of graduate students. Each group watched four video clips with four caption conditions: first-language Chinese, second-language English, dual first-language and second-language, and no captions. The order and caption conditions were counterbalanced. The purpose of the study was to find which caption condition is more effective for EFL learners. Four by four mixed ANOVAs were used to compare the differences among the four conditions and groups. Results indicated that students' performances were statistically

significantly different across captions and class levels. In general, students in first language, second language, and dual first-language and second-language captions statistically outperformed the no caption condition in vocabulary and comprehension. Results of the effects of first language, second language, and dual first-language and second-language captions on vocabulary learning and comprehension were mixed. Moreover, the pedagogical implications of using authentic TV series and multimedia captions have positive effects in ESL vocabulary education.

Different languages represent different cultures. Different cultures have different methods of teaching. On the one hand, many ESL educators often use media materials in language teaching. On the other hand, in some foreign countries, media materials are not used commonly by some EFL teachers. Foreign countries that have not been using media materials should understand the benefits of multimedia instruction. Research evidence has proved that a combination of print, audio, and imagery can enhance input by making it more comprehensible and pictures and videos can improve reading and listening comprehension (Drame, 2004; Plass & Jones, 2005).

Paivio (1986, 1991, 2007) addressed a combination of imagery and verbal information enhances information processing in Dual Coding Theory. Text, color, graphical images, animation, audio sound, and full-motion video are different types of multimedia application that can be useful in helping second-language learners' language. Multimedia material can be based on books, television, computer, and other multimedia environments. Multimedia books or textbooks (i.e., a text based and a situation model) are common teaching and learning sources. Educators can use the books effectively with mental representations texts and pictures (Chun, 2012; Jeung, Chandler, & Sweller, 1997).

Researchers have noted that different levels of students kept information in memory longer when students learned words through texts with pictures of animals. Mental representation, structure schemata, frames, Orthographic symbols, and scripts can be text based from a book with pictures and diagrams (Levie & Lentz, 1982; Minsky, 1975). The use of pictures within a text improves memory retention, especially for poor readers. If the pictures illustrate and explain information central to the text, and when they evoke new content that is significant to the overall message (Anderson, Spiro, & Anderson, 1978; Kintsch & van Dijk, 1978; Pressley, 1977; Rusted & Coltheart, 1979; Schank & Abelson, 1977).

Researchers have conducted many studies to find out the effects of audio, video, and audio-visual on students' learning. Results found that teaching with television videos, DVD videos, and streamed video recordings were helpful for students to learn new information. Both auditory and visual symbol systems attracted students' attention constantly. Additionally, evidence proved that audio, video, and audio-visual presentations motivated students in learning new knowledge and helped students remember the new information (Alwitt, Lorch, & Levin, 1979; Baggett & Ehrenfeucht, 1983; Meringoff, 1982; Nugent, 1983; Pezdek & Hartman, 1983; Pezdek, Lehrer, & Simon, 1984; Stevens, 1984).

Wang (2018) investigated how animation films of Shakespeare's effect students' learning abilities. The films were played with bilingual captions to help students understand the ancient English and the meaning of the story. The films had the pause-repeat feature to tell the story details and explained the ancient language. As a result, the films helped students learn and understand the reading stories better and developed students' holistic skills by the animation with native-speaking recording, captions in English, and meaningfulness in stories in Shakespeare's

tales. The films naturally integrated listening, speaking, reading, and writing content enhances students' learning performance.

Multimedia instruction with audio, video, and visual-audio elements attracted students' attention, created interests, and led students to longer memory of the new knowledge. Television, DVDs, and CDs, computer are other commonly used media that help educators create effective multimedia lessons. Computers can transform information in one symbol system to that in another one (Dickson, 1985). Studying the role of the computer in second-language vocabulary learning, Pavicic (2008) referred to Computer Assisted Vocabulary Learning (CAVL) that helped students learn words successfully by using specialized programs available on CD ROMs, the Internet, and popular computer games. Learning might also happen through a combination of media or multimedia.

According to Mayer (2003, 2005), multimedia is words and pictures, different types of texts and different types of visual representations. Students learn better and more effectively with auditory and visual representations together than learn with texts or pictures alone. Using printed and spoken texts with pictorial, such as illustrations, graphs, diagrams, maps, or using dynamic graphics that consist of animation or video can benefit students in learning and make students' learning more successful.

The benefits of multimedia instruction in ESL education

Mayer (2004a, 2004b) claimed the Cognitive Theory of Multimedia Learning supported student's working memory to learn effectively when learning with both images and words. According to Mayer (2003, 2004 a or b), multimedia is the text and pictures or visuals and sounds or any combination of visual and auditory cues teaching technique. Mayer (2014 a or b) claimed students built up new knowledge with interests and motivation when multimedia

elements were used. Therefore, comics, music with lyrics, movies, and TED Talks fit for the definition of multimedia.

Learning from words and pictures can be meaningful. Meaningful learning happens when the learner engages in five cognitive processes, which include selecting relevant words for processing in verbal working memory as well as relevant images for processing in visual working memory, organizing selected words into a verbal model as well as selected images into a pictorial model and finally integrating the verbal and pictorial representations with each other and with prior knowledge. CTML helped educators understand that multimedia created deep meaningful learning compared to rote memorization. Thus, the integration of YouTube videos, pictures, comics, and music in ESL classes can enhance the language-learning experience and improve students' phrasal-verb knowledge (Mayer, 2010).

Many second-language acquisition researchers have studied how multimedia instruction effects vocabulary learning. Al-Seghayer (2001) conducted a comparative study that investigated the relationship between ESL students' vocabulary knowledge and the effect of different modes of multimedia: "the printed text definition alone, printed text definition coupled with still pictures, and printed text definition coupled with video clips" (p. 202). The researcher examined which was the more effective in aiding vocabulary acquisition between the image modalities of dynamic video and picture-text. 30 ESL students were introduced to a hypermedia-learning program, designed for reading comprehension. The results indicated that a video clip was more effective in teaching unknown vocabulary words than a picture-text instruction. Participants in the video-instruction group learned more words that supported CTML, and meaningful learning happened when learned visual and audio mental representations together. Connecting visual and audio mental representations from multiple media elements creates multimedia instruction for

teaching that can promote learning. Therefore, technology, such as computer programs, software, and apps—can provide the multisensory multimedia instruction (Kozma, 1991). The following studies also have been carried out to investigate students' opinions about the use of multimedia on their language learning classes.

Yang and Chen (2006) conducted a mixed-method study in a class of 44 senior high-school students from Taiwan to explore how the integration of visual and audio instruction benefits students in language learning and what student thought about the multimedia learning. There were six media-based teaching activities: (a) group e-mailing, (b) a web-based course, (c) an email writing program, (d) English homepage design, (e) video conferencing, and (f) chat room discussion offered to the 44 students for one semester. Data were collected through interviews, questionnaires, and an online survey. The results indicated students enjoyed learning language through media and Internet resources and they thought using media and Internet resources was convenient, flexible, and interesting. Some, however, thought the media was not strong compared with the traditional lecture-based material. The researchers concluded media resources required students to have more innovative learning strategies and more effort to enhance their language learning experience.

There also have been studies on how music-instruction effects teaching a second language. Stokes (2008) reported the cognitive processing of music instruction and second-language learning based on empirical-article reviews. She believed evidence showed in the articles that music could benefit language learning. Yilmaz (2011) found music actually could be an instructional tool rather than just being a fun activity. The musical activities helped the second-language learners learn and remember words, increase their motivation to learn more words, and build a positive learning atmosphere in the classroom.

Li and Manning (2009) investigated the relationship between music-song-lyric instruction and the three-group second-language learner's vocabulary acquisition from a mainland China university. The three groups were all-music group, half-music group, and no-music group. The researchers conducted the pretest and posttest before and after each treatment for the three groups. The results indicated all-music group had the higher posttest scores than the other two groups and all-music group had a more positive attitude toward and greater confidence in their learning of English. Lin (2019) extended the music-instruction study and found second-language learners were happier in learning words with song lyrics compared with learning words with the text-explained material the students' learning motivation was higher due to the increasing amount of interactions and conversations happened in the classroom.

Rezaee and Shoar (2011) investigated the relationship between different types multimedia methods and different levels of students' vocabulary learning in a three intermediate level ESL-reading class. 70 students studying English at pre-intermediate level was selected and they were divided into three groups. Each group received a different kind of instruction. The participants in the first group received instruction with some texts about the target vocabulary. Participants from the second group received picture illustration with the same texts about the target vocabulary. The students in the third group were exposed to the same material along with some movie strips. The researchers implemented different media instruction, such as movies, music, comics, and activity-games to teach the 3-group pre-intermediate English-language learners. The findings based on the participants' feedback and the vocabulary tests indicated that movie-instruction-class students had the higher average score in learning and recalling of vocabulary compared with the music-instruction group, comics-instruction group, and activity-game-instruction group.

In summary, the use of media materials in teaching has benefits for both teachers and students. This approach can make the classroom more energized and positive than when a traditional lecture-based approach is used. This media approach connects to this study. The researcher used the media approach to benefit community-college ESL students in learning phrasal verbs. Making this kind of teaching more commonplace is still a long way off. It would require that teachers devote time and energy toward developing their own materials. Also, it requires time to make students aware of the value of using media materials in their language development.

Multimedia Learning for Individuals with Low-Prior Knowledge

The need for educators to consider individuals' prior knowledge has been well recognized in some early studies related to multimedia instruction (Mayer, Stiehl, & Greeno, 1975; Kalyuga, 2005; Ollerenshaw, Aidman, & Kidd, 1997). Design principles suggested that for multimedia learning environments depend on the prior knowledge of the learner is helpful to low-knowledge learners but may not help or even hinder high-knowledge learners (Kalyuga, 2003). The following articles address studies in multimedia instruction indicated that multimedia learning was effective only for low-knowledge learners.

Mayer (1992) and his associates demonstrated that well-designed multimedia instruction could better support the cognitive process of low-prior knowledge learners than the high-prior knowledge learners. Mayer and Gallini (1990) found that only low-prior knowledge students statistically significantly improved their retention and problem-solving performances through the multimedia learning formats of text-and-illustrations compared with the text-only instruction.

Mayer (2004) found the median effect size differed between the low know prior knowledge learners and the high prior knowledge learners in the multimedia instruction

experiment. According to Mayer (2004), “the multimedia effect was 0.60 and 0.80 standard deviations stronger for low-knowledge learners than for high-knowledge learners. The effect was called the individual differences principle and explained by high-knowledge learners’ use of their knowledge to compensate for a lack of instructional guidance” (p. 161).

Ollerenshaw, Aidman, and Kidd (1997) compared the effects of different formats of instruction, such as text-only, text with diagrams labelling parts, text with diagrams depicting major stages of operation, and text with a computer-based animated simulation of the objects’ operation labelling parts. The researchers found that students with low prior knowledge clearly benefited most from the multimedia computer-simulated diagrams. The beneficial effects of the multimedia format for low-knowledge students were substantially reduced when that format was used for high-knowledge students.

Kim, Kim, and Whang (2013) conducted a study to investigate multimedia effects that had different results from the findings of existing multimedia learning studies. They described and summarized three experimental studies they conducted from 2006 to 2010. Then they analyzed findings to explore learner characteristics that might impact the cognitive processes in multimedia learning. The researchers identified individual student characteristics that offered a more coherent explanation for why and how multimedia students learn differently: "affection," "prior knowledge," "metacognition," and "cognitive synergy." Including these student characteristics in multimedia learning considerations could shed additional light on an issue of great importance, namely how "cognitive synergy" affects multimedia learning, and also led to the identification and development of methods for helping students overcome learning difficulties and thus has important implications for multimedia researchers

and teachers who are trying to optimally align learner characteristics with pedagogical and practical approaches to multimedia learning.

Chen, Kalyuga, and Sweller (2015) demonstrated that the effect size differences between the low-knowledge and high-knowledge learners associated with learning from the multimedia isolated-interacting elements instructions in comparison with the interacting elements instructions. Based on the data of Chen et al., (2015), the multimedia isolated-interacting elements instructions clearly benefited only low-knowledge learners providing evidence for the prior knowledge principle.

Clinton, Cooper, Michaelis, Alibali, and Nathan (2017) investigated the imagination effect in multimedia instruction between low-knowledge and high-knowledge learners. In this study, high-knowledge students with appropriate prerequisite schemas found the media technique more beneficial for learning compared to the simple learning material. Low-knowledge students with limited working memory had to process all components of the learning materials about the instruction as individual elements. Based on the data of Clinton et al., (2017), the positive effect of the imagining instruction for higher-knowledge students was substantially increased; however, the low-knowledge learners constructed new schemas of complex procedures that contained many multimedia interacting elements, but high knowledgeable learners already had such schemas and studying the worked examples was a redundant activity.

Lin, Lee, Kalyuga, Wang, Guan, and Wu (2017) conducted a series of experiments to investigate interactions between multimedia instructional formats and levels of learner expertise (i.e., Diagram + embedded text vs. Diagram-only; Operation and troubleshooting test vs. Fault-finding test; Animated diagram with narrated text vs. Diagram-only; Worked examples vs. Problem solving; Writing programs for relay circuits vs. Writing switching equations for circuits;

Worked examples vs. Exploratory learning). A meta-analysis by Richtee, Scheitee, and Eitel (2016) revealed that only learners with low-prior knowledge benefit from multimedia presence of verbal and pictorial information integration signals in comparison with the high-prior-knowledge learners. Along with Mayer's (2003, 2014 a or b, 2015) experiments on multimedia learning, the above articles addressed and provide evidence that multimedia instruction supports only low prior knowledge learners, whereas high-knowledge learners are hindered in learning with text-picture correspondences instructional design measure. The results of above articles suggested that there is a need for individualizing learning materials depending on the levels of learners' prior knowledge.

Multimedia instruction benefited learners by using a combination of text and picture elements. Accordingly, high-knowledge learners could recognize text–picture correspondences by applying their background knowledge but low-knowledge learners need to receive additional support (Butcher, 2014; Mayer, 2009). Hence, expert learners might compensate for a lack of guiding information because they already have developed schemas that guide them during learning. Low-knowledgeable learners had better achievement after learning the well-structured instructions using interactive multimedia learning techniques (Kalyuga, 2008). For example, unstructured-concept map may show only the network of relations, whereas multimedia-concept-map can structure the explicit hierarchy of relations between concepts through linked and color-coded notes and pictures (Amadiou, van Gog, Paas, Tricot, & Marine, 2009).

According to the articles above, multimedia instructional techniques that were effective with low-knowledge learners became ineffective and eventually had negative consequences when used with more-knowledgeable learners. Instruction designed according to multimedia and split-attention principles (Mayer & Sweller, 2005) was not effective for more knowledgeable

learners. According to the modality principle (Mayer & Sweller, 2005; Moreno, 2006), learners can integrate textual explanations and pictures more effectively when the text is narrated rather than presented in an on-screen form. For high-knowledge learners narrated explanations, however, may become redundant and reduce learning effectiveness. Low knowledge could be overloaded by the uncontrolled approach of learning during the process. An adaptive-guidance approach based on controlling learners' progress and providing them with tailored guidance in selecting appropriate learning tasks was suggested by Bell and Kozlowski (2002).

The design and techniques of effective multimedia presentation need to adapt instruction to the levels of learner expertise to optimize cognitive load. Adaptive multimedia formats may enhance learning by providing personalized interactions and dynamic visualizations of instructional information. All these findings suggest that multimedia instruction could help English learners improve phrasal-verb comprehension. These findings connect to my research by suggesting that using effective instructional materials in EFL or ESL classrooms could help students perform better in language learning.

Effective Techniques in Multimedia Instruction for ESL

The advantages of using media materials in language instruction are clear and obvious after a review of the previous studies. How could the approach be made more practical for ESL students learning English, specifically learning phrasal verbs? Because the major trend of English-language instruction in the US is still textbook based and test oriented, it is not easy to challenge the traditional teaching methods. The following articles addressed the value of implementing multimedia teaching techniques.

Using music materials

Lems (2018) described that music offers special benefits for those learning a new language. When studying English or other languages, listening to songs and singing is a natural and enjoyable way to practice new sounds, words, and phrases. In fact, learning a song or musical instrument is analogous in many ways to learning a language. Students are required to produce and employ a repertoire of specific sounds, learn new patterns and rules, and master the “syntax” of songs and compositions. As musicians become more proficient, they—like language learners—make ever-closer approximations of the target sounds until they reach a level of ease and enjoyment, or “fluency.” Some forms of music, such as pop songs, work especially well for teaching English language learners (ELLs). Murphey (1990), in his classic book, explored why pop songs are so effective in teaching English to ELLs. He found that pop songs have the magic combination of high-frequency words, repeated often, and the use of first and second person. As a result, listeners are personally and emotionally involved with the songs (Murphey 1990).

To enhance second-language students listening skills, Li and Lo (1998) proposed the “song dictation” activity. The song-dictation activity begins with teacher handing out the lyrics with blanks of the missing words and then the teacher give a description of the song meaning and the meaning of the new words. Next, students only listen to songs for the first time, then guess the words and write down possible answers for the blanks at the second listening, and the last time students listen to song they check their answers. Li and Lo (1998) proposed a different activity called the “word portrait” that students can use the target words to create their own stories. The students work in small groups and then present their various stories about a song. Then the teacher hands out the song lyrics and ask students to compare their stories with the song

playing. One of the outstanding parts of the researchers' activities is the four skills of English listening, reading, writing, and speaking are all in the activities.

Medina (2002) proposed an activity called "Anticipation." This activity is useful for pre-lesson teaching, and it can be used for different levels of students. Medina suggested that students learn the song vocabulary from one another and create skits in which the vocabulary is used. Students can gain new-word knowledge and listen to the song to reduce the learning anxiety especially for beginner-level second-language learners. Furthermore, Medina proposed a different activity called "musical drama." With "musical drama," the teacher gives an example of how to dramatize a song's lyrics in front of the class. Then, he or she asks students questions to make sure the students understand what they need to do in this activity. This activity approach gives students a "hook" that dramatizes the meaning of the song's words and builds up learning habits on extracting main verbs and important words from a song lyrics.

Akbary, Shahriari, and Hosseini (2018) investigated the degree to which music can play a role in exposing learners to phrasal verbs through analyzing their frequency in song lyrics from different genres (i.e., Pop, Rock, Hip-hop and Metal). For this purpose, a corpus of 400 song lyrics by different artists from these four genres was searched for all existing phrasal verbs. The resulting list of phrasal verbs was compared with Garnier and Schmitt's (2014) Phrasal Verb Pedagogical List in order to determine their value for learners. Further comparisons subsequently were drawn to determine which genre could be of greater use to language learning and instruction. The results revealed that song lyrics potentially can be a beneficial source for learning these constructions. Differences in the type and token frequency of phrasal verb among the four genres also can be used to determine the usefulness of each genre to students from various levels of proficiency.

One of the potential multimedia sources of second-language teaching methods is music video game. There has been little research on the learning outcomes based on music video game technique. deHaan, Reed, and Kuwada (2010) conducted a mix-method research to investigate how music videos affect Japanese second-language learners' vocabulary recall and if the music video games are helpful to second-language learners' language learning. There were 80 randomly selected participants who were paired based on their English language and music video game proficiencies. One subject played the English-language music video game as the player and simultaneously, the paired participant viewed the screen of English-language music video game. After the players finished the game, all participants completed the vocabulary recall test, a cognitive load measure, an experience questionnaire, and a 2-week delayed vocabulary recall test. The results indicated both the players and the watchers of the video game recalled vocabulary from the game, but the players recalled significantly less vocabulary than the watchers. With the findings of vocabulary acquisition and video game-based language learning, deHaan et al. (2010) concluded that interactive multimedia elements can be effective in language teaching and learning.

These findings related to my study by suggesting that music, songs, lyrics and music video games may play a critical role to help English learners improve phrasal-verb comprehension. Furthermore, the findings suggested that using music, songs, lyrics, and music video games materials in EFL or ESL classrooms may help students perform better with language learning.

Using video materials

Wang (2012) conducted a 12-week research study in a Taiwanese English language school to explore the relationship between the computer-assisted language learning (CALL)

multimedia videos, and second-language learners' vocabulary learning outcome. There were 28 participants in the study. To advance the students learning process, the researcher proposed the use of pictures and sounds and US TV dramas to teach second-language learners' vocabulary. The data were collected through students' interviews and the results indicated that watching TV dramas helped participants to learn and comprehend the target vocabulary, especially when those words appeared repeatedly, dramatically, or with different meanings, such as idiomatic words.

Kabooha and Elyas (2018) investigated the relationship of both EFL students as well as EFL teachers toward the inclusion of YouTube for the development of vocabulary. The findings of the study revealed that the group who viewed the YouTube clips had higher scores in the posttest than the group who was not presented the YouTube videos. The results clearly showed that YouTube videos provided positive effects on the students' vocabulary acquisition. The findings of the study indicated that the participants positively viewed the use of YouTube in their lessons. The findings also revealed significant improvement in the students' vocabulary achievement.

Furthermore, using technology is beneficial in language learning and second-language acquisition. Ma and Kelly (2006) asserted that learning vocabulary is one of the most popular subjects in Computer-Assisted Language Learning (CALL) programs. A computer-based method is through the use of annotations to facilitate reading comprehension (e.g., AbuSeileek, 2008; Akbulut, 2007; Chun & Plass, 1997; Yun, 2011). Animation provides imagery in meaning context (Akbas, Kayaoglu, & Ozturk, 2011; Schmitt, 2000) and the ease of mechanical repetition (Segler, 2002). Chapelle (2001) maintained that anyone concerned with language teaching in the 21st-century "needs to grasp the nature of the unique technology-mediated tasks learners can engage in" (p. 2). Computer-mediated instruction has been reported to be beneficial in

vocabulary learning (e.g., Chan, Hsiao, & Lin, 2011; Oberg, 2011; Shabani & Zanussi, 2015); however, others have not found statistically significant improvements based on computer-mediated instruction (e.g., Anderson, 2009; Chen, Chen, Jeng, & Yang, 2010; Chen, Lin, Wu, Wu, & Yang, 2020).

In 2020, researchers believed second-language educators used education technology (e.g., computers, iPads, mobile phones) frequently in language teaching. Research evidence indicated new technologies could benefit second-language learners from various aspects. Compared with text-based instruction, multimedia instruction is the big trend to engage second-language students in learning English. The students need to learn under positive emotions so their intake and output can be raised, which can be achieved by CALL. The students feel more confident and gain higher self-esteem than when they are taught by motivational technologies (Chen & Liu, 2015; Hafner & Miller, 2011; Kim, 2015; Lin, 2020, 2016; Yeh & Wong, 2013).

One of the motivational multimedia techniques is using English movies to learn English because there are native English speakers in the movies providing more authentic English than an English textbook. In particular, when second-language learners learn English through movies, they can use the transcripts to help understand the difficult words or sentences in the movie context. At the same time, second-language learners can practice listening, speaking, and reading in the movies. Using movies to teach English can improve second-language learners' learning interest and efficiency (Chen & Liu, 2015; Wang & Liu, 2012).

Chai, Liu, King, and Wong (2016) conducted a mix-method comparison research to investigate how useful and effective using multimedia captioned-videos instruction would be to teach Chinese English learners English. There were 20 upper-level intermediate second-language learners from two language schools in Auckland randomly assigned to two groups. The

quantitative data were collected through six different tests, and the qualitative data were collected through questionnaires. The results indicated that the multimedia captioned-video instruction treatment could enhance second-language learners' understanding of the target English and helped second-language learners learn new knowledge especially phrases more effectively; in fact, participants thought the captioned-video instruction was useful and helpful in learning English (Chai et al., 2016).

With the help of multimedia video materials, teachers can put more content into classrooms with confidence. Brewer, Wagner, Young, and Zheng (2009) conducted a quasi-experiment research to investigate how ESL learners learn differently between audio-only instruction and audio-video instruction in improving listening skills. There were 103 participants from Community English Program (CEP) assigned to the audio-video-experimental group, and 99 participants assigned to the audio-only-control group. The quantitative data were collected through the pretests and the posttests. The results indicated that audio-video experimental group had higher test scores than the audio-only group on the listening comprehension tests.

These findings related to my study by suggesting that nonverbal elements (such as facial expressions) in videos may play a critical role to help English learners increase phrasal-verb comprehension.

Mohammadian, Saed, and Shahi (2018) conducted experiment research to investigate how video instruction effects EFL learners' reading-comprehension skills. The study was conducted for Iranian intermediate EFL learners chosen from the state high schools in Chabahar. There were 30 participants chosen based on the Longman Placement Test to make sure all EFL learners were at the same English level of proficiency. There were 15 students in each group. The experimental group was the video-instruction group, and the comparison group was the text-

book-based group. The quantitative data was collected through pretest and posttest. The results of the study indicated that video materials had a statistical significant effect on promoting reading comprehension of Iranian intermediate EFL learners.

Kanellopoulou, Kermanidis, and Giannakoulopoulos (2019) investigated the theories of dual coding (DCT) and multimedia learning (CTML) as the theoretical basis for the development of more effective digital tools with the use of films and subtitling. Bilingual dual coding was also identified as a means of indirect access from one language to another and the different types of subtitling were explored regarding their effectiveness, especially in the field of short-term and long-term vocabulary recall and development. Finally, the researchers investigated some new alternative audiovisual tools that actively engage learners with films and subtitling, tailored toward EFL vocabulary learning.

These findings related to my research by suggesting that using video materials in EFL or ESL classrooms may help students perform better on tests. In addition, the use of US films and YouTube videos also provide rich cultural content, which contributes to building second-language students' background knowledge for the language.

Summary

Multimedia instruction has been used in language teaching successfully. Research has focused on vocabulary, listening, speaking, or reading via multimedia instruction. Few studies have used multimedia instruction in ESL or EFL phrasal-verbs education, indicating a need to investigate the effectiveness of using multimedia instruction for ESL phrasal-verbs education.

In this literature review, four themes were introduced: the barriers and difficulties in ESL phrasal-verbs education, the benefits of using multimedia instruction in ESL education, the multimedia learning for low-prior-knowledge learners, and the effective techniques on

multimedia instruction in practical ESL circumstances. The main findings of the literature review can be divided into two categories. One category was that both students and teachers held positive attitudes toward using media materials to teach and learn English (e.g., Acha, 2009; Akbas, Kayaoglu, & Ozturk, 2011; Chan et al., 2011; Edelmann, Imhof, Gerjet, & Scheiter, 2013; Elyas & Kaboocha, 2018; Kim, 2015; Schmitt, 2000; Shabani & Zanussi, 2015), which means this study filled the gap of positive attitude in ESL phrasal-verb education. Researchers found that using a multimedia teaching approach can help ESL educators teach English more effectively (e.g., Akbulut, 2007; Anderson, 2009; Chen et al., 2010; Chen et al., 2020; Oberg, 2011; Shabani & Zanussi, 2015), which means in this current study, the researcher might fill the gap of using multimedia teaching approach to teach phrasal verbs. Another category of the findings was that traditional grammar-oriented teaching is still very popular in foreign countries (e.g., Broner & Tarone, 2001; Choorit & Supakorn, 2014; Cornell, 1985; Fan, 2003; Gao, Cheng, & Zhou, 2003; Ismaili, 2013), partly because of the requirements of the system of testing. Implementing the use of teaching methods using media material still requires more effort and energy.

These findings have provided valuable information to address the problems and help the researcher to develop the current study. The use of multimedia instruction in class can improve students' learning and thinking ability and make classrooms more energized and lively and the contents more vivid for ESL phrasal-verb education. Most EFL or ESL students can obtain high scores on English tests but later find themselves unable to use English as a communication tool, which is why it is necessary to examine and reflect seriously upon the traditional teaching method in other foreign countries and find innovative ways to make it appropriate for the current globalized environment. The research studies above provided many effective and innovative

media-based teaching methods that might be helpful to solve these problems. In this current study, the researcher investigated the effectiveness of a set of multimedia curricula about phrasal verbs for community-college ESL students. The researcher drew upon suggestions from the scholarly literature about using various media materials such as movie clips, music, news, and pictures

CHAPTER III

METHODOLOGY

The purpose of this mixed study was threefold: (a) to investigate the effectiveness of using multimedia to teach two-word phrasal verbs to community-college adult ESL learners, (b) to investigate the motivation of community-college ESL learners learning two-word phrasal verbs actively by using multimedia, and (c) to study the relationship between ESL learners' motivation and interest for furthering their learning.

The researcher taught a 6-week 12 session ESL class at a community college by using the new multimedia method of phrasal-verbs instruction. The researcher conducted a comparison research, which means there were a treatment group and a comparison group. The researcher conducted the multimedia instruction using pictures, comics, songs, movies, animation, and videos intervention with the treatment group and the traditional text-based lecturing instruction intervention with the comparison group. The students' learning was measured by a pretest and a posttest for both comparison group and treatment group. All students responded to a questionnaire after the posttest. Students who volunteered from the treatment group participated in the individual interviews. The research methodology was a mixed method. Quantitative data and qualitative data were collected in order to measure the effectiveness of the teaching methods applied and its effect on the students' learning and their learning success.

Research Design

As shown in Table 1, this mixed-method study utilized a comparative pretest and posttest design that included both quantitative and qualitative methods. Using both quantitative and qualitative methods in a mix-method study allowed the researcher to investigate the research questions and conclude the findings through one quantitative research method and combined the

findings of other quantitative research method. Research evidence proved that the validity of the findings, the internal consistency and the generalizability increased when of mix-method research was designed and conducted (Burke, Johnson, Anthony, & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2009; Venkatesh, 2013; Yeasmin & Rahman, 2012). In this study, the use of qualitative and quantitative methods brought valuable insights and powerful results of findings about the two types of two-word phrasal-verb instruction. Therefore, the researcher conducted a comparative pretest and posttest design for the study that investigated the effectiveness of using multimedia to teach two-word phrasal verbs for community-college adult ESL learners.

Table 1
Research Design

Week	Phase	Procedure
Session 2	Pretest	All participants took the pretest. Make up pretest for those who were absent.
Session 1+2	Intervention	<u>Text-based Group</u> : Students learned phrasal verbs with text. <u>Multimedia Group</u> : Students learned phrasal verbs with text, visual, audio, video materials.
Session 1+2	Posttest	All participants took the posttest. Make up test for those who were absent.
Session 1	Questionnaire	All participants took the questionnaire.
Session 1+2	Interview	<u>Multimedia Group volunteer participants</u> attended the semistructured individual interviews.

The independent variables in this study were teaching two-word phrasal verbs through multimedia instruction or through text-based instruction for community college ESL learners and the two levels of prior knowledge about phrasal verbs (low-knowledge and high-knowledge that depended on the scores of the pretest). The dependent variable were the test scores of the two-word phrasal-verb pretest and posttest, and the test-score change from the phrasal-verb pretest to posttest. Another dependent variable was the scores from the MUSIC model questionnaire that assessed interest, usefulness, and successfulness of using multimedia and text-based to teach

two-word phrasal-verbs for community-college adult ESL learners. The individual interview data were followed up on the MUSIC Model questionnaire responses.

Research Setting

This study conducted in two community colleges in Northern California. The Community College ESL program is designed to help nonnative English speakers to learn English to communicate effectively in order to access degree or transfer programs, academic programs, and vocational programs to be prepared for employment. The settings were chosen from two Community Colleges in Northern California. The two Community Colleges belonged to one Community College District. All course outlines, assessment or placement tools, and textbooks were chosen by the community-college district council. If Reading and Writing 2 (level 2) was offered in the College A, then College B used exactly the same books and course outlines. Instructors did not teach two sections of the same course in the same semester. Each college, however, offered multiple sections of the same course in the same semester. Usually, more than 20 students would enroll in each reading and writing class. During COVID-19 quarantine, both classes were on Zoom, which was an online platform.

Before COVID 19, both classes met in smart classrooms equipped with laptop connections, a smart board with touch screen, data projectors, speakers, and overhead transparency projectors. Both classes had the same weekly instructional time of 180 minutes, and the classes were taught by two different ESL instructors. After the pandemic, both classes met online through Zoom. Because of the pandemic, the schools were closed, and the classes met online for the academic year. Therefore, the researcher conducted the research and completed the intervention online through Zoom for the two classes. The Community College offers courses and programs that satisfy the transfer requirements for 4-year colleges and universities. In

addition, a range of vocational or technical programs prepares students for 21st-century complex workplace. The ESL program serves nonnative English speakers who need to learn sufficient English to communicate effectively and overcome their difficulties in reading, writing, speaking, and understanding English.

As part of the admission process, the Community College required all ESL course applicants to take the Combined English Language Skills Assessment (CELSA) test and a locally validated test to evaluate the student's English grammar, vocabulary, and reading skills. The CELSA test itself had 75 questions total. There was a writing test portion used for placement with a writing prompt for holistic grading purposes as assessed by three proctors. To assess the student's listening and speaking level, there was also an oral interview with holistic grading assessed by one proctor.

Each student's starting level was determined by the student's cumulative testing score. There were four levels of difficulty in the ESL program at the Community College, with the levels generally defined as found in Table 2 regarding the CELSA placement score value.

Table 2
CELSA Placement Score Value

English Level	CELSA Placement Score Value
High Beginning	35 to 45
Intermediate	46 to 55
High Intermediate	56 to 65
Advanced	66 and over

Participants

All participants in this study were ESL students from the two Intermediate-level reading and writing classes at the Community College in Northern California. All students in the Reading and Writing 2 classes from the two community colleges participated in the phrasal-verb

instruction, but only those who signed consent forms included in the study. The setting was chosen as a convenient sample because the diverse student body should be generalizable to other student populations.

Before COVID 19, for example, Reading and Writing 2 was offered in the morning, afternoon, and evening in the College A and College B (three sections of the same course taught by three different instructors). College A used to offer about 40 to 50 sections of ESL (about 1,500 students) and College B offered 100 ESL sections to about 3,000 students each semester. After the pandemic, the enrollment declined, and many ESL instructors have been laid off. For this reason, the research conducted in the two Reading and Writing 2 (level 2) classes with the two instructors at two Community Colleges in the district. Background information about the two instructors is included at the end of this chapter. There were 45 participants from the two Level 2 classes. Some of the students were full-time and some were part-time in both classes. The ages of the participants in both Level 2 classes ranged from 18 to 65 years old, including male students and female students. The students' first languages included Urdu, Arabic, Chinese, Amazigh, Dari, Mongolian, Farsi, Portuguese, Spanish, Vietnamese, Arabic, Berber, Chinese, and Korean. None of these languages have phrasal verbs as part of students' first languages.

The researcher selected sections in which the participants were at the same level of competence (Spring 2021 semester) in the ESL Course. In order to ensure the privacy of each participant, the participants' names were coded with a numerical ID by the instructors. The instructors gave the tests to the students online and scored the test through Canvas. Then the instructors provided results of pretests to the researcher without names. The researcher used the information for lesson planning. Posttests was given by the instructors as well. Posttests results

were scored by Canvas as well. The instructors provided pretests and posttest data using the numerical IDs of the students who consented to release their scores to the researcher.

Protection of Human Subjects

The researcher requested the consent of individual participants. The researcher obtained permissions from the Co-Chair of the Community College ESL Department and the two instructors in order to gain access to the research participants in accordance with the Community College's ethical policies in Northern California. The participants' identities were concealed and protected through the use of coded numbers and pseudonym.

Prior to visiting the ESL classes in the Community College and collecting data, the researcher submitted an application for approval to conduct this research to the USF Institutional Review Board for the Protection of Human Subjects. The research followed American Psychological Association (2012) guidelines for protection of human subjects.

No individual identities were used in any reports or publications resulting from this study. Students were told that their participation was voluntary, and if they chose to opt out, there would be no adverse effect on their course grade or aspects of their participation in the course. Participation in the study was voluntary, and signing consent forms from all participants were required (Consent Form Letter in Appendix B). The researcher will keep all data and records confidential and will store all data in the cloud for 10 years, She will destroy all data after that.

The following paragraphs provided the steps for protection of human subjects during this study. The researcher obtained proper approvals from the Institutional Review Board of the University of San Francisco through following the proper procedures established by the organizations. The Co-Chair of the English department at the community-college site and the

two instructors had provided written permission for the study (Attached in Appendix C and Appendix D).

The consent form was given to the students online through Zoom. Qualtrics was used as the inventory tool to complete the consent forms for releasing their grades and instrument responses. The researcher asked the students to complete the consent forms and the questionnaire online. The interview details were given to the students at the end of the consent form. Students were asked to provide their email addresses if they wanted to participate in the instrument. Students who did not want to complete the questionnaire and the consent form read a phrasal-verb reading and learn phrasal verbs. Volunteers participated in the individual interviews online. The researcher gave the consent forms to the participants before they completed the questionnaire. The researcher sent out the consent form of Qualtrics link online through Zoom so that all participants could access to the consent forms. All participants completed the consent forms to participate in the study and responded to the questionnaires online.

The researcher also informed the students to type in their names as they could not sign the forms. If they did not want to complete the consent forms, they got the phrasal-verb reading and learned phrasal verbs. On a separate sheet, with the consent forms, the researcher also asked all participants to fill out their email addresses if they volunteered to participate. The researcher received the email addresses so that the researcher could contact the volunteers directly and arrange for a time to meet on Zoom for the individual interviews. The interviews were conducted online in Zoom and each individual interview lasted 15 to 20 minutes. Then all of the online questionnaires and consent forms were saved anonymously in the researcher's Qualtrics account. The researcher created a new session outside of the class to complete the individual interviews for volunteer participants.

The researcher also collected biographical and demographical data of the participants. Demographic data were collected from participants including age, gender, educational level, first language, prior knowledge of phrasal verbs, and number of languages that the students speak at the end of the Questionnaire with a demographic information form below the open-ended questions in Qualtrics .

Instrumentation

Data for this study were gathered through the following instruments: (a) a demographic information form, (b) a two-word phrasal-verb pretest, (c) a two-word phrasal-verb posttest (d) a questionnaire, and (e) a semistructured individual interview. Each instrument subsequently is described in detail. The primary instruments for quantitative data collection is the two tests: the two-word phrasal-verb knowledge pretest (20-item multiple-choice test) and the two-word phrasal-verb knowledge posttest (the same 20-item multiple-choice test but the sequence of the questions is different). The following sections provide a description of these instruments.

Two-word phrasal-verb pretest and posttest

The researcher created the two-word phrasal-verb knowledge pretest and posttest. The pretest was prepared as a 20-item multiple-choice test. For this test, the student participants were required to choose the correct answer from a group of four choices. There were 20 questions in the pretest. The posttest was the same 20-item multiple-choice test as the pretest but the sequence of the questions in the posttest is different.

The phrasal-verb measurement tool (20-item multiple choice test) was based on the chosen target words from the Community College's ESL Level 2 textbooks. The two tests were administered online through Canvas in Zoom. To ensure the reliability and validity of the measurement, the researcher provided the tests, then the instructors posted the tests on Canvas.

The instructors were members of the validity panel who reviewed the test items before published the tests. They reviewed the tests before they gave the tests. The students were requested to turn on their Zoom cameras during the tests so the researchers and the instructors could see all the students. There was an alarm set up on the Zoom screen so students did not have time to download or print the tests with the cameras on and with the limited time. Timing for pretest and posttest was set to 10 minutes. Once the students started the tests, they only had one attempt to finish the tests. All tests were in English for all participants. The instructors made the tests published to the students on Canvas right before the pretest and the posttest phases and made the tests unpublished right after the pretest and the posttest phases. There was a make-up pretest and a make-up posttest for students who were absent on those days. The instructors opened the make-up tests on Canvas only for the absent students. The instructor locked the test after the pretest and posttest phases so that all participants could not go back to their Canvas and change their answers.

Questionnaire

The MUSIC Model of Motivation (Jones, 2009, 2015) is a model that can be used in any subject area (a) to design instruction that motivates students, (b) to diagnose strengths and weakness of instruction, and (c) to research relationships among factors critical to student motivation. MUSIC is an acronym of the five key components of motivation and engagement: M for eMpowerment, U for Usefulness, S for Success, I for Interest, and C for Caring. Although researchers have used other scales to measure constructs similar to those in the MUSIC model, few of these scales have been validated through the use of rigorous empirical evidence, and others have been modified for their use. As an example, Jones (2010a) used existing instruments but deleted some of the items, deleted or added words to items, changed the wording of the

items, changed the tenses of the items, and changed the number of descriptors in the Likert-type format scales. To address these problems and others, the MUSIC Inventory was developed by Brett Jones to ensure that the items and scales for each MUSIC component would be similar in format and provide valid scores (Jones, 2009, 2015).

In this study, the researcher focused on understanding why learning is useful for their short- or long-term goals, the success of putting forth the effort required, and the interests in the content and instructional activities. There were 18 rating items focused on the usefulness, success, and interests. As for the rating items, the participants were asked to rate the degree of usefulness, success, and interest for the two-word phrasal-verb instructions. For the 1 to 6 rating scale, students were expected to select each number along with the associated description with 1 being *strongly disagree* and 6 *strongly agree* (i.e., 1 = *strongly disagree*; 2 = *disagree*; 3 = *somewhat disagree*; 4 = *somewhat agree*; 5 = *agree*; 6 = *strongly agree*).

In addition to the previous rating items, the open-ended questions section includes questions from different studies in which the researchers surveyed students about their perceptions related to the components of the MUSIC Model of Motivation (Jones, 2009). There is no one “correct” way to ask students about their perceptions related to the MUSIC model. Jones (2012) found that the questions asking about change are the most useful for getting ideas that can be used to redesign instruction (e.g., What could be changed in this course to make you feel you had more choices in the course? What could be changed in this course to help you feel you could be more successful in it?). The three open-ended questions were seeking the participants’ perceptions of usefulness, success, and interest for furthering learning to study the phrasal verbs.

The validity evidence for the use of this version of the MUSIC Inventory with college students was very good. Because the validity evidence from different studies proved that the use of the MUSIC inventory reported excellent Cronbach coefficient alpha values, confirmatory factor analysis, and exploratory factor analysis for empowerment, usefulness, success, interest, and for caring in college settings (Pace, Ham, Poole, & Wahaib, 2016; Singh & Jones, 2017; Tendhar, Jones, & Skaggs, 2016)

The questionnaire was given to all the participants. The questionnaire included 18 rating items and 3 open-ended questions based on the MUSIC Model (Jones, 2009). The questionnaire was prepared through Qualtrics, a web-based software program for researchers to create surveys and generate reports. This platform enabled individuals to do surveys, feedback, and polls using a variety of distribution means. Qualtrics provided the survey results for viewing each item in reports.

Semistructured individual interview

One of the common used qualitative research methods is interview. Interviews allow researchers to explore more comprehensive, thorough, and insightful opinions from one's special mind that quantitative data cannot provide based on the responses of particular experiences, perceptions, opinions, feelings, and knowledge (Fontana, & Frey, 2005; Gay, Mills, & Airasian, 2009; Patton, 2002; Punch, 2011). Therefore, in this study, the individual interviews were used as a complement for supporting the findings of the quantitative phase of data analysis. The researcher used a semistructured interview guide based on Fontana and Frey (1994, 2005) category of interviewing to gather information about participants' experience of learning new two-word phrasal verbs based on the cognitive load theory of multimedia methodology.

The researcher asked additional follow-up questions as well. The interview lasted 15 to 20 minutes. For further data analysis, the researcher recorded the discussion with the participants through Zoom. The individual interviews were transcribed in full through Zoom as well. Coded numerals IDs were used in the transcript and in the qualitative data. Interviews draw upon these questions as a starting point:

1. Have you learned phrasal verbs before? Do you think phrasal verbs are difficult for you to learn?
2. When have you learnt phrasal verbs on your own without any support, what has that process been like? Felt like?
3. Can you describe what you are thinking when you have a tricky phrasal verb in a picture, song, or video?
4. What strategies are you using to make sense of things you do not understand right away? Do you guess or look up in the dictionary?
5. Now let us focus on the learning of phrasal verbs using the videos, pictures, and songs. Tell me about your experience, what did you learn from the videos?
6. Could you describe what it was like for you to study the phrasal verbs using the videos, songs, and pictures?
7. Could you find phrasal verbs that we learned when you watch YouTube videos or listen to music?
8. Do you like learning through multimedia on Zoom? Why?
9. How was studying with the video similar to, or different from, your experiences of studying phrasal verbs on your own?

10. Do you have difficulties in using technology to learn English? Can you give me an example of your learning technology? What are the difficulties?

Validity and Reliability

Validity, also referred to as trustworthiness, authenticity, and credibility in qualitative research, is considered to be one of the strengths of qualitative research and is based on determining whether the findings are accurate from the perspectives of the researcher, the participant, or the readers of an account (Creswell & Miller, 2000). In this research, I have adopted several strategies suggested by Creswell (2014) to assess the accuracy of findings, thereby ensuring the validity of the study. Both quantitative data and qualitative data were collected to examine evidence to provide justification for the research questions. The different data sources enhanced the validity of the study. A doctorate candidate as a review coder reviewed the raw data and the interpretation of the data. The researcher also carefully reread the data to look for any discrepant information that ran counter to the research questions.

Validity panel review

In order to obtain the validity evidence for this form of mixed-method research, the researcher gathered a validity panel review for the data instrument in order to assess the content validity for pretest, posttest, lessons segments, phrasal-verb list, and multimedia and text-based intervention materials. Both of the two professors taught the same ESL Level 2 classes and they agreed to serve as my dissertation validity panel members. The validity panel members were both ESL teachers at a community college in the SF Bay Area and are experts in the ESL education field. The researcher contacted the validity panel through e-mails and by video conference calls and requested their assistance and solicited their expertise as reviewers for this study.

The researcher requested detailed responses concerning clarity, relevance, cultural sensitivity, linguistic sensitivity, and level of motivation about the intervention materials. The researcher provided a letter explaining the intent of the study. Validity review panel members reviewed the Google Presentation, and the researcher practiced the lectures with the validity review panel members. Several items revised through their commentary as well as several new items were added in the instruction. The validity panel reviewed and evaluated each item of the research instruments for content validity, linguistic sensitivity, and cultural relevance.

The experts were sent a content validity form (see Appendix J and Appendix I) and instructional sheet that asked them to decide if the phrasal-verb test item met the course objectives. They also were asked to rate the level of difficulty for each of the test items. On the test sent to the content experts, there were three rating values: the least difficult, the moderately difficult, and the most difficult. Based on the feedback from the content experts, most of the test items were rated as moderately difficult.

The researcher included the following qualitative reliability procedures to ensure that the qualitative data-analysis approaches used for the study were reliable. The researcher listened to the interview recordings, randomly selected three from the recordings, checked the transcripts to verify that the transcription was accurate, and created the coding scheme for interpretate the recordings (see Appendix M). To establish interrater reliability (IRR) for the coding system, after the initial establishment of the coding scheme, the researcher worked with a second coder, a classmate of the researcher with experience in ESL education, to code one recording selected at random. According to Miles and Huberman (1994), an IRR of 80% agreement between coders on 95% of the codes is sufficient agreement among multiple coders (Miles & Huberman, 1994). The researcher told the second coder about how she coded the recoding and made sure that the

second coder understand the coding system. Then the second coder coded the other two recordings. After the second coder finished coding the two recordings, the researcher compared her results with the second coder's results and checked if there were disagreements.

The researcher had two meetings with the second coder. During the first meeting, the researcher used the transcript from the multimedia treatment group that she coded as an example to discuss the coding scheme with the second coder, explained how it was developed, what the codes were, and what each code meant (see Appendix M). Based on this discussion, the researcher and the second coder clarified the codes and definitions. Then the researcher randomly selected a different interview transcript and coded a copy of it with the second coder. During our second meeting, the researcher and the second coder went over the coding for the codebook and compared the results of the two random selection of the interview recordings. Coding problems where there were discrepancies and confusion were discussed by the researcher and the second coder. Eventually, the disagreements resolved. The researcher finished coding the rest of the four sets of interview data. The coding results and the IRR was found to be between 89% to 91%.

The researcher conducted Cronbach Coefficient Alpha through SPSS to ensure that the quantitative data-analysis approaches used for the study were reliable. The reliability value is .80 which means the quality of the tests is good. The tests were developed based on a previous test with 10 items. The researcher constructed the tests by using the phrasal verbs from the textbooks. The researcher went to the end of the textbook to choose the phrasal verbs and made sure that the chosen ones were not covered by the class teachers early. And all the chosen phrasal verbs were used during the intervention. Students would have recall from the courses, the intervention, and

training during the posttests. Both groups received the same chosen phrasal-verb intervention and the posttests.

Description of Teaching Phrasal Verbs

Upon successful completion of sample selection and obtaining the approval of the Institutional Review Board, the researcher conducted the study within the classroom context and during scheduled instruction hours while teaching two-word phrasal-verbs materials 12 times to the same students in the treatment group, with around 22 students in each session. The researcher conducted one 20-minute instructional session twice a week, excluding weekends, holidays, and any special events that interfered with the teaching schedule.

The independent variable for this study was the instructional intervention, which has two levels: (a) multimedia pictures, comics, songs, animation, TED Talks, and movie videos instruction and (b) traditional text-based instruction. Students participated in either the treatment or the comparison condition for the instructional intervention, which was based on the ESL standard-issued Reading and Writing textbooks to select level-appropriate learning material and phrasal-verb list that was chosen by the validity review panel and the researcher. The instructional material covered in this study consisted of 48 phrasal verbs. In each 20-minute instructional session, the researcher covered four new phrasal verbs by using pictures comics, songs, animation, TED Talks, and movie videos, for example, the researcher used the Google Presentation to present her lessons on Zoom, she played videos and songs through YouTube, and she also used Poll Everywhere and Qualtrics to do classroom assessment and group activities. Before the beginning of the treatment, the students completed the pretests, the researcher practiced the intervention lecturing with the two ESL instructors who were the validity review panel members.

The treatment instruction focused on teaching students English phrasal verbs using multimedia instruction. In general, to propose the Pictorial-Auditory technique, the researcher drew on Mayer's (2014) Cognitive Theory of Multimedia Learning. This technique provided support for the effectiveness of simultaneous cognitive phrasal-verb instruction on ESL learners' phrasal-verb learning. Therefore, the researcher had two separate but interrelated verbal and visual systems allowing the learners to benefit even more if they received the target words through the verbal tools of text with audio as well as the visual tools of text with pictures, video, or animation.

In the intervention phase, the researcher divided the 12 participating sessions for 6 weeks into the treatment group, placing two sections twice a week. The material that the researcher covered in the intervention phase consisted of a list of 48 new phrasal-verbs that were reviewed by the validity review panel (see Appendix J).

The intervention used the multimedia approach (Mayer, 2003) to teach the new phrasal verbs in pictures, comics, songs, animation, TED Talks, and movie videos. The researcher provided examples of the new phrasal verbs in the sentences relevant to the pictures, comics, songs, animation, TED Talks, and movie videos. According to the Cognitive Theory of Multimedia Learning (Mayer, 2008), "learners must have corresponding words and images in working memory at the same time in order to make connections between them" (p. 764). The researcher presented new phrasal verbs and definition as well as sentence examples all on one screen for the ESL learners. The researcher integrated the verbal and pictorial representations with each other and with a relevant example in order to help language learners to activate their prior knowledge from their long-term memory and also to help them to eliminate the need to hold the information in working memory for a lengthy period of time.

The intervention started on the 3rd week of spring semester. The researcher used Zoom to conduct the intervention sessions. The intervention (see Table 2) was interactive lectures that included the Google Presentations with both visual and audio materials followed by group activities that students collaborated in practicing phrasal verbs, concluding with a group project or an assignment. The researcher used multimedia pictures, comics, songs, animation, TED Talks, and movie videos as the primary technique in all twelve sessions. The materials were formatted through Google Presentation slides that provided an integrated online platform to create and share pictures, comics, songs, animation, TED Talks, and movie videos. Through Google Presentation slides, the researcher were able to bring phrasal verbs and pictures, comics, songs, animation, TED Talks, and movie videos together to build multimedia learning flow. As the useful educational technology tools, Google Presentation slides and Zoom provided a visual selection option for online images and text to be added on the same screen and shared with the students. The researcher connected with students through Zoom, had the interactive conversations through the Zoom chat box, and shared the Google Presentation slides through Zoom.

In the first part of the intervention, the researcher presented Google Presentation slides through Zoom to start the phrasal-verb presentation. Phrasal verbs were taught according to multimedia pictures, comics, songs, animation, TED Talks, or videos along with the written form of the definition in the Google Presentation slides. An example of the new phrasal-verb in a sentence relevant to the pictures, songs, or videos was provided. In the second part of the intervention, the researcher taught each phrasal-verb through multiple activities (see Appendix H). The researcher played the songs, videos, and TED Talks more than 3 times. Students listened to the songs repeatedly to learn the target language. The researcher used Poll Everywhere,

Kahoot, Video games in Zoom to conduct activities and set up small groups into different breakout rooms. The researcher checked on each breakout room and learned or observed how students work together during cooperative learning. Some example activities asked each group to construct a sentence by using the new phrasal verbs or create a short story based on a picture, a song, or a video clip by using the new phrasal verbs. The students used the annotation white board to present their work or share their screen with the whole class to present their group work. The last part of the intervention was an interactive communication through Zoom. The researcher asked students reflection questions or conducted a one-minute paper assessment through Google Presentation slides. The instruction was posted on the slides and the researcher posted the Qualtrics link or a different Google Presentation link for the students to complete the feedback questions. The students typed their answers into the post-it in Google Slides, and the researcher provided three post-it in Google Slides for three groups (see Appendix H). Or the students responded to the Qualtrics evaluation and gave their answers.

The instructional intervention began with a warm-up activity. Students read the warm-up questions related to the pictures, comics, songs, animation, TED Talks, or videos through Google Presentation slides screen shared by Zoom (see Appendix H). Then the researcher played the songs, videos, or animation for the students. In the first phase of instructional intervention, students viewed one multimedia video. In the second phase of the instructional intervention, students viewed the video again as the first phase they watched but with the video transcripts or music lyrics shared on the screen. The students were asked to write down all the phrasal verbs that they heard from the videos. Then the researcher put all students into breakup rooms to discuss their phrasal verbs for 2 minutes. Three to four students were assigned randomly to one breakout room depending on the day of the attendance. Normally, there were five breakout

rooms. When students came back to the main group, one group member from each breakout room presented their phrasal-verb answers. Or they wrote the phrasal verbs in the Zoom chat box and shared with everyone. After all groups reported their answers, the researcher played the video again with the lyrics or transcripts showing on the screen, and all students checked their answers again. Then the researcher gave students matching activities through Poll Everywhere. Or the research showed the matching exercises on the Zoom share screen and went over the matching exercises with the class together. The matching activities had students matched the right phrasal verbs with the correct pictures or comics. Or matched the correct meaning with the appropriate phrasal verbs. Before the intervention ended, the researcher asked the warm-up questions as reflection activity.

The researcher-teacher created some of the pictures or comics that appeared in the intervention sessions. The other pictures and comics were from online sources, such as Google Images, Pinterest. All the music and video clips are found on YouTube (see Appendix H). All multimedia pictures, comics, animation, songs, and videos were reviewed by the validity review-panel members.

Each video adhered to applicable design principles for multimedia learning (Mayer, 2009, 2014a). Videos included cues, such as vocal emphasis, pointer words, headings, and initial outlines, directed and attracted student's attention to the most important parts of the lessons. Moreover, students had control over the pacing and progression of the videos, which were broken down into manageable segments during class activities.

Comparison group

The researcher used Zoom to share the Google Presentation slides of the phrasal-verb lessons. The lesson began with a traditional text-based lecture. There was a warm-up at the

beginning of the intervention. Students saw plain text material through Google Presentation slides with no pictures, songs, or videos. The researcher talked about each new phrasal verb slide by slide. Students asked questions at any time during the lecture. Students were asked to use the new phrasal verbs to make sentences and report to the whole class. The researcher gave the same phrasal-verb matching exercises but without pictures or comics to the comparison-group students. The students matched the right phrasal verbs with the correct text definitions. At the end of the lesson, the researcher asked the warm-up questions as the ending reflection activity which was written on the Google Presentation Slides. The researcher also promoted cooperating learning activities through Google Presentation on Zoom. Students received the activities link in the Zoom chat box, and based on the breakout room number, they found their group number of slides in the Google Presentation. There were three to four students in one group. Each student was assigned to complete one task in the slides, for example, each student used one phrasal verb to make one sentence in your group slide and each phrasal verb could be used only once. So even though the comparison group students had no multimedia instruction like music, pictures, or videos but they had interactive activities through technology.

Procedures

The researcher used quantitative comparative research design. Therefore, the researcher took measurements from the treatment and comparison groups, both before and after the intervention. Accordingly, the quantitative part of the study was conducted in three phases: (a) pretest, (b) intervention, and (c) posttest. The researcher administered the questionnaire after the posttest. The treatment group received intervention in the morning class. The morning class was set as half synchronous and half asynchronous due to the COVID-19 situation. The researcher taught the phrasal-verb lessons at the end of each morning class session. The evening class was

set as online teaching class for the whole time. The comparison group received the intervention on the same day but in the evening class and the researcher taught the phrasal-verb lessons at the beginning of each evening class session. The researcher used a qualitative individual interview method after the completion of the questionnaire phase (see Table 1 & Table 3).

Table 3
Overview of Procedures by Week Period

Week	Session	Description
2	1	Introduction: Students and Researcher got to know each other and made connections. Randomly assigned one class as the treatment group, and assigned the other class as the comparison group.
	2	Pretest, the two groups took the pretests using Zoom, Canvas, Qualtrics, and Timer.
3	1	Intervention: Multimedia Pictures versus traditional text-based lecture, introduction of phrasal-verbs, types of phrasal-verbs.
	2	Multimedia Pictures versus traditional text-based lecture, activities and exercises.
4	1	Intervention: Multimedia Comics versus traditional text-based lecture, introduction of phrasal-verbs, types of phrasal-verbs.
	2	Multimedia Comics versus traditional text-based lecture, activities and exercises.
5	1	Intervention: Multimedia Music Song-Lyric versus traditional text-based lecture, five new phrasal-verbs.
	2	Multimedia Music Song-Lyric versus traditional text-based lecture, five new phrasal-verbs activities and exercises.
6	1	Intervention: Multimedia Animation Story versus traditional text-based lecture, five new phrasal-verbs.
	2	Multimedia Animation Story versus traditional text-based lecture, five new phrasal-verbs activities and exercises.
7	1	Intervention: Multimedia Movie-Clip versus traditional text-based lecture, five new phrasal-verbs.
	2	Multimedia Movie-Clip versus traditional text-based lecture, five new phrasal-verbs activities and exercises.
8	1	Intervention: Multimedia TED Talks Video versus traditional text-based lecture, five new phrasal-verbs.
	2	Multimedia TED Talks Video versus traditional text-based lecture, five new phrasal-verbs activities and exercises
9	1	Posttest, the two groups took the posttests using Zoom, Canvas, Qualtrics, and Timer.
	2	Grading, the two instructors collected scores of the pretests and the posttests from Canvas.
10	1+2	Consent form, the two groups completed the consent forms using Qualtrics on Zoom. Questionnaire, the two groups completed the questionnaire using Qualtrics on Zoom.
11	1+2	Individual interviews with volunteers who consented in the treatment group using emails and Zoom.

Note: Each session was 20 minutes long.

In the posttest phase, the researcher asked the instructors to make the posttest published to the students on Canvas right before the test. The students completed the 20-item multiple-choice test with their Zoom camera on and there was an alarm set up on the Zoom screen. The participants completed the test in 15 minutes. Afterward, the instructors scored the posttest through Canvas and the instructors sent the grades of students who consented to release their grades to the researcher. The instructors used the same codes that they used in the pretest for the participants. The researcher collected students' grades and properly documented the participants' score data at a later time.

In the seventh week of the Spring semester, after the posttest, the researcher conducted a survey for all the participants. The questionnaire included 18 items and three open-ended questions based on the MUSIC Model (Jones, 2009). As for the rating items and the open-ended questions, the participants were asked to rate the degree of usefulness, success, and interest for the two-word phrasal-verb instructions.

In the eighth week of the spring semester, after the questionnaire phase, the researcher conducted the individual interviews as a complement for supporting the findings of the quantitative phase of data analysis to the participants who agreed to do the interview in the consent forms. The researcher used a semistructured interview guide to gather information about participants' experience of learning new two-word phrasal-verbs techniques based on the cognitive load theory of multimedia methodology. The researcher asked seven to ten open-ended questions. The researcher asked additional follow-up questions as well (see Appendix G).

The researcher gave the consent forms to the participants with the questionnaire through Qualtrics. All participants completed the consent forms and responded to the questionnaires. At the end of the consent form, all students had an option to choose Yes or No to process the

questionnaire. If the students did not want to complete the consent forms, they got the phrasal-verb reading and learned phrasal verbs while other students were finishing the questionnaire. Then all of the online questionnaires were saved anonymously in the instructors' Qualtrics account. All of the online consent forms were saved in the researcher's Qualtrics account. The questionnaire took about 5 to 10 minutes for the participants to complete. The purpose of the questionnaire was to ask students' perceptions and opinions on the motivation of furthering learning two-word phrasal-verbs that they thought was useful and successful to study the target words (Appendix A).

Volunteer participants attended the individual interviews virtually. For releasing their grades and instrument responses, the researcher asked students to complete the consent forms online. The instructors gave the questionnaire to the student through Canvas. The researcher asked students to complete the consent forms online. The individual interviews details were given to the students at the end of the consent form. Students were asked to provide their email addresses if they wanted to participate in the instrument. Students who do not want to complete the consent form completed a phrasal-verb reading and learn phrasal verbs. Volunteers participated in the individual interviews online. The researcher wrote down all the volunteer's names and emails, and sent them to the instructors. The instructors gave the questionnaire data of the students who consented to release their questionnaire data to the researcher. The researcher created a new session outside of the class to complete the individual interviews for volunteer participants.

The priority for participant selection was given to those who completely attended all the study phases including pretest, intervention, posttest, and questionnaire sessions. The instructors coded students' names and they gave the participants data who attended all study phases of

pretest, intervention, posttest, and questionnaire sessions to the researcher. To make sure that the volunteers attended all the study phases, the researcher gave interview details and told the students about the priority for participant selection. The researcher emailed volunteers one by one to schedule individual interviews. Then the researcher worked with volunteer participants one by one to conduct the interview. The researcher met with the volunteers through Zoom, a video-conferencing platform that allows for conversations to take place. The researcher asked seven open-ended questions during the individual interviews.

What the instructors agreed on was that the researcher conducted the intervention as part of the regular class instruction. The pretest and the posttest were parts of the instruction as well. The pretest was set as a diagnostic test to help instructors plan their course focus. The posttest was counted for students' grades. When the researcher finished the instruction, then she gave the posttest. After the posttest, the researcher asked the students to finish the questionnaire and asked students' permission to use their grades. The instructors controlled the process of giving the pretest and posttest and the assessment of the test scores to the researcher.

Qualifications of Instructors (Raters)

The two instructors have taught ESL courses at various institutions for 20 years. One of the instructors has a doctorate and a Masters in Teaching English As A Second Language (TESOL). The other instructor has a Masters in TESOL. He is working on his doctorate. They were all long-time English faculty at the community colleges where the study took place. They were experts using Zoom to teach classes, and they knew how to lecture students using Qualtrics and Canvas to complete course work. The two instructors were the validity panel members and raters for grading the pretests and the posttests. The two instructors reviewed the phrasal verbs that the researcher chose from the ESL level 2 textbook. They reviewed the 20-item multiple-

choice test and gave the pretests and the posttests to all participants. The researcher gave the answers of the pretests and posttests to the two instructors. The reliability was established for scoring the tests. Only both pretests and posttests were completed by students who consented were included in the study. All data collected was entered into SPSS, and all materials collected were kept in the cloud by the researcher. The instructors reviewed the 48 phrasal-verb list, pretest, posttest, and the lesson materials. The researcher practiced the lessons with the validity panel.

Researcher

The researcher has been engaged in teaching and learning foreign languages for over 10 years. She grew up in China, where she completed her undergraduate studies. She earned her Bachelor of Arts degree in Wild Animals and Nature Reserve Management from the University of Northeast Forest, China. In 2012, she began her career as a foreign-language educator in Harbin and Beijing, China. One year later, she immigrated to the United States for higher education. She completed her MA degree in TESOL in 2015. During her study, she taught Mandarin Chinese at University of San Francisco and All Stars Mandarin Center (ASMC). At the same time, she taught beginner-level ESL vocabulary class and intermediate-level reading and writing as a teaching assistant at John Adams Campus, City College of San Francisco (CCSF). She was referred by her mentor at CCSF to teach Beginner level English for Art Purposes (EAP) classes at Academy of Art University (AAU). In the same year, she was selected to be the bilingual head teacher and program manager at ASMC where she led a team of 37 professional foreign-language teachers, providing instruction in two languages. She created five different language and art programs for the before-school and after-school programs at five different SFUSD elementary and middle schools. She created different types of curriculum for

different levels of language classes, art classes, dance class, enrichment program classes, 10-week summer camp classes, teacher training courses, language and culture training courses, and so on. She also planned language proficiency performance events once per school year for the past 7 years. There were hundreds of parents and SFUSD school principals and teachers who came and watched the event. In the event, all of the students from ASMC created the performance by themselves to show how much they learned for the past school year and how much they could master the language for furthering learning. After the end of her MA degree, the researcher established a startup company and created an app to bridge ESL teachers from North America and Chinese students from Shang Hai and Hang Zhou. She designed the app and planned the TOEFL class curriculum, Business English Speaking and Business English Email Writing curriculum that she created for the product. There were 31 ESL teachers who successfully taught English to more than 100 Chinese English Language Learners through this app.

She also served as a subcontractor lead linguist and cultural advisor for Future Valley Education (FVE) and Koantic e-learning education. In this capacity, the researcher introduced the educational technology world. In addition to above duties, she started teaching English and Mandarin Chinese online as an independent educator at Prepaze, Outschool and Tutor Corps. She also worked as an instructional designer and e-learning content creator for ASMC, FVE, and Koantic. She started to realize that with more responsibilities and more roles as an educator, she needed additional research-based knowledge to help her go further in the instruction world. Therefore, in 2018, she decided to pursue her doctorate degree at University of San Francisco.

At the beginning of the research, the researcher worked at Google as a Training Specialist creating instructional training courses through multimedia and technology. At the beginning of

the research data analysis, the researcher worked as an Instructional Designer and Curriculum Developer at Tik Tok. She held the rank of language educator, and her previous work assignments included language teaching, teaching team leadership, and chairing a foreign-language program. In 2020, the researcher created the Future Education Foundation. The goal was to help new and young (adolescents) foreign immigrants in the SF Bay Area learn English and Mandarin Chinese and help children from low-income families learn English in the mountain area, Shangri-La, Yun Nan, China. The researcher had research interests that included foreign-language acquisition, second-language acquisition, foreign-language faculty professional development, multimedia intelligence, multicultural education, and instructional design with technology as they related to the mission of researcher's working places. Therefore, the researcher hopes to contribute to the description, prediction, and understanding of second-language education phenomena based on empirical evidence and to use the findings to improve the teaching practice and students' learning effectiveness.

Data Analysis

The research questions for this study were as follows:

Research Question 1: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group on the pretest scores?

- A. To what extent, was there a difference between the levels of prior knowledge for the pretest scores?
- B. To what extent, was there an interaction between treatment and levels of prior knowledge for the pretest?

Research Question 2: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group for the posttest scores?

- A. To what extent, was there a difference for the levels of prior knowledge for the posttest?
- B. To what extent was there an interaction between treatment and levels of prior knowledge for the posttest?

Research Question 3: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group in the change from pretest and posttest scores?

- A. To what extent, was there a difference for the levels of prior knowledge for the change from pretest to posttest?
- B. To what extent was there an interaction between treatment and levels of prior knowledge for the change from pretest to posttest?

Research Question 4: To what extent was there a difference between students' motivation for furthering their learning for the comparison-text-based group and the treatment-multimedia group of the community-college students?

Research Question 5: What did the individual interviews indicate regarding the use of multimedia for learning phrasal verbs?

To address the first four research questions a two-way analysis of variance was used. The independent variables were the treatment and the two levels of prior learning. The dependent variables were pretest, posttest, and change from pretest to posttest scores. The overall error rate was controlled at the .05 level, and effect sizes were computed for statistically significant results. The remaining three questions were analyzed in the same way (see Table 4).

As for the study's fourth research question, excluding the data of the open-ended questions in the questionnaire, the researcher used independent-samples *t* test to analyze

students' motivation for furthering learning between the two groups questionnaire rating items data. For the last research question, the researcher used qualitative data analysis methods to analyze the data of the individual interview questions to understand more about the multimedia techniques of learning phrasal-verbs. Only the treatment group students were interviewed so there were only data from the treatment group reported in the study.

Summary

This study investigated the effectiveness of using multimedia instruction to teach phrasal verbs for ESL students in community-college ESL class setting. Particularly, this study explored the motivation of community-college ESL learners learning two-word phrasal verbs actively by using multimedia and studied the relationship between ESL learners' motivation and interest for furthering their learning. Participants' learning interest, successfulness, and usefulness for furthering their learning were measured by the MUSIC Questionnaire (Appendix A). The learning outcomes were measured by the phrasal-verb pretest and posttest. Five research questions, statistical analyses including descriptive statistics were performed and described, and individual follow-up interview data were coded and analyzed. Results of the data analyses are presented in Chapter IV and findings of the study are discussed and interpreted in Chapter V.

CHAPTER IV

RESULTS

The purpose of this mixed study was threefold: (a) to investigate the effectiveness of using multimedia to teach two-word phrasal verbs to community-college ESL learners, (b) to investigate the motivation of community-college ESL learners learning two-word phrasal verbs actively by using multimedia, and (c) to study the relationship between ESL learners' motivation and interest for furthering their learning. This study was designed as a mixed-method of quantitative and qualitative methods. The findings of this study are organized and reported on the basis of the five research questions, and a final summary of the results concludes the chapter.

In order to analyze the quantitative data, the two-way analysis of variance (ANOVA) was conducted through SPSS to compare the performance of the groups on phrasal-verb knowledge in the pretest and posttest. The rationale to select the two-way ANOVA for analyzing the present study's data was because it compared the mean differences between groups that were split on two "factors;" the independent variables were the treatment groups and the two prior knowledge groups, and the dependent variables were the pretest scores, the posttest scores, and the differences from pretest to posttest. The first four research questions all involve the quantitative data. The quantitative data are presented first and followed by the qualitative research question.

Research Question 1

To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group on the pretest scores?

- A. To what extent, was there a difference between the levels of prior knowledge for the pretest scores?

B. To what extent, was there an interaction between treatment and levels of prior knowledge for the pretest?

The assumptions for the two-way analysis of variance involve normal distribution for the dependent variables and equal population variances. The sample sizes were unequal, and they were small. Because the sample sizes are smaller than that required by the Central Limit Theorem (30), if there is a statistical significance finding then the results could be due to not meeting the assumption for normal population. The Levene's test was used for testing for equal population variances. And in all cases, there was no statistically significance.

The descriptive statistics for the comparison between the two groups, including the means of the two treatment groups on the phrasal-verb pretest can be found in Table 4. The multimedia group had lower means, whereas the text-based group had higher means. As expected, the prior knowledge group had the lower scores on average. There is little difference between pretest means for low-prior-knowledge treatment and comparison groups, whereas there is a difference between the means for the high-prior knowledge means with those in the treatment group having the higher scores, on average, compared with those in the comparison group with high-prior knowledge. Overall the students had on average about half of the questions correct on the pretest.

The results of the two-way ANOVA for treatment by prior knowledge for phrasal-verb pretest can be found in Table 5. There was no statistically significant difference for treatment, and there was no statistically significant interaction (Figure 2), but there was a statistically significant difference in terms of prior knowledge ($\eta^2 = .62$), which is very large. This result could not be a Type I error with such a large measure of practical importance even though satisfying the normal distribution assumption is unknown. As mentioned above, there was a little

more than one point difference between the treatment and comparison groups, particularly for the high-prior-knowledge group and no difference for the low-prior-knowledge group. A graph of the difference between treatment groups for prior knowledge is found in Figure 2.

Table 4
Means and Standard Deviations Broken Down by Treatment and Prior Knowledge Variable for the Phrasal-Verb Pretest

Group	Statistic	Prior Knowledge		
		Low	High	Total
Treatment	n	11	11	22
	Mean	6.73	14.00	10.36
	SD	2.15	2.93	4.49
Comparison	n	4	9	13
	Mean	6.75	12.89	11.00
	SD	0.96	2.93	3.83
Total	n	15	20	35
	Mean	6.73	13.50	10.60
	SD	1.87	2.91	4.21

Table 5
Two-Way ANOVA Results of Treatment by Prior Knowledge for Phrasal-Verb Pretest

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	Eta Squared
Treatment	1	2.18	2.18	0.33	.01
Prior Knowledge	1	331.30	331.30	50.39*	.62
T X P	1	2.37	2.37	0.36	.01
Within	31	203.82	6.58		
Total	34	602.40			

* Statistically significant at the .05 level.

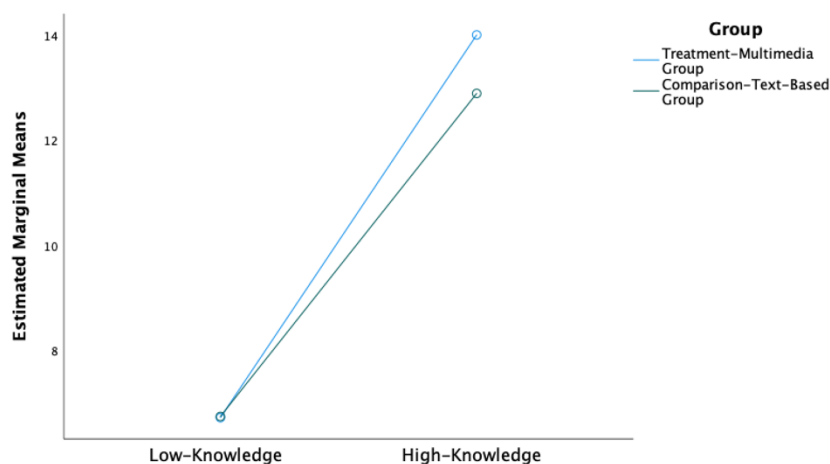


Figure 2. Estimated Graph Marginal Means Between Levels of Prior Knowledge and PV Pretest

Research Question 2

To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group for the posttest scores?

- A. To what extent, was there a difference for the levels of prior knowledge for the posttest?
- B. To what extent was there an interaction between treatment and levels of prior knowledge for the posttest?

The descriptive statistics for the comparison between the two groups, including the means of the two treatment groups on the phrasal-verb posttest can be found in Table 6. The multimedia group had lower means, whereas the text-based group had higher means. There is little difference between posttest means for high-prior-knowledge treatment and comparison groups, whereas there is a difference between the means for the low-prior knowledge means with those in the comparison group having the higher mean, about one point higher than the treatment group with low-prior knowledge on average. On average, students had a score of 13 correct on the posttest.

Table 6
Means and Standard Deviations Broken Down by Treatment and Prior Knowledge Variable for the Phrasal-Verb Posttest

Group	Statistic	Prior Knowledge		Total
		Low	High	
Treatment	n	11	11	22
	Mean	9.82	15.18	12.50
	SD	3.97	3.52	4.58
Comparison	n	4	9	13
	Mean	11.25	15.33	14.08
	SD	0.96	2.06	2.63
Total	n	15	20	35
	Mean	10.20	15.25	13.09
	SD	3.45	2.89	3.99

The results of the two-way ANOVA for treatment by prior knowledge for phrasal-verb posttest can be found in Table 7. There was no statistically significant difference for treatment, and there was no statistically significant interaction (Figure 3), but there was a statistically significant difference in terms of prior knowledge (eta squared = .34), which is very large. This result could not be a Type one error with such a large measure of practical importance even though satisfying the normal distribution assumption was unknown. As mentioned above, there was more than one point difference between the treatment and comparison groups, particularly for the low-prior-knowledge group and no difference for the high-prior-knowledge group. A graph of the difference between treatment groups for prior knowledge is found in Figure 3.

Table 7
Two-Way ANOVA Results of Treatment by Prior Knowledge for Phrasal-Verb Posttest

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	Eta Squared
Treatment	1	4.62	4.62	0.45	.01
Prior Knowledge	1	164.38	164.38	16.02*	.34
T X P	1	3.02	3.02	0.30	.01
Within	31	318.02	10.26		
Total	34	542.74			

* Statistically significant at the .05 level.

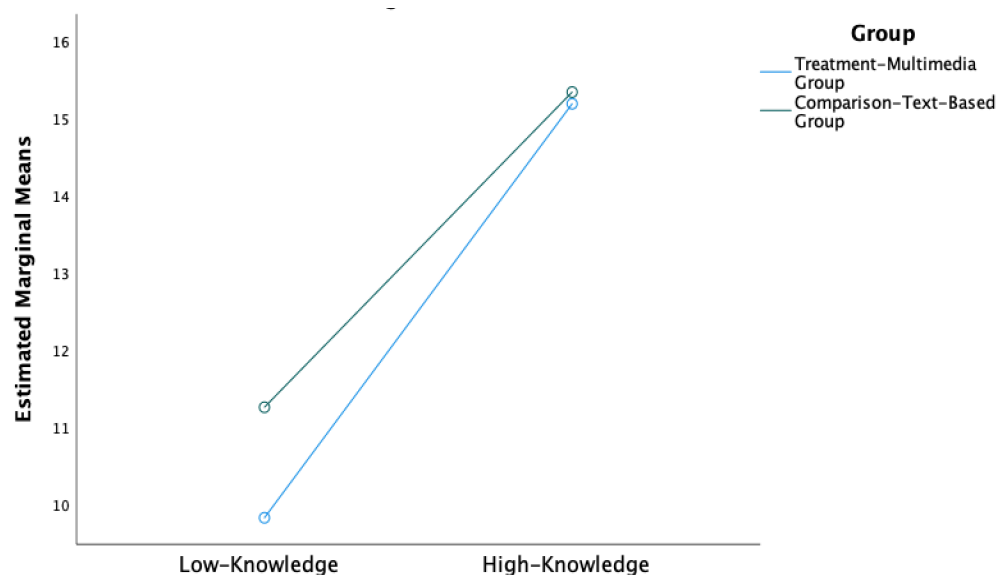


Figure 3. Estimated Graph Marginal Means Between Levels of Prior Knowledge and PV Posttest

Research Question 3

To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group in the change from pretest and posttest scores?

- A. To what extent, was there a difference for the levels of prior knowledge for the change from pretest to posttest?
- B. To what extent was there an interaction between treatment and levels of prior knowledge for the change from pretest to posttest?

The descriptive statistics for the comparison between the two groups, including the means of the two treatment groups on the change from the pretest to posttest, which is the test-score difference can be found in Table 8. The multimedia group had lower means, whereas the text-based group had higher means. There is difference between the test-score difference means for low-prior-knowledge treatment and comparison groups, and there is a difference between the means for the high-prior knowledge means in the treatment and the comparison group. On average, there is a little over a 2-point change from pretest to posttest for phrasal-verb knowledge.

Table 8
Means and Standard Deviations Broken Down by Treatment and Prior Knowledge Variable for the Test-Score Difference

Group	Statistic	Prior Knowledge		Total
		Low	High	
Treatment	n	11	11	22
	Mean	3.09	1.18	2.14
	SD	3.75	3.60	3.72
Comparison	n	4	9	13
	Mean	4.50	2.44	3.08
	SD	1.73	2.46	2.40
Total	n	15	20	35
	Mean	3.47	1.75	2.49
	SD	3.34	3.13	3.28

The results of the two-way ANOVA for treatment by prior knowledge for test-score difference can be found in Table 9. There was no statistically significant difference for treatment and there was no statistically significant interaction (Figure 4), and there was no statistically significant difference in terms of prior knowledge ($\eta^2 = .08$), which is moderate. This result could not be a Type I error with such a large measure of practical importance even though satisfying the normal distribution assumption was unknown. As mentioned above, there was more than one point difference between the treatment and comparison groups for the high-prior-knowledge group and for the low-prior-knowledge group. There is a two-point difference between low- and high-prior knowledge groups for treatment and comparison groups. A graph of the difference between treatment groups for prior knowledge is found in Figure 4.

Table 9
Two-Way ANOVA Results of Treatment by Prior Knowledge for Test-Score Difference

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	Eta Squared
Treatment	1	13.15	13.15	1.24	.04
Prior Knowledge	1	28.95	28.95	2.74	.08
T X P	1	0.04	0.04	0.00	.00
Within	31	327.77	10.57		
Total	34	366.74			

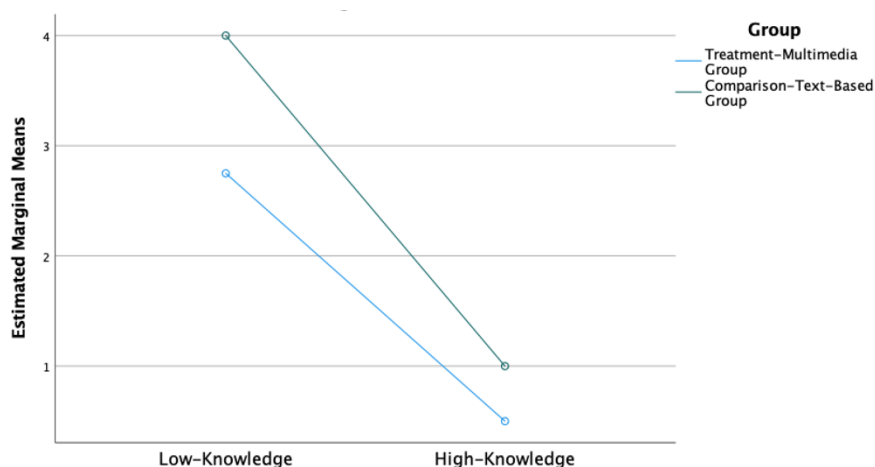


Figure 4. Estimated Graph Marginal Means Between Levels of Prior Knowledge and Phrasal-Verb Test-Score Differences

Research Question 4

To what extent, was there a difference between students' motivation for furthering their learning for the comparison-text-based group and the treatment-multimedia group of the community-college students?

The descriptive statistics for the comparison between the two groups, including the means of the two treatment groups on the Questionnaire can be found in Table 10. The multimedia group had higher means, whereas the text-based group had lower means. There is a small difference between Questionnaire means for low-prior-knowledge treatment and comparison groups, and there is a little difference between the means for the high-prior knowledge means in the treatment group and the comparison group. The means for all groups are close to the value of 5, indicating agreement with the statements.

Table 10
Means and Standard Deviations Broken Down by Treatment and Prior Knowledge Variable for the Questionnaire

Group	Statistic	Prior Knowledge		Total
		Low	High	
Treatment	n	7	10	17
	Mean	5.27	5.27	5.27
	SD	0.64	1.31	1.06
Comparison	n	3	6	9
	Mean	4.62	5.20	5.01
	SD	1.42	0.60	0.90
Total	n	10	16	26
	Mean	5.08	5.25	5.18
	SD	0.91	1.08	1.00

The results of the two-way ANOVA for treatment by prior knowledge for Questionnaire can be found in Table 11. There was no statistically significant difference for treatment, there was no statistically significant interaction (Figure 5), and there was no statistically significant difference in terms of prior knowledge. As mentioned above, there was more than one point

difference between the treatment and comparison groups for the high-prior-knowledge and the low-prior-knowledge group. A graph of the difference between treatment groups for prior knowledge is found in Figure 5.

Table 11
Two-Way ANOVA Results of Treatment by Prior Knowledge for Questionnaire

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	Eta Squared
Treatment	1	219.08	219.08	0.62	.03
Prior Knowledge	1	144.93	144.93	0.41	.02
T X P	1	142.55	142.55	0.41	.02
Within	22	7731.78	351.44		
Total	25	8073.12			

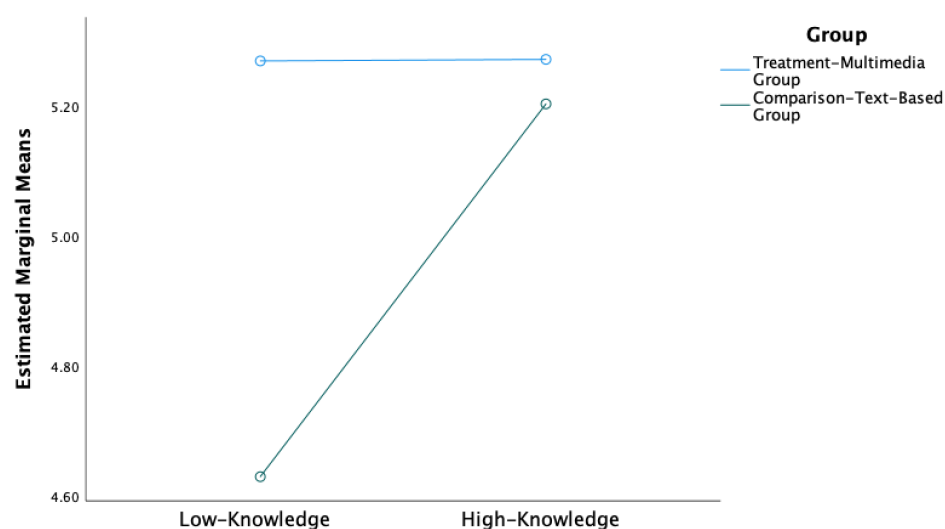


Figure 5. Estimated Graph Marginal Means Between Levels of Prior Knowledge and Questionnaire

Research Question 5: Qualitative Analysis

What did the individual interviews indicate regarding the use of multimedia for learning phrasal verbs?

The purpose of the qualitative portion of this study was to provide more indepth information on the multimedia instruction and students' learning experience with different levels of prior knowledge for furthering their learning on phrasal verbs. Seven students in the treatment

group were interviewed for this purpose, and the demographic information for the seven participants is provided in Table 12. The majority of the students were female, and they were 39 years or younger. The majority of students were full-time students and had no prior knowledge of phrasal verbs except for one. The variety of participants' native languages are presented in Table 12. The majority of the participants lived in the US less than 4 years except for two students.

Open-coding techniques (Creswell, 2014) were used to develop the codes and themes for this research. Five themes emerged from the analysis of the data: (a) students' engagement and interests in phrasal-verb multimedia instruction, (b) students' opinions about multimedia English learning techniques, (c) students' self-confidence in using phrasal verbs, (d) students' phrasal-verb learning difficulties and barriers, and (e) students' learning time, resource, and support.

Table 12
Demographic Information for Students Participating in Follow-Up Interviews

Student Pseudonym	Age	Gender	Phrasal-Verb Prior Knowledge	Full-Time Students	Years of Living in the USA	Native Language
Betty	55-64	Female	None	Yes	15.0	Spanish
Grace	25-39	Female	None	No	4.0	Farsi
Jason	25-39	Male	None	No	1.5	Arabic
Anna	25-39	Female	None	No	2.0	Vietnamese
Judy	18-24	Female	None	Yes	2.5	Vietnamese
Jack	25-39	Male	None	Yes	1.0	Mongolian
Monica	40-54	Female	Yes	Yes	10.0	Mongolian

The responses from the interview questions based on the three categories from the Questionnaire are summarized in Table 12. The three categories from the Questionnaire for each theme are successfulness, interest, and usefulness. As shown in Table 13, the majority of the responses were for themes one and two with almost equal numbers for the categories from the Questionnaire. The majority of the responses for Theme 1 and Theme 2 are in the categories of usefulness. For Theme 3, Theme 4, and Theme 5, the majority responses are in the categories of successfulness, whereas the greatest percentage of responses for theme one is in usefulness. There is little difference in the total percentages for the categories, ranging from 31% to 36%.

Table 13
Frequency and Percentage for Themes Broken Down by Categories from the Questionnaire

Themes	Successfulness		Interest		Usefulness		Total
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>
1. Students' engagement and interests in phrasal-verb multimedia instruction	12	24	18	35	21	41	51
2. Students' opinions about multimedia English learning techniques	10	22	17	38	18	40	45
3. Students' self-confidence in using phrasal verbs	5	42	3	25	4	33	12
4. Students' phrasal-verb learning difficulties and barriers	6	50	3	25	3	25	12
5. Students' learning time, resource, and support.	10	53	5	26	4	21	19
Total	43	31	47	34	50	36	140

Theme 1. Students' engagement and interests in phrasal-verb multimedia instruction

The phrasal-verb multimedia lessons engaged students' phrasal-verb learning. The majority of students described how the phrasal-verb lessons were useful and interesting for their learning. Students mentioned that "using music, comics, and movies were very helpful and useful in terms of learning phrasal verbs" (Betty and Monica). Students thought the multimedia

lessons on phrasal verbs were very useful because the elements such as, images with examples illustration, music with song lyrics, movie clips with highlighted subtitles attracted their attention, helped them remember, and understand the meaning. Some students (Betty, Monica, Jack, and Grace) never had experience in using media material to learn English before. When the researcher asked Betty if the multimedia lessons were useful and interesting to you, she said,

Your phrasal-verb lessons were very useful and helpful for me. I think the music and the song lyrics was useful and interesting. I like music. I have never learned English through music. When I listened to the music and learned how to sing it, I could find the phrasal verbs in the song lyrics. When I sang the song, I noticed the phrasal verbs in the song and I remembered the meaning of the phrasal verbs. You did a good job. And I like movies as well but between music and movies, I like music better because I like singing and it is useful for me to learn English.

When the researcher asked Grace if she thought the multimedia lessons were engaging, useful, and interesting, she answered,

I like your pictures and examples. I think the picture examples were very useful to me. When I saw the pictures and examples, I understood the meaning of the picture and helped me remember the phrasal verbs because when I want to use the phrasal verbs, I think about your pictures. I also like the movie clips because the movie clips were short and easy-understanding. The movie clips attracted my attention so that I remembered the story and understand the meaning of the phrasal verb. I never learned English with movie clips. That was very interesting and useful to me.

When the researcher asked Monica if she enjoyed the multimedia lessons and if the lessons were engaging, useful, and interesting, she said,

I enjoyed a lot. I have been learning English for many years, and I have met many teachers, but nobody used movies and music to teach a lesson. I like your music choices. The music was very beautiful, and I learned very well. I remembered the lyrics, and I remembered the phrasal verbs. The music was very useful. After class, I listened to the song again and again. I also like the pictures and comics, because the comics were very funny and I could imagine the story and the meaning with the pictures so that I could learn the new phrasal verbs. I could guess the meaning from the pictures and the comics. Your lessons were very useful and interesting.

Theme 2. Students' opinions about multimedia English learning techniques

Using multimedia-learning techniques to learn English is a brand new idea for the most of the participants. The majority of students commented that the multimedia-learning techniques were useful and interesting for learning English. Some students mentioned that “listening to music, reading comics, and watching movies were very helpful and useful in terms of learning English” (Betty, Anna, and Jason). When learning English with multimedia techniques, some students said “taking notes about the media material were useful to review the notes and review the media material that reinforce the learning memory” (Betty, Judy, and Jason). Some students thought that the multimedia-learning techniques were interesting because they never had experience using media material to learn English and that they might try to use the multimedia learning techniques to learn English in the future (Monica, Jack, and Anna). Few students thought multimedia learning techniques could help them learn English successfully when teachers use the multimedia techniques in class (Judy and Jason). When the researcher asked Betty what was her opinion about multimedia techniques when learning English, she answered,

I think the multimedia techniques were great. I used Facebook to communicate people and sometimes people correct me when I use wrong grammar during the conversation. I learned English through Facebook posts. Some English posts were videos with texts, and some posts were pictures with texts. The videos and pictures were very interesting for me. I also like singing so I listen to many English popular songs. When listening to the songs and learning how to sing the songs, I remember the lyrics and at the same time I remember the English.

When the researcher asked Jason what was his opinion about multimedia techniques when learning English, he answered,

I think the multimedia techniques were helpful. I took notes when you taught us the phrasal verbs through comics. Sometimes when you went too fast during the class, I took screenshots about your pictures and comics with the phrasal verbs. Then I took notes from the screenshots and learned the phrasal verbs. I like the comics. They were useful. When using the phrasal verbs, I can recall the funny comics or the pictures. I also like the

songs that you played during the class. The songs were very beautiful and I listened to the songs that you provided us after class.

When the researcher asked Monica what was her opinion about multimedia techniques when learning English, she answered,

I think the multimedia techniques were good. I never learned phrasal verbs before. And I never learned English through comics, music, and movies. I bought some English grammar books. There were a lot of pictures in the books. When I saw the picture, I could imagine the meaning or the story about the pictures. I think it helped me remember the phrasal verbs. Sometimes when I used some words or English from the book, I could recall the pictures. I used YouTube premium to listen to music or different radio channels. I learned some English from the songs and radios but I couldn't remember all of them. I like the music you used in class and taught us English. I don't think I learned a lot without you when using the media material myself. I do like your teaching about learning English through movies, songs, comics, and pictures.

Theme 3. Students' self-confidence in using phrasal verbs

Self-confidence in using phrasal verbs in daily conversation is important. As shown in Table 14, the majority of the responses were in the category of successfulness, and the responses for the remaining categories of interest and usefulness are similar. Even though most students thought they uses phrasal verbs successfully, the frequency of the successfulness, interest, and usefulness is the lowest among all five themes. Students' low-response frequency indicates that most students have low self-confidence in using phrasal verbs.

When the researcher asked Jason that how did you learn phrasal verbs so well to get such a good grade in the phrasal-verb posttest, Jason said,

“no, no, my English is very bad. People don't understand me...this is my first time learning phrasal verbs, and I can use some easy phrasal verb successfully but not the difficulty ones. I took a lot of notes about your lessons. I wanted to remember what you taught me in class. I think I need to learn more and practice more.”

When the researcher asked the same question to Monica, Monica answered, “my English is not good. My speaking is bad. I like your lessons, but I don't use phrasal verbs very often. I can use other words.” When the researcher asked Monica, “you only made one mistake on the

phrasal-verb posttest, that means you understand almost all of the phrasal verbs, can you use these phrasal verbs that we learned in class?” Monica said, “I reviewed my notes on phrasal verbs before the test. I did not know that I could pass the test. I sometimes use the phrasal verbs that we learn in class, but I think I need to learn more, maybe more examples.” When the researcher asked Jason how you learned phrasal verbs so well, he answered, “no, I don’t think I learned phrasal verbs well. I need more practice”. And when the researcher asked Anna if she could use phrasal verbs successfully, she said no because she only remembered the phrasal verbs from the lessons but need to learn more.

Theme 4. Students’ phrasal-verb learning difficulties and barriers

According to the participants, phrasal verbs are difficult for them to learn and practice. As shown in Table 14, the majority of the responses were in the category of successfulness, and the responses for the remaining categories of interest and usefulness are the same. The frequency of the successfulness, interest, and usefulness is the second lowest to last among all five themes. All students mentioned “phrasal verbs were very difficult to learn” (Betty, Anna, Grace, Jason, Judy, Jack, and Monica). When the researcher asked Grace what were the phrasal-verb learning barriers for her, she said,

Phrasal verbs were very difficult for me to learn because I did not understand the small words very well. I did not know how to use the preposition and what did the preposition mean in different phrases. I learned English in my home country but I did not learn the phrasal-verb knowledge. Also, in my native language, I don’t think there are prepositions in the language structure.

When the researcher asked Anna what were her phrasal-verb learning barriers, she answered,

I think the phrasal verbs were very difficult for me to learn. I used phrasal verbs very often when I work but I did not know these were phrasal verbs. When I learned the phrasal verbs with you, I found one phrasal verb may have more than three different meanings in different context. I think the multiple meaning of a phrasal verb is very difficult for me to remember.

When the researcher asked Judy what were her phrasal-verb learning barriers, she answered,

When I learned phrasal verbs with you during the class, I found the phrasal verbs were very difficult. I understood the structure of a phrasal verb but when I tried to learn the phrasal verbs by myself, I did not recognize what was a phrasal verb in some cases. I did not understand the phrasal verb structure and the different meanings. I think I need more exercises or more examples from you.

When the researcher asked Jason what were his phrasal-verb learning barriers, he answered,

I took notes when you taught us phrasal verbs. I had to review my notes many times to remember the phrasal verbs. I do not think I use phrasal verbs very often because I may make mistake. I also think people do not understand my English. If I use phrasal verbs, and if I use them wrong, then I may confuse people when we speak. Phrasal verbs are very difficult for me to learn. I learned many phrasal verbs from your lessons. I think phrasal verbs are very important for me to learn so I will use what you teach me and keep learning.

Theme 5. Students' learning time, resource, and support

Learning time, learning resource, and learning support were three important concerns for participants to learn phrasal verbs. The majority of the responses were into the category of successfulness, and the responses for the remaining categories of interest and usefulness are similar, as shown in Table 14. The frequency of the successfulness is the highest comparing to the frequency of interest and usefulness for Theme 5. Most participants mentioned if they could have more learning time, resource, and support, they could learn more successfully (Anna, Grace, and Monica).

When the researcher asked Anna how was her pretest and posttest, Anna said, "I did not have enough time to finish the tests. I finished more questions in the posttest than I did in the pretest. If I had more time, I could finish the phrasal-verb posttest". When the researcher asked Jack if he had enough time to finish his tests, he said,

I did not have enough time to finish the pretest, but I finished the posttest. I reviewed the phrasal verbs before the tests but I had some questions that I did not have a chance to ask you during the class before the posttest. Sometimes I need more time and more examples

or practices to learn the phrasal verbs. The phrasal-verb lessons were short and fast for me to keep up. I used Google search to learn some more about the phrasal verbs.

About using extra learning resource or support, when the researcher asked Judy if she used any learning resource or support during English learning, Judy said,

I used a Vietnamese App to learn phrasal verbs because the App provided both Vietnamese and English with pictures for me to understand the phrasal verbs. And I also used this app to learn new English vocabulary. There were some easy exercises provided through this App. So I could learn some English and practice how to use the new knowledge at the same time in this App.

Moreover, some students used Netflix and YouTube Premium to watch TV shows and movies to learn English (Betty, Grace, Monica, and Jason). Betty, Grace, Monica, and Jason talked about the common feature of using Netflix, HBO, and YouTube Premium that they could turn on or turn off the subtitles as needed, and they could choose the language of the subtitles. They thought the learning resources (Netflix, HBO, and YouTube Premium) were helpful for them to learn English. Betty also said, “using Facebook to communicate with people could help me use English to express my thoughts and learn new English expressions from other people and that learning was successful.”

Additional Analysis

During the intervention while teaching the phrasal-verb lessons for the two groups, the researcher found there was insufficient interaction between the students and the researcher and the instructors. Only one or two students turned on their Zoom cameras during the class and only three to five students would communicate and answer questions with the researcher or the instructors through the Zoom Chat. The researcher talked the most of the class time with very little interaction with the students. During the group activity, many students muted themselves with cameras off in the Zoom breakout rooms. Only one or two students participated during the group activity. Based on these observations, the researcher worked with the instructors to

classify the students in terms of their level of engagement. Two levels were classified by the instructors: low-engagement level and moderate-engagement level. The ratings for the low-engagement level and the moderate-engagement level engagement for the two groups can be found on the Students' Engagement Level of Feedback Form (see Appendix L).

Additional analysis was conducted through the two-way ANOVA by using SPSS. The purpose of this analysis was to explore the relationship between the levels of engagement and the phrasal-verb posttest. An interaction between the two groups and the levels of engagement on the phrasal-verb posttest can be found in Figure 6. The students in the text-based group had very similar estimated marginal means on the levels of engagement. In the treatment group, moderate-engagement students scored higher than the low-engagement students on the estimated marginal means.

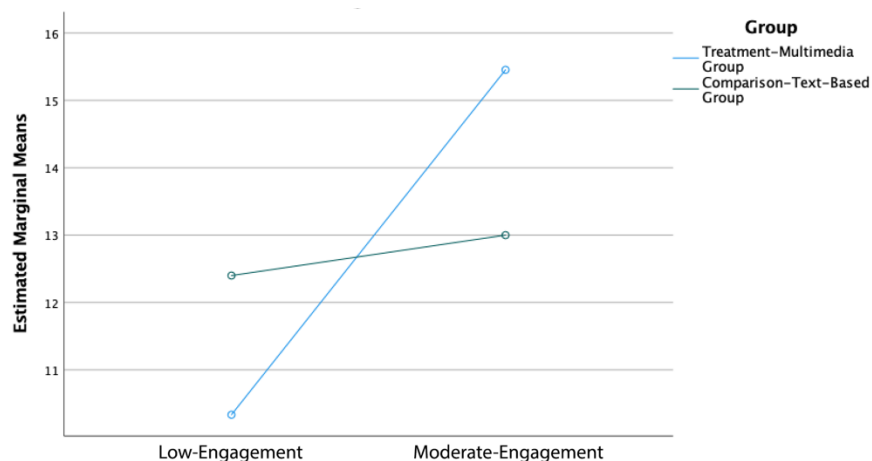


Figure 6. Estimated Graph Marginal Means Between Levels of Engagement and Phrasal-Verb Posttest

The assumptions for the two-way analysis of variance involve normal distribution for the variable measured of the dependent variables and equal population variances. The sample sizes were unequal, and they were small. Because the sample sizes were smaller than that required by the Central Limit Theorem (30), if there is a statistical significance found then the results could

be due to not meeting the assumption for normal population. The Levene's test was used for testing for equal population variances. And in all cases, there was no statistical significance.

The descriptive statistics for the comparison between the two groups, including the means of the two treatment groups on the phrasal-verb posttest can be found in Table 14. The multimedia group had lower means whereas the text-based group had higher means. As expected, the engagement group had the lower scores on average. There was difference between posttest means for low-engagement treatment and comparison groups, whereas there was a big difference between the means for the moderate-engagement means with those in the treatment group having the higher scores, on average, compared with those in the comparison group with moderate engagement.

Table 14
Means and Standard Deviations Broken Down by Treatment and Engagement Variable for the Phrasal-Verb Posttest

Group	Statistic	Engagement		
		Low	Moderate	Total
Treatment	n	15	11	26
	Mean	10.33	15.45	12.50
	SD	3.77	3.01	4.27
Comparison	n	10	7	17
	Mean	12.40	13.00	12.65
	SD	3.84	3.42	3.57
Total	n	25	18	43
	Mean	11.16	14.50	12.56
	SD	3.86	3.31	3.97

Table 15
Two-Way ANOVA Results of Treatment by Engagement for Phrasal-Verb Posttest

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	Eta Squared
Treatment	1	0.38	0.38	0.03	.00
Engagement	1	81.74	81.74	6.47*	.14
T X P	1	51.05	51.05	4.04*	.09
Within	39	492.46	12.63		
Total	42	660.61			

* Statistically significant at the .05 level.

The results of the two-way ANOVA for treatment by engagement for phrasal-verb posttest can be found in Table 15. There was no statistically significant difference for treatment, and there was a statistically significant interaction ($\eta^2 = .09$, Figure 7), which is moderate practical importance, but there was a statistically significant difference in terms of engagement ($\eta^2 = .14$), which is moderate to large. This result could not be a Type I error with such a large measure of practical importance even though satisfying the normal distribution assumption was unknown. As mentioned above, there was more than a two-point difference between the treatment and comparison groups, particularly for the moderate-engagement group favoring the treatment group and some difference for the low-engagement group but reversed with the comparison group having the higher mean. A graph of the difference between treatment groups for engagement is found in Figure 6.

Summary

Quantitative and qualitative findings were presented in this chapter regarding the five research questions addressed by this research. The results of the five research questions and additional analysis are summarized as follows.

The results of the two-way ANOVA of the quantitative data showed that there was no statistically significant difference for the treatment among the first four research questions. There was no statistically significant interaction among the first four research questions as well (Figures 2, 3, 4, 5, & 6) but there was a statistically significant difference in terms of prior knowledge among the first four research questions ($\eta^2 = .62$), which are very large. In the additional analysis, there was a statistically significant difference in terms of engagement ($\eta^2 = .14$), which are moderate practical importance.

The results of the analysis on five themes of the qualitative data showed that the majority of the responses were for themes one and two. For the three categories of successfulness, interest, and usefulness on each theme, the majority of the responses for Theme 1 and Theme 2 are in the categories of usefulness. For Theme 3, Theme 4, and Theme 5, the majority responses are in the categories of successfulness, whereas the greatest percentage of responses for theme one is in usefulness. There is little difference in the total percentages for the categories, ranging from 31% to 36%. For Theme 4, the frequency of the successfulness, interest, and usefulness is the second lowest to last among all five themes. For Theme 5, the frequency of the successfulness, interest, and usefulness is the second lowest to last among all five themes.

CHAPTER V

SUMMARY, LIMITATIONS, DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was threefold: (a) to investigate the effectiveness of using multimedia to teach two-word phrasal verbs to community-college adult English as a second language (ESL) learners, (b) to investigate the motivation of community-college English as a Second Language learners learning two-word phrasal verbs actively by using multimedia, and (c) to study the relationship between ESL learners' motivation and interest for furthering their learning. The research methodology was mixed method. Quantitative data were collected to measure the effectiveness of the phrasal-verb multimedia instruction on students' learning and the effect of the phrasal-verb multimedia instruction on the students' motivation. Qualitative data were collected to measure the students' learning interests, usefulness, and success. This chapter contains a summary of the study, its findings, its limitations, a discussion of findings, conclusions, implications for educational practice, and recommendations for future research.

Summary of Study

Phrasal verbs are important for second-language learners and foreign-language learners to learn. There are many reasons why phrasal verbs play an important role in learners' second-language proficiency. First, second-language learners experience phrasal verbs in daily life and academic settings frequently. On average, second-language learners will experience one phrasal verb in every 150 English words, and phrasal verbs will occur almost 2,000 times per million words. Second, phrasal verbs have multiple meanings and functions in different English context, one frequently used idiomatic expression has 5.6 meanings on average (Gardner & Davies, 2007). Last, phrasal verbs are commonly used in conversational language, fluently using English phrasal verbs is very important for second-language learners to speak more natural and idiomatic

with native English speakers during everyday conversation (Biber, Johansson, Leech, Conrad, & Finegan, 1999; Gardner & Davies, 2007; Garnier & Schmitt, 2015).

Due to the difficulties and barriers of fluently using phrasal verbs in English context, second-language learners tend to avoid using phrasal verbs. There are many reasons causing the phrasal-verb avoidance issue. Second-language learners' first language may not carry phrasal-verb construction and the semantic and syntactic complexity are difficult for second-language learners so they avoid using phrasal verbs. Additionally, second-language learners tend to use one-word equivalent instead of using a phrasal verb, because one phrasal verb may have more than five different meanings and the different meanings lead to the difficulty for second-language learners finding the equivalent. One of the reasons why second-language learners prefer to use the single-word equivalent is that second-language learners attempt to translate the meaning of the phrasal verbs into their first language. Because phrasal verbs are two or more orthographic words, which means the verb and the preposition work together as a unit, second-language learners may not be aware of the semantic units that cause the misinterpretation of the phrasal verbs. Lack of phrasal-verb education in a English learning environment, lack of educational recourses, authentic learning material, and lack of engaging and effective phrasal-verb curriculum also may cause the avoidance of using phrasal verbs (Chen, 2007; Cornell, 1985; Gardner & Davies, 2007; Liu, 2011; Siyanova & Schmitt, 2007).

Phrasal verbs are both very important and difficult to learn. Phrasal verbs are the most frequent multiword units in English; therefore, English as a foreign language (EFL) and ESL educators should include phrasal verbs in their curriculum. Many ESL and EFL instructors focus on communicative competence and interactions between second-language learners in a variety of authentic language contexts. Many studies have revealed the positive benefits on second-

language learners' understanding and retention of multiword meanings when the Cognitive Theory of Multimedia Learning (CTML) techniques were used in teaching. Many scholars and researchers have pointed to the efficacy of visuals in learning, and it has become a widely accepted norm in language teaching (Kurtyka, 2001; Mayer, 2005, 2014; Rudzka-Ostyn, 2003; Tyler & Mahpeykar, 2015). The use of multimedia instruction has been acknowledged as a valuable resource by many researchers (Chan & Liou, 2005; Chun, 2012; Huke, Steinke, & Floto, 2010; Mayer, 2003; Pemberton & Fallahkhair, 2007; Sweller, 2005). The majority of the studies have investigated how effective CTML is to teach vocabulary in ESL and EFL settings (Al-Seghayer, 2001; Arndt & Woore, 2018; Kabooaha & Elyas, 2018; Scheiter & Eitel, 2015). There has been a much smaller number of studies have investigated how CTML helped second-language learners improve their speaking, listening, reading, and writing skills (Hashemi & Bardine, 2011; Ismaili, 2013; Kim, 2015; Qian, 2002; Wang, 2018). Only a few studies have investigated how CTML could be used effectively in ESL and EFL phrasal-verb education (Akbari, Shahriari, & Fatemi, 2018; Marashi & Maherinia, 2011). The major findings of these studies are the use of media materials in teaching has benefits for both teachers and students, as well as CTML can make the classroom more energized and positive than when a traditional lecture-based approach is used. These findings also suggested that music, TV sitcoms, movies, and animation may play a critical role to help English learners boost phrasal-verb comprehension. Furthermore, the findings suggested that using music, songs, TV sitcoms, movies, and animation materials in EFL or ESL classrooms may help students perform better on language. More importantly, multimedia learning was effective only for low-knowledge learners compared with the high-knowledge learners (Kalyuga, 2003; Mayer, 2001; Pollock, Chandler, & Sweller, 2002).

In order to investigate the effectiveness of the multimedia instruction, the researcher conducted a mix-method comparison research. There were two groups in the study: multimedia-treatment group and text-based comparison group. All groups were taught 48 new phrasal verbs for 12 sessions. The multimedia-treatment group was taught through the phrasal-verb multimedia lessons and the text-based comparison group was taught through phrasal-verb text-based lessons. All participants were from community-college English as a second language program in North California. There were 22 participants in the treatment group and 13 from the comparison group. The community-college ESL students' phrasal-verb knowledge was measured through a phrasal-verb pretest and a phrasal-verb posttest. After the posttest phase, all participants were asked to complete the MUSIC Inventory Questionnaire to measure students' learning interest, as well as the usefulness and success of the phrasal-verb lessons. After the Questionnaire phase, the researcher conducted individual interviews with the volunteered participants from the treatment group to gain participants' perception about the phrasal-verb multimedia instruction. The intervention, pretest, posttest, Questionnaire, and individual interviews were conducted online through educational technology (i.e., Zoom, Qualtrics, Google Presentation, Adobe tools). Quantitative data were analyzed through two-way analysis of variance by using SPSS and qualitative data were analyzed through coding-technique.

This study was conducted to answer the following five research questions:

Research Question 1: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group on the pretest scores?

A. To what extent, was there a difference between the levels of prior knowledge for the pretest scores?

- B. To what extent, was there an interaction between treatment and levels of prior knowledge for the pretest?

Research Question 2: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group for the posttest scores?

- A. To what extent, was there a difference for the levels of prior knowledge for the posttest?
- B. To what extent was there an interaction between treatment and levels of prior knowledge for the posttest?

Research Question 3: To what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group in the change from pretest and posttest scores?

- A. To what extent, was there a difference for the levels of prior knowledge for the change from pretest to posttest?
- B. To what extent was there an interaction between treatment and levels of prior knowledge for the change from pretest to posttest?

Research Question 4: To what extent was there a difference between students' motivation for furthering their learning for the comparison-text-based group and the treatment-multimedia group of the community-college students?

Research Question 5: What did the individual interviews indicate regarding the use of multimedia for learning phrasal verbs?

The above research questions were examined using a mixed-method comparison design with the phrasal-verb pretest and posttest quantitative component and the individual interview qualitative component. Participants' learning interest, as well as the usefulness and success of the

phrasal-verb lessons were measured by the MUSIC Inventory through the 18-item questionnaire with three open-ended questions. The phrasal-verb pretest and posttest were used to measure students' phrasal-verb learning outcome. Individual interviews were conducted with seven participants to understanding students' phrasal-verb learning perceptions and feedback on the multimedia instruction.

All the participants were enrolled in the English as a Second Language Reading and Writing 2 classes when the data were collected. There were 35 students participated in this study (N=35). The age group ranged from 18 to 65 years old. For research questions 1, 2, 3, and 4, descriptive data were analyzed for the comparison between the two groups, including the means of the two treatment groups on the phrasal-verb pretest, phrasal-verb posttest, test-score difference, and Questionnaire. A two-way ANOVA was conducted to measure for the treatment by prior knowledge for phrasal-verb pretest, phrasal-verb posttest, test-score difference, and Questionnaire. For research question 5, the qualitative data were collected through the individual interviews, and open-coding techniques (Creswell, 2014) were used to analyze the data to develop codes and themes. Additional analysis was conducted, first, to analyze descriptive data for the comparison between the two groups, including the means of the two treatment groups on the engagement; second, to use the two-way ANOVA to measure assess the difference between treatment and comparison groups by engagement on the posttest scores only.

Summary of Findings

The findings of this study include both quantitative and qualitative results. Research questions 1, 2, 3, 4 and the additional analysis were addressed by quantitative findings, and research question 5 was addressed by qualitative findings.

Research question 1 consisted of three questions: to what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group on the pretest scores? To what extent, was there a difference between the levels of prior knowledge for the pretest scores? To what extent, was there an interaction between treatment and levels of prior knowledge for the pretest? There was no difference between the comparison-text-based group and the treatment-multimedia group on the pretest scores. There was no statistically significant difference for the treatment between the comparison-text-based group and the treatment-multimedia group on the pretest scores. There was a little difference between the treatment and comparison groups, particularly for the high-prior-knowledge group and no difference for the low-prior-knowledge group. There was no statistically significant difference for treatment, and there was no statistically significant interaction (Figure 2), but there was a statistically significant difference in terms of prior knowledge.

Research question 2 consisted of three questions: to what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group for the posttest scores? To what extent, was there a difference for the levels of prior knowledge for the posttest? To what extent was there an interaction between treatment and levels of prior knowledge for the posttest? There was more than one point difference between the treatment and comparison groups, particularly for the low-prior-knowledge group and no difference for the high-prior-knowledge group. There was no statistically significant difference for treatment, and there was no statistically significant interaction (Figure 3), but there was a statistically significant difference in terms of prior knowledge ($\eta^2 = .62$), which is large practical importance.

Research question 3 consisted of three questions: to what extent, was there a difference between the comparison-text-based group and the treatment-multimedia group in the change

from pretest and posttest scores? To what extent, was there a difference for the levels of prior knowledge for the change from pretest to posttest? To what extent was there an interaction between treatment and levels of prior knowledge for the change from pretest to posttest? There was more than one-point difference between the treatment and comparison groups for the high-prior-knowledge group and for the low-prior-knowledge group. There was a two-point difference between low- and high-prior knowledge groups for treatment and comparison groups. There was no statistically significant difference for treatment and there was no statistically significant interaction (Figure 4), and there was no statistically significant difference in terms of prior knowledge.

Research question 4 was to what extent was there a difference between students' motivation for furthering their learning for the comparison-text-based group and the treatment-multimedia group of the community-college students? There was no difference between students' motivation for furthering their learning for the comparison-text-based group and the treatment-multimedia group of the community-college students. The two-way ANOVA for treatment by prior knowledge for Questionnaire revealed that there was no statistically significant difference for treatment and there was no statistically significant interaction.

Research question 5 was what did the individual interviews indicate regarding the use of multimedia for learning phrasal verbs? The individual interviews indicated that for Theme 1 and Theme 2, the majority responses were in the categories of usefulness. For Theme 3, Theme 4, and Theme 5, the majority responses were in the categories of successfulness, whereas the greatest percentage of responses for theme one is in usefulness. There was little difference in the total percentages for the categories, ranging from 31% to 36%. For Theme 4, the frequency of the successfulness, interest, and usefulness was the second lowest to last among all five themes.

For Theme 5, the frequency of the successfulness, interest, and usefulness is the second lowest to last among all five themes.

The additional analysis consisted of three questions: to what extent was there a difference between treat-multimedia group and the comparison-text-based group for the posttest? To what extent was there a difference between the two levels of engagement for the posttest? To what extent was there an interaction between treatment and comparison groups and two levels of engagement for the posttest? There was a difference for the levels of engagement between the comparison-text-based group and the treatment-multimedia group for the posttest and there was interaction between treatment and levels of engagement on the posttest. The two-way ANOVA for treatment and engagement revealed that there was no statistically significant difference for treatment and there was no statistically significant interaction, but there was a statistically significant difference in terms of engagement ($\eta^2 = .14$), which is moderate practical importance.

Limitations of the Study

There were some limitations to this study. The biggest limitation was the small sample size. Due COVID-19, students' enrollment dropped 90% for the two community colleges comparing to class enrollment before the quarantine. Before the quarantine, there were 1000 duplicated students enrolled in the ESL courses at the community college A and 3000 duplicated ESL students at community college B. If this study was conducted without COVID-19 influences, there would be a large sample size to conduct this study. The different class time might have huge influence to this study. The treatment group class was in the morning and the class was half synchronous and half asynchronous for a total of 3 hours. The researcher taught the lessons at the end of each class session. Community-college students in the morning class did not participate

till the end of the class and were not engaged at the end of each class. The morning class teaching time was shorter because it was half synchronous. The researcher was in a hurry to complete the lessons at the end of each morning class session. The comparison group class was on the same day as the treatment class but evening time. The comparison group class was full time teaching online through Zoom for 3 hours. The researcher taught the lessons at the beginning of the class. Community-college students in the evening class were tired and not engaged during evening time. The researcher might teach longer time in the evening class because the class was set as normal teaching for the whole time. One thing the researcher noticed, the average level of technology skills for the two groups were not high level. The researcher spent a large amount of time to explain how to use Zoom screenshare, Zoom chat box, Qualtrics, and Google Drive documents. So students might have technology bias and had low engagement in the lessons.

One limitation concerned the availability of community-college ESL participants. As a simple example, the researcher did not have any control regarding the absence of some students on a teaching day or testing day. The researcher needed to plan the make-up tests. The instructors had to give the make-up tests a different time to the absent students. Due to the effect of the global pandemic coronavirus (COVID-19), students had very low engagement in participating the lessons and the activities. The researcher and the instructors experienced very low interaction and participation during the classes. If this study was conducted without COVID-19 influences, students would have higher engagement level to participate the study. In addition to the general effect of the social isolation and studying from home, there was an emotional and subsequent intellectual atmosphere in the classroom. For example, students were able to give their best academic performance studying online instead of studying in live classrooms because of the

negative emotional effect from the quarantine. Students had low motivation and interest in learning new knowledge and attend classes regularly. Another limitation was class hours and time. The class time was predetermined by the ESL programs and the researcher had to follow the ESL programs policy for class dates, times, and duration. The researcher had to teach the multimedia group first in the morning then taught the text-based group on the same day but later in the evening time. Although the two groups were ESL intermediate level 2 classes, the students' English proficiency level was lower than intermediate level. The researcher and the instructors found out this fact during classroom questions, classroom reaction, communication, and students' emails. The researcher had to adjust her intervention material, teaching time, and the class schedule to the program.

There were additional limitations to this study. First of all, even though the comparison group community-college ESL students did not receive the treatment, they might have the opportunity to use technology outside of class and had exposure to some kinds of technology. This might be a reason why the researcher did not find statistical significance differences between the two groups. Second, the participants in this study were adult English learners in a community college. Therefore, the findings of the study cannot be generalized to noncommunity-college ESL students. Another limitation of this study was the diversity of ESL community-college students' in terms of socioeconomic status, experience, college degree, the length of treatment, the time for lesson, the responses to questionnaire, and self-reporting data issues.

Discussion of the Findings

Investigating the effectiveness of the multimedia instruction in phrasal-verb education for community-college students was the purpose of the study along with investigating students' phrasal-verb learning interest, as well as the usefulness and success of the multimedia phrasal-

verb lessons. Previous research into multimedia as an instructional strategy has centered on vocabulary and reading-comprehension instruction (Amir, 2017; Mayer, 2008; Raniah, 2018; Tariq, 2019, Yangting, 2019; Younes & Seifert, 2017; Yu-Feng, 2018). Phrasal verbs are one of the most difficult vocabulary knowledge or grammar knowledge for English language learners. Understanding what type of media and multimedia techniques have the potential for English language learners exposing to can be a huge benefit for both teachers and students. Previous studies have argued that learning can happen outside of classes through different media, such as, TV shows, music, video games, social media, animation, podcasts, and movies (Pemberton, 2007). Berns and Hasebrink (2007) suggested that music and song lyrics could be a valuable media to teach English because many English language learners preferred to listen to music repetitively, the pleasure when listening to music could be an engaging reason in learning through music. Therefore, this mixed-method study of multimedia instruction of using pictures, comics, songs, movies, animation, and videos provided crucial research on phrasal-verb education among community-college ESL students. This study also offered empirical and quantitative information on multimedia instruction research by using community-college ESL classrooms during distance learning. In short, the multimedia lessons were effective for the low-knowledge students but not for the high-knowledge students in the multimedia-treatment group. For the comparison group, the text-based lessons were effective for the low-knowledge students but not for the high-knowledge students.

Although the researcher did not find statistical significance on the treatment, the research found that students' different levels of learning engagement affected students' phrasal-verb posttest scores. Comparing the multimedia-treatment group and the text-based comparison group, the students from the treatment groups had higher engagement score means, which

indicated that students from the multimedia-treatment group had high engagement level regarding the phrasal-verb lessons, whereas, the comparison group students had low engagement level regarding the phrasal-verb lessons. Moreover, in the multimedia-treatment group, students with moderate-engagement level had higher phrasal-verb posttest score means than the low-engagement students, which indicated that students who had higher phrasal-verb posttest score had higher learning engagement during the phrasal-verb multimedia lessons.

Low-prior-knowledge students learned phrasal verbs more effectively through multimedia instruction. Accordingly, the low prior knowledge students made big changes between pretest and posttest score (see Chapter IV). High-prior-knowledge students did not benefit as much as the low-prior-knowledge students. The high-prior-knowledge students already had the prerequisite knowledge of phrasal verbs so multimedia instruction was not helpful for them as compared with the low-prior-knowledge students.

Phrasal verbs are not rule governed .The researcher hoped that by exposing different means and media, students could pick up the phrasal-verb knowledge subconsciously acquired. And for this acquisition, the 12 lessons were probably necessary but not enough. Students take a long time to learn phrasal verbs. The positive of rule govern is to learn ground rules. If there is no room for learning, students need to acquire phrasal-verb knowledge. One of the reasons why there was no statistically significant difference is because phrasal verbs are not a rule govern part of language and to acquire phrasal verbs, students need to have a lot more time to expose to different means and media repeatedly.

Based on the results about students' learning engagement, the researcher also found interesting findings regarding the qualitative analysis. For theme 1, regarding students' interview conversation examples, students enjoyed the phrasal-verb multimedia lessons, and they thought

the lessons were very useful, interesting, and engaging. Students hold different perceptions on using multimedia elements, such as music, pictures, movies, and comics to learn English phrasal verbs. Even though the students had no prior knowledge in phrasal verbs and they had no experience in using media material, they gained the knowledge of phrasal verbs through the phrasal-verb multimedia lessons.

For Theme 2, the majority of students commented that the multimedia-learning techniques were useful and interesting for learning English. Most students hold positive and open opinions on multimedia learning techniques. Most students mentioned that listening to music, reading comics, and watching movies were very helpful and useful in terms of learning English. When learning English with multimedia techniques, students said they took notes about the media material, and students could review the notes and review the media material that reinforce their memory. Some students thought that the multimedia-learning techniques were interesting because they never had experience using media material to learn English and that they might try to use the multimedia learning techniques to learn English in the future. Few students thought multimedia learning techniques could help them learn English successfully when teachers use the multimedia techniques in class. In general, students understand the multimedia learning techniques are very useful and interesting. They just need more self-confidence to widely use the multimedia learning techniques in terms of learning success. These examples indicated that using multimedia-learning techniques to learn English is a brand new idea for the most of the participants.

For Theme 3, some students had very high score on the posttest but they still thought their English was not good enough. I somewhat agree with the students that they need more time to learn more English. On the one hand, all participants were low-intermediate level ESL

students, they were in the process of gaining more English knowledge. On the other hand, most participants made progress in learning phrasal verbs, they need more self-confidence to use phrasal verbs in their everyday life, and practice using the phrasal verbs can help them learn more successfully. The examples above indicated that most participants had low self-confidence in using phrasal verbs or English speaking.

For Theme 4, according to the participants, phrasal verbs are difficult to learn and practice. Students' low-response frequency indicates that most students have difficulties and barriers in learning phrasal verbs successfully. According to participants' responses during the interview, one of the reasons why students think phrasal verbs are difficult to learn is most participants have no prior knowledge of phrasal verbs. Most students learned the phrasal verbs for the first time of their life so phrasal verbs were very difficult for them to learn. The other reason is most participants' native language has no phrasal verb. Participants had barriers understanding the structure of a phrasal verb and the multiple meaning of a phrasal verb. Some participants mentioned that because of the engaging, useful, and interesting phrasal-verb multimedia lessons, they could overcome some difficulties and barriers in learning phrasal verbs, and use the English phrasal verbs more successfully than before.

For Theme 5, learning resource and support through different software and platforms could help most participants learn English successfully. Some students thought using technology made learning more interesting but some students thought teacher's support was more useful. The examples above indicated that most participants needed more learning time, resources, and support to practice phrasal verbs in their everyday life.

Participants from the multimedia-treatment group found the phrasal-verb lessons were useful and interesting. Participants could use phrasal verb successfully in their everyday life. The

participants also found the multimedia learning techniques were very useful and interesting. They would use the multimedia learning techniques to learn English more successfully. The effectiveness and successfulness of the multimedia learning techniques may be related to the students' self-confidence, learning time, learning resource, and learning support.

In this study, ESL learners had a chance to build up their learning strategies, study skills, and habits with the multimedia instruction. Using music, comics, and movies to learn English was fun but challenging. Students found the multimedia methods useful, helpful, and interesting when they learnt phrasal verbs (see Appendix H). The multimedia materials and resources motivated ESL learners to further their learning in speaking, listening, reading, and writing. When students experience a type of material, they will connect it with their the multimedia phrasal-verb lessons. Given the use of pictures and comics, music and songs, and videos and animation as multimedia tools to create domain specific schema helped the learners manage high element interactivity, Mayer's (1997) CTML offered a theoretical reference point for the multimedia instruction intervention of this study.

Conclusions

This study investigated the effectiveness of using multimedia instruction to teach phrasal verbs for community-college ESL students and the students' learning interest, as well as the usefulness, and success of the phrasal-verb lessons for furthering learning. The participants reported using pictures, comics, music, movie clips, and videos were very useful for them to use and practice phrasal verbs. Most participants thought that the multimedia lessons were very interesting and they could understand and use phrasal verb successfully during everyday life.

The findings of this study show that the text-based group had better phrasal-verb posttest scores than the multimedia group; in particular, the low-knowledge students had higher grades

comparing to the low-knowledge students in the multimedia group. In the multimedia group, however, the low-knowledge students had larger score changes than the low-knowledge students in the text-based group. The multimedia group had more low-knowledge students than the text-based group during the phrasal-verb pretest, but the multimedia group had higher phrasal-verb posttest scores than the text-based group students. In short, the multimedia lessons were effective for the low-knowledge students but not for the high-knowledge students in the multimedia-treatment group. For the comparison group, the text-based lessons were effective for the low-knowledge students but not for the high-knowledge students.

Implications for Educational Practice

Language learning can be fostered through popular music, TV shows, comics, and movies (Ghasemi, Hashemi, & Bardine, 2011; Ismaili, 2013). This mixed-method study of multimedia instruction of using pictures, comics, songs, movies, animation, and videos provided crucial research on phrasal-verb education among community-college ESL students. This study offered empirical and quantitative information on multimedia instruction research by using community-college ESL classrooms during distance learning. Students may not focus on the words when listening to music, watching movies, reading comics during the class or outside of the classroom. There is a need for educators to form the learning process for teaching and learning phrasal verbs or English learning in general. One useful idea for educators is using websites or applications that can display words synchronously and highlight the lines that are being heard, watched, or read. For example, educators can use Spotify in the classroom. Spotify is a popular music or audio resource platforms. Educators can use it on a laptop or download the App to a mobile phone and easily perform an engaging multimedia classroom through this application when teaching English. Also, educators can ask students to listen to music, podcasts,

and news during their free time. Another useful idea is educators can take lyrics to the classroom based on the phrasal verbs presented in a unit of the textbook they are teaching. This not only helps learners become familiar with the phrasal verb through repeated listening, but can also expose them to the correct pronunciation and intonation. Richards (1993) introduced that the correct prosodic features of pronunciation could be an added advantage of using music for teaching phrasal verbs in the classroom.

The findings of this study showed that students' learning engagement could influence the phrasal-verb learning. For example, most participants in the individual interviews mentioned that they liked the music and song-lyric lesson the most (Anna, Betty, Jason, Judy, & Monica) because the songs were repetitive, conversation-like, and half-speed of spoken discourse. Students felt comfortable and easy to understand the meaning. More importantly, phrasal-verb music materials were useful for both low-knowledge and high-knowledge students. This indicated since music presents a variety of phrasal verbs and these phrasal verbs are useful and helpful for daily conversation. Hip-hop songs, however, may not be useful for low-knowledge learners because this type of songs often include culture specific references and slang. Low-knowledge students may experience language learning more difficult to understand than the high-knowledge students. As an educator, selecting the appropriate songs, choosing the well-pronounced singers or a concise-short clip of a song is very important in language teaching.

The researcher recommends bringing songs, short movie clips, and pictures to the classroom based on learners' interests. The most important consideration is the personal taste of using different media forms, such as TV shows, movies, video games, other multimedia learning materials. This study extended previous Cognitive Theory of Multimedia Learning research by (a) conducting the comparison study in the community-college ESL distance learning classrooms

and (b) covering the multimedia instruction on phrasal-verb knowledge teaching to investigate if multimedia instruction of phrasal verbs effectively support differentiated instruction in ESL content. Though this study found that text-based lessons were possibly more useful for learners for both low-knowledge and high-knowledge students, this did not mean that phrasal-verb multimedia lessons were of little value of teaching phrasal verbs. Multimedia materials, such as comics, music, pictures, movies, video games, animation, and TED Talks, can be great source of motivation for language learners, and learners' learning interests, as well as the usefulness and success of the phrasal-verb lessons.

Apart from the theoretical importance, this study contributes a new fashion and research-based solution to second-language learners. This study recommends ESL and EFL educators to apply more engaging educational technology, such as software tools, platforms, apps, to facilitate teaching process and at the same time to motivate students learn, build up students' learning interest, and promote their learning success. Bringing valuable insight into using multimedia instruction in distance learning for ESL and EFL practitioner, this comparison research study not only provided effective and engaging phrasal-verb multimedia instruction and interactive activity elements, but also opened the gate for educators to embrace online technical education for current distance learning fashion.

Recommendations for Future Research

This study investigated the effectiveness of using multimedia instruction in phrasal-verb education for community-college ESL students. There were only 35 participants in this study, only 26 participants answered the questionnaire and 7 participants joined the interview phase. Future studies could include more participants for the phrasal-verb pretest and posttest, questionnaire, and more participants for the individual interviews to investigate the effectiveness

between multimedia instruction and text-based instruction, and the phrasal-verb learning interest, usefulness, and success on the multimedia instruction. Although the findings of this study did not completely answer the research questions, the benefits of using multimedia techniques in phrasal-verb education could not be avoided. To limit the influence of the biases inherent in the self-reported behavior data, it is recommended that future studies use class observations, learning logs, and recall protocol to collect data on learners' phrasal-verb learning.

Future studies could provide more multimedia lessons for ESL or EFL students in a face-to-face classroom setting. This study was conducted online through Zoom. Although this study could give an example of teaching in distance learning, most participants still prefer to have classes with teachers and classmates in a classroom not online. More importantly, phrasal verbs are difficult to learn and difficult to teach, future studies could give the phrasal-verb multimedia instruction more than 12 lessons because many participants mentioned they needed more phrasal-verb lessons to learn and understand how to use phrasal verbs. Teaching phrasal verbs could not be a whole class because phrasal verbs are not like reading and writing or grammar, but ESL instructors could teach three to four phrasal verbs 15 minutes with more class sessions. Students need more time to get familiar with the multimedia material and need more time to learn the difficult and complex phrasal verbs.

One of the most important findings in this study was multimedia lessons and text-based lessons are effective to the low-knowledge student but no to the high-knowledge students. This finding suggested that the effectiveness of different teaching material may be modified by the levels of learners' prior knowledge. The multimedia lessons or the text-based lessons may not work effectively for high-knowledge learners. Therefore, when the high-knowledge students in the intermediate class move to advanced class, future research could investigate if the advanced-

level community-college ESL students could learn phrasal verbs effectively through multimedia instruction. Future studies could be generalized to other different settings such as an intensive-English program since this research was conducted in community-college ESL-class settings.

This study was conducted online through Zoom. During the intervention, the researcher used many educational technology, such as software tools Google Presentation, platforms, Qualtrics, YouTube, Adobe animation, many participants hold different opinions on using technology to learn English. Some students mentioned they used Netflix to watch TV shows and movies, they never thought about learning English through Netflix. Using Netflix for these students was useful and interesting. The researcher used many media materials, perhaps for future researches, the researcher can try the same approach but only with well-chosen music and music lyrics or only with comics. And no movies or animations will involve with music only or comics only approach. So that students can get into the comic book approach and the pop music approach and maybe if only focusing on those two and students would learn better. Students may pay attention to what word it is and how it is pronounced when listening to music with lyrics. And they can repeat the learning and listen to the music multiple times. With pictures and movies, students may pay less attention to the language and only pay attention to the actors and actresses visuals. Listening to music with lyrics probably will be more helpful than watching movies.

Future studies could take into consideration how educational technology could be effectively used in teaching and how to motivate students to build up learning habits when they use technology outside of classroom. Researchers have found that students felt more confidence to speak English during video game because the safe virtual environment provided students a less-anxiety space to practice English (Macaro, 2006; Sinclair, McGrath, & Lamb, 2000). Future

studies could examine how learner's gender, motivation, language aptitude, language background engage second-language learners' learning.

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APPENDICES

Appendix A
Modified MUSIC Inventory

Modified MUSIC Inventory

Instructions

The items that refer to the course or instructor refer to this course.

As also note that the word “coursework” refers to anything that you do in the course, including assignments, activities, readings, etc.

There is no right or wrong answer to our answer to the question in this questionnaire. We are interested in your opinion. Please answer the questions in this questionnaire honestly. Your answers will be kept confidential and they will not be used as part of the final grade assessment for this course. Please use the following scale to answer the questionnaire.

Please rate the items in this section using the following scale:

1	2	3	4	5	6
Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree

- _____ 1. The coursework on phrasal verbs held my attention.
- _____ 2. In general, the coursework on phrasal verbs was useful to me.
- _____ 3. The instructor was available to answer my questions about the phrasal-verbs instruction.
- _____ 4. The coursework on phrasal verbs was beneficial to me.
- _____ 5. The instructional methods used in this course on phrasal verbs held my attention.
- _____ 6. I was confident that I could succeed in the coursework on phrasal verbs.
- _____ 7. I had the freedom to complete the coursework on phrasal verbs my own way.
- _____ 8. I enjoyed the instructional methods on phrasal verbs used in this course.
- _____ 9. I could be successful in meeting the academic challenges in the course.
- _____ 10. The instructional methods on phrasal verbs engaged me in the course.
- _____ 11. I enjoyed completing the coursework on phrasal verbs.
- _____ 12. I was capable of getting a high grade in this course on phrasal verbs.
- _____ 13. The coursework on phrasal verbs was interesting to me.
- _____ 14. Throughout the course on phrasal verbs, I felt I could be successful on the coursework.
- _____ 15. I found the coursework on phrasal verbs to be relevant to my future.
- _____ 16. I will be able to use the knowledge that I gained in this course on phrasal verbs.
- _____ 17. The knowledge I gained in the coursework on phrasal verbs is important for my future.
- _____ 18. The instructor for phrasal verbs was friendly.
19. What could be changed in the lessons about phrasal verbs to make it more interesting and enjoyable?
20. What do you find useful about the lesson for phrasal verbs (or activity)?

21. What makes you feel successful with phrasal verbs?

Demographic information:

22. What is your gender?

23. What is your age?

24. What language do you speak?

25. Have you learnt about phrasal verbs before? What did you learn?

26. How long have you been in the USA?

27. Are you a full time student?

Appendix B
Phrasal-Verb Reading

Phrasal-Verb Reading:

Identify the phrasal verbs in the following ESL reading passage:

Although she admits to sometimes watching her favorite reality shows before attending to her homework, Mary objects to procrastination. She insists on completing her assignments before the assigned due dates. She cares about her education and has confessed to wanting good grades. Mary also believes in working hard because she relies on grade-based scholarships for financial aid. She often argues about quiet time with her roommate because her roommate listens to music loudly while Mary is studying. But, Mary secretly gloats at her own success when her roommate worries about upcoming tests.

When Scott woke up this morning, he discovered that his toddler had thrown up in her crib last night. He, therefore, cleaned her bedding up before he chowed down on breakfast. While he was tucking into his food, however, his daughter started acting up. She just suddenly broke down and threw a tantrum on the kitchen floor. After falling apart for only a few minutes, the tantrum blew over and his daughter calmed down. Scott then finished eating and logged onto his computer. But, before he could access the Internet, the computer blew up. Scott looked the phone number up, called for technical help, and told the IT technician off. He only eased up when the tech threatened to put him on hold.

The situation did not add up. Espen depended on Julia to pick him up but she had not shown up. He worried about what might have happened to her. Perhaps she had been taken away by a notoriously bad band of ninjas. Espen hoped Julia would fight against such evildoers. Or, perhaps she had just forgotten about him. Could she let him down like that? If she had simply failed to remember him, he promised that he would lay in on her when he saw her next. But, then again, what if Julia had been knocked out by conniving bank robbers? What if she had refused to give them her car for a getaway vehicle? What if she had passed out in her attempts to get to him? Just then, when Espen had decided not to give up on her, Julie pulled up to the curb. She was just running late. She gazed at Espen, and Espen blushed, thinking about his unfounded anger. He got into the car, but, before he could apologize, she started yammering on about how bad traffic had been. Espen silently vowed to wait patiently for her tomorrow.

Appendix C
Student's Letters of Consent

INFORMED CONSENT FORM FOR RESEARCH PARTICIPATION CONSENT
TO BE A RESEARCH SUBJECT

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Below is a description of the research procedures and an explanation of your rights as a research participant. You should read this information carefully. If you agree to participate, you will sign in the space provided to indicate that you have read and understand the information on this consent form. You are entitled to and will receive a copy of this form. You have been asked to participate in a research study conducted by Guohua Fu, a doctoral student in the Department of Learning and Instruction Education at University of San Francisco.

WHAT THE STUDY IS ABOUT:

The purpose of this research is to gain a deep understanding of using different methods to help community-college ESL students to improve their English phrasal-verb learning, usefulness, success, interests, and motivation, and at the same time improve speaking, reading and writing skills.

WHAT WE WILL ASK YOU TO DO:

You will be asked to release your scores from the two tests on the phrasal verbs. You will be asked to complete a questionnaire regarding the teaching of phrasal verbs. You will also be asked to indicate your preference for individual interviews about your experience in phrasal-verb learning.

DURATION AND LOCATION OF THE STUDY:

Your participation in this study will involve one session to fill out the questionnaire for 15 minutes. Another session is if you volunteer to participate in individual interviews, you will participate in the individual interviews with the researcher. The two sessions will take place on Zoom.

BENEFITS:

You have already taken the classes. There will be additional information to help you understand the instruction of phrasal verbs.

PRIVACY/CONFIDENTIALITY:

Because you will not be providing any information that can uniquely identify you (such as your name or student ID number), the data you provide will be anonymous.

COMPENSATION/PAYMENT FOR PARTICIPATION:

There is no payment or other form of compensation for your participation in this study.

VOLUNTARY NATURE OF THE STUDY:

Your participation is voluntary and you may refuse to participate without penalty or loss of benefits. Furthermore, you may skip any questions or tasks that make you uncomfortable and may discontinue your participation at any time without penalty. In addition, the researcher has the right to withdraw you from participation in the study at any time. Not participating or withdrawal from the study will not affect your grade of the course you are taking.

OFFER TO ANSWER QUESTIONS:

Please ask any questions you have now. If you have questions later, you should contact the principal investigator: (Guohua Fu) at () or ()

If you have questions or concerns about your rights as a participant in this study, you may contact the University of San Francisco Institutional Review Board at IRBPHS@usfca.edu.

CONSENT:

I have read this form, and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told who to contact. I agree to participate in the research study described above. I am willing to provide my email address and participant in the individual interviews session.

PARTICIPANT'S SIGNATURE

DATE

PARTICIPANT'S EMAIL ADDRESS

RESEARCHER'S SIGNATURE

DATE

If you are willing to participate in the 20 minute interview, please add your email address below so that you can be contacted to schedule the interview.

Email address: _____

Thank you for participating.

Individual Interview Consent Form

Interview Consent Form

You have been asked to participate in an interview conducted by Guohua Fu, a graduate student in the Department of Learning and Instruction at the University of San Francisco. The interview is part of the project conducted for the completion of my doctoral studies in education.

WHAT IS THIS ABOUT

The purpose of this research is to gain a deep understanding of using different methods to help community-college ESL students to improve their English phrasal-verb learning, usefulness, success, interests, and motivation, and at the same time improve speaking, reading and writing skills.

WHAT YOU WILL BE ASKED TO DO

Specifically, you will be asked to share what strategies you use for learning English phrasal verbs, describe in detail how you use these strategies, and what strategies you perceive to be most useful. With your permission, discussions will be audiotaped to ensure the accuracy of my observations.

All information collected during the interview is confidential. I may quote directly from statements made during the discussion, however, I will protect your confidentiality by ensuring all comments remain anonymous and no names are used in the research. Recordings will be transcribed and destroyed once the transcription is complete. All information developed during the interview will be kept secure and stored in a password protected computer. The information will be destroyed after 10 years.

There are no known psychological, financial, or other types of risk associated with your participation.

Participation in the interview group is entirely voluntary, and you may withdraw at any time during the discussion.

QUESTIONS

Please ask any questions you have now. If you have questions later, you should contact the principal investigator: (Guohua Fu) at (██████████) or (██████████). If you have questions or concerns about your rights as a participant in this study, you may contact the University of San Francisco Institutional Review Board at IRBPHS@usfca.edu.

I appreciate very much your willingness to share your thoughts with me, and I hope you find this discussion beneficial.

Thank you,

Guohua Fu
Doctoral Candidate, University of San Francisco

PARTICIPANT CONSENT

I _____ consent to participate in the interview. I have received information about my rights as a participant and I understand that I may withdraw without penalty at any time. I understand that Guohua Fu will be recording the session and that my participation in this group and my identity will remain confidential and anonymous. I have been given a copy of this consent form to keep for my own records.

Signature _____ Date _____

Appendix D
A Script for the Survey

A script for the survey

Hello Class, I am Guohua Fu, you can call me Angela. I am a doctoral student at University of San Francisco. I am planning to conduct a research project, and I would like to invite you to take part in my study. You will receive an online survey link that contains the consent form, the questionnaire, and a reading. The consent form has essential information about the rationale for doing this study, what I will ask you to do if you decide to be in this study, and the way I would like to use information about you if you choose to be in the study. The information that you provide will be anonymous. (Next part, I will read aloud the student consent form. If you would like to participate in this research, you need to type your name on the end of consent form. Then you can begin filling out the questionnaire. You will take approximately 10 minutes to complete the survey. If you do not want to participate, you will be directed to read the phrasal-verb reading while everyone else is filling out the questionnaire. When you complete the questionnaire, press submit button, you may close the survey window. If there are any questions, please let me know. (After 10 minutes, I will check if anyone needs more time.) When everyone is finished, please close the survey window. Thank you for your time and participation.

Appendix E
Co-Chair's Letter of Consent

November 19, 2020

Dear Dr. [REDACTED],

I am formally requesting, as a doctoral candidate at the University of San Francisco, the consent to conduct research in two ESOL classes that are the Reading and Writing Level 2 classes during the Spring semester of 2021.

I have gotten permission from professor [REDACTED] and professor [REDACTED] to teach in their ESL classes. I will obtain Institutional Research Board Consent from University of San Francisco for this research.

I hope you will give your consent to conduct this research.



Thank you for your time and consideration.

Sincerely,

Guohua Fu
Doctoral Student
School of Education University of San Francisco

Consent for Research

My signature below indicates that I acknowledge and authorize Guohua Fu to conduct a research project in my English Reading and Writing 2 class in Spring Semester 2020. I am aware that the research involves administering a pretest, a posttest, a questionnaire, and an individual interview online to students. I understand these assignments are part of regular course work that students will have the option to opt out of having their data included in the study via a consent letter.

	ESOL Faculty/Department Co-chair
Name	Title/Position
	11/22/2020
Signature	Date

Appendix F
Instructor's Letter of Consent

November 19, 2020

Dear Professor [REDACTED],

I am formally requesting, as a doctoral candidate at the University of San Francisco, the consent to conduct research in your ESOL class which is the Reading and Writing Level 2 class during the Spring semester of 2021.

On Week 2, I will ask your help to post the pretest on Canvas for the students. It will last 15 minutes. From Week 3 to Week 5, I will give the phrasal-verb instructional sessions to the students over 3 weeks and six consecutive sessions. Each instructional session will last 15 minutes. In another session of Week 6, I will ask your help to post the posttest on Canvas for the students. It will last 15 minutes. Then on Week 7, I will ask your help to post a questionnaire to the students in your class. This session will last 15 minutes. I will give the consent form link through Qualtrics in Zoom at the same time as you give them the questionnaire. The last phase of Week 8, I will ask student volunteers to participate in individual interviews. The interview will take 20 minutes.

All of these instructions and multimedia methods are part of the normal learning coursework materials, but students may opt out via a letter of consent should they not want their data included in the study. Their participation will be voluntary, and their information will be anonymous and kept in a secure location. I will obtain Institutional Research Board Consent from University of San Francisco for this research.

I hope you will give your consent to conduct this research.
Thank you for your time and consideration.

Sincerely,

Guohua Fu
Doctoral Student
School of Education University of San Francisco

Consent for Research

My signature below indicates that I acknowledge and authorize Guohua Fu to conduct a research project in my English Reading and Writing 2 class in Spring Semester 2020. I am aware that the research involves administering a pretest, a posttest, a questionnaire, and an individual interview online to students. I understand these assignments are part of regular course work that students will have the option to opt out of having their data included in the study via a consent letter.


Name _____ Title/Position _____

ESOL Instructor


Signature _____ Date _____

11/19/20

January 10th, 2021

Dear Professor [REDACTED],

I am formally requesting, as a doctoral candidate at the University of San Francisco, the consent to conduct research in your ESOL class which is the Reading and Writing Level 2 class during the Spring semester of 2021.

On Week 2, I will ask your help to post the pretest on Canvas for the students. It will last 15 minutes. From Week 3 to Week 5, I will give the phrasal-verb instructional sessions to the students over 3 weeks and six consecutive sessions. Each instructional session will last 15 minutes. In another session of Week 6, I will ask your help to post the posttest on Canvas for the students. It will last 15 minutes. Then on Week 7, I will ask your help to post a questionnaire to the students in your class. This session will last 15 minutes. I will give the consent form link through Qualtrics in Zoom at the same time as you give them the questionnaire. The last phase of Week 8, I will ask student volunteers to participate in individual interviews. The interview will take 20 minutes.

All of these instructions and multimedia methods are part of the normal learning coursework materials, but students may opt out via a letter of consent should they not want their data included in the study. Their participation will be voluntary, and their information will be anonymous and kept in a secure location. I will obtain Institutional Research Board Consent from University of San Francisco for this research.

I hope you will give your consent to conduct this research.
Thank you for your time and consideration.



Sincerely,

Guohua Fu
Doctoral Student
School of Education University of San Francisco

[REDACTED]

Consent for Research

My signature below indicates that I acknowledge and authorize Guohua Fu to conduct a research project in my English Reading and Writing 2 class in Spring Semester 2021. I am aware that the research involves administering a pretest, a posttest, a questionnaire, and an individual interview online to students. I understand these assignments are part of regular course work that students will have the option to opt out of having their data included in the study via a consent letter.

	ESOL Instructor
_____ Name	_____ Title/Position
	January 26, 2021
_____ Signature	_____ Date

Appendix G
Individual Interview Questions

INDIVIDUAL INTERVIEW QUESTIONS

1. How useful is the picture and comics activity for your goals this year or in the future? In what ways is it useful?
2. Tell me about your learning on the phrasal verbs by using the lyric writing activity?
3. How interested are you in working on the matching activity? (How much do you enjoy this activity?) What about it interests you?
4. How important is the multimedia learning activity to you? Why is it important?
5. What aspects of multimedia learning make you feel competent? Overwhelmed? Bored?
6. What feedback has contributed most to your success? Teachers? Group members? Yourself? What is your favorite parts? Movies?
7. Do you believe that working within a group made the multimedia learning easier or more challenging? Please explain.
8. In the survey you mentioned, you need more practice, what kind of or what type of practice do you think is useful? Are you interested in using comics, music, pictures, videos to learn phrasal verbs? Would you like to practice with these methods?
9. Do you like having class on zoom or in live classroom?
10. Do you have any tech bias in using technology to learn?
11. Have you used any tech during class?
12. Have you learnt phrasal verbs in your home country? Do you like phrasal-verb lesson?

Note: The researcher may ask additional follow-up questions, as appropriate, with participants.

Appendix H
Sample Lesson Plan

Lesson Plan on Phrasal Verbs

Learning Outcomes:

- Students will be able to identify two-word phrasal verbs.
- Students will be able to identify the types of two-word phrasal verbs.
- Students will be able to use two-word phrasal verbs to make sentences.
- Students will be able to contextualize the use of two-word phrasal verbs.

Total Time:

Classes meet twice a week. Class time will be used starting from the 3rd week, end of the 5th week of the 2nd-class session, 15 minutes per session, 90 minutes in total.

Timeline and Activities:

Week Three Session 1:

Five phrasal-verbs lecture (multimedia pictures and comics instruction or traditional text-based lecture)

Week Three Session 2:

Five phrasal-verbs activities and exercises (multimedia pictures and comics instruction or traditional text-based lecture)

Week Four Session 1:

Five phrasal-verbs lecture (multimedia music dialogue instruction or traditional text-based lecture)

Week Four Session 2:

Five phrasal-verbs activities and exercises (multimedia music dialogue instruction or traditional text-based lecture)

Week Five Session 1:

Five phrasal-verbs lecture (multimedia video story instruction or traditional text-based lecture)

Week Five Session 2:

Five phrasal-verbs activities and exercises (multimedia video story instruction or traditional text-based lecture)

Intervention (Treatment-group) Sample: Google Slides Presentations, Activities, Exercises, Source Link, and so on.

Pictures and Comics - Introduction of Phrasal verbs

Objectives: Enable students to do the followings:

- Get to know the types of phrasal verbs
- Identify the types of phrasal verbs

* Phrasal verbs

Also called two word verbs



*Phrasal
Verbs*

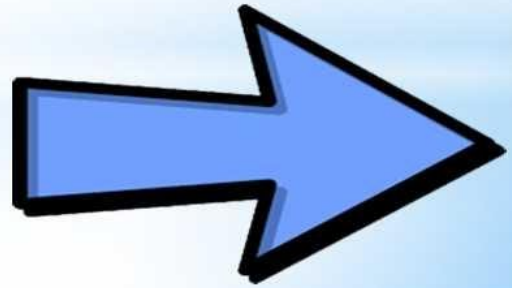
* What is a phrasal verb?

* Phrasal verb is a **verb** + preposition

* E.g. **put** off

* **come** in

* **clean** up



◆ Verbs

- Take: I took an aspirin because I had a terrible headache.
- Break: He broke his arm during the game.
- Catch: She managed to catch the last train.

◆ Phrasal Verbs

- Take off: Take off your coat! It's too hot here.
- Break up: Jenny broke up with her boyfriend yesterday.
- Catch up with: You go ahead - I'll catch up with you later.



* **compare**

*The small words in phrasal verbs are **IMPORTANT**, because they completely change the meaning.

*For example:

- Get up = get out of bed
- Get away = escape
- Get on with someone = like being with them



* Can you answer the following questions by using one of the phrasal verbs below?

* **put down** * **put on** * **put up** * **take off**

* What do women with long hair sometimes do to their hair when they play sports?

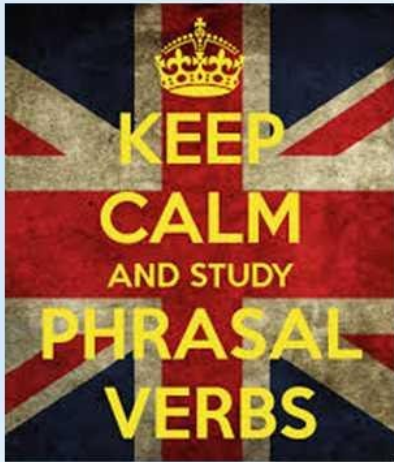
* What do you say to a child who has just picked up a piece of broken glass?

* What do people do when they go out in cold weather?

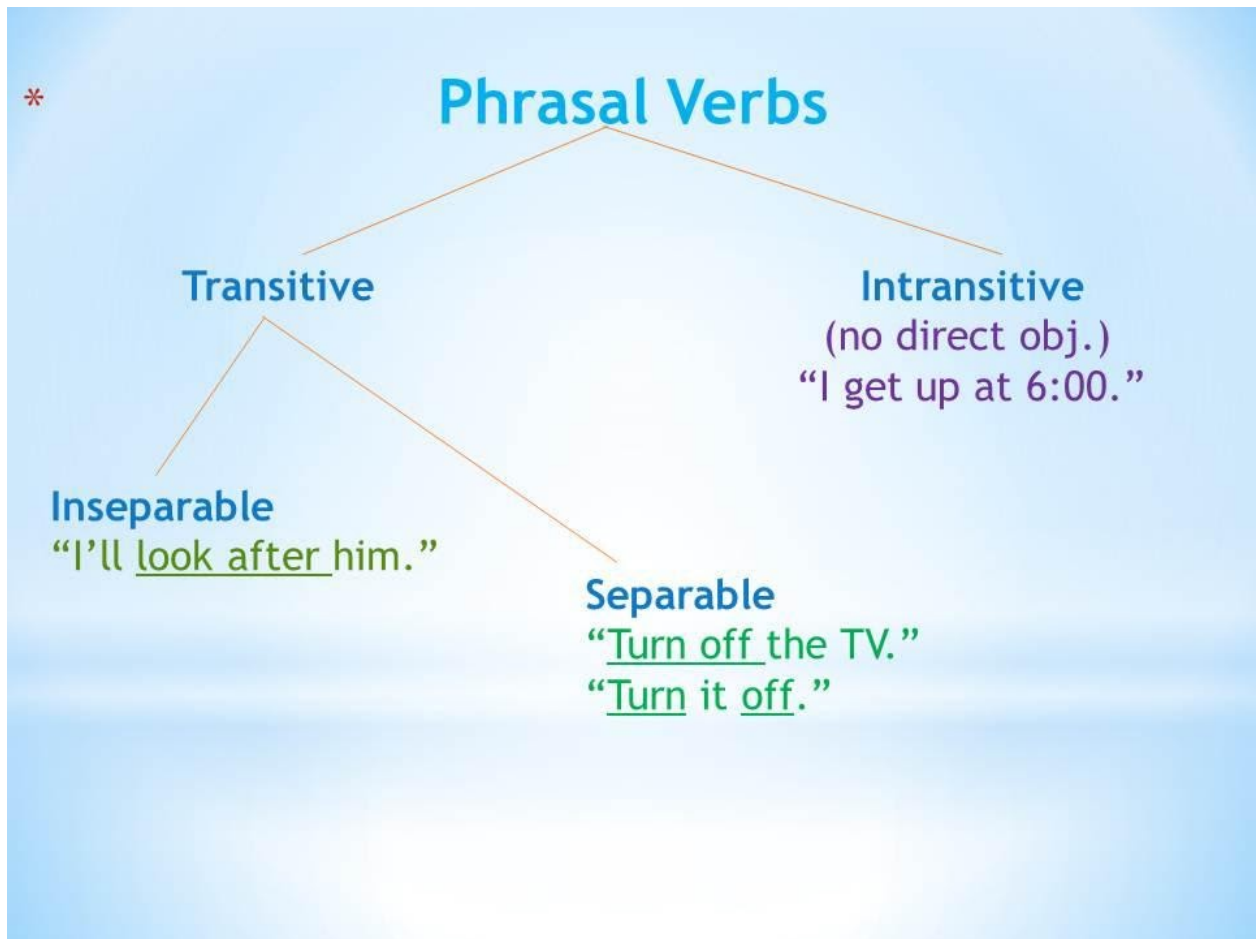
* What do you do with a sweater when you come into a warm house?

**YOU CAN
CHOOSE**

*Types of phrasal verbs



*STATEMENT.



Created by Guohua Fu.

* **A. Intransitive:** (The verb is not followed by an object.)

* A.1. VERB + particle

* A.2. VERB + preposition

* Such as: stand up

* sit down

* bend over

* grow up

* step back

* look at

* slow down

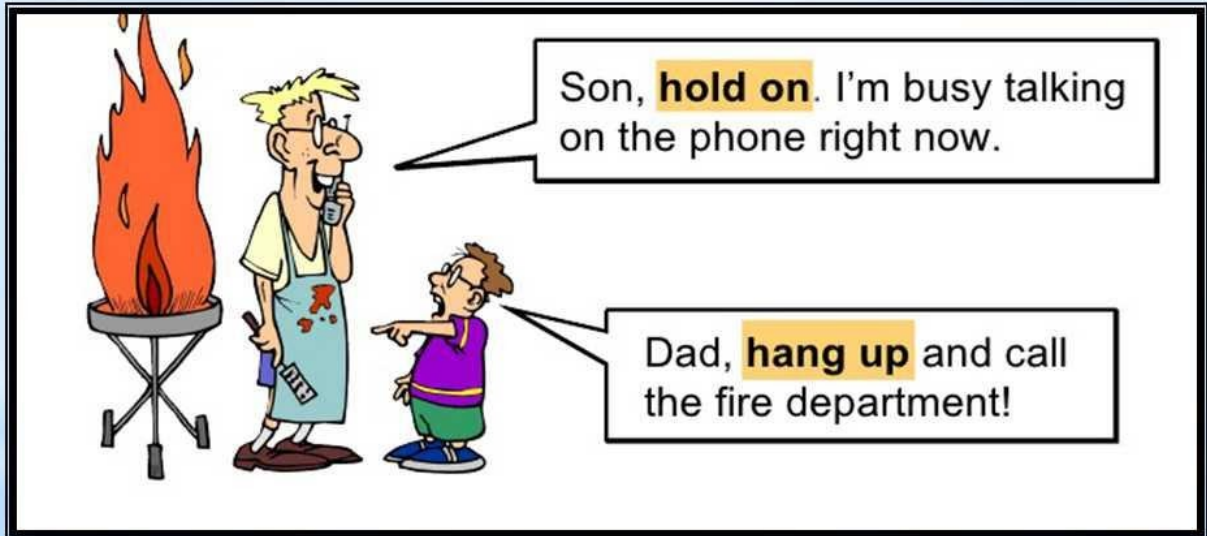
* shut up

Intransitive

Can't take a direct object

Always
Inseparable

FOR
EXAMPLE



Created by Guohua Fu.

Be careful!

When the object is a pronoun,
it must come between the
verb and the particle.

A friend called ~~u~~ her at
work.

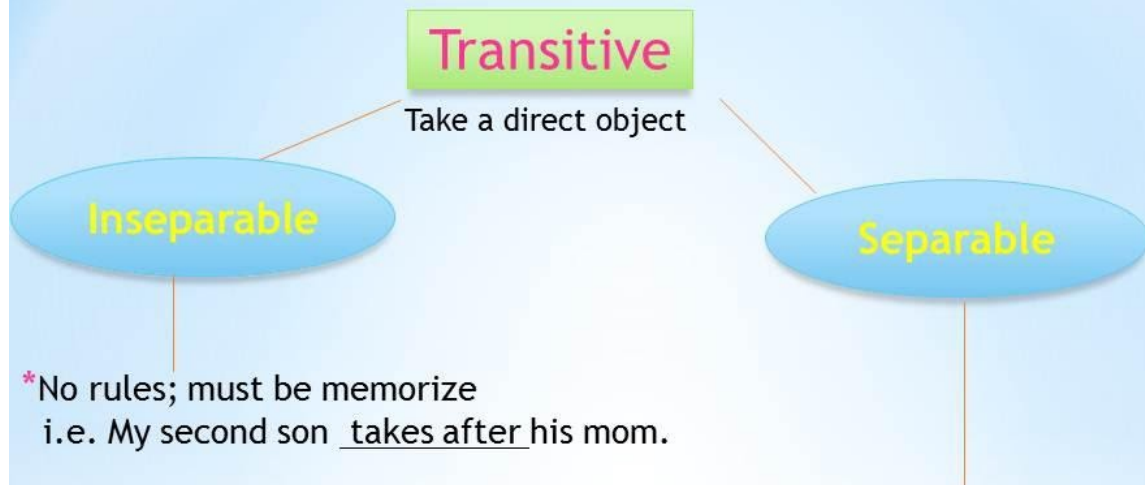
Object



A friend call ^{er} up at
work.

Object

* **B. Transitive:** (The verb is followed by an object AND can be passive.)



* No rules; must be memorize
i.e. My second son takes after his mom.

- * Direct object can separate the verb and preposition,
- * Direct object=noun-it must come between the verb and the preposition,
- * Direct object=pronoun-it must come between the verb and the preposition.
- * i.e. Fill out this application form.

FOR EXAMPLE

*Separable transitive phrasal verbs

*He can't figure out the instructions.

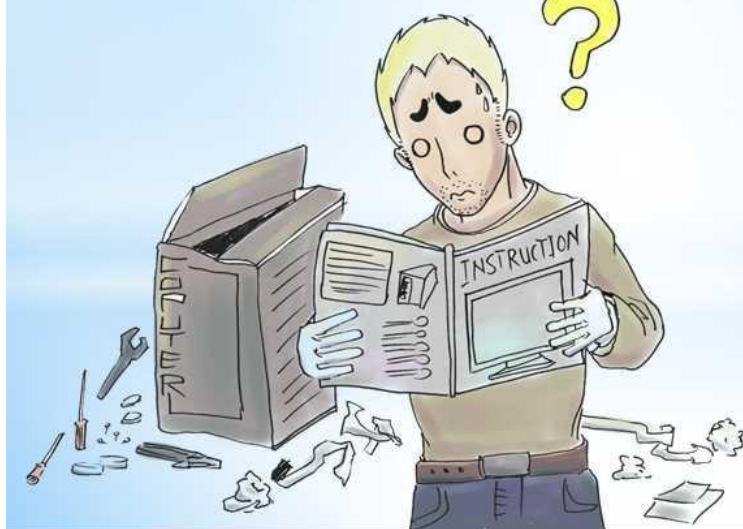
Noun object

*He can't figure the instructions out.

Noun object

*He can't figure it out.

Pronoun object



FOR EXAMPLE

* Inseparable transitive phrasal verbs

* Sam ran his ~~boss~~ **into**.

* Sam ran into his boss.

* He ran ~~him~~ **into**.

* Sam ran into him.



Created by Guohua Fu.

*With a partner, write five sentences about the pictures provided using two word verbs. Your sentences can be.



*Activity a1: Pair Work

FOR EXAMPLE

intransitive

Dress up

I **dress up** nicely.

Ask over=invite

Set up =prepare

Show up=appear


Put on=use clothes

Let in=allow to enter

Run out=not have enough

intransitive

intransitive



***Activity a1:**

Created by Guohua Fu.

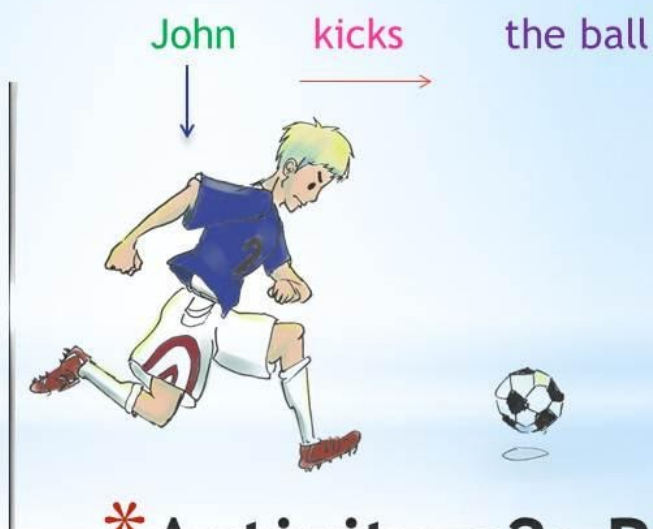
put off	doing work
work out	the answer
turn up	late for class
brush up	my English
pull out of	a competition
own up to	telling a lie

*Activity a1:

* Transitive VS Intransitive

Followed by a direct object that answers the question what? Or whom?

Does not have a direct object



* Activity a2: Relay



*Activity a2: Relay

- * Divide the white board in half.
- * On Each side, write Transitive and Intransitive phrasal verbs.
- * Divide the class into two teams. Team A and Team B. Each team forms a Straight line.
- * The student at the front of Team A is given a red board marker. The student at the front of Team B is given a blue board marker.
- * The teacher calls out a two word verb, and the first student from each line identify and write the two word verb on the divided white board.
- * After each two word verb, the student gives his/her marker to the next person in line.
- * Check the correct red/blue response gets a point for each team. The team with the most points wins.



Created by Guohua Fu.

- * Look at the following pictures
- * Use the two word verbs on the picture to make sentences
- * Get into small groups and write your own "PHONE CALL STORY". Use the two word verbs on the picture.
- * Draw pictures for your story



* Activity b

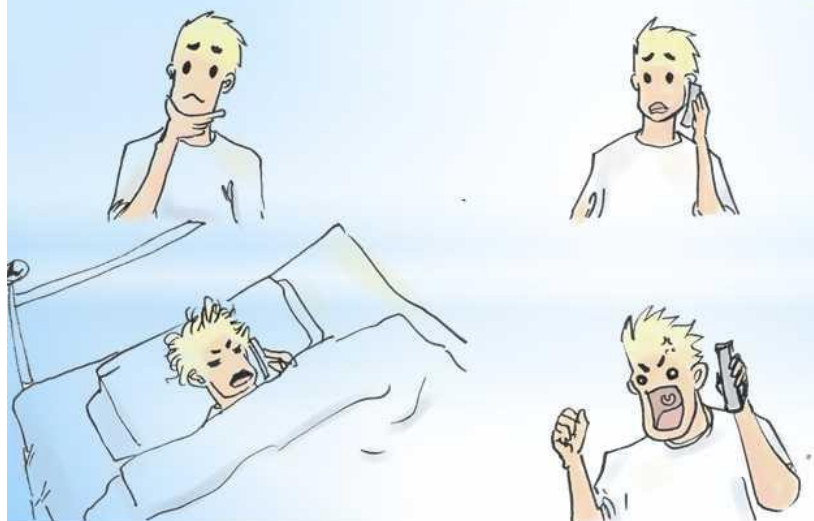
FOR EXAMPLE***TELEPHONE PHRASAL VERBS**

2:30 am

1. It's quite late now.
Let's make a phone call...
2. Hey, teacher! Don't **hang up**! Are you sleeping?
3. Yeah...Why?
4. Because I'm still studying!!!

HANG UP

To end a phone conversation and put the phone down



Created by Guohua Fu.

* TELEPHONE PHRASAL VERBS

HOLD ON

To wait for a short time

PICK UP

To answer a telephone call

Call back

To telephone sb. again or in return

Hang up

To end a phone conversation and put the phone down

Hang on

To wait for a short time

CUT OFF

To interrupt a telephone conversation

Put through

To connect by telephone



speak up

To speak louder

- * Ask students to find an interesting picture or short comics of themselves or someone they know.
- * Have students write an essay describing the using of two word verbs.



* Homework

Music Dialogue: Song: Rob Stewart “Father& Son”

Objectives: Enable students to do the followings:

- Improve use of two word verbs.
- Contextualized use of two word verbs: settle down, look at, go on think of, turn away, go away, sit down and go through in listening, speaking, reading and writing.



YouTube Link: <https://www.youtube.com/watch?v=CpZD80bfDyo>

Activity 1: Guessing about Song: Rob Stewart “Father & Son”





1. What do you think this song is going to be about?
2. What do you guess from the title "Father and Son"?
3. Which do you think this song will be?
 - A romantic song? A love song story?
 - A sad song?
 - A song about a family?
 - A song about divorce?
 - A song which brings up memories?
 - A song which takes place in the United States?
 - A song which takes place in China?
 - A song which sings by a second language learner?
 - A song with a serious family problem?

Activity 2: Preview

Indicate which of them you are familiar with. Choose one of the following for each two word verb:

- | | |
|-----------------------|--|
| 1. settle down | <input type="checkbox"/> 1. To happen; to resume, to continue (= to keep on) |
| 2. look at | <input type="checkbox"/> 2. To undergo, to experience; to consume, to use (=to use up) |
| 3. go on | <input type="checkbox"/> 3. To make or become quiet and orderly |
| 4. think of | <input type="checkbox"/> 4. Keep in mind for attention or consideration; take into consideration |
| 5. turn away | <input type="checkbox"/> 5. Give someone's attention to; to watch |
| 6. go away | <input type="checkbox"/> 6. To send away; dismiss: |
| 7. sit down | <input type="checkbox"/> 7. To move away from a place into another direction |
| 8. go through | <input type="checkbox"/> 8. To locate information in a dictionary or a book |
| | <input type="checkbox"/> 9. To take a seat |



Activity 3: Watch and listen to the song two times



Activity 4: Pair Work

Talk to your partner about the questions in [Activity 1](#).



Activity 5: Listen again and fill in the blanks

It's not time to make a change,
Just relax, _____.
You're still young, that's your fault,
There's so much you have to know.
Find a girl, _____,
If you want you can marry.
_____ me, I am old, but I'm happy.
I was once like you are now, and I know that it's not easy,
To be calm when you've found something _____.
But _____, think a lot,
Why, _____ everything you've got.
For you will still be here tomorrow, but your _____ may not.



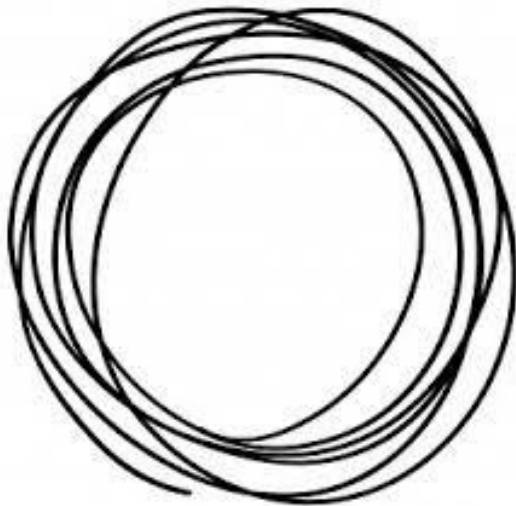
Activity 6: Are these statements TRUE or FALSE?



- T F** 1. We see the son wants his father stay with him forever.
- T F** 2. Father and son, they both love each other.
- T F** 3. The father wants to make sure that his son has found a girl already.
- T F** 4. The son is easy to say goodbye to his father.
- T F** 5. The father probably has no wife now.
- T F** 6. The father talks about the son's grandfather.
- T F** 7. The son will settle down.
- T F** 8. We can see the father in the song doesn't love his son.

Activity 7: Listen to the lecture again. Circle the words and phrases you hear.

1. **Fault**
2. **calm**
3. **take it easy**
4. **take your time**
5. **ignore**
6. **decision**
7. **alone**
8. **be order to**
9. **actually**
10. **we like twins**
11. **settle down**
12. **what's that holding?**
13. **look at**
14. **pull off**
15. **switch off**
16. **go on**
17. **think of**
18. **go down**
19. **turn away**
20. **go away**
21. **sit down**
22. **go through**



Words

Activity 8: Questions for Discussion.

1. Do you think Sob Stewart is a good singer?
2. What do you like of his song?
3. Are you moving by his song?
4. Do you like these phrasal verbs in his song? Why?

Video Story: TED Talks: “The Magic of Truth and Lies”

Objectives: Enable students to do the followings:

- Improve use of two word verbs.
- Contextualized use of two word verbs: work on, tell about, ask about, think of, feel about, hold on, base on, tell apart, take onto, conjure up, give over in listening, speaking, reading and writing.



YouTube Link: <https://www.youtube.com/watch?v=fumsXEuiLyk>

Activity 1: Guessing about TED Talk -“The magic of truth and lies”



1. Do you know magic? Can you do magic?
2. Do people around you always tell the truth?
3. Have you lied before? Do you think it will be always right to tell the truth?

Activity 2: Preview

Indicate which of them you are familiar with. Choose one of the following for each two word verb:

- A. **work on**
- B. **tell about**
- C. **ask about**
- D. **think of**
- E. **feel about**
- F. **hold on**
- G. **base on**
- H. **tell apart**
- I. **take onto**
- J. **conjure up**
- K. **give over**
- L. **stuck in**



- ___ 1. To sit upright and hold oneself erect; to rise a sitting position.
- ___ 2. To exert effort in order to do, make, or perform something
- ___ 3. To give information to someone about someone or something
- ___ 4. To request information (about someone or something) from a number of different sources
- ___ 5. To hold a particular kind of opinion of someone or something
- ___ 6. To explore something by the sense of touch
- ___ 7. To maintain a grip on something; cling to something or to be patient
- ___ 8. To form, develop, or found something on the basis of something else
- ___ 9. To perceive something as being different or distinct from something else
- ___ 10. To move something to the interior of something
- ___ 11. To make someone or something appear, seemingly by the use of magic
- ___ 12. To hand something over; entrust something.
- ___ 13. To be caught in a traffic jam

Activity 3: Watch and listen to the lecture two times

First time without subtitle

Second time with subtitle



Activity 4: Pair Work

Talk to your partner about the questions in [Activity 1](#).



Activity 5: Listen again and fill in the blanks

One of my favorite magicians is Karl Germain. He had this wonderful _____ where a rosebush would _____ right in front of your eyes. But it was his production of a _____ that was the most beautiful. Ladies and gentlemen, the _____ of life.

When _____ deception, he said this: Magic is the only honest profession. A magician promises to _____ you -- and he does. I like to _____ myself as an honest magician. I use a lot of tricks, which means that sometimes I have to lie to you. Now I _____ bad _____ that. But people lie every day. _____. Hey, where are you? _____ in traffic. I'll be there soon. You've all done it.

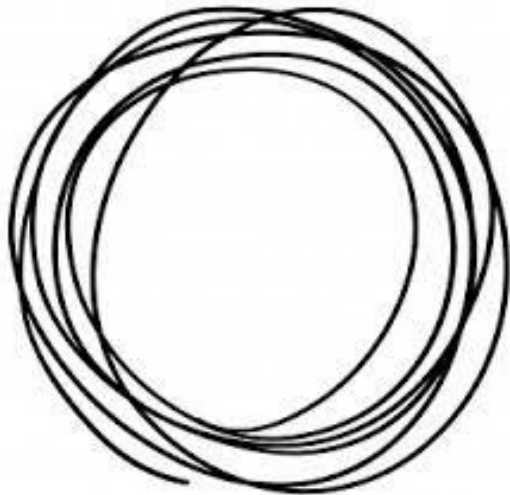


Activity 6: Listen again and find the differences between what you see and what you hear.

Some people receive for money. Let's play a game. Three cards, three chances. One five will get you 10, 10 will get you 20. Now, where's the lady? Where is the queen? This one? Sorry. You lost. Well, I didn't deceive you. You deceived yourself. Self-reception. That's when we convert ourselves that a lie is the truth. Sometimes it's hard to told the two apart. Compulsive gamblers are experts on self-deception. They believe they can lose. They forget the times they lose. The brain is very good in forgetting. Bad experiences are quickly forgotten. Good experiences quickly appear. Which is why in this vast and lonely cosmos, we are so wonderful optimistic. Our self-deception becomes a negative illusion -- why movies are able to take us into extraordinary adventures; why we believe Romeo when he says he loves Juliet; and why single notes of music, when played together, become a sonata and conjure upon meaning. That's "Clair De lune." Its composer, called Debussy, said that art was the greatest reception of all. Art is a deception that creates real emotions -- a lie that creates a truth. And when you give yourself up to that deception, it becomes magic.

Activity 7: Listen to the lecture again. Circle the words and phrases you hear.

1. **illusion**
2. **in particular**
3. **synchronize**
4. **deception**
5. **rosebush**
6. **fundamental**
7. **poll**
8. **deceive**
9. **convince**
10. **compulsive**
11. **cosmos**
12. **optimistic**
13. **extraordinary**
14. **sonata**
1. **work on**
2. **tell about**
3. **ask about**
4. **think of**
5. **feel about**
6. **hold on**
7. **base on**
8. **tell apart**
9. **take onto**
10. **conjure up**
11. **give over**
12. **stuck in**



Words

The Reflection Post-it:

Reflection-Post-it

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!

Write here!


Write here!

1

Reflection Session

Post your Comments here

Most Important Point	Questions Remaining



Comparison-group Sample: Google Slides Presentations, Activities, Exercises, and so on.

Phrasal verbs

Also called two-word verbs

What is a phrasal verb?

Phrasal verb is a **verb** + preposition

E.g.

put	off
come	in
clean	up

◆ Verbs

- Take: I took an aspirin because I had a terrible headache.
- Break: He broke his arm during the game.
- Catch: She managed to catch the last train.

◆ Phrasal Verbs

- Take off: Take off your coat! It's too hot here.
- Break up: Jenny broke up with her boyfriend yesterday.
- Catch up with: You go ahead - I'll catch up with you later.

compare

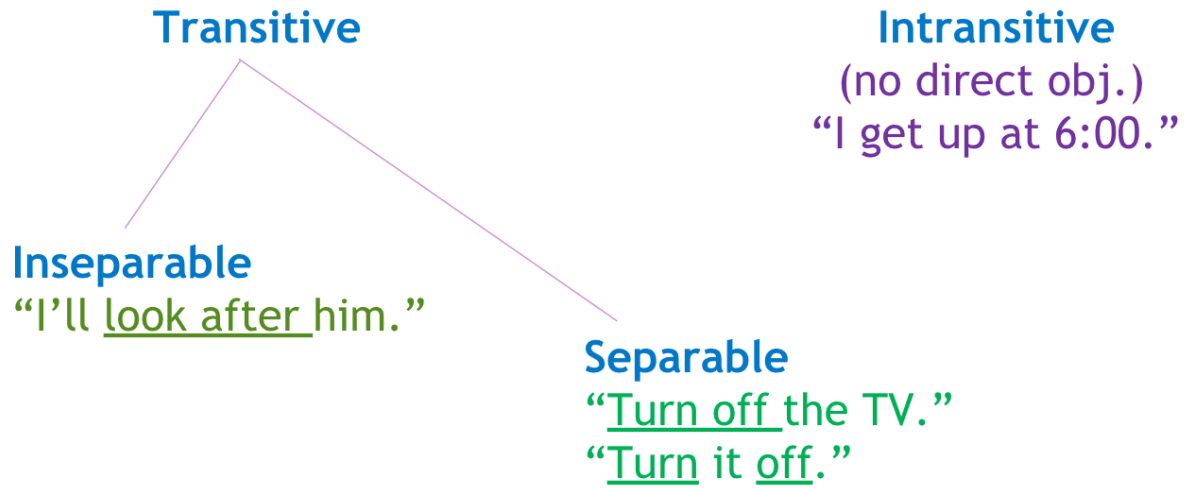
- The small words in phrasal verbs are **IMPORTANT**, because they completely change the meaning.
- For example:
 - Get up = get out of bed
 - Get away = escape
 - Get on with someone = like being with them

● Can you answer the following questions by using one of the phrasal verbs below?

* **put down** * **put on** * **put up** * **take off**

- What do women with long hair sometimes do to their hair when they play sports?
- What do you say to a child who has just picked up a piece of broken glass?
- What do people do when they go out in cold weather?
- What do you do with a sweater when you come into a warm house?

Phrasal Verbs



A. Intransitive: (The verb is not followed by an object.)

A.1. VERB + particle

A.2. VERB + preposition

Such as:

stand up

sit down

bend over

grow up

step back

look at

slow down

shut up

Intransitive

Can't take a direct object

Always
Inseparable

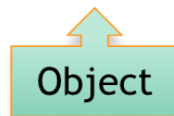
Be careful!

When the object is a pronoun,
it must come between the verb and the
particle.

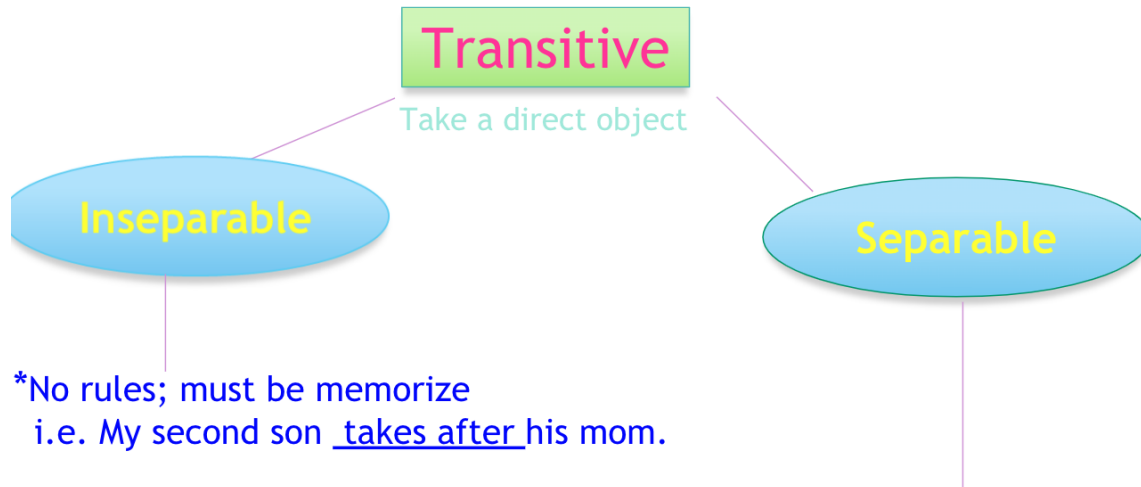
A friend **called up** ~~X~~er at work.



A friend **called** her **up** at work.



- **B. Transitive:** (The verb is followed by an object AND can be passive.)



*No rules; must be memorize
i.e. My second son takes after his mom.

- * Direct object can separate the verb and preposition,
- * Direct object=noun-it must come between the verb and the preposition,
- * Direct object=pronoun-it must come between the verb and the preposition.
- * i.e. Fill out this application form.

- Separable transitive phrasal verbs

- He can't figure out the instructions.

Noun object

- He can't figure the instructions out.

Noun object

- He can't figure it out.

Pronoun object

FOR
EXAMPLE

- Inseparable transitive phrasal verbs

● Sam ~~ran his boss~~ into. 

● Sam ran into his boss.

**FOR
EXAMPLE**


● He ~~ran him~~ into.

● Sam ran into him.

- With a partner, write five sentences about by using the two word verbs provided below.

put off	doing work
work out	the answer
turn up	late for class
brush up	my English
pull out of	a competition
own up to	telling a lie

Activity 1: Pair Work

The students work together in Zoom. Begin a story by saying a sentence that includes a phrasal verb, e.g. 'I walked down the street'. The first student repeats the sentence and continues the story by adding a sentence containing a phrasal verb, e.g. 'I walked down the street and went into the corner shop'. The game continues with each student in turn trying to remember what was said and then adding a sentence containing a phrasal verb to continue the story. Students are out of the game if they cannot think of a continuation to the story using a phrasal verb, forget what was said or take too long to answer. The last student left standing wins the game.

Activity 2: Story Time

Appendix I
20-Item Multiple-Choice Test
(The pretest and the posttest)

20-Item Multiple-Choice Test

Directions: Select the best answer for each question.

Time: 10 minutes

1. That song has already _____ \$7 million.
 - A. made out
 - B. made up
 - C. made in
 - D. made

2. You can _____ words in a dictionary.
 - A. look after
 - B. look up
 - C. look up to
 - D. look for to

3. Sorry I'm late. My car _____ gas.
 - A. ran out
 - B. ran out in
 - C. ran out on
 - D. ran out of

4. Those bright yellow football boots really _____.
 - A. stand up
 - B. stand down
 - C. stand out
 - D. stand over

5. Oh no! The building's elevator has _____ again!
 - A. broken down
 - B. broken up
 - C. broken in
 - D. broken over

6. Our babysitter's really good at _____ our kids.
 - A. looking after
 - B. looking into
 - C. looking down on
 - D. look after for

7. The bus was nearly full so it was difficult to _____.
- A. get into
 - B. get on
 - C. get up
 - D. get down
8. If the TV isn't loud enough, _____ it _____ a little.
- A. turn, off
 - B. turn, up
 - C. look, on
 - D. look, down
9. Our plane _____ thirty minutes late.
- A. took off
 - B. took up
 - C. took out
 - D. took on
10. Let's _____ that old box. We don't need it.
- A. throw up
 - B. throw in
 - C. throw away
 - D. throw down
11. I have to _____ my notes once again to make sure I have learned all important details before the exam.
- A. stand for
 - B. go over
 - C. take after
 - D. pull down
12. My check-up results indicate that I have to _____ all my bad habits at once.
- A. keep on
 - B. let down
 - C. give up
 - D. put across
13. Whenever he sat down at the piano, we knew he was going to _____.
- A. step away

- B. keep off
- C. keep out
- D. show off

14. Cheryl has missed several days of school and now she is _____ in her homework.

- A. picking up
- B. turning up
- C. dropping out
- D. falling behind

15. As we have been informed that the weather will get worse soon, we have decided to _____ the tennis match.

- A. put off
- B. give off
- C. turn off
- D. take off

16. If it weren't for the loan I got from the bank, it would have been impossible for me to _____ my own business.

- A. set up
- B. throw up
- C. take up
- D. look up

17. Though he loved his fiancée very much, the boy acted in accordance with his parent's wishes and _____ with her.

- A. made up
- B. signed up
- C. broke up
- D. grew up

18. I earn extra money by _____ brochures on the street.

- A. giving out
- B. coming out
- C. putting out
- D. taking out

19. The computer company I work for is _____ with a new video game system next month.

- A. working on
- B. coming to

- C. sending out
- D. coming out

20. Vegetarians should _____ for animal fat in biscuits.

- A. live in
- B. make up
- C. depend on
- D. watch out

Appendix J
Validity Review Panel

Validity Expert Panel Review

Instructions:

There are two forms and one test to review. Please review the 30-phrasal-verb checklist and complete the form with comments as needed. Please review the 22-phrasal-verb replacement form. If you would like to make a replacement, please write the replacement number (1-22) of the phrasal verb in the first form for the phrasal verb that you would replace. Please review the 20-item Multiple-choice test and provide feedback.

30-Phrasal-verb Checklist -- Chosen from Chapter 8, 9, & 10

Number	Chosen Phrasal Verbs	Easy	Medium	Difficult	Comment	Replacement #
1	Look at					
2	Look after					
3	Work on					
4	Work with					
5	Work out					
6	Break in					
7	Make up					
8	Find out					
9	Put off					
10	Break up					
11	Move into					
12	Get into					
13	Come to					
14	Belong to					
15	Stand out					
16	Go over					
17	Fall behind					
18	Take off					
19	Close to					
20	Connect to					
21	Sign up					
22	Depend on					
23	Step away					
24	Stay away					
25	Drop out					
26	Look for					
27	Roll down					

28	Put off					
29	Prepare for					
30	Grow up					
Comment/Feedback						

Note: This form of 22-phrasal-verb is not chosen in the above list but also from Chapter 8, 9, & 10. They may replace some phrasal-verbs in the list above.

Number	Phrasal Verbs	OK	Replace	Delete
1	Look like			
2	Work of			
3	Live in			
4	Carve into			
5	Hear of			
6	Decorate with			
7	Continue to			
8	Involve in			
9	Come from			
10	Fall on			
11	Go down			
12	Make of			
13	Come to			
14	Go out			
15	Result in			
16	Set up			
17	Feel like			
18	Try out			
19	Go up			
20	Send to			
21	Combine with			
22	Think about			

20-Item Multiple-Choice Test

Directions: Select the best answer for each question.

Time: 10 minutes

1. That song has already _____ \$7 million.
 - A. made out
 - B. made up
 - C. made in
 - D. made

2. You can _____ words in a dictionary.
 - A. look after
 - B. look up
 - C. look up to
 - D. look for to

3. Sorry I'm late. My car _____ gas.
 - A. ran out
 - B. ran out in
 - C. ran out on
 - D. ran out of

4. Those bright yellow football boots really _____.
 - A. stand up
 - B. stand down
 - C. stand out
 - D. stand over

5. Oh no! The building's elevator has _____ again!
 - A. broken down
 - B. broken up
 - C. broken in
 - D. broken over

6. Our babysitter's really good at _____ our kids.
- A. looking after
 - B. looking into
 - C. looking down on
 - D. look after for
7. The bus was nearly full so it was difficult to _____.
- A. get into
 - B. get on
 - C. get up
 - D. get down
8. If the TV isn't loud enough, _____ it _____ a little.
- A. turn, of
 - B. turn, up
 - C. look, on
 - D. look, down
9. Our plane _____ thirty minutes late.
- A. took off
 - B. took up
 - C. took out
 - D. took on
10. Let's _____ that old box. We don't need it.
- A. throw up
 - B. throw in
 - C. throw away
 - D. throw down

11. I have to _____ my notes once again to make sure I have learned all important details before the exam.

- A. stand for
- B. go over
- C. take after
- D. pull down

12. My check-up results indicate that I have to _____ all my bad habits at once.

- A. keep on
- B. let down
- C. give up
- D. put across

13. Whenever he sat down at the piano, we knew he was going to _____.

- A. step away
- B. keep off
- C. keep out
- D. show off

14. Cheryl has missed several days of school and now she is _____ in her homework.

- A. picking up
- B. turning up
- C. dropping out
- D. falling behind

15. As we have been informed that the weather will get worse soon, we have decided to _____ the tennis match.
- A. put off
 - B. give off
 - C. turn off
 - D. take off
16. If it weren't for the loan I got from the bank, it would have been impossible for me to _____ my own business.
- A. set up
 - B. throw up
 - C. take up
 - D. look up
17. Though he loved his fiancée very much, the boy acted in accordance with his parent's wishes and _____ with her.
- A. made up
 - B. signed up
 - C. broke up
 - D. grew up
18. I earn extra money by _____ brochures on the street.
- A. giving out
 - B. coming out
 - C. putting out
 - D. taking out

19. The computer company I work for is _____ with a new video game system next month.

- A. working on
- B. coming to
- C. sending out
- D. coming out

20. Vegetarians should _____ for animal fat in biscuits.

- A. live in
- B. make up
- C. depend on
- D. watch out

Note: Here are the answers for expert panel review: 1D 2B 3D 4C 5A 6A 7B 8B 9A 10C 11B 12C 13D 14D 15A 16A 17C 18A 19D 20D

Number	Answer
1	D
2	B
3	D
4	C
5	A
6	A
7	B
8	B
9	A
10	C
11	B
12	C
13	D
14	D
15	A
16	A
17	C
18	A
19	D
20	D

Appendix K
Questionnaire Validation Rubric for Expert Panel—VREP

Questionnaire Validation Rubric for Expert Panel

Modeled after the Survey/Interview Validation Rubric for Expert Panel – VREP

By Marilyn K. Simon with input from Jacquelyn White

Criteria	Operational Definitions	Score				Items NOT meeting standard (List page <u>and</u> question number) and need to be revised. <i>Please use the comments and suggestions section to recommend revisions.</i>
		1	2	3	4	
		1=Not Acceptable (major modifications needed) 2=Below Expectations (some modifications needed) 3=Meets Expectations (no modifications needed but could be improved with minor changes) 4=Exceeds Expectations (no modifications needed)				
Clarity	<ul style="list-style-type: none"> The statements. In the items are direct and specific. The participants can understand what is being asked. 					
Wordiness	<ul style="list-style-type: none"> The statements in the items are concise and understandable. There are no unnecessary words 					
Negative Wording	<ul style="list-style-type: none"> The statements in the items are given using the affirmative (e.g., Instead of using, “I did not enjoy completing the coursework on phrasal verbs.”, the researcher asks, “I enjoyed completing the coursework on phrasal verbs.”) 					
Use of Jargon	<ul style="list-style-type: none"> The terms used in the items are understandable by the target population. 					
Use of Technical Language	<ul style="list-style-type: none"> The use of technical language is minimal and appropriate. 					

Comments and Suggestions

Appendix L
Engagement Level of Feedback Form
(Additional Analysis)

Students' Engagement Level of Feedback Form
Treatment Group

ID	Low Engagement (1)	Moderate Engagement (2)	Agreed	Disagreed
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
Comments:				

Students' Engagement Level of Feedback Form
Comparison Group

ID	Low Engagement (1)	Moderate Engagement (2)	Agreed	Disagreed
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
Comments:				

Appendix M
Codebook

Codebook

Code Name	Definition	Example	Coder 2 Agreed Times
Phrasal verbs are difficult to learn.	Statement on the difficulty of learning phrasal verbs.	I feel hard for me to learn phrasal verbs.	
The phrasal-verb lessons are useful.	Statement on the usefulness and helpfulness about the media phrasal-verb lessons.	Comics and music are very useful for me. I like songs.	
Multimedia elements are useful and helpful.	Statement on the usefulness about using pictures, music, comics, and videos.	I like movies because I can see and understand the meaning.	
Multimedia elements are interesting.	Statement on having interest in learning English through media material such as pictures, comics, songs, videos.	You lesson is very interesting to me. I never had a lesson with movie before.	
Use multimedia elements to learn English for future.	Statement on using media material to learn English in the future.	Yes, I will learn English with Netflix movies.	
Use self-selected resources (i.e., online, books, apps)	Statement on using different resources such as Facebook, Textbook, YouTube, Netflix.	I practice English using Facebook and communicate with people.	
Matching exercise is useful and helpful.	Statement on the usefulness of the matching practice.	I like the matching exercises. I take notes about the match game and I review my notes after class.	
Learned phrasal verbs when watching TV and listening to music while in class.	Statement on learning phrasal verbs when watching TV or listening to music such as YouTube Premium, Netflix.	I enjoy music. I like singing so I learn the words in the lyrics.	
Learn new phrasal verbs or new English knowledge when	Statement on learning phrasal verbs when watching TV or listening to music	I like movies because I see the people acting and I can turn	

watch TV and listen to music.	such as YouTube Premium, Netflix.	on the transcript and learn English.	
The pictures and comics with examples are interesting, useful, and helpful.	Statement on the usefulness of learning English through examples with pictures and comics.	I like the examples with pictures. They are useful because I can imagine the picture meaning with the examples.	
Prefer in-person face-to-face classroom.	Statement on the preference of having class face-to-face in a classroom.	I like face-to-face class because I can ask questions at any time to the teacher and my classmates. .	
Prefer learn with groups.	Statement on the preference of pair work or group work.	I learn more when I do pair work with my classmates because I can ask questions to my classmates.	
Prefer learn alone.	Statement on the preference of study alone.	I like studying by myself because it helps me focus.	
Use phrasal verbs successfully in everyday conversation.	Statement on the successfulness of using phrasal verbs in daily communication.	I use phrasal verbs to communicate with people on Facebook.	

Appendix N
Transcript

Transcript 1: Student Pseudonym -- Betty

Angela Fu: Can you share anything you think is the most useful, helpful or the most interesting part that you learn during the phrasal verb lessons.

Betty: Oh yeah about your phrasal verb lesson, I think that is useful to communicate with people. I use Facebook and learn English with people to communicate with.

Betty: People from outside like in a market need to understand your English.

Angela Fu: Your English is very good, how did you learn so well?

Betty: I learned a little in my country. Not high score. I can understand and talk with you.

Angela Fu: What do you think about the multimedia learning? Do you think these learning materials are helpful, useful and interesting to you when you learn phrasal verbs?

Betty: Yeah, I love when you have the music and the video music so everyone can hear like Facebook you put enough music videos yeah it feels interesting.

Angela Fu: So you like the music?

Betty: Yeah, you don't have kind of bad movie and kind of make people interested in phrasal verbs, it's good.

Angela Fu: I like that, so in the phrasal verb lessons, there is this activity, so the main verb on the left the phrasal verb on the right so basically it's a meaning and the phrasal verb comparison.

Angela Fu: Do you think that's useful, do you think you can use the phrasal verbs and the verbs successfully your daily life?

Betty: Yeah, I took notes in my notebook so I can post Facebook so I can see when I had a free time you know.

Angela Fu: Okay, I see, so you take notes.

Angela Fu: It's good how interested you are in learning, do you enjoy the matching game?

Betty: Activity 100% yeah. Like a small test or something I can see online, unlike kind of Gmail, for your kind of meeting like that I always try yeah.

Angela Fu: As you said that you like the comics music and videos and like how important do you think these materials in your learning and the, why is that important that using pictures using music and videos to learn English are phrasal verbs.

Betty: Good songs for my opinion, I choose music maybe I love music that's why I interesting about music yeah first song that I attended kind of beautiful yeah.

Angela Fu: Good!

Betty: You get my attention in and you know have movie and music kind of useful for me I attained a 100% in depth just I sometime in the US kind of some Muses song your body class.

Angela Fu: Good, so you personally love music and movie.

Angela Fu: It motivates you in learning English, right?

Betty: Yeah I can remember the name, so I can lease and over again you're now part of lettuce I sent a light as. Very good, very high kind of want to learn about more.

Angela Fu: multimedia learning as in through pictures comics music videos make you feel competent overwhelmed or boring or bored?

Betty: No. I enjoyed about it yeah it's good you're doing a good job.

Angela Fu: Thank you and.

Angela Fu: What feedback has contributed most to your success of learning, teachers, group members or yourself?

Betty: All that kind of by yourself, or teacher. You can know you learn a lot and establish communicating something.

Angela Fu: Do you like having class on zoom online or in person at a college in your classroom?

Betty: Now is the worst way you learn on zoom.

Angela Fu: So is this your first semester.

Betty: Oh, no, this was second year, because the campus now I choose I can't go to classroom.

Angela Fu: It is not your first year and yeah you've never been to a live classroom.

Angela Fu: OK, I see. So do you like the zoom class like are you meeting teachers online on zoom or do you like, a meeting teachers in in school, like in Camp on campus?

Betty: I like in person, it was way better you know, you can communicate with the classmate.

Angela Fu: And about your survey, you mentioned that you need more practice, and I wonder what kind of practice or what type of practice, do you think is useful and are you interested in using like comics music or videos to practice phrasal verbs?

Angela Fu: are well like what else would you like to learn.

Betty: You give same kind of Gmail for me about our lesson of email, so I own voice so CEO of again this lie so deck right I load a lie, when you sell it glad you know yeah on about a song and Music

Betty: The tests are awesome ideas, so I can see over when I feel it class, you know yeah to just Richard not cut up in glad and learn about our teachers are when you're finished you just see of again you can't remember all my song yeah.

Angela Fu: that's good that's good, and do you believe that working within a big group in the group may help the multimedia learning easier or more challenging and more difficult, can you explain?

Betty: It first time when I learned about in zoom kind of different and now as a lot of time I can I'll even throw my style and chill in Technology, you are now yeah a lot of time, energy and learn this year so that a good way to learn new chapter gives us a chance to practice yeah.

Angela Fu: And do you like using technology to learn? Do you do you have any bias or difficulties in using technologies to learn phrasal verbs?

Betty: yeah I tend to kind of territory, now as kind of year for you can start you know was 35% Internet you know loads more about a place of your recruiters you to serve and kind of set a meme on Facebook, or something like that yeah are my dissemble yeah a lot of where you can.

Betty: Find out in Internet yeah.

Angela Fu: Have you used like Google translation or any other technology during the phrasal verb lesson when you on zoom?

Betty: Now, because you have a module plan a bad domain, so I think the boy you just have to understand the main apart unless it's not color it is, in my language, you know yeah okay.

Angela Fu: I see very good, very good so mostly you think using music is the most usable effective way to learn phrasal verbs during our phrasal verb lesson.

Betty: yeah and then some example you gave us yeah it is your fault, you.

Angela Fu: So you like the examples very good, do you have any questions for me.

Betty: yeah so you now use or instead of my lingo so I just want to add you give me a wide.

Betty: Learn and not on Angeles, because I want to grow my business, so I can chew our virtual colored our Chancellor Unilever to hire you now.

Angela Fu: Oh, so I see what you mean so you mean can I give you some advice in learning English so that to a bigger university or college who completed.

Betty: Yeah.

Angela Fu: So my advice would be try to say English as much as you can so whenever you want to read something in that.

Angela Fu: We are none no use English reading English speak in English watch TV English, even at home talk to your children talk to your parents English first.

Angela Fu: Try to use English to explain first and then use your native language so, for example, if you want to explain something to your children, then you use English first.

Angela Fu: gave to find an opportunity for you to practice speaking and if your children doesn't understand you can try to explain again, and then you think are you know.

Angela Fu: What vocabulary and need more I go back to the Internet and check and then I can understand what vocabulary, I need to learn and.

Angela Fu: What sentence, I need to speak more and then where your children doesn't will stand and then you can use your native language and talk to your family because using your native language, it will be faster and easier you just say it, it comes, naturally.

Angela Fu: If you practice if you're using English first it's a good practice for you it's a good practice for you so, for example, if you say one sentence one time, if you practice, the same sentence 10 times, then it makes different.

Angela Fu: Imagine if you practice one sentence 100 times it's going to make.

Angela Fu: much difference between your practice one time.

Angela Fu: And practice 100 times so you can you can see, the different so the main point of learning English is practice is practice.

Angela Fu: So just try everything when you can just gather at all is that you can and then practice.

Angela Fu: whenever you have a word you don't understand you get the meaning first and then you go back to the dictionary.

Angela Fu: turn down the subtitle first and then turn off the subtitle.

Angela Fu: Later on, when you watch the video our movies and see if you can listen to their language and figure out the word verbs.

Angela Fu: first, and then, if you can figure out all the verbs you can see if you can figure out all the nouns and then see if you can repeat the sentences, when you watch the movie when you watch a video and.

Angela Fu: Reading newspaper or reading magazines.

Angela Fu: Reading fictions will also help you to learn English and.

Angela Fu: For you now the textbook is very important, so your textbook has a lot of good information and vocabulary in it, so I would recommend you remember all the.

Angela Fu: vocabularies in your textbook and try to do all the practice as much as you can even though Professor blindsided is suggested you don't have to do it, but if I were you I would work very hard, if I want to go to a university so yeah.

Betty: Thank you.

Transcript 2: Student Pseudonym -- Grace

Angela Fu: I want to ask you about your learning experience with comics pictures videos and TED Talks and see how you learn phrasal verbs through all these different methods and the first question is.

Angela Fu: How you using is the pictures, comics activity for your learning for phrasal verbs do you think they are helpful and useful?

G: Know there's too much yours for life.

G: Your spin on the money.

G: Before I didn't know I didn't know I take on it very good take more information about you.

Angela Fu: So useful and helpful that you learned a lot?

G: Yeah I learned yeah because you give us a lot of the first of all films.

G: You know I almost busy but I get some.

G: Of the films.

Angela Fu: You did a very good job.

Angela Fu: You made a big difference between pre and posttest.

G: Yes.

Angela Fu: Can you tell me about your learning on the phrasal verbs?

Angela Fu: By using the music movies, and the comics?

G: about what?

Angela Fu: Can you tell me about your learning on the phrasal verbs by using videos comics music and the TED Talks?

G: yeah I say I think about videos and songs better for me.

Angela Fu: Very good for you you're very interested in all these materials.

G: yeah I think when I see the video and we learn new jewelry and we we get the visible forms.

Angela Fu: Good yeah that's very interesting material for you.

G: I think that's better.

Angela Fu: Do you like the matching activities?

G: again.

Angela Fu: Do you like the matching practice the matching practice.

G: machine? I'm sorry?

Angela Fu: So I gave a meaning and give you a phrasal verb, and ask you match the meaning with the...

G: that's okay everything you give is good, but I told you what.

G: I interested for song, because you know I give all my.

G: For the song I remember what the total they talk about what.

Angela Fu: Do you think what aspects of videos music comics learning make you feel overwhelmed interesting or bored?

G: No boring, very good interesting, but some student like song like some students may be interested for video.

G: The events for the student.

Angela Fu: Do you like we work in the group make the learning easier or more challenging, what do you think is it easier, or is it more challenging when we working group?

G: No, better you know when you talk.

G: We talk from you and from the student we.

G: Very good, we are interested about that group I think this is very good.

Angela Fu: Good, and do you think what has contributed most to your learning success teachers group members?

G: I think by myself I know.

G: But you know when you give us more information you're alone, then we talk together and we solve the exercise that's better.

G: And you get fit your songs I think that's better for a student, because you know because we knew student my language, not very well and you give this third husband firms it's very, very good.

Angela Fu: Nice very good I'm glad to hear that I'm so helpful.

Angela Fu: Do you like having class on zoom or do you think having class in person, when you face?

G: I think a face to face.

Angela Fu: face to face better.

G: yeah.

G: I this number one he caught face to face you sister we asked, everything is OK now you know and online sometimes we need the camera close sometimes not listen handled person to the Professor for.

G: yeah I see what yeah, but when, but when you face to face and the.

G: Class that's better.

Angela Fu: That's a very good point. I feel the same way. For me I'm talking to a bunch of names, black screens, so I cannot communicate with you cannot see like in person.

Angela Fu: Do you have any questions?

G: No.

Angela Fu: Do you have any difficulties in using technology.

G: Well, I have a lot of.

G: Sometimes my wife, sometimes my kids they helped me about this.

Angela Fu: Ah, OK, I see and have you like Google translate our dictionary our other technology well during the class when you learn phrasal verbs?

G: No, no, no, no, make anything.

Angela Fu: Oh yeah I only listen to you okay good go, so you think the multimedia materials are useful and interesting, so you can understand you don't need other materials ok.

Angela Fu: Do you have anything else want to share with me?

G: Thank you so much for your time for your heart our job, and we trust for your lesson we need to thank you for every thank.

G: You are doing, have you give us all information, I think you can for feed your for exercise for.

G: grow everything you need to do for the student you do.

Angela Fu: Thank you I' m so glad and I' m helpful and.

Angela Fu: Nice to meet you my first time see your face.

G: man.

G: Nice to meet you.

G: yeah we have Ellen and future, you will be.

G: Professor.

G: you doing good Thank you you're doing good, very good.

Angela Fu: You have any questions for me?

G: Thank you so much, Sir, we hope, have anything good for you, and if you need anything for a student, we will do for you okay.

Angela Fu: Thank you.

G: We need anything for you.

G: So much.

G: happy to see you I' m the Professor everything is kind can't for other free teach our students very good and kind and helpful.

Angela Fu: Good, and if you have any questions email me because you have my email right?

G: yeah I know you're a modify anything fella.

Angela Fu: I will see you out.

Angela Fu: Okay, thank you.

G: Take care have a great day, thank you so.

G: Much you to take care and.

G: I am very happy to see you have to talk with you meeting.

Angela Fu: yeah see you on Wednesday.

G: yeah see you Thank you so much.

G: bye take care, thank you bye-bye.

Transcript 3: Student Pseudonym -- Jason

Angela Fu: Okay, now we are recording, my first question is have you learned phrasal verbs in your home country?

J: yeah a little

Angela Fu: Do you like the phrasal verb lessons?

J: yeah I like that

Angela Fu: Do you like the pictures comics music videos and the TED Talks.

J: yeah a lot, I, like all of.

Angela Fu: You are very interested about all these activities and the message, and do you think are these pictures videos are useful for you?

J: I just talk about the reservoir in the Internet on the Internet, and now I just learn how about that.

Angela Fu: Can you tell me about your learning experience on phrasal verbs by using music or video?

J: I was, I was in the music.

J: yeah I listen to music that's why I learn very easily.

J: I love animals like, but I cannot think.

Angela Fu: You like the music you understand the lyrics right?

J: yeah.

Angela Fu: That's very good. How interested are you working on the matching activities?

J: not too much of it.

Angela Fu: The matching practice, not too much, so you like the music, which one do you like better music or video?

J: We can live the ball, but sometimes I watch Netflix to.

Angela Fu: You watch Netflix and when you watch Netflix do you pick up the phrasal verbs?

J: Just little bit not too much.

J: Time just one to the racial up.

J: But always happy tenses.

Angela Fu: Okay, do you write down all the phrasal verbs when you watch Netflix movies.

Angela Fu: Do you turn on transcript when you watch movies?

J: no, weakness okay.

Angela Fu: No transcript.

Angela Fu: Okay, and do you think the multimedia methods like music pictures me videos and Ted talks are boring or overwhelmed?

J: I think the music and video somehow I walk the talk to.

Angela Fu: So you think you like the music using the video is boring.

J: No, not boring.

J: You know, somehow my chuck listen, the most it very easy for me that's why I always learned about it.

Angela Fu: Okay, so you listen to music more often than watch movies. What makes you successful on your posttest you're seeing yourself, our group members are teachers?

J: maybe more.

Angela Fu: Maybe both? Okay that's a good answer that's a good answer. What do you think like you can do so well on your posttest.

J: Not well.

Angela Fu: Not too well? but you did a better job on the post ads because.

Angela Fu: The pretest you didn't score very high yeah.

J: Because when I learned we kill about race Oh well, I when I go when I go home, I doubt a little bit raise them up on the Internet and I learned about it and that's why I can.

J: Read and I can.

J: Go to the deck very fast that's why.

Angela Fu: OK, I see, so you understand the lesson and then you learn a lot, so you score very high on your posttest.

J: yeah you know, the first time, when I got a tab reservoir I just made up, but I just find all.

J: The files tab back now I have 11 I have my, but I still talk with my family I not good, well.

Angela Fu: So you learn the through all these multimedia materials with music videos and then you learn a lot?

J: practiced with your that's why I can't be the video and.

J: let's listen when they talk no video on the YouTube and I copy again and I listen.

Angela Fu: Very good that's how you learn very well just keep doing that.

Angela Fu: The media materials that you learned more.

J: yeah Thank you.

Angela Fu: You are very welcome, do you believe that, working with a group or working with everybody else in the classroom makes your learning phrasal verbs easier or more challenging?

J: I know I don't I don't know show now some handle the ball lyda chasing sometimes people lie the razor well but not too much that the ball like.

J: You know that's why I always I just stay in my dream, when I talk about race of work if you lie, you can miss than me and you're not lie you just.

Angela Fu: Okay, I see what you mean so you don't like working in a group sometimes people don't listen.

Angela Fu: Very helpful, so the multimedia materials are very helpful and what about learning online, I mean do you like studying on zoom or do you like having classes in person like face to face in a classroom?

J: yeah I think face to face not, no, no, because somehow you practice with to read and though a Nada about now, can you tell me why you bro you know, and you and Brett it and the another partner, have you.

J: know how you don't cry.

Angela Fu: Okay, I understand what you mean so saying face to face, you can ask questions or ask your classmates to help you, but it's really difficult for you to ask questions all the time it takes up your time right, yes, so I miss teaching the real classroom, is this your first year first semester?

Angela Fu: How many years have you been studying English?

J: In my country, I study English when I go to school high school.

J: High spot. yeah.

J: But um you know my country and not learn by that lie up as here know Everywhere you speak English, but my going to always be with me.

J: yeah that's why different and very deep, because when I talk about English.

J: When I go here.

J: I have been here to have here, I can learn the bottling English I get I can understand when the my customer talk everyone talk and I understand I work but somehow I always scale when I talk, because I think Dean Ambrose the work that's why I talks very slowly.

Angela Fu: That's very good so talking slowly, is a good thing, because you making sure people understand you right that's very good and here everybody speaking English, so it helps in learning English class.

Angela Fu: Yes, and do you have any like difficulties or bias, when you learn English or through the technologies like do you have any issues when you use technologies?

J: I always listen most.

Angela Fu: You listen mostly so you don't use technology, have you used like Google translation or either technology during the class?

J: Well, I have the APP are the.

J: World the fantasy. and

J: The APP right up and see and on the APP always planned for me about English know Vietnamese.

Angela Fu: It's an APP right.

J: yeah this is APP on the apple.

Angela Fu: Okay, what is it called what is the Apps name.

J: Okay, I tell you okay I tie.

J: You can because I talked to Brian.

Angela Fu: Thank you.

J: up on me, because when I go to.

J: Colorado I have the one last listen and respect and teacher tell me.

J: This one, and you can when I'm when you understand the work you can put a here and explain English no but now me.

Angela Fu: Very good, very good so you're using technology to learn English.

Angela Fu: Yes, good.

J: At this level, a lot of.

J: The work.

J: A lot of the yoga and you understand, but the two and three, the world you understand, and you learn easy.

Angela Fu: Yes, that's very true.

Angela Fu: yeah and so you think the multimedia materials are useful and helpful you're very interested in the multimedia and you're very successful in their post hats, so do you have any like suggestions or any questions about the phrase over lessons?

J: know I always lie the teacher when talk with me about something for very new with me, I always learn about that I that's why I know never asked question.

Angela Fu: Very good, very good, so you have no questions do you have any questions for me?

J: No, you always very good.

Angela Fu: Thank you.

J: you'll have a lot of your ball.

Angela Fu: yeah.

J: Very funny.

Angela Fu: Thank you I' m trying.

J: yeah.

Angela Fu: It is here that I' m trying to help people learn and make fun of the learning process.

Angela Fu: So I'm not.

J: worried question.

J: yeah where you come from.

J: China yeah I think what I still thinking you meet the Korean.

Angela Fu: A lot of people told me that I am like Korean.

Transcript 4: Student Pseudonym -- Anna

Angela Fu: Can you tell me about your learning experience on phrasal verbs?

A: Yes, I learned in this.

A: Class visual get up.

A: Wake up.

A: Going okay endo and so.

Angela Fu: phrasal verbs that's a lot.

A: Yes, yes that's a lot.

Angela Fu: yeah I wonder, do you enjoy learning phrasal verbs through comics?

A: Pictures yes.

Angela Fu: Music, do you like.

Angela Fu: Yes, yes.

A: Yes.

Angela Fu: Can you learn phrasal verbs through our pictures comics music and videos and TED Talks at home?

A: A yes.

Angela Fu: So when you watch movie do you do you write down the phrasal verbs or when you listen to music, do you write down the phrasal verbs.

A: Yes, okay.

Angela Fu: How do you learn English like how many years have you been learning English?

A: or 10 years that when he is.

Angela Fu: One year.

A: Okay yeah.

Angela Fu: How did you learn English? Just from school? Do you do anything at home?

A: And not just an school because I have baby at home, I do my homework and how, so I I do my homework and hot, so I have baby at home, she is the nighttime she sleep, and I can do my homework, because she is two years she cannot she said, this is my computer, this is my This is my book, I can.

Angela Fu: Not so easy.

A: yeah yes, because he she not understand I miss Daddy she said, that is my computer and how, so I have, I am the class she I think he or she said, this is my book, this is my know I can that is difficult sorry.

Angela Fu: Do you think the pretest and posttest are difficult for you?

A: Oh I'm sorry, you can repeat again.

Angela Fu: Do you think the phrasal verb tests are very difficult and very hard for you?

A: Yes, I think.

Angela Fu: They're very difficult.

Angela Fu: Yes, and.

Angela Fu: Do you think the music lessons and the video lessons help you learn phrasal verbs?

A: Yes, yes, I think I think that's helped me.

Angela Fu: So that is helpful and useful, and can you tell me more about like when you do the test which part is the most difficult part, like the word of phrasal verbs or a sentence or the language, what do you think is the most challenging and difficult part for you to do the test?

A: I think the testers I, I think that is the time is.

A: 30 minute, but I not understand, that is, that is our That is our fourth time that's two hours I don't know but.

A: I submitted after that I know that I have, I have time to submit it, but I think the time is soon I submitted.

A: I can get some good the pointer that with that.

Angela Fu: So you think if you have more time, you would do a better job.

A: On the test, yes, because I have baby at home.

A: I submitted by.

A: that's typical yes.

Angela Fu: OK, I see.

A: Thank you.

Angela Fu: I wonder, do you like having class online on zoom or do you like our class we have class in person like face to face?

A: I think the island northern guess good.

Angela Fu: Online learning is good.

A: Because yeah that's good I can take it to the class, but every.

A: Yes, that is good and learn and learn in this course Okay, because I have bb at home, my my homework is I can do at night and how, so I can see.

A: This page well that's good that is good, yes, I think, and learn on this, because I have baby at home, like everyone take care of my baby I am only at home.

Angela Fu: It's very convenient so you can have the class, at the same time, and take care of your baby that's good.

Angela Fu: Have you learned phrasal verbs before our lesson like have you learned phrasal verbs in your home country or in your native language?

A: No, no.

Angela Fu: No okay you've seen it's very difficult right?

A: yeah because that is the first time.

Angela Fu: First time.

A: Yes.

Angela Fu: I'm glad that I'm first time that I'm teaching here phrasal verbs.

A: Take you. and

Angela Fu: Can you tell me about like your learning phrasal verbs by using music or videos or pictures like how did you learn phrasal verbs by using the music lyrics videos and pictures and comics?

A: Yes, I learned again.

A: See the video you if you send it.

A: I see that, but he has that's good that's good.

Angela Fu: Ok, do you like the matching activities like the matching exercise when we do it during class the matching one like I have the phrasal verbs and I have the meaning and ask you to do the matching practice, do you think that's helpful?

A: Yes, yes.

Angela Fu: Okay, so, in general, using the phrasal verb lessons are very helpful and useful for you.

Angela Fu: Do you have any questions or suggestions for the phrasal verb lesson?

A: No, no, thank you.

Angela Fu: Any questions for me.

A: And no Thank you so much.

Angela Fu: Thank you, thank you very much.

Transcript 5: Student Pseudonym -- Judy

Angela Fu: I see you did pretty good job on your posttest, so you have a big score change, I want to know how did you learn phrasal verbs?

Angela Fu: And what do you think about the multimedia materials that I gave you during the class like using comics pictures, videos, music and TED Talks so I wonder what do you think about this, and can you tell me about your learning experience on phrasal verb and how did you improve your score?

J: yeah in the first test and the prettiest because I doesn't think about time I hardly it's I have like more.

J: More time so I was really careful to talk about the answer, so I didn't think about the time and honestly I answered on a question, I think, and I, and that time I saw.

J: It was it said, if your time is like you can do.

J: Oh, my time was finished yet.

Angela Fu: Okay, I see So the first time, you did.

J: exciting time.

Angela Fu: Hello.

J: Hello.

J: Yes.

Angela Fu: Can you hear me? I hear you okay.

Angela Fu: I am, yes, I'll become so it stopped the one you say, the next time the next test, so I didn't get that so, can you please continue about your learning experience and posttest.

J: On posters well at that time I was like I was saying, the thing about the time I said, because this the post test, I think we had a 15 minute or.

J: It was more than the protest, so that time I had only I had I I did the all.

J: Question so on, I was really fast, so I was, I was scared to.

J: My time is a is going to finish so and after I finished, I saw I have more time so.

Angela Fu: Okay, do you think the test is difficult for you or it was okay.

J: It was OK, but some like the first word for me it was.

J: More for other words it was like the first time I saw the further there are no use the phrasal verb so the.

J: Before like coming or something some phrasal verbs.

J: I hit, but I didn't know if this is phrasal verbs oh.

J: yeah I know I know some further where we are cannot be used, and this is faster web, so this is like phrasal verbs has like a.

J: super bowl inseparable phrasal verb so Now I know a little bit yeah.

Angela Fu: Learning phrasal verbs is difficult For you.

J: And I know because some time because in because when we talk in in like in our conversation or daily, we can use the prison the phrasal verbs like when the when some.

J: guest coming to our House and we say come in, please are like.

J: Get out like we sometime us with our kids put away or something so this is not some further words, it was new for me and I after.

J: You teach in the class and I I searched in my phone in YouTube and I saw video, and it was it has a lot of phrasal verbs so it was interesting for me to learn.

Angela Fu: Okay, interesting and do you think the multimedia materials like music videos pictures are useful?

J: helpful and yes.

J: Yes, of us.

Angela Fu: Okay, are you going to use music videos tech talk to learn English for yourself?

J: And no because.

J: We are not like.

J: We don't put like you know our faith or something in the media, so I will use like in my conversation I will, in my like speaking when I speak like the outsider with my friends, I will.

J: I will use maybe Paris in.

J: France over here.

Angela Fu: I see in the future if you learn English are you going to use YouTube videos or TED Talks or music to learn English?

J: In the future, yes.

J: Of course I always use then usually the YouTube videos are used the video to learn English yeah, of course.

Angela Fu: Good, and do you have any like technology bias or issues when you learn English through technologies, for example, when we are in class have you used like Google translation or other mobile Apps to translate the words and everything, have you used technology during class when you learn English?

J: And in in the class in the me, because this is my second my second semester I a learning English and last time it was in.

J: And this is the next sometime if I don't know the meaning in my language, so I have to check, I have to use the Google translate some words if I don't know so I have I I searched in the.

J: Google translate that word I sometime I asked for my husband, so he he's here his English is good to us, usually I asked my husband so sometimes I'll use the Google translate but not during the class because that time my kids are at home, and they are using the phone.

J: So, usually I don't have their phone.

Angela Fu: OK, I see, and do you think the matching practice the matching exercise when we use when we do it in class is helpful for you.

J: So first, of course.

J: Name yes.

Angela Fu: Yes, like you do with me or would you like to do it with like for yourself at home?

J: So, so when you teach it when you teach us, so this is a good idea to the new you teach us and you showed the.

J: pictures and the comics it was it was really helpful, so the video you put in the during the class the video it was helpful so.

J: This, it was a good idea for to learn better.

Angela Fu: I'm very glad to hear I'm very glad.

J: and happy so much I.

Angela Fu: If I can provide you more examples, or more practice more exercise on phrasal verbs What would you like me to add more?

J: So uh like I said the video when you put the during the class the video it was it was better it was like.

J: We learn better from like from the picture, like the video when you put the video in that class, it was better, it was clear so everyone, I think it was that the meaning and they use it.

Angela Fu: I see some more video examples and more pictures examples would be helpful and useful for you Okay, and I have another question.

Angela Fu: Do you like we have class on zoom like this, or do you like we have class on campus like face to face in a real classroom which way, do you like better?

J: I think in the classroom will be better because some it was a lot of more people and they someone asked the question so we learn more.

J: Better then, then the between me and you because maybe they have different question for different and meaning or different using the freezer world, so I think it will be better.

Angela Fu: I see so in meeting in the classroom you're able to ask questions and help each other and learn from your classmates right?

Angela Fu: My next question for you is what you think is the most helpful thing, like, for your success our post is studying from teachers or yourself or your group members or your classmates?

J: Think to study for myself is better because when I always learn in the class. I take the picture for your pictures and the freezer words, then I write in the in a notebook I have notes in my notebook and I'm studying some time if I had time I'm studying and using the phrasal verbs and sometime before I have a question I asked for my husband and my kids to be helped me.

Angela Fu: Okay, very good, so you will like to learn by yourself, instead of working with a group with your class Okay, and as I have another question is, have you learned phrasal verbs before in your home country or in your native language.

J: No.

Angela Fu: Yes, so do you have any questions or any suggestions for my lessons.

J: No, thank you so much I think you're doing really good and I'm really happy to.

J: I am learning English, the Semester a learning English like.

J: The writing and reading class and.

J: I learned the freezer work too so I'm really glad, and thank you so much you're doing good.

Angela Fu: Thank you I'm happy because you're happy.

Angela Fu: For me.

J: yeah no Thank you so much.

Angela Fu: Okay, thank you, thank you for your time, thank you.

Transcript 6: Student Pseudonym -- Jack

Angela Fu: Okay can you tell me about your learning experience about the phrasal verb lessons? For example, do you think there are multimedia materials like comics videos tech talks and music are useful and helpful for you to learn phrasal verbs.

J: Yes, Yes. The internet.

Angela Fu: Do you think the Internet, the videos and the comics and music are useful for you?

J: Yes.

Angela Fu: Yes, do you think they are helpful for you to learn English.

J: Yes, of course.

Angela Fu: Are you going to use music or videos to learn English by yourself?

J: I used to watch video.

Angela Fu: You watch video to learn phrasal verbs that's good.

Angela Fu: What do you think about the matching exercise? Do you remember that we did the matching exercise on the Internet so phrasal verb and the meaning and then you match the correct meaning with the phrasal verb do you think that's helpful for you?

J: Yes, I get it.

Angela Fu: You get it, you understand that right?

J: Yes, okay.

Angela Fu: What are the reasons that you get the good score on your posttest?

Angela Fu: How did you learn so well? Have you learned phrasal verbs before?

J: No.

Angela Fu: This is your first time.

J: yeah.

J: This semester is of course time I bought me.

Angela Fu: Is this your first English class in America.

J: And no, it's my second semester.

Angela Fu: Second semester first year second semester Okay, how many classes are you taking? are you a full time student?

J: I take this semester corner session grammar listening speaking, writing.

Angela Fu: Ah, so you're a full time student.

Angela Fu: Okay, it must be very busy, and do you like studying online like now, or do you like, when we can meet in class like we can meet face to face which classroom do you like better?

J: I think.

J: These two pieces comfortably walk me so.

Angela Fu: So you think face to face classes help you more instead of learning online?

Angela Fu: Okay, and do you think I'm using multimedia like videos music and pictures is important for you to learn English.

J: Yes, of course.

Angela Fu: So it's a, it is important Okay, and I have a question on technology issues, do you have any technology issues when you have the lessons, do you have issues when you fill out the questionnaire? Do you understand how to use that technology?

J: Yes, I understand. yeah.

Angela Fu: Okay, good and do you use any like tools or software or Apps to study English?

J: Oh, I started yet.

Angela Fu: Okay, do you think all the multimedia materials are interesting to you?

J: I am interested, engaged..

Angela Fu: Engaging. What about working in group do you like working in group with your classmates or do you like study by yourself?

J: Isaac working group with you my class.

Angela Fu: Working Group work with the class okay.

Angela Fu: Do you think phrasal verbs are difficult for you?

J: Yes, difficult.

Angela Fu: Okay, so anything else you would like to share with me about your English learning experience?

J: Ah, I saw increased experience.

Angela Fu: You have so much experience Okay, have you learned English in your home country?

J: I study English in USA.

Angela Fu: Only here, not in your home country okay, how many years have you been in the United States?

J: Three years.

Angela Fu: Three years.

J: yeah.

Angela Fu: OK I see, and do you have any questions for me?

J: No, no questions.

Angela Fu: No question oh good Okay, and if you would like to give me a suggestion or example for me to improve the class um What would you like to tell me?

J: I don't know.

Angela Fu: You don't know but are you seeing the phrasal verbs are useful and then that's I'm very happy.

Angela Fu: Okay do you have any questions, for me, or do you want to ask me anything.

J: No questions.

Angela Fu: No questions Okay, so now I'm going to stop recording.

Transcript 7: Student Pseudonym – Monica

Angela Fu: OK, now we are recording. The recording is only for me to write my paper.

M: Okay Angela, is it the recording for others?.

Angela Fu: No it's just for me.

M: Okay, because it's my first time they've paraphrased bear with you holly yeah.

Angela Fu: Your first time, you did very good job.

Angela Fu: Do you think the pictures images and comics videos and music are useful and helpful when you learn phrasal verbs?

M: Yes.

Angela Fu: Yes, are you going to use our music or movies or TED Talks for yourself to learn English in the future?

Angela Fu: Yes.

Angela Fu: And how, what do you think about the matching exercise, so the matching exercise we did in the class is a phrasal verb matching the correct explanation of the correct meaning, do you think that activity is useful for you?

M: Yes, yes, yes.

M: Yes, yeah it's more bear with me.

M: When you have imagine you remember very.

Angela Fu: You see the image, it helps you remember right?

M: Yes.

Angela Fu: very good.

Angela Fu: Do you think that all the multimedia materials are very interesting to you when you learn English?

M: Yes.

Angela Fu: Yes, Which part of the multimedia learning make you feel like overwhelmed or boring?

M: No, no, no, no, no okay.

Angela Fu: Good and what do you think what are the reasons that are make you so successful in learning phrasal verbs and doing all the pretest and the pulse had so good so well?

M: Okay, can you repeat please yes.

Angela Fu: My question is how did you learn and do the pretest and posttest so well and so successful?

M: Some time.

Angela Fu: Take your time no rush.

M: Okay, I don't know, maybe, maybe.

M: Maybe I understand.

M: Because when I learned I reading is important.

M: In the day wasted was significant this intense.

M: uh huh because it's my first time they prefer I learned before so I'm a little led prophesied para no complaint with you touch me don't pass those.

Angela Fu: Okay, so you basically learn everything in the lessons and then that's how you get the good score that's very good score you only made one mistake that's very good.

M: A way, I mean, so this is your glasses very was very good, because the Professor is allowed his is not easy, because before the preposition maybe change the distinguished in demand in your class first, for me, for me, you testing and Barry.

M: And then the memories is better.

Angela Fu: Ah, the Amish are good at attracts you to learn and then help you remember a better right.

M: Exactly okay.

Angela Fu: Very good.

M: I don't have that multimedia method for studying. For example, the teacher dependent on the professor and I had other classes before, on different topic different reading and writing gramma in my life when the teacher try to teach. They don't like you. You help us imagine the example with pictures and learn more.

Angela Fu: Okay, so what you mean is I'm not like other professors, using pictures really help you a lot when you learn right?

M: Yeah, depend on the teacher, how is your class with imagine within the job with the comics and songs, good.

Angela Fu: How many years have you been learning English?

M: Oh, a little, my English is very bad.

Angela Fu: Your English is good.

M: For example, now, you don't know my idea is very confused.

Angela Fu: I understand you very well.

M: Sorry yeah.

Angela Fu: No problem, you're very good student.

M: I try, my daughter is very good student.

Angela Fu: Ah they're very good students um I have a question about technology, do you use any Apps or educational technology like tools are online to learn English?

M: Yes.

Angela Fu: Yes, what technology do you use?

M: Google.

Angela Fu: Do you use like any software's or tools or Apps?

M: YouTube premium. I buy a different book how I need them, for example, two months ago I bought different textbook.

Angela Fu: Different text book? Excellent! Are these textbooks electronic version or books like this.

M: Book like this.

Angela Fu: Okay books like this.

Angela Fu: Your textbooks have a lot of pictures images in it or just plain text no pictures?

M: Mixed.

Angela Fu: Mixed. You like multimedia very good. Does your daughter help you learn English and improve?

M: Not so much. Because they study in day and not too much time.

Angela Fu: Did they help you on the tests?

M: I do for myself.

Angela Fu: You learn by yourself, very good very impressive and I have a question, do you like taking courses taking classes online, or do you like classes, when we can meet face to face in a real classroom?

M: Okay, can you repeat again, I feel sorry.

Angela Fu: Yes, so do you like a classroom like what we are doing right now online, or do you like the classroom that we can go to school, and we can meet face to face and meet the teacher and then practice which class do you like better?

M: I enjoy all the plus gamma pronunciation in reading and writing better, for me, this time from for me was very more easy because you know look good are we with the car, drive them in by the word for four other way is. Holding my family's the room there the rain wrong in. In my diary has a glass it had a class are in one room he all in together.

M: Plus drive time. I like the online yes.

Angela Fu: You like online because you don't have to drive right? you can just study at home.

M: Maybe other person at school.

Angela Fu: And what's your favorite part when you learn phrasal verbs with me?

M: I have the memory, when you show me imagine, is it very useful for me when you imagine.

Angela Fu: With the examples you like the examples, yes Okay, if there are anything that you want me to improve or any suggestions, what would you say like what would you recommend.

M: These materials I have you for me, is good for me because you show me the alternative, you ask the question with alternative, this is better with the Asian when they will be the videos so you are good, Professor.

Angela Fu: Thank you, and between music and video which one do you like better.

M: The music yeah.

Angela Fu: Music and the videos movies.

M: When I see that. Yes, in a music a film.

Angela Fu: For the phrasal verb lesson do you remember that there's one day we play we learn phrasal verbs using music and there's one day we use movies and videos to learn phrasal verbs know which one do you like better music or movies?

M: I think movies.

Angela Fu: movies Okay, and do you think learning with a group is more helpful or learning by yourself is helpful?

M: For my experience by myself.

Angela Fu: Learning by herself.

M: A person work different, for me is most difficult in working group.

Angela Fu: OK, I see, and do you have any questions for me?

M: No, I hope to have you with them. You career with this. The video we say and remember.

Angela Fu: Do you think phrasal verbs are difficult for you to learn?

M: And time difficult.

M: Time because you learn this and not too much. For a movie or more, the palace of our bear is difficult in different sentence, you need exercise more in song. Summer on the next week I learn more depressive prayer because it's important always retain use the pair of a pair.

Angela Fu: Did you review the phrasal verbs before the test?

M: Yeah.

Angela Fu: You're reviewing so you're taking notes and you review your notes are phrasal verbs.

Angela Fu: OK, I see.

M: But I need more, because this is only a little, but it was very interesting because all they are more and more all I do this way or this is mean different I it I how I team.

Angela Fu: I help you think a lot and motivate you to learn right? So that what you're saying, I understood.

M: I am so sorry. I am bad with my speaking.

Angela Fu: You're very good. Be confident. just speak it out so your English is fine you're doing just fine.

Angela Fu: Anything you want to share with me like your learning experience and phrasal verbs are learning English in general? About multimedia or anything you would like to share your opinion?

M: No. Good for me. Okay.

Angela Fu: Thank you very much.

M: You plus for me for us very interesting very interesting because never I had never told a learned them better software. Game Information for me or their information for me for studying English.

Angela Fu: A good beginning for studying English.

M: More English.

M: For you Angela you enter this class in never I made you the other class in the in the class I learn more English.

Angela Fu: English okay I'm really glad to speak with you because I really learned a lot from your opinion from your speaking from your sharing is very important for me yeah not every student saying you.

Angela Fu: You are very honest, thank you, thank you very much for honest for being true to me.

M: Thank you.

M: For your passion, thank you.

Angela Fu: Thank you and good luck to your learning English learning.

M: You too.

M: Very sousaphone your life.

Angela Fu: Okay, thank you, I will try my best.

M: Okay, thank you Angela bye-bye.