COMPARING THE EFFECTS OF TRADITIONAL AND VIRTUAL REALITY ENHANCED
TASK-BASED LANGUAGE INSTRUCTION ON CHINESE L1-ENGLISH L2
KNOWLEDGE OF PHRASAL VERBS

BY

ALEXANDER B. BURKEL

THESIS

Submitted in partial fulfillment of the requirements
for the degree of Master of Arts in Teaching English as a Second Language
in the Graduate College of the
University of Illinois at Urbana-Champaign, 2018

Urbana, Illinois

Master's Committee:

 Associate Professor Randall Sadler, Chair
 Assistant Professor Xun Yan

ABSTRACT

Until now the authenticity of materials used in Language Learning, and the context in which they are used, had been debated in a favorable light (Chomsky, 1965). Using current Virtual-Reality (VR) technology in the classroom has the potential to increase the authenticity of the context in which students perform meaningful tasks and allows us to combine different theoretical and applied approaches to Second Language Acquisition (SLA) such as Task Based Language Teaching (TBLT) and Total Physical Response (TPR) (Asher, 1969). This study examined the learning of phrasal verbs (PV) by three groups (n=21 each) of Chinese-L1 ESL intermediate to advanced proficiency learners. Participants completed Session 1 which consisted of a PV proficiency knowledge test used as a pre-screening test, as well as a language background questionnaire. Those who showed little-to-no knowledge of the PVs being tested were called in for Session 2, for which participants were split into three groups; a control group and two experimental groups. Participants in both experimental groups first received a list of the PVs being tested and were shown a short 10-minute video presenting the PVs and their definitions in a traditional-style classroom format. After this, the participants in the task-based group practiced showing their understanding of the meaning of these verbs by completing a semi-guided VR game[1], in which they adopted the role of a cook in training, completing tasks in an attempt to get hired; whereas participants in the other traditional group completed a traditional practice where they had to insert the most appropriate VP (from a textbox) in several contextualized dialogues. After completing each of their respective practice portions in session 2, the participants of both groups were asked to take the same PV knowledge test they had been

---

[1] *Job Simulator* [TM]

given during session 1, and again a week later, to assess potential gains over time. Participants in the control group only completed the PV proficiency knowledge tests in session 1 and were given the same PV knowledge test as the other groups for the following sessions. Overall, my findings show that participants in the experimental VR group showed larger gains over time compared to the control and other experimental group, particularly regarding the figurative PVs.

This study aimed to investigate the use of the HTC Vive™ (a virtual reality headset) to increase the acquisition of Phrasal Verbs by intermediate proficiency ESL learners. We incorporated the factor of VR into Task Based Language Teaching to give participants a communicative meaning-based task with a more immersive and authentic setting. Preliminary results suggest that VR offers a more authentic scenario for vocabulary learning, than traditional practice, leading to greater learning gains. In addition, responses from my debriefing questionnaire suggest that participants also perceived this practice as a more positive and encouraging experience, which mirrored real-life situations for them.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

CHAPTER 1. INTRODUCTION

If there is an area that differs between L1 and L2 language acquisition it is the learning

context, the amount, and the quality of input. Whereas native speakers start acquiring their

language from birth in a naturalistic environment and have years of rich input and interaction

with other native speakers, L2 learners, at least in the U.S., tend to start learning a foreign

language in their teens (if at all) preteen years, in a classroom context where input is often

limited in use and not as authentic as in a naturalistic environment. As proposed by Long's

(1996) Interaction Hypothesis, learners will only be able to communicate successfully if they

engage in authentic interaction with other learners, or ideally native speakers of the target

language. This interaction creates opportunities for them to assess their knowledge of the

language and to put it into practice. Language instruction has proven to be extremely helpful for

L2 learners when compared to naturalistic exposure alone (Norris & Ortega, 2001).

Within the last few years, Task-Based Language Teaching has emerged as a new

approach to language learning that forces L2 learners to interact and engage in tasks (that are not

always explicitly linguistic in nature), providing a more authentic context for communication

(Ellis, 2003). Technology has proven to help enhance Task-Based Language Teaching making it

more authentic, meaning-focused, and learner-centered (González-Lloret, 2017). Well-designed

technology mediated tasks can be more holistic and authentic, they also require digital skills that

are particularly valuable in our current society, especially among L2 learners attending our

classrooms, which Prensky (2001) refers to as "digital natives," students who were born into the

midst of the age of digital communication and do not know a life without it. Additionally, the use

of technology can also be a great advantage for linguists that aim to test if context authenticity

plays a role in SLA (Seliger et al, 1989), since technology is able to bridge the gap between L2

learners and the more naturalistic environment that is missing from the classroom. One of the goals of the present study is to use Virtual Reality (VR) as a tool to contextualize a task. We examine the acquisition of Phrasal Verbs (PV) by Chinese L1-English L2 learners (who are currently ESL learners and enrolled in ESL classes) by assigning them to two different types of instructional intervention: traditional (drill-based) and task-based (with virtual reality) instruction. Chinese students have previously predominantly been exposed to traditional instruction (Jumin et al, 2017; Rao, 1996), therefore we predict that traditional instruction will still show to be beneficial; however, we do not know how they will respond to a more communicative instruction where they could learn phrasal verbs through a more authentic-based interaction. This study is twofold, we examine (a) the effects of traditional and task-based instruction on Chinese L1-English L2 (ESL) learners, as well as (b) the use of technology (the latest virtual reality gear in particular) to enhance Task-Based Language Teaching.

CHAPTER 2. LITERATURE REVIEW

2.1 Second Language Acquisition Theory

2.1.1 Interaction

Previous research has shown that the role of interaction in language learning is of the upmost importance (Long, 1996). The role of interaction is its capacity to enhance SLA by creating complex oral feedback loops. When language learners are made to interact with each other, they are prone to making mistakes, but unlike in written speech where there is no immediate feedback, oral interaction allows for immediate feedback between the speakers. This immediacy helps learners know exactly where their mistakes lie, and get corrective feedback allowing them to be more aware of the types of mistakes they tend to make and be able to correct themselves by recasting the incorrect speech segment (Swain, 1985). According to Long (1996) modifications to discourse structure (e.g., negotiated interaction and modified input) indirectly facilitate SLA. Through interaction L2 learners revisit their previous assumptions of the L2, and it allows them to explore language that they would not produce in written form, as they have less time to think about what they are going to say, since they need to respond in the moment to maintain the flow of the conversation. This process aids in making them become more automatic in their production. Interacting with native speakers is even more efficient at honing this process, as the feedback will be more frequent, and the overall errors have a higher chance of being spotted and corrections being made to them through feedback, as native speakers will be more adept at noticing them, compared to another non-native. An additional benefit is that native speakers will produce forms that might be underused in a more formal classroom setting but are forms that are found to have a much higher use in everyday native speech. With this, we return to the Krashen's Input Hypothesis (1985), which states that L2 input must both be comprehended

and be at a stage above the learner's current level (i+1) to be acquired. As mentioned above, when interacting with a native speaker the odds of encountering new forms will occur more often than with speakers of the same level that share a common knowledge pool. An added stipulation to the Input Hypothesis, is that the learner must be emotionally receptive to the input, or, in Krashen's terms, their *affective filter* must be low.

This study attempts to demonstrate that VR can provide greater immersion, which fosters a lot of authentic interaction, and authentic input. It helps with implicit unconscious learning of the language (rather than through explicit recitation of the rules) aiding in the process of learning. The more immersive environment, and implicit nature of the task-based instruction, should satisfy the conditions for lowering the *affective filter*, allowing participants to be more receptive to making mistakes, and integrating corrections offered through immediate feedback.

Meaningfulness is another aspect of task-oriented approaches and lacked by decontextualized drills that has been shown to be more effective in terms of learning. Technology-mediated tasks should be aimed at moving away from being grammar focused, as is more traditional with drill-based instruction, and have a focus on meaning. To do this they must be leaner-centered, attempting to adequately take into consideration the needs of the students, and reduce the time spent listening to the instructor, and rather interacting with each other. The technology-mediated tasks should also focus on drawing from real-world situation, to be as authentic as possible, so that the use of language reflects real-word language processing and provide for higher-order learning (González-Lloret, 2017). Students (and adult learners in general) can feel very uneasy at speaking, if they are not confident in their own abilities, so they tend to avoid using certain grammatical structures that they consider hard to comprehend and produce. By virtue of being under-used, they are unlikely to improve the use of those same

structures. However, if the focus of a task is on meaning and not on form, mistakes will appear as miscommunications that are not perceived as lacking for native speakers' skills, but an occasion to negotiate the meaning that is trying to be conveyed and allows leaners the chance to display many language tools to accomplish this: paraphrasing, substitution, asking for clarification, circumlocution (Selinker, 2009).

We will attempt to demonstrate that with the help of technology-mediated tasks, the focus can be shifted from form to meaning. Given the feeling of immersion provided by VR, students should lower their *affective filter* and engage in communicative strategies when they are confronted with a miscommunication, in turn helping with the process of learning.

2.1.2 The role of interaction in SLA

Long (1996) established that interaction is a crucial element needed to mediate input and output in language learning. This is the basis of his Interaction Hypothesis. He puts forward the idea that one of the most important aspects of learning a language is being able to maintain a conversational, two-way flow of information. When this flow is interrupted, a need to negotiate meaning arises, and the speakers must attempt to tackle the point of contention through a joint effort of making themselves understood. By making mistakes and being faced with an obstacle to the progress of their flow of communication, learners are required to engage in a negotiation phase of learning, during which they are paying closer attention to their errors and revisiting previous existing knowledge to try and fix the current misunderstanding. According to Schmidt's (1993) Noticing Hypothesis, learners must notice something to be able to acquire it, and interaction with other learners or native speakers would provide situations rich with the chance for learners to encounter breakdowns in communications and to reflect on their own language to negotiate meaning. In addition, interaction offers a variety of types of feedback, including being

given the correct form when they are interacting with native speakers, increasing the possibility that learners comprehend that there has been some sort of miscommunication forcing them to revisit their linguistic inventory and formulating a new utterance with the additional input provided by the feedback to get a clearer message across.

Many methodologies recently emerging, TBLT in particular, are grounded in the Interaction Approach (Gass & Mackey, 2007), which draws on Long's (1996) Interaction Hypothesis. They posit that language learning requires the presence of interaction, but interaction which aids in making input comprehensible, gives feedback on attempts to use language, and pushes learners to modify their own output to render it more target-like. It must also assist natural learning and give learners the linguistic knowledge they need to engage in communication. Therefore, authentic input (exposure to language in real life contexts e.g. using Spanish to buy food in a Mexican market) is better in this regard for long-term learning than decontextualized exercises and drills (Grammar Translation, Audio-Lingualism).

We can see this interactivity emphasized in the role of feedback in the Output Hypothesis (Swain 1985) and the Interaction Hypothesis (Long 1996). Teachers would need to create tasks that require students to bridge a gap in their linguistic knowledge to be completed. This would be similar to manufacturing an internal motivation to learn. Students would focus on the end-goal of accomplishing the task, and not focus on their lack of knowledge. The context of this task is the aspect which is the least difficult to manipulate, and the focus of this context would be its authenticity within which the task is being asked to be performed. By having students perform tasks, with clear instructions, we are giving learners more time to focus on the gap in their knowledge.

2.1.3 Previous methods of enhancing language leaning.

In the case of traditional instructed SLA there is a limited frequency and amount of exposure to the target language, as well as limited opportunity to use the L2 in meaningful social context, leading to a lack of interaction opportunities. Wells (1987) formulated the theory of Situated Learning, which claims that learning involves an active engagement in the building of the knowledge or skill that is presented to the learner. The process of learning essentially becomes interactional in nature, between both the leaner and himself and the learner and the instructor. The language learning context in-class suffers from two problems compared to this goal. First, the distance from the target language culture and its speakers. Second, Situated Learning emphasizes the role of socio-cultural context for language learning.

One practical implementation of the integration of these two points has been tandem learning. Tandem learning involves two language learners who each are native in the target language that the other wants to learn. This co-dependent relationship fosters a student-centered approach to learning, as each partner takes a turn becoming the language tutor and the other the tutee, this relationship has been perceived as highly motivational as the partners are on equal footing in the situation (Ushioda, 2000). Tandem learning has been successfully implemented in person, through e-mail, and MOO. VR headsets bring this sense of being there in person, but without the need to be physically present. Foster defines VR as a "form of immersive, synthetic environment which creates the feeling of presence or suspension of disbelief is sufficient to make the user feel that the artificial world which they appear to inhabit is 'real'" (Foster & Meech, 1995, p.210). VR strives to immerse the user in a learner-centered and leaner controlled virtual environment, which leads to higher cognitive engagement than traditional classroom learning. VR is an improvement over traditional tele-conferencing systems, as it removes the elements

around the user that usual lead to a loss of immersion. The VR headset completely covers the eyes and ears of the leaner, so all they can see is the virtual world and all they can hear are the sounds of the virtual world. This feeling of immersion is hard to replicate with other current technology assisted language learning tools.

Another form of technology enhanced language learning is Computer Assisted Language Learning (CALL). Grgurović et al. (2013) conducted a meta-analysis of 37 CALL studies suggesting that second/foreign language instruction studies supported by technology were found to be as effective as instruction without technology (which my study shows when comparing the two instructional groups to the control group). This step is of importance to the current study, as suggesting using a technology that is not at the very least as effective as current technology-enhanced is a failed venture.

Cerezo et al (2014) found that technologies like e-tutors (interaction of learners with machines) and synchronous computer mediated communication (SCMC), allowing the interaction of learners with other learners and teachers to collaborate over the internet, promoted second language development at the grammatical and communicative level. Overall, there is ample evidence that computer technologies do foster enhanced engagement, attention, motivation, and feedback for language learning but lack the crucial component before, of being truly present in the target culture (Grgurović et al., 2013). Virtual Reality has the potential to take a step forward in the direction of overcoming this last issue.

Total Physical Response is a theory that was based on several pilot studies of language learners who demonstrated the ability to retain a close to perfect recollection of target units that they were being taught. This was achieved by combining the input of the target form with the output of a physical action (Asher 1966). Beyond this main point, Asher (1966) described that

the physical acting-out gave the learners intense motivational power sustaining their interest and effort. Based on the results of the previous studies, we could assume that other forms of physical response might show similar results. Therefore, in the present study the element of physical interaction with the environment that is made possible with the use of VR is so interesting. The input that the participants will receive can produce a physical output and can in theory help with their retention by the participants.

The above-mentioned theories are compatible with task-based language learning and teaching principles where experiential learning, authentic language, and communicative goals, are emphasized (Doughty & Long, 2003; Long, 2000; González-Lloret & Ortega, 2014; Norris, 2009).

2.2 Interaction and language instruction

2.2.1 Language Instruction

Language instruction has proven to be more beneficial than naturalistic exposure to the L2 (Norris & Ortega, 2001); However, the ongoing debate these days is about what type of instruction is best for L2 learners. Although explicit instruction (versus implicit instruction) has consistently shown to be the most effective instructional intervention (Norris & Ortega, 2001; Spada & Tomita, 2010); there is a growing body of research that investigates other instructional interventions that focus more on the role of communication, such as communicative language teaching, and task-based language teaching in comparison to traditional drill-based language instruction. The learners that took part in the present study come from China where foreign language classes are often taught with a drill-based methodology, which has seen some push-back as of late in the United States (Liao, 2000; Rao, 1996) In the US, the communicative methodology is being widely adopted as the new standard for language learning, and so there is

9

ample opportunities to try new teaching methodologies on L2 learners who are not accustomed to such methodologies. This provides an optimal scenario for instructed-second language acquisition researchers to compare the effects of the different methodologies in use, on their language learning. The present study aims to compare two different teaching styles, one more drill-based and branded "traditional," to another more communicative, and heavy inspired from TBLT.

Unlike traditional instruction, task-based language instruction (TBLT) posits a clear focus on meaning, rather than a more traditional focus on form and requires that there be a gap in the learner's knowledge that is being filled by meaningful interaction between learners or the teacher and learners (Ellis & Shintani, 2014). In TBLT attention to form occurs while students are performing the task, however the attention to form always comes second to the primary aim which is one of communicative use of the language to achieve an outcome. Different from traditional instruction, TBLT is characterized by its learner-centered approach (Long, 2015; Willis and Willis, 2007; Shekan, 1998). The learners learn by using by interacting with other speakers in the target language with the goal of accomplishing a non-linguistic task. This is implemented to replicate the conditions of a naturalistic learning of an L1. The educational philosophy at play is that of *learning-by-doing* (Ellis & Shintani, 2014). This type of instruction is especially helpful for ESL students who are already immersed in the target language, as they live in the country where the target language is spoken. In addition, TBLT dictates that the task itself should match real-world activities that are performed by native speakers of the target language, to increase the likelihood of the forms produced matching those found in more natural speech, and by consequence show situational authenticity (Willis & Willis, 2007).

In recent years, there has been an increase in technology use for teaching and language purposes. Technology has been used a way to increase the authenticity of certain meaning-focus activities. González-Lloret & Ortega (2014) have proposed the use of technology-mediated tasks that are learner-oriented and take into account the learners 'needs and wants for language as well as their digital skills'. In addition, they argue that tasks should also provide more opportunities for higher-order learning as part of principles of experiential learning (Dewey, 1997). The current study explores the use of technology and the learning-by-doing educational philosophy by using Virtual reality in the task-based instructional intervention.

2.2.2 Virtual reality and language learning

Virtual Reality (VR) is becoming one of the most important research topics to date in the fields relating to computer generated graphics, and it has today become widely used as an indispensable tool in virtually every major sector (Carson, 2015; Williams, 2017). Up until very recently, the financial hurdle of setting up a VR training program has typically restricted its accessibility to research universities, large corporations, and the military (Loureiro & Bettencourt, 2014). However, the field of VR has gained immense popularity in recent years. From its earliest conceptions as seen in science fiction stories, to its bulky and expensive hardware iterations in earlier applications, today VR is once again on course to becoming a common household product. The mainstream commercialization of VR by companies such as Oculus VR (owned by non-other than Facebook), HTC, Samsung, Google, and a plethora of user-driven Kickstarter companies, is driving VR to be ever more accessible and affordable. Gaming companies are heavily advocating for the development of VR on desktop, mobile, and console platforms using the recent surge in popularity of VR, to drive research into streamlining the hardware. This is evident with the popularization of VR even within the mobile market,

where with the use of an inexpensive perforated cardboard mount (Google Cardboard VR) users are able to fit most current smartphones into this easily set-up contraption. These types of mount are in effect creating a highly portable, affordable, head-mounted VR display, which are able to mimic the basic functionality of more expensive VR headsets, at a fraction of the cost and using smartphones, to which it is predicted that by 2020, 58% of the world's population will have access (Wu, 2016).

Through increasing progress in both the hardware and software aspects of this technology the previous financial drawbacks of the device are being overcome and are finally allowing VR to transition from existing only in research and development labs, into a much more portable, easy-to-use, device. The focus that will be taken in this paper is the validity of its usage in education, and more specifically language acquisition, now that it is becoming mainstream and can be made more readily available to the education sector, at a much smaller price.

The twenty-first century is marked by rapid technological advancements (Friedman, 2005) that are creating a new type of classroom learner. This latest generation of learners have spent their entire lives immersed in a digital environment of computers, video games, music players, video cameras, cell phones, and many other digital user interactive devices (Baker, 2010), These learners have come into this world expecting every facet of their life to include an interactive digital aspect. According to Baker (2010) an average K-12 student spends close to 8h a day using any number of these digital medias. The students of tomorrow will come to crave a more direct and interactive school and learning process. In the United States alone, upwards of 85% of states have a public virtual school or online initiative program, with most of those virtual schools showing annual growth rates between 20 to 45% (Watson et al., 2009). This country-wide trend should be reason enough for such technologies to be given a fair consideration for

improving the way knowledge is taught. Technology's pervasiveness is ever increasing, and so deserves to be embraced when it is shown to be an effective tool.

Virtual Reality technology utilizes computer graphics to create a realistic world that responds to a user's physical input. In other words, VR is an interactive experience in which the user is effectively immersed in a highly responsive virtual environment, allowing its users to feel as if they are a physically integral part of the world that they are seeing before them. The focal point for this study being that in this VR environment users are not simply immersed in the environment, feeling like they are present in the virtual world, they are also fully capable of interacting with this environment in meaningful ways. Using VR technology, the environments that are able to be crated are no longer simply a context in which users perform a language task, they are a part of the task itself, by its very nature of being able to be acted on. *Meaningful* conveys that interaction is no longer a background aspect of learning, but a main one, and one where the user is not only able to react to the content of the virtual world, but that content of the world will react back by producing instantaneous feedback.

There are many more breakthrough technological projects in the works that will not be able to be explored in this paper, but which are working on providing not just audio and visual feedback, as provided by the VR headsets available today, but will provide in the near future haptic-feedback, which adds the sense of touch to the increasing spectrum of user-interactive technologies (Lee, 2017). In the very near future, as prototypes of this type exist already, you will not only be able to see a whole new virtually generated world, not just interact with it, but feel it on your fingers that to an array of minute hydraulic pistons that replicate the sensation of touching things through small pressure point being applied to the fingers

Nevertheless, this VR technology has become more accessible to the public through the release of more portable, easy-to-use, devices. The focus that will be taken in this section is the validity of its usage in education, and more specifically language acquisition, now that it is becoming mainstream.

2.3 Role of virtual reality in language learning.

The main pillars of VR being built on are: immersion, sensory feedback, authenticity, and interaction. The first three features are dependent upon interaction to be able to be properly implemented (Dawley, 2007). These features make VR an ideal tool for second language acquisition as they can enhance immersion, promote interaction, and can provide a more authentic environment for task-based language learning, which traditional instruction fails to do it because it is bound to a school setting and decontextualized, non-collaborative drill-based practice. (Carpenter & Finn, 2006). Today, school leaders can implement virtual education to expand the school day and connect students to learning opportunities that were once prohibited by physical limitations. Ludlow (2015) holds that the educators have not yet understood the benefits of VR and this technology can enhance students' learning experience, helping language instructors move beyond the current SLA classroom environment. The present study used VR technology, in the form of a cooking game, to enhance task-based language learning with a more authentic context that we believe will enhance interaction and will ultimately test the *learning-by-doing philosophy* (Ellis & Shintani, 2014). Given that Chinese learners have previously mostly been exposed to traditional instruction (Jumin et al, 2017; Rao, 1996), some grammatical constructions and vocabulary that are not prominent in a formal context, such as the target forms in this study, are rarely covered. The use of a game would be ideal for the target form examined

14

in the present study, which is prominent in informal environments and recurrent when following

cooking instructions.

2.4 Technology enhanced language learning.

Using Virtual Reality for teaching English is tantamount to playing an educational

oriented game, and what learners gain from educational games is the sense that they are having

fun and that learning becomes an implicit aspect, at least from their point of view. Games also

create an emotional investment in the task at hand. If we can combine a learning task and an

emotional investment, then we have a learner who will become invested in learning (Kapp,

2012). Another major aspect of the gamification of educational tools, is motivation. Games are

very efficient at engaging the user, by fostering a feeling of internal motivation, since they are

rewarding the learners with a positive feeling of accomplishment (Muntean, 2011). The

immediacy of the sense of reward felt by accomplishing tasks in a game is another way to feed

back into the motivation of wanting to continue improving. The learner becomes motivated to

continue feeling rewarded (Dicheva et al, 2015). Through a positive-loop of emotional

investment, reward, and motivation, gamification proves to be a powerful tool in any teacher's

belt. A good educational tool makes the learners want to come back and continue to use it, not

the other way around. The way the game used in the study is set up, it is possible to avoid

negative feedback or a sense of failure, because even when the participant is unsure of how to

proceed, they are given the option of negotiating the miscommunication by interacting with the

other person involved in the practice. A more agentive role in interaction results in higher

learning outcomes of L2 grammar, and explicit feedback appeared to be more effective with

complex structures and higher proficiency levels (Cerezo, 2010; Hsieh, 2007; Mackey, 1999), all

of which is found in the present study with: the interactional element of the VR game, the

provided element of explicit and immediate feedback from the person giving the instructions, and the intermediate to advanced level speakers participating in the study.

Metacognition plays an important role in this process, as learners are put in situations where they are faced with having to self asses they ability to complete the required task but are given easy ways to move forward from the obstacle by interacting in the target language, about the target form (Dimmitt & McCormick, 2012).

Lastly, the game can be used not just as a practice, but an assessment tool since it possesses many similarities with drill-based activities: quick turnaround, replicable in very similar conditions will all learners, can be used to both practice and assess understanding. However, games can be changed to suit different goals and needs, while drill-based can only follow a very narrow set of outputs. That was originally one of the appeals of drill-based activities, to be valid and reliable in assessment (Wiggins, 1993). Another advantage of using Virtual Reality over other teaching technologies is that it is so new and was originally meant for the entertainment industry. New technologies have the advantage of attracting investors who see a potential future return in their rapid development. Being a part of the entertainment industry is also a strength because there is already a huge player base to build on, and therefore investing time and money in something that has guaranteed users will interest investors as well. Older technologies are sometimes based on antiquated ideas, or technology that is slowly being replaced by newer ones. A consequence of this diminished financial return on many established technologies is that they will often turn to the users and ask them to pay recurring fees to continue financing this old technology. The Vive is currently a single price for the hardware, and then through a browser-based eShop, called *Steam*, gives owners access to a plethora of free and

single payment software, which can then be used ad-infinitum on an unlimited number of learners.

There are also some inherent issues that may arise with the use of VR to teach language. The issues that are considered for this study are independent from the learning of the target form itself and apply to simple human limitations. What is asked of language learners is to be fully concentrated on the subject at hand, whether the instruction and forms are explicit or not, as the focus required to completing the task is paramount for the acquisition of the target form.

The virtual reality gear and virtual environment provided has the potential of taking away from the focus on meaning that this study is trying to foster. The environment is meant to complement and enhance the feeling of authentic language input. Therefore, it must be taken into consideration that language learners might not be familiar with the workings of the VR gear which might hinder their learning of the phrasal verbs, since they could end up being unable to complete the task, and not receiving the input necessary for the learning process to take place.

2.5 English phrasal verbs

English phrasal verbs have been an indispensable part of modern English. This study is greatly motivated by the pedagogical necessity that are presented by phrasal verbs, which possess an immense power of expressing meaning, to EFL learners. The basis of language has been shown to consist largely of a multitude of ready-made constructions. A large number of studies have been conducted of these phraseological units (Granger 2005; Wray, 2002). Words are more than often unable to be regarded alone when considering their definition, and so we must turn to the accumulation of words within a context to shape their meaning (Stubbs, 1995; Lennon, 2005; Lesniewska, 2006). One such special group that is of great interest to researchers

are Phrasal Verbs. They are distinct from other phraseological targets and require their own separate study.

Phrasal Verbs (PVs) are lexical units consisting of a verb and an adverbial particle functioning as a single verb (Celce-Murcia & Larsen-Freeman, 1999), and are ubiquitous in English. In fact, there are very few non-Germanic languages that have phrasal verbs; and despite the common belief that they are usually found solely in informal speech, they are, in fact, widespread in both: written and spoken language, and in formal and informal registers (Cornell, 1985) although they are highly discouraged by English instructors in English academic writing and speaking classes (UIUC ESL program). Although native speakers of English use phrasal verbs preferentially over their more simplistic single-verb expressions, non-native speakers do not seem to share this preference. Non-native speakers of English produce very few phrasal verbs in their spontaneous speech (and will more often than not, make errors when they do), generally avoiding using phrasal verbs, opting for more semantically transparent combinations over their obscurer counterparts (Dagut & Laufer, 1985; Yorio, 1989). Phrasal verbs are an important component of native-like spoken discourse and not using them can make non-natives sound stilted and unnatural in speech (Siyanova & Schmitt, 2007).

A more in-depth analysis shows that PV consists of a verb with a particle. These compound verbs have been given many different names and are defined in various ways by different researchers. Baldwin and Villavicencio (2002) conceive phrasal verbs as a head verb combined with one or more specific particles, in the form of an intransitive preposition, adjective, or verb. They are generally viewed as a verb and invariable particle that act as a single unit, both lexically and syntactically (Liao & Fukuya, 2004), but that can also jointly behave as a single lexico-grammatical unit (Scheiner, 2004).

18

In the last twenty years, SLA researchers have used psycholinguistic methodologies to help them analyze the language processing of native and non-native speakers. The use of these cutting edge online methods has proven crucial to SLA, which assumes that L2 acquisition happens through the processing of input (VanPatten, 2004). Language processing, and more specifically sentence processing, is the process by which oral or written input is assigned meaning. It becomes obvious that for input to be processed efficiently, the input needs to be given in context. As with PV, the words in a sentence do not consist of a list of unrelated pieces, instead, these words hold a structural and meaningful connection that lead to one or sometimes various interpretations. This can be why phrasal verb should be used in a context that gives learners the possibility to process them within the context of a sentence, rather than just by the definition of their meaning.

Sentence processing necessarily involves a syntactic analysis of the sentence allowing the learner to identify a syntactic role for the words that constitute the sentence, as well as an analysis that involves the use of semantic and pragmatic information to come to a plausible interpretation. This sentence parsing is characterized as being an incremental, rapid and an automatic process. A recent study showed that participants read formulaic sequences faster than non-formulaic ones, suggesting formulaic sequences have a processing advantage over common sequences, regardless of whether they were used idiomatically or literally. This was found to be true for the non-native group as well, suggesting that once acquired it is possible for them to benefit from the same processing advantage. This shows the necessity of making the formulaic sequences be integrated into a more direct and autonomous response system (Conklin & Schmitt, 2008).

The present study will attempt to introduce the PV through oral input that can then be processed by the learners in part due to the sentence within which they are given, as well as the overall authentic context of the task they are assigned to complete.

2.6 Chinese learners of English and phrasal verbs

An important aspect of successful language learning is the mastery of idiomatic forms. These expressions whose meaning is not predictable from the usual meaning of its constituent elements are also referred to formulaic sequences. As previously mentioned, the present study will study the acquisition of phrasal verbs, which fall under this definition through their being polysemous, transitive, intransitive, or even di-transitive, and their final particle can be either omittable or obligatory (Villavicencio, 2003). These formulaic sequences can be difficult to teach because their form and function often do not fit into the regular molds which the learners have previously created. The reason for this is that the internal inspection which usually takes place coding and decoding the strings of words cannot be applied to these formulaic sentences. The initial assumption is that the acquisition of formulaic competence is different from that of other components of communicative language, and so it would be linked to the everyday reality of the culture of the target language. This social and physiological integration of the learner with the target language group is known as acculturation (Schumann, 1986).

With the increasing spread of newer educational methodologies, traditional instruction in China is undergoing unprecedented changes. In the past, Chinese students have experienced many difficulties in developing communicative competence in foreign language (FL) courses. This is due to pedagogical approaches used by native Chinese-speaking teachers of English in an educational environment grounded in Confucian precepts for teaching, learning, and educational roles and responsibilities (Rao, 1996). More recently, we see new thoughts and approaches being

continuously put forward from the West, however, old conventions and customs have proven to be difficult to reform. Beginning with the education revolution in China, we have seen a shift in the impact of modern educational methods on traditional teaching methods (Jumin et al, 2017).

The limitations stem from a more traditional teacher-centered classroom and the use of rote-memory strategies. The introduction of massive open online courses (MOOC), to reach an unprecedented number of students, and the rise of *flipped classrooms*, where the practice that is traditionally set for outside the class is now done in-class, are amongst some of the changes seen happening with the typical Chinese education reform methods. Burnaby & Sun (1989) previously established the various constraints on attempting to implement modern language-teaching methods in China, including the context of the wider curriculum, the prevalence of traditional teaching methods, class sizes and schedules, the access to resources and equipment, as well as the low status of teachers who teach communicative rather than analytic skills. The newer generation of students are therefore amid a reform that is entirely on par with the integration of more technology in the classroom as a successful tool for language learning. The communicative approach was mainly applicable in China only for those students who planned to go to an English-speaking country. Hence, these students should be more open to change, with the use of newer digital technologies, and despite its novel use VR could prove to be an excellent resource to practice certain aspects of language learning. The use of VR should seem like a natural step in the same direction as other changes that we are seeing happening in the educational setting. It is important that the students feel at ease with the format of the practice, otherwise it might hinder their leaning process of the more complex structures taught (González-Lloret, 2017). The present study will therefore attempt to use VR as a way of practicing a more complex English structure.

Phrasal verbs are one such structure regarded as complex, because some of the main characteristics that can be applied to most phrasal verbs are: being polysemous (*make up* has eight separate meanings), they can be transitive, intransitive, or even di-transitive, and their final particle can be either omittable or obligatory (Villavicencio, 2003). Finally, and of interest to this present study, Dagut & Laufner (1985) suggest that they can be separated according to their idiomaticity: Literal (e.g. to stand up) or figurative (e.g. to pig out). A same phrasal verb can even possess different levels of idiomaticity. Unfortunately, there seems to be a shortage of research on L2 learner's acquisition of formulaic sequences.

The above-mentioned intricacies of phrasal verbs can be the origin of the great challenge for L2 learners to master them, particularly when being taught in classes that are more teacher centered and students are given limited usage practice in class. This instruction is limited in the type of register, formal or informal, as well as the content covered which is for the main part devoted to grammar explanations and decontextualized vocabulary. As a result, Chinese learners who are exposed to a more traditional educational setting often show limited, to no knowledge of phrasal verbs which are significantly more recurrent in less formal environments.

In their study, Dagut and Laufer (1985) found that in cases were native speakers would preferentially use PVs, more than half of the time the non-natives would entirely avoid them, choosing semantically clearer version. Another layer of complication is added to the use of PVs if we consider literal vs. figurative PVs. According to Dagut and Laufer (1985) literal phrasal verbs are those whose meaning is a straightforward product of their semantic components. For instance, in the PV go up, the particle "up" specifies the direction of the go action. On the other hand, figurative phrasal verbs are those in which a meaning has resulted from a metaphorical shift of meaning and the semantic fusion of the individual components. For instance, the PV *turn*

up: The addition of the particle "up" to the verb "turn" creates a new meaning for the compounded lexical unit.

Learners of English have been shown to avoid the use of PV compared to their native counterparts. Several research studies have found that non-native speakers (amongst which Chinese learners of English) prefer to use more literal than figurative phrasal verbs (Dagut & Laufer, 1985; Hulstijn and Marchena, 1989; Laufer & Eliasson, 1993; Liao & Fukuya, 2004; Mcpartland, 1983; Siyanova & Schmitt, 2007). When they did know some sequences, they tended to overuse them, which made them once again sound less fluent and non-native like in their writing (Granger, 1998).

Liao & Fukuya (2004) in particular, examined if Chinese learners of English avoided the use of PVs and if figurative PVs were avoided more often than literal ones. In addition, they examined if the avoidance of PVs affected if they were perceived as more or less native-like. Their results showed that Chinese learners did avoid using phrasal verbs overall, compared to native speakers, and that figurative verbs were increasingly avoided over literal ones. The same phenomenon was found across several different L1 backgrounds, with figurative PV being regarded as the most difficult for ESL/EFL learners (Celce-Murcia & Larsen-Freeman, 1999). Liao & Fukuya concluded that learners tended to avoid using sequences that they do not properly understand, suggesting that figurative PVs are more difficult than literal PVs for Chinese learners of English at the interpretation and production level.

Chu (1996) examined if Chinese learners of English could understand the meaning of figurative PVs and studied which meaning Chinese L1-English L2 learners would choose from PVs that could have both a figurative and literal meaning with a translation task. Her results confirmed that Chinese learners of English struggled more with figurative PVs (0 to 38%

accuracy) than with literal ones (over 85% accuracy). In addition, they also found that participants were more likely to use the literal meaning than the figurative one when translating, suggesting that they did not fully understand the semantic meaning formed by the fusion of the verb and the succeeding particle.

This difficulty associated with figurative phrasal verbs have also been observed with other English learners which according to Siyanova and Schmitt (2007), try to decode the meanings of the individual words, as they will often process the "phrasal verb" unit as if it were a sentence, formed by two separate units which each have they own distinct meaning. Adult L2 acquisition of formulaic expression is considered to be related to the achievement of fluency (Wray, 2002). Formulaic expressions are also considered to be an effective assessment point for separating lower and higher levels of L2 English proficiency (Laufer & Waldman, 2011; Verspoor, Schmid, & Xu, 2012). This would help to explain, at least in theory, why formulaic sequences are so hard to acquire, as they are amongst the last to be acquired in the L2.

Learners need to be made more aware that not every sentence can be broken down into its individual words, and that words are able to combine and take on new meanings. This study introduces the explicit instruction of this point during the second session, to give the students analytical tools to be used for the processing of the target forms.

2.7 The present study

The present study aims to study the effects of traditional as well as task-based language instruction (with integrated virtual technology) on Chinese L1-English L2 learners' knowledge of English phrasal verbs. The motivation behind this is to showcase the effectiveness of using current technological devices in aiding Chinese students to learn PV more effectively. I posit the following three research questions and hypotheses:

1.   Do Chinese L1-English L2 learners benefit from traditional instruction on

English PVs?

2.   Do Chinese L1-English L2 learners benefit from task-based VR enhanced

language instruction?

3.   Do these types of instruction help more with literal or figurative phrasal verbs?

Based on previous research, I predict that traditional instruction will be beneficial for

Chinese learners given that it is an approach that they were, until recently, more accustomed to,

and it is a more common one in their culture. Explicit instruction has also shown to produce

some effect on learning, but not as much as when the students are engaged by the method by

which it is delivered. Regarding task-based instruction, to the best of my knowledge, I do not

know of any empirical studies that examined the effects of task-based instruction (with virtual

reality) on Chinese learners; therefore, I adopt a null hypothesis. Finally, based on previous

research mentioned above (Chu, 1996; Liao & Fukuya, 2004) I predict that Chinese learners will

do well with literal phrasal verbs but might not learn or perform as well with figurative phrasal

verbs. If the use of technology has any long-lasting effect on these predictions, it has yet to be

demonstrated through further research.

CHAPTER 3. METHODOLOGY

3.1 Participants.

Participants in this study were all Mandarin L1-English L2 learners. They were recruited from a Midwestern University's English as a Second Language (ESL) classes, which included both graduate and undergraduate level classes. According to the University's admission pamphlet, to attend this university, students whose native language is not English, need to provide proof of having received a minimal TOEFL score of 79-102 (iBT), 213-253 (CBT), or 550-610 (PBT) to get a "Limited Status Admission." If they scored below this bracket they were not admitted. However, if they scored above they satisfied the full status admission, which allows them to forego the requirement of taking ESL classes.

For those who fell within the bracket, the ESL classes became a requirement of their admission. The classes are meant to assure that the international students are instructed on the basics of English academic writing standards. To be placed in these ESL classes, students needed to first take part in an English Placement Test (EPT), the result of which allowed the students to be assigned into the different sections (found in each corresponding academic level separated once more by their grad/undergrad grouping). This means that the participants had a TOEFL score that meant they were advance users of English. The aforementioned literature shows us that despite their overall level, Chinese L1 speakers demonstrated having difficulties understanding and producing PVs due to their L1 which does not possess any direct equivalents. Therefore, the participants were chosen on the basis of their L1 and L2 to insure they did not have a knowledge-transference advantage due to their L1. Additionally, their further participation in the study was hinged upon a 50% accuracy cut-off value after the pre-test, on the basis of their knowledge of the target PVs being tested. In other words, they were only allowed

to participate in the study if they showed less than 50% accuracy in the PV tested during the pre-test. However, it is important to note that this cut-off could lead to some downsides, in terms of the generalizability of the results, as it means that the results of this study would only apply to niche of students who do not know certain specific PV. In the future, to obtain results that are more applicable to the general student population, the results both with, and without, those students could be provided. The meta-analysis of those two groups could lead to some findings.

There were 25 participants who were dropped during the course of the study. 19 of those were dropped on the basis of the above-mentioned "50% accuracy cut-off". The reasoning behind this drop being that the study is attempting to analyze the rate of acquisition and retention of phrasal verbs. If the participants already knew too many of the verbs, it might have skewed the final results. A few additional participants' results were dropped if they admitted to having studied the phrasal verbs independently at any point in time during the course of the two to three weeks of the sessions. The reasoning again was to avoid any discrepancies in the results affecting either of the groups, but more importantly the control group serving as the evidence of a baseline to compare the other two groups.

Table 1. Participant Biographic Information

	L2 English (n=64)		
	M	SD	range
Age	19.5	2.3	18-32
Age of acquisition			
Chinese	0	0	0
English	7.7	3	3-16
TOEFL scores	101	7.2	80-111
Understanding	26.2	2.5	19-30
Speaking	22.6	2.2	15-28
Reading	26.9	2.6	18-30
Writing	25.1	2.6	19-30

In the end, a total of 64 native Chinese, English L2, speakers (36 males, 28 females) were

included in this study. Twenty of them were assigned to the traditional group, twenty were

assigned to the task-based group, and 23 were assigned to the control group. They were aged 18-

33, and the vast majority of them were in the United States for their first year of university

studies, and mostly reported using English exclusively for classroom purposes. None of them

had previously spent any significant length of time in an English-speaking country. More

biographic information can be found above, in Table 1.

3.2 Materials.

There was a total of three tests (pre-, post-, and delayed posttest) intended to measure

gains in accuracy over time. Each test consisted of 28 items, using phrasal verbs (PV). These

phrasal verbs were adapted from Liao and Fukuya (2004) and made to fit the cooking theme

chosen in the task-based practice. This theme was chosen because of its relevance to

international students, and anyone in general, who needs to feed themselves every day, as well as

because of its application within the VR game that was chosen for the task-based Practice, called

Job Simulator™, and which included a selected setting that puts users behind the counter of a

restaurant kitchen. A full list of the experimental item is provided in *Figure 1* below. Fourteen of

these phrasal verbs are considered to have a literal meaning (i.e. to pull down) and 14 have a

figurative meaning (i.e. to pig out). Participants were asked to define these PVs, and then attempt

to use them in an example sentence they were asked to provide themselves. In addition to these

tests, participants completed a language background questionnaire given at the very beginning of

session 1 (Pre-Test), as well as a brief questionnaire targeting their perceived level of current

knowledge of phrasal verbs before and after session 1 and session 3, with the goal of self-

assessing their learning gains.

Literal phrasal verbs:
Turn towards, look around, lay down, pull down, throw in, throw out, slide down, fill up, warm up, stack up, pour out, flip over, push in, pull off.

Figurative phrasal verbs:
Pig out, switch out, single out, crack open, turn up, put out (extinguish), carry on, show up, get over, serve up, make out, pop open, point out, count on.

Figure 1. List of phrasal verbs tested

Participants in the experimental groups (task-based and traditional instruction) watched a

10 minute-video-tutorial where an English instructor provided a definition of the targeted phrasal

verbs and would then explained the meaning of the PV with various examples throughout. One

such example of a definition and a preview of tutorial-video can be seen in *Figure 3*. It shows the

setting of the instructional video, which was aimed at mimicking a teacher-centered classroom

setting, despite it being a recorded video later played on a computer. The Instructor within the

video announced each PV, which would appear on the whiteboard behind her in bold blue letters.

Then as she explained what the PV meant, a brief one sentence summary of her explanation

would appear below the already displayed PV. Then the explanation was accompanied by an oral

example of the PV being used in a given sentence.

Participants in the traditional instruction followed the viewing of this video by

completing a fill-in-the-blank practice that consisted of 28 scenarios where the required phrasal

verb portion was left blank. They were provided with a word bank at the top that contained the

28 targeted phrasal verbs and were instructed to complete the gaps with them. An example can

be seen in Figure 2 below. The correct answer being "*POP OPEN*"

[Xin and Anna spent all day preparing their weekly food. By the end, they were so tired that they didn't feel like making another effort. They decided to ----------- a bottle of beer, and just relax for an hour.]

Figure 2. Sample fill-in-the-blank practice

Instructor says: "*To pig out, means to eat a lot of something, very fast; Just like a pig. An example: Anne was very hungry, so she went to the Burger King and pigged out on five hamburgers*."

Figure 3. Sample video-tutorial

On the other hand, participants in the task-based group took part in a task built with VR where they were asked to prepare two meals as a way to test their sous-chef skills for a job interview. I used the already existing Job Simulator™ virtual reality game (available to Vive users) and muted the volume of the in-game instructions and administered my instructions which contained the targeted phrasal verbs. See *Figure 4* for a visual image of the game interface.

Figure 4 is a screenshot, taken directly from one of the video recorded task-based practice sessions. In it there are several elements of importance. In the top-middle, we can see the green colored computer screen character that was an avatar appearing in the virtual world, representing the person giving the instructions to the participant. In the middle-right we can see the red grill, used to cook the meal required of the participant to accomplish the given goal. On the grill are several of the kitchen utensils used during the practice: a lemon, a bottle of grape juice, a bottle of olive oil. In the lower-left and lower-right of the picture we can see the white-gloved hands that were a representation of the participant's hands within the virtual world. In the far right we can see the sandwich the participant has finished making and served up on a plate. The participants hands were at a 1:1 positional tracking, meaning that they were always represented in the virtual world exactly where the participants hands were found in the real world.

The Vive Virtual Reality Headset is composed of three distinct pieces of hardware. Two of them are directly used by the participant: The headset to see the displayed images; which is worn over the top of the face, covering the eyes like a ski mask of sorts, and the two remote controllers; which are splayed with different buttons and held in the hands to interact with the virtual world, see *Figure 5*. The blue straps are meant to be strung around the participants wrists, in an effort to avoid he controller slipping out of their hands. The third and final two pieces,

31

called the base stations, are a set of small square-shaped detection devices that use a vast beam of

infrared light to estimate and coordinate the global position of the controllers and headset, within

a delimitated space. Together, these three pieces of equipment allow for a highly precise display

and positioning of the user within a 3D environment.

The headset is connected to a computer by a cable and has two small screens within it

that are designed to be positioned at a safe distance in front of the eyes. The controllers and

headset are connected to the base stations through infrared. The base stations relay the

positioning of the headset and controllers, back to the PC by Bluetooth. No alterations to the

commercially available equipment or software was necessary for this study.

Pictured to the left in *Figure 6* is a participant wearing the VR headset and holding the

two controllers, giving him the impression of being fully immersed within an interactive

restaurant-kitchen. Leading from the headset is the single video-cord with caries the images of

the virtual world, from the computer back to the small displays within the headset. Standing in

front of him, is the instructor who is giving the live oral instructions, helping the participant in

completing his tasks. Behind the instructor is the screen showing a live feed of the virtual world

that is being display in the headset for the participant.

Figure 4. Task-based practice

Figure 5. The Vive headset and two handheld controllers

Figure 6. Participants wearing the VR headset

In addition to these tests, and instructional materials, participants also completed a debriefing questionnaire, and two debriefing questionnaires targeting participants' subjective knowledge of phrasal verbs at the pretest and delayed posttest stage of the study. This language background and debriefing questionnaires were also administered via Google forms.

Every aspect of the study was designed in a manner that would allow for it to be administered in the most efficient way, accessed from any internet capable device, and most importantly be able to be replicated indefinitely by anyone with access to the same readily available tools as needed for this study. The best choice for this to be accomplished was Google Forms, which are documents stored on Google's online servers and allowed for on-the-fly access and editing. Google Forms also have some basic excel data sheet analysis happening in the background, which provide a preview of some of the data that it is collecting during the study. Each session was administered in person, but the Google Forms allow for them to be administered remotely, if need be, which can be very helpful if a participant is unable to come to an appointment for any reason. The script for the second task-based group session was written with this replicability in mind, and was annotated with instructions for both the participants, to be read during the session, as well as details "instructors notes" that gave pointers to any other researcher who would want to know wat to expect, and how to administer this part of the study. Similarly, all the data collected during the entire study was stored in Google Sheets.

3.3 Procedure

Participants came in to the Second Language Acquisition Lab (SLAB) for session 1 where they completed the pretest, which lasted on average 30 minutes. It included the language background questionnaire, and a pre and post debriefing questionnaire targeting their subjective current knowledge of phrasal verbs. Only participants who scored less than 50% in the pretest

were called in for session 2. Session 2, which lasted on average 45 minutes, took place in the Virtual Reality laboratory[2], in this session participants in the experimental groups watched the video tutorial defining and exemplifying the targeted phrasal verbs. Afterwards depending on their assigned group, they completed the fill-in-the-blank practice (if they were assigned to the traditional group) or the VR practice (if they were assigned to the task-based group). The traditional group completed a fill-in-the-blank practice that is akin to a traditional in-class quiz.

It consisted of 28 items, each one a kitchen themed situation between two friends, which always ended with a sentence requiring the use of a PV. The PV were provided to the students as a word bank, with the instructions that by the end of the quiz each PV was to be used, and only once. The task-based group took part in an interactive practice session that required them to wear a VR headset and use two handheld controllers. They were immersed into a virtual restaurant kitchen, and asked to accomplish a set of tasks, for which they received oral instructions on how exactly to complete these tasks. The oral instructions made use of the PV, and the participants were told they could interact freely with the other participant who was giving them their instructions.

Immediately after, both groups completed the immediate posttest. Participants in the control group only completed the pre-, post-, and delayed posttest, they did not receive any kind of instruction. The time between session 1 and 2 varied based on participant's availabilities but was kept at a minimum, and at most at around 4-5 days. Session 3 took place a full week after session 2. During this final session participants were asked to complete a delayed posttest and debriefing questionnaire targeting their subjective current knowledge of phrasal verbs, as well as their overall impression of the study and the parts in which they participated. Total testing time

---

[2] In the Armory building at the University of Illinois at Urbana-Champaign

(including all three sessions) was approximately 2 hours and participants received extra credit for

their participation.

CHAPTER 4. RESULTS AND DISCUSSION

In order to answer my research questions examining the effects of type of language instruction and the effects of this on the type of phrasal verb I computed accuracy scores for items and participants and analyzed it via mixed-effects logistic regression using R (R Development Core Team, 2014) with the lme4 package (Bates, Maechler, Bolker, & Walker, 2015). My fixed effects were time (pre/post/delayed posttest), instruction (traditional, tasked based, control), and type of PV (literal, figurative). My first model contains results from the two types of phrasal verbs together and can be seen in Table 5. The results of this model (Table 5) yielded a main effect of time showing that participants performed significantly better in the immediate posttest and delayed-posttest compared to the accuracy scores of the pretest. In addition, I found a main effect of instruction for the traditional and task-based groups, showing that participants in these groups performed significantly better than participants in the control group. Finally, I found a significant interaction of Time with both types of instruction (traditional and task-based) showing that participants in these groups improved significantly from pre-to posttest.

Table 2. Mean average scores by group over time both types of phrasal verbs

	Control		Task-based		Traditional	
	Mean	SD	Mean	SD	Mean	SD
Pre	23	7.3	23	6.9	22	8.8
Post	22	7.8	47	5.9	46	7
DP	23	8.1	45	6.5	42	7

Table 3. Mean average scores by group over time figurative phrasal verbs

	Control		Task-based		Traditional	
	Mean	SD	Mean	SD	Mean	SD
Pre	4.9	2.3	4.9	1.9	4.9	2.1
Post	5.1	2.2	11.5	1.7	11	1.9
DP	5.3	2.2	10.9	2.2	10	2.4

Table 4. Mean average scores by group over time literal phrasal verbs

	Control		Task-based		Traditional	
	Mean	SD	Mean	SD	Mean	SD
Pre	6.3	2.4	6.6	2	6	3
Post	5.8	2.5	11.9	1.8	11.5	2
DP	6.3	2.6	11.2	1.7	10.7	2.1

For each of the above Tables, the standard deviation and mean were calculated over time for each of the three groups: control, task-based, and traditional. Table 2 is for all phrasal verbs, Table 3 for figurative PV, and Table 4 for literal PV.
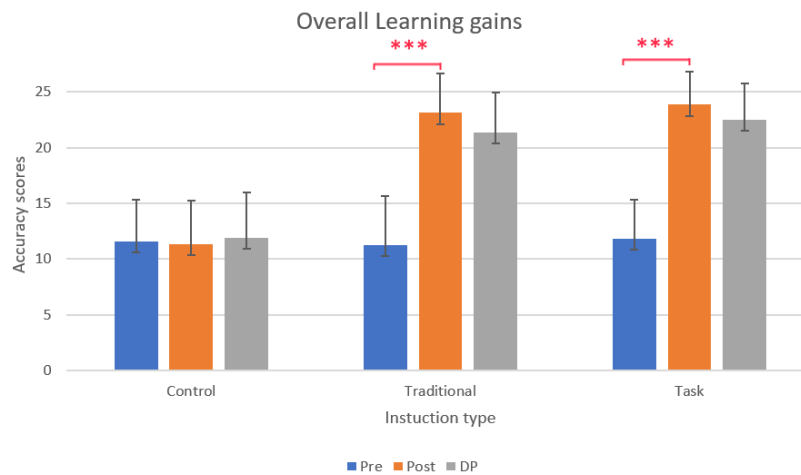

Figure 7. Overall accuracy scores over time

The results found in *Figure 7*, which show the overall accuracy scores of all three groups over time, clearly demonstrate that there is a significant gain in accuracy between the pre and posttest for the traditional and task-based groups. This makes it clear that it was the type of instruction given to the groups that had an impact on their PV accuracy, as the control group, which received no instruction at all, did not improve in any significant way between either the pre and posttest, nor the post and delayed posttest.

The difference of accuracy between the traditional and task-based groups on the posttest was not significant, despite it being slightly higher for the task-based group. The same can be said between the same two groups for the delayed posttest; the difference of accuracy between them was not significant, and even though only marginally so, there is once again a very slight higher accuracy for the task-based groups over the traditional one, in terms of overall accuracy on the delayed posttest.

What can be said based on the given results is that instruction seems to play a significant role in the acquisition of PV. However, the type of instruction, be it traditional or task-based, had no significant impact.

Table 5. Logistic regression output. Accuracy scores for both types of phrasal verbs

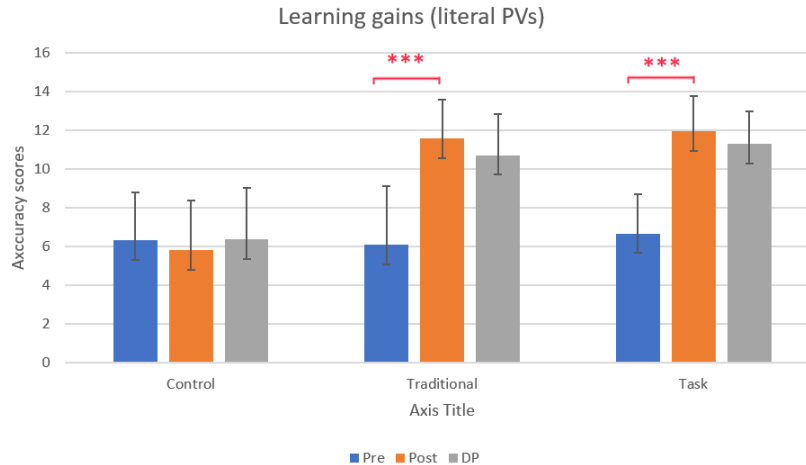|	Estimate	z-value	p-value
Time (pre)	-1.13 (0.07)	-15.310	.000***
Instruction (traditional)	1.131 (0.17)	6.506	.000***
Instruction (task)	1.316 (0.17)	7.548	.000***
Time*traditional (pre)	-1.509 (0.17)	-8.485	.000***
Time*traditional (post)	0.513 (0.18)	2.738	.00**
Time*task (pre)	-1.724 (0.18)	-9.488	.000***
Time*task (post)	0.436 (0.19)	2.229	.02*

*p <.05   ** p< .01   *** p< 0.0

Figure 8. Literal Phrasal Verbs accuracy scores over time

The results shown in *Figure 8*, which describe the literal PV accuracy scores of all three groups over time, clearly demonstrate that there is a significant gain in accuracy between the pre and posttest for the traditional and task-based groups. This tells us once more that instruction indeed plays a role on the accuracy of PV, as the control group, which received no instruction at all, did not improve in any significant way between either the pre and posttest, nor the post and delayed posttest.

The difference of accuracy between the traditional and task-based groups on the posttest was not significant, despite it being slightly higher for the task-based group. The same can be said between the same two groups for the delayed posttest; the difference of accuracy between them was not significant, and even though only marginally so, there is once again a very slight higher accuracy for the task-based groups over the traditional one, in terms of overall accuracy on the delayed posttest.

What the results show in *Figure 8* is that, compared to receiving no instruction, traditional and task-based instruction seems to play a significant role in the acquisition of PV.

42

However, both types of instruction do not yield a significant difference of accuracy for literal PV specifically.

Table 6. Logistic regression output. Accuracy scores for literal phrasal verbs only

	Estimate	z-value	p-value
Time (pre)	-1.029 (0.10)	-9.779	.000***
Instruction (traditional)	1.110 (0.20)	5.509	.000***
Instruction (task)	1.290 (0.20)	6.376	.000***
Time*traditional (pre)	-1.537(0.25)	-6.067	.000***
Time*task (pre)	-1.537(0.25)	-6.173	.000***

*p <.05   ** p< .01   *** p< 0.0

My second model contains the accuracy results from only literal phrasal verbs and can be seen in Table 6. The results from this model yielded a main effect for time, as well, as for traditional and task-based instruction. In addition, I found a significant interaction between time and both types of instruction (traditional, and task-based) showing that participants in these two groups performed significantly better than participants in the control group from pre to immediate posttest. A follow-up analysis, a significant interaction between time and instruction type from post to delayed posttest that was significant for the traditional group, *Estimate = 0.568 (0.27), z = 2.094, p = .03,* but only marginally significant for the task-based group, *Estimate = 0. 528 (0.28), z =1.861, p =. 06.* Finally, my third model contains the accuracy results from only the figurative phrasal verbs and can be found in Table 7 below. This model yielded a significant main effect of time, as well as a significant main effect of instruction (for both experimental groups). Furthermore, I found a significant interaction of time and instruction for both types of instruction showing that participants in the experimental groups (traditional and task-based) improved their accuracy significantly from pre to posttest.

43

Table 7. Logistic regression output. Accuracy scores for figurative phrasal verbs only

	Estimate	z-value	p-value
Time (pre)	-1.272 (0.10)	-11.96	.000***
Instruction (traditional)	1.180 (0.20)	5.891	.000***
Instruction (task)	1.368 (0.20)	6.801	.000***
Time*traditional (pre)	-1.505 (0.25)	-5.938	.000***
Time*task (pre)	-1.883 (0.26)	-7.214	.000***

*p <.05   ** p< .01   *** p< 0.0
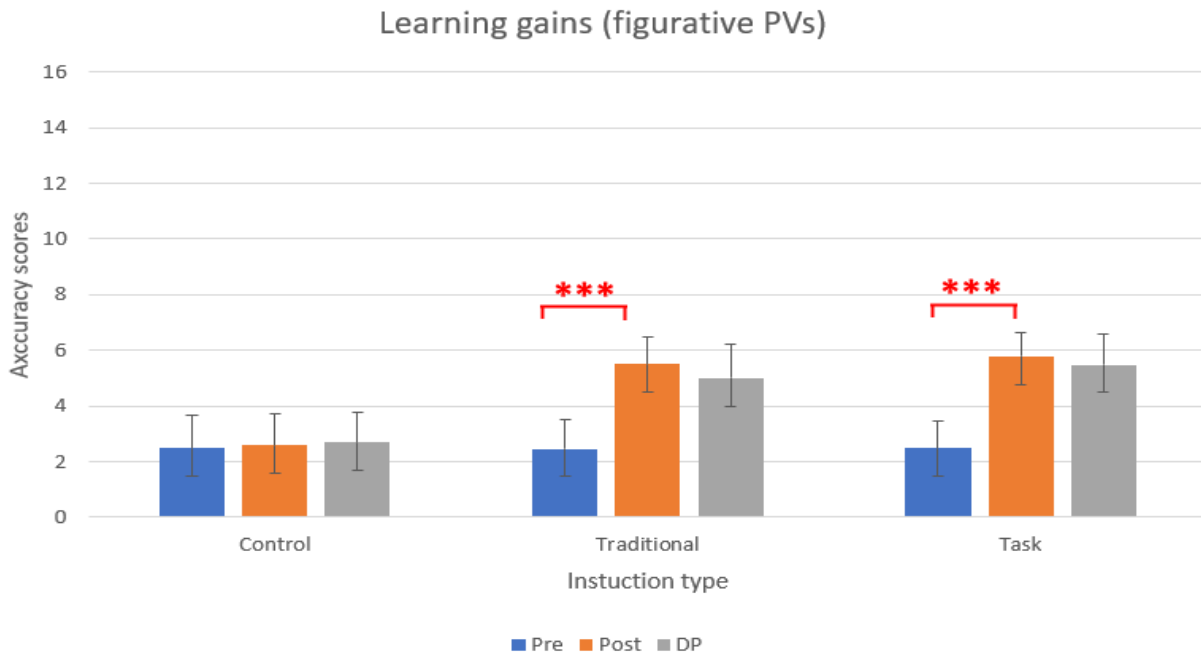
Figure 9. Figurative Phrasal Verbs accuracy scores over time

The results shown in *Figure 9*, which describe the figurative PV accuracy scores of all three groups over time, clearly demonstrate again that there is a significant gain in accuracy between the pre and posttest for the traditional and task-based groups. This tells us once more that instruction indeed plays a role on the accuracy of PV, since in juxtaposition the control group, which received no instruction at all, did not improve in any significant manner between either the pre and posttest, nor the post and delayed posttest.

We find once more very similar results as above. The difference of accuracy between the traditional and task-based groups on the posttest was not significant, despite it being slightly higher for the task-based group. The same can be said between the same two groups for the delayed posttest; the difference of accuracy between them was not significant, and even though only marginally so, there is once again a very slight higher accuracy for the task-based groups over the traditional one, in terms of overall accuracy on the delayed posttest.

What the results show in *Figure 9* is that, compared to receiving no instruction, traditional and task-based instruction seem to play a significant role in the acquisition of PV. However, both types of instruction do not yield a significant difference of accuracy for figurative PV specifically.

We can therefore claim, based on all of the above, that instruction most certainly plays an important role in PV acquisition, but does not significantly increase said acquisition whether using traditional or task-based, nor does it favor literal or figurative PVs. Further research is necessary to conclusively show more significant differences.

Beyond the main data collection, there were many informational questions given during the three sessions' questionnaires that asked students to share what they thought of the VR practice, how it compared to other type of instruction they had received, as well as how they felt of their overall improvement with learning phrasal verbs. The responses show that out of all the participants who took part in the VR group 68.8% of participants rated the use of VR as much better than traditional drill-based practice they had done before.

Out of all the participants 91.2 % of participants expressed that taking part in the study has made them more aware of phrasal verbs and their use. The same percentage of all those

participants similarly expressed feeling motivated to continue acquiring phrasal verbs and 45% said they would go straight home to study up on phrasal verbs.

The 21 students who participated in the VR practice initially self-reported their understanding of PV to be on average 44.6%. By the end of the third session they self-reported their perceived understanding of PV to be on average 67.3%. In other words, on average, these students report perceived gains of close to 23% better understanding of PV. This same perceived gain was only 17% percent on average for those who were a part of the traditional instruction group.

When asked which particular aspects of the study they found most interesting, some of the answers about VR were as follow:

Participant 12 said: "Using VR to practice [in] particular. Everyone knows we need to put what we learn into practice to make those knowledge a really part of our brain, but I never realize that we can use it through VR. That will be much convenient and will create a much better learning environment for students who cannot go to foreign language and improve their language ability there."

Participant 24 said: "VR step actually makes me more familiar with the [phrases] and put the phrases into practical use indeed help learning"

Participant 45 said: VR scene is special because it's interesting and entertaining

There were even participants who attempted to use some of the study's phrasal verbs within their response:

Participant 20 said: It makes me warm up so many phrases.

Overall there were next to no complaints from the students who participated in the task-based group. Among those in the traditional group, there were a few who felt that the drill-based

46

practice quiz, see APPENDIX B, and the pre, post, and delayed posttest were too monotonous, and doubted that they were gaining anything from doing them.

Although, to my knowledge, this is the first study of its kind to that examines the effects of different instructional intervention on Chinese learners of English knowledge of phrasal verbs the feeling of immersion in the VR simulation was much more conclusive than anticipated, and was most notably shown by one incident in which a participant, who was a part of the pilot study, attempted to lean onto the kitchen table, that was displayed within the game but was not physically present, with one hand outstretched in front of them. When they continued to try to lean of the non-existent table, they ended up tumbling forward unto their knees and laughing at how incredibly fast they had begun to interact with the virtual world as if it were really there. Another event, which occurred several times throughout the VR practice of session 2 with participants included the present study, happened in the following part of APPENDIX A.

"Take the bacon and eggs, even if they look a little burnt, and place them on the plate with the toast."

At this point in the task, they were being instructed to pick up the food they had previously been asked to put on a grill to cook. Several of the participants asked me if it was okay to pick up the food, or if there was anything with which they could pick it up, as the food was now hot and would burn their hands. When keeping in mind that the entire practice lasted around 15 minutes, these happenstances are excellent displays of how fast the human mind will adapt to a new environment and convince us that what we are seeing is real.

CHAPTER 5. CONCLUSION

5.1 Conclusion

My study aimed to examine the effects of two types of instruction on Chinese learners' knowledge of English phrasal verbs. My results suggest that Chinese L1-English L2 ESL learners benefitted from traditional and task-based instruction when compared to the control group that did not receive any instruction. Given that Chinese learners are accustomed to traditional instruction, it is unsurprising to find these results, and my hypothesis is confirmed. However, my null hypothesis for task-based instruction does not hold. Participants in this group showed significantly consistent learning gains from pre to posttest comparable to the traditional instruction group. This instructional intervention, characterized for its implicit approach to form, seems to also be effective for this student population. Although I do not research the question of which instruction type is more effective, my analysis does not find an advantage for one over the other.

These results do not support Long's Interaction hypothesis (1996) suggesting that interaction is necessary for successful language learning as it aids in making input comprehensible, gives feedback on attempts to use language, and pushes learners to modify their own output to render it more target-like. The task-based instructional intervention was the most interactive nature since participants had to follow instructions that included phrasal verbs and could not perform the requested actions without understanding the instructions, therefore negotiation of meaning was enforced in this task-based practice but was not necessary in the traditional fill-in -the-blank practice used in the traditional instructional intervention. At this point in time and based on this study's results, I can only conclude that both instructional interventions are better than no instruction at all. When looking at the effects of instruction by

type of phrasal verb (literal vs. figurative), I found that both instruction types yielded a positive effect showing that participants in both experimental groups displayed large learning gains over time.

In total the students were asked to acquire 28 PV, which they seemed to be able to acquire relatively well given their limited exposure to the target forms. The session lasted approximately 30 minutes, and so in all they participants were being exposed to the PV for a grand total of an hour and a half. Had they been exposed to more PV, we might have seen the overall accuracy scores of the students fall, as they could have been unable to remember them all or started to mix-up forms. Throughout the data collecting, target forms with similar particles were more susceptible to being interchanged. One such example was the PV "to throw out", which was often confused with "throw up". This latter PV was not one of the given target forms, which means we must assume it was one which the participants were familiar with and might demonstrate an issue that might arise exponentially. Given a higher number of forms, and more specifically forms that have similar enough units could lead to some interesting phenomena to be researched in the future.

Previous research suggested that Chinese learners had more difficulty with figurative than literal phrasal verbs (Dagut & Laufer, 1985; Hulstijn and Marchena, 1989; Laufer & Eliasson, 1993; Liao & Fukuya, 2004; Mcpartland, 1983; Siyanova & Schmitt, 2007). I find this to be true based on the pretest accuracy scores. Participants in all groups (control and experimental) performed worse with figurative phrasal verbs (with an average of 2 out of 14) than with literal verbs (with an average of 6 out of 16 phrasal verbs). Nevertheless, the gains made after instruction were equal for both types of phrasal verbs. In terms of type of instruction, I can say that both types of instruction were beneficial for both types of phrasal verbs, but I did

find participants in the traditional group making significantly gradual learning gains from pre to immediate posttest, as well as from immediate to delayed posttest only with literal phrasal verbs.

Consistent with Chu (1996) findings, I found that the learners provided a literal meaning for phrasal verbs that could have both a figurative and literal meaning at the pretest stage. For example, the participants often defined the phrasal verb "put out" as taking something out of a place or container but almost never provided a figurative definition as "extinguishing a fire". Instruction helped teach learners both possible meaning and I observed an increase in figurative as well as literal definitions in the immediate and delayed posttests.

Task Based Langue Teaching makes a point of involving non-grammar focused activities, and that is something that we see replicated in the game-like nature of VR environment. With the participants attempting first and foremost to complete the task they are given, the mindset of the student is in effect shifted to the task at hand, and the learning takes on a secondary, but still very important role. The results of the study show that the use of a VR enhanced task-based activity, the participants' overall accuracy was not affected.

This would lead us to believe that a focus on task completion does not hinder the action of the grammar point and might even benefit students in a classroom setting if they are not actively aware that they are learning, but rather feel like they are simply enjoying themselves by playing a "game". This is one of the very definitional of an educational game, it is a tool that incorporates both enjoyment through the act of learning and learning through the act of accomplishing tasks using target forms. The impressions of the students discussed in the results section of this study reflect this assumption.

5.2 Weakness of the research

This study only examined the understanding of phrasal verbs. Although this is an important component of second language acquisition, I cannot make any generalizations about Chinese learners' overall knowledge of phrasal verb that include production, beyond their written production. In addition, I collected data from more than 64 participants, but I had to discard some participants because they reported studying after session 1. I tried my best to ensure that participants were only exposed to my instruction but given that they are in an ESL context it is very possible they have encountered these PVs outside the experiment time and this might have played a role in the data I found because I failed to add this to the debriefing questionnaire. Finally, I would like to emphasize Ludlow's (2015) point that language educators are not taking advantage of the many benefits of virtual reality and how this technology can enhance L2 learners' learning experience

During the early stages of development of this study, it quickly became apparent that it would be a challenge finding off-the-shelf tools that could be applied to teaching phrasal verbs with the use of a VR headset. This is because the VR headset relies on heavily coded software to be running on a computer and displaying a world or environment that has been coded beforehand to the headset. The coding background required for the development from the ground-up of an interactive world is still very much out of reach for most people who are not directly involved within the field of coding, and even more specifically game coding. There are however many possible alternatives to overcome this small drawback. One such possibility was to simply adapt a pre-existing interactive environment that had already been created by a team of coders. This is where the game called *Job Simulator*™, which is accessible to the public for a minimal one-time fee, was able to be used for a slightly different objective than originally intended. Job

Simulator™ is a game set in the distant future where Artificial Intelligence has taken over after the extinction of mankind. These computers have open a museum dedicated to the preservation of what used to be known as "Jobs". There are several different jobs from which to choose, and each one puts you in the role of a museum patron, and you are given instructions which have you accomplish tasks related to the chosen job. This set-up allowed for the free use of these designed job settings to accomplish any task related to said job, so long as the instructions where modified accordingly.

The space necessary for the set-up of the entire VR gear was more than I had available at the original facility where the study was conducted, and so the second session, involving the use of the VR gear for the task-based group, was conducted at a different location than a majority of the first sessions had already been conducted. This resulted in a few sessions being delayed due to the participants getting lost on campus or being too afraid to admit to being lost and asking for directions. This, despite that fact that they were sent emails that included a map, and several pictures of the facilities. The final facility that was used for conducting those specific second sessions was a pre-existing virtual reality lab, which had all the necessary gear set-up, and without which it would have been slightly complicated, if it had required the installation and break-down of the gear every day.

The initial cost to set up the entire study is an aspect that must be considered if there is not any easy access to the VR gear, or a lack of funds to purchase the necessary complements to the research. At the time that the study was in its pilot stage, the total cost was well over twice that at which it stands now at the time of the writing of this paper. However, this should not remain a concern for much longer, as the price already shown to have halved over the course of this study, it will continue to do so until the VR gear is commonly found in universities.

5.3 Pedagogical implications

Based on the results of this study, it is strongly encouraged that language educators and researchers in the field of second language acquisition consider continuing to explore this technology. I would be happy to share my materials with anyone who so desires to use any and all of the appendixes that are included in this study for their own personal research. All the materials were designed in a way that would allow anyone to be able to replicate the exact settings of this study, and making sure it utilized materials, software, and hardware that is readily available at the writing of this paper. Additionally, A website that explains the technological components required to run program, and set up the virtual reality equipment, has been set up to answer the most common queries regarding the use of this technology for language learning purposes.

Another key factor to consider, is that based on the above-shown results that both traditional and task-based groups performed similarly, it would seem that we can claim that both types of instruction are just as efficient as one another. However, for a hypothetical case where there is no "classroom", so-to-speak, available then potentially the use of VR enhanced TBLT is a more viable, and as efficient, option to be implemented. Reflecting on the potential that VR possess in making people think that they are in a virtual world which is "as far and wide as the eye can see", then it goes without saying that even a learner who is studying in a limited space, would be able to participate in a virtual world that they perceive as vastly more unlimited.

Adding to this same train of thought, comes the fact that the virtual environment is limited by nothing more than the imagination of its creator. In other words, the world that is being displayed is by its very nature unlimited. Games are created by design to be self-contained, and so even though for this particular study the instructions for the completion of the VR task

relied on the presence of another person being present, in reality the game has the function built-in of being able to follow the steps of the task, and moving on to the next, without requiring a live tutor. This is a very important fact to remember, as it cuts down the role of the tutor, and puts the student in the role of being in charge, as the game would match the pace of the student and move along to each next step by itself.

5.4 Research implications

The implications for the future of teaching are immeasurable. When we often discuss the disparity of opportunities between different institutions, the geographical barrier that stands between language learners is become ever so small with the introduction of the internet, and now more and more efficient ways for interacting. The Vive allows people to seamlessly interact in life-like environment, and are an amazing opportunity asking to be exploited by those who care to try. This study has shown through and through that language learners are eager to learn, and even with limited exposure to the VR technology showed great motivation to pursue the study of the target forms.

As mentioned previously and throughout this paper, the game is designed to be self-contained, and to allow a self-paced progression of the performed tasks. This does not automatically imply that there is no room for developing the necessity of a secondary user, who's role would be to interact with the leaner within the VR. One such suggestion would be to maybe implement the game in a way that requires two students to interact, where one complete the task, and the other gives the instructions and provides immediate feedback. Completed in this manner, the game would allow for the building of interaction between the students, making this task more student-centered, benefitting from maximizing student-student engagement, which is in line with the current direction of the communicative classroom of tomorrow. One where the instructor

would be left to monitor the students' interactions, but also actively trying to leave the main bulk of the task to be negotiated between the learners. With the combination of the Vive's ability to display environments that do not reflect the real-life surroundings of the user, and the digital communication achievable through the internet, there is little doubt that this is the next step in the progression of a language learning experience like no other before it.

REFERENCES

Asher, J. J. (1966). The Learning Strategy of the Total Physical Response: A Review. *The modern language journal*, *50*(2), 79-84.

Asher, J. J. (1969). The total physical response approach to second language learning. *The modern language journal*, *53*(1), 3-17.

Baker, F. (2010). Media literacy clearinghouse. Retrieved from http://www.frankwbaker.com

Bates, D., Maechler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software, 67*(1), 1-48.

Burnaby, B., & Sun, Y. (1989). Chinese teachers' views of western language teaching: Context informs paradigms. *TESOL quarterly*, *23*(2), 219-238.

Carpenter, D., & Finn, C. (2006). Playing to type? Mapping the charter school landscape. Washington, DC: Thomas B. Fordham Institute.

Carson, E. (2015, March 10). Nine industries using virtual reality. Retrieved from https://www.techrepublic.com

Celce-Murcia, M., & Larsen-Freeman, D. (1999). The grammar book: An ESL/EFL teacher's course. 2nd ed. Boston: Heinle & Heinle.

Cerezo Ceballos, L. (2010). *Talking to avatars: The computer as a tutor and the incidence of learner's agency, feedback, and grammatical form in SLA* (Doctoral dissertation, Georgetown University).

Cerezo, L., Baralt, M., Suh, B. R., & Leow, R. P. (2014). Does the medium really matter in L2 development? The validity of CALL research designs. *Computer Assisted Language Learning*, *27*(4), 294-310.

Chu, Y. Y. (1996). *Phrasal verbs for ESL students in Taiwan* (Doctoral dissertation, University
of Texas at Arlington).

Conklin, K., & Schmitt, N. (2008). Formulaic sequences: Are they processed more quickly than
nonformulaic language by native and nonnative speakers?. *Applied linguistics*, *29*(1), 72-89.

Cornell, A. (1985). Realistic goals in teaching and learning phrasal verbs. International Review
of Applied Linguistics in Language Teaching, 23(4), 269-28

Dagut, M. and B. Laufer. 1985. Avoidance of Phrasal Verbs - A Case for Contrastive Analysis.
Studies in Second Language Acquisition 7: 73-79.

Dalgarno, B., & Lee, M. J. (2010). What are the learning affordances of 3-D virtual
environments? British Journal of Educational Technology, 41(1)

Dawley, L. (2007). The tools for successful online teaching. Hershey, PA: Information Science
Press.

Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A
systematic mapping study. *Journal of Educational Technology & Society*, *18*(3).

Dimmitt, C., & McCormick, C. B. (2012). Metacognition in education.

Doughty, C. J., & Long, M. H. (2003). Optimal psycholinguistic environments for distance
foreign language learning. *Language Learning and Technology*, 7, no. 3: 50-80

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford University Press.

Ellis, R., & Shintani, N. (2013). *Exploring language pedagogy through second language
acquisition research*. Routledge

Foster, D., & Meech, J.F. (1995). Social dimensions of virtual reality. In K. Carr & R. England
(Eds.), *Simulated and virtual realities* (pp. 209-224). London: Taylor and Francis.

Franetovic, M. (2012). A higher education case: Millennial experience toward learning in a

virtual world designed as an authentic learning environment. ProQuest Dissertations &

Theses Global: Literature & Language (Order No. 3503911)

Friedman, T. (2005). *The world is flat: A brief history of the twenty-first century*. New England.

Gass, S. M., & Mackey, A. (2007). Input, interaction, and output in second language acquisition.

Theories in second language acquisition: An introduction, *175199*.

González-Lloret, M., & Ortega, L. (Eds.). (2014). *Technology-mediated TBLT: Researching

technology and tasks* (Vol. 6). John Benjamins Publishing Company.

González-Lloret, M. (2017). Technology for Task-based Language Teaching. In The Handbook

of Technology and Second Language Teaching and Learning (eds C. A. Chapelle and S.

Sauro). doi:10.1002/9781118914069.ch16

Granger, S. (1998). Prefabricated patterns in advanced EFL writing: Collocations and formulae.

In A. P. Cowie (Ed.), Phraseology: *Theory, analysis, and applications*. New York: Oxford:

University Press.

Granger, S. (2005a). Prefabricated patterns in advanced EFL writing: Collocations and formulae.

In A. P. Cowie (Ed.), *Phraseology: Theory, Analysis, and Application* (pp. 145–160). New

York: Oxford University Press.

Grgurović, M., Chapelle, C. A., & Shelley, M. C. (2013). A meta-analysis of effectiveness

studies on computer technology-supported language learning. *ReCALL*, *25*(2), 165-

198.Homan, W. J. (1994). Virtual reality: Real promises and false expectations. Educational

Media International, 31 (4) 224-227

Hulstijn, J. H., & Marchena, E. (1989). Avoidance: Grammatical or semantic causes? *Studies in

second language acquisition*, *11*(3), 241-255.

Hsieh, H. C. (2007). *Input-based practice, feedback, awareness and L2 development through a computerized task* (pp. 1-236). Georgetown University.

Irujo, S. 1986. Don't Put Your Leg in Your Mouth: Transfer in the Acquisition of Idioms in a Second Language. TESOL Quarterly 20, 2: 287-304.

Johnson, M. D., Acevedo, A., & Mercado, L. (2016). Vocabulary knowledge and vocabulary use in second language writing. TESOL Journal, 7(3), 700-715. doi:10.1002/tesj.238

Jumin Zhao, Shimin Huo, Yanxia Li, Dengao Li, Xinyan Liu, and Jie Zhou. 2017. Tide and shock: the influential modern teaching methods on chinese education reform. In *Proceedings of the ACM Turing 50th Celebration Conference - China* (ACM TUR-C '17). ACM, New York, NY, USA, Article 15, 6 pages. DOI: https://doi.org/10.1145/3063955.3063970

Kapp, K. M. (2012). *The gamification of learning and instruction: game-based methods and strategies for training and education*. John Wiley & Sons.

Krashen, S. D. (1985). The input hypothesis: Issues and implications. New York: Longman.

Lan, Y. (2015). Contextual EFL learning in a 3D virtual environment. Language Learning & Technology, 19(2)

Laufer, B., & Eliasson, S. (1993). What causes avoidance in L2 learning: L1-L2 difference, L1-L2 similarity, or L2 complexity? *Studies in second language acquisition*, *15*(1), 35-48.

Laufer, B. &Waldman, T. (2011). Verb-Noun Collocations in Second Language Writing: A Corpus Analysis of Learners' English. *Language Learning*, 61(2), 647–672.

Lennon, P. (2005). Lexical collocations and the teaching of lexical meaning. *Neusprachliche Mitteilungen Aus Wissenschaft Und Praxis*, *58*(1-2), 18–24.

Lesniewska, J. (2006). Collocations and second language use. *Studia Linguistica*, 95–105.

Lee, N. (2017, November 20). HaptX promises to make your virtual hands feel like real ones. Retrieved from https://www.engadget.com/

Liao, X. Q. (2000). Communicative Language Teaching Innovation in China: Difficulties and Solutions.

Liao, Y., & Fukuya, Y. J. (2004). Avoidance of phrasal verbs: The case of Chinese learners of English. *Language learning*, *54*(2), 193-226.

Li, J. (1996). Underproduction does not necessarily mean avoidance: Investigation of underproduction using Chinese ESL learners. In L. F. Bouton (Ed.), Pragmatics and 95 language learning (Vol. 7, pp. 171–187). Urbana: University of Illinois at Urbana-Champaign.

Lightbtbown, P.S., Spada, N. (2008) How languages are learned. Oxford University Press: Toronto

Long, M. H. (1981). Input, interaction and second-language acquisition. In H. Winitz (Ed.), Native language and foreign language acquisition: Vol. 379. Annals of the New York Academy of Sciences pp.259-278. New York: New York Academy of Sciences

Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), Handbook of language acquisition. Vol. 2: Second language acquisition (pp.413-468). New York: Academic.

Long, M. H. (2000). Focus on form in task-based language teaching. *Language policy and pedagogy: Essays in honor of A. Ronald Walton*, 179-192

Long, M. H. (2014). *Second language acquisition and task-based language teaching*. John Wiley & Sons.

Ludlow, B. L. (2015). Virtual reality: Emerging applications and future directions. Rural Special

    Education Quarterly, 34(3), 3-10.

Loureiro, A., & Bettencourt, T. (2014). The use of virtual environments as an extended

    classroom--A case study with adult learners in tertiary education. Procedia Technology, 13,

    97-106. doi:10.1016/j.protcy.2014.02.013

Mackey, A. (1999). Input, interaction, and second language development: An empirical study of

    question formation in ESL. *Studies in second language acquisition*, *21*(4), 557-587.

McMahon, D. D., Cihak, D. F., Wright, R. E., & Bell, S. M. (2016). Augmented reality for

    teaching science vocabulary to postsecondary education students with intellectual

    disabilities and autism. Journal of Research on Technology in Education, 48(1), 38.

    doi:10.1080/15391523.2015.1103149

McPartland, P. (1983). What the Non-native Speaker Leaves Out. Unpublished manuscript, The

    Graduate School, City University of New York.

McPartland, P. (1989). The Acquisition of Phrasal Verbs by Nonnative Speakers of English.

    CUNYForum 14:150-156.

Muntean, C. I. (2011, October). Raising engagement in e-learning through gamification. In *Proc.

    6th International Conference on Virtual Learning ICVL* (Vol. 1). sn.

Norris, J. M., & Ortega, L. (2001). Does type of instruction make a difference? Substantive

    findings from a meta-analytic review. *Language learning*, *51*(s1), 157-213

Norris, J. M. (2009). 30 Task-Based Teaching and Testing. *The handbook of language teaching*,

    578.

Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the horizon*, *9*(5), 1-6.

R Development Core Team (2014). R: A language and environment for statistical computing. R
Foundation for Statistical Computing, Vienna, Austria. Available at <http://www.R-project.org/>.

Reinders, H., & Wattana, S. (2014). Can I say something? the effects of digital game play on
willingness to communicate. Language Learning & Technology, 18(2), 101-123.

Richard-Amato, Patricia A. *Making It Happen: Interaction In The Second Language Classroom :
From Theory To Practice*. New York : Longman, 1988. Print.

Schmidt, R. (1993). Consciousness, learning and interlanguage pragmatics. *Interlanguage
pragmatics*, *21*, 42.

Schumann, J. H. (1986). Research on the acculturation model for second language acquisition.
Journal of multilingual & multicultural development, *7*(5), 379-392.

Seliger, H. W., Herbert, W., Seliger, H. W., Shohamy, E., & Shohamy, E. G. (1989). *Second
language research methods*. Oxford University Press.

Selinker, L. (2009). INTERLANGUAGE. *IRAL - International Review of Applied Linguistics in
Language Teaching*, 10(1-4), pp. 209-232. Retrieved 4 Jul. 2018, from
doi:10.1515/iral.1972.10.1-4.209

Side, R. (1990). Phrasal verbs: Sorting them out. ELT Journal, 44, p. 144-52

Siyanova, A., & Schmitt, N. (2007). Native and nonnative use of multi-word vs. one-word verbs.
IRAL-International Review of Applied Linguistics in Language Teaching, 45(2), 119-139.

Skehan, P. (1998). *A cognitive approach to language learning*. Oxford University Press.

Spada, N., & Tomita, Y. (2010). Interactions between type of instruction and type of language
feature: A Meta-Analysis. *Language learning*, *60*(2), 263-308.

Stanley, G., & Mawer, K. (2008). Language learners & computer games: From "space invaders" to "second life". TESL-EJ,11(4), 12

Stubbs, M. (1995). Collocations and semantic profiles: On the cause of the trouble with quantitative studies. *Functions of Language*, *2*(1), 23–55.

Swain, M. (1993). The output hypothesis: Just speaking and writing aren't enough. The Canadian Modern Language Review, 50, 158-164.

Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass & C. Madden (Eds.), Input in second language acquisition, pp.235-253. Rowly, MA: Newbury House

Ushioda, E. (2000). Tandem language learning via e-mail: From motivation to autonomy. ReCALL, 12 (2), 121-128.

VanPatten, B. (2004). Input processing in second language acquisition. In B. VanPatten (Ed.), *Processing instruction: Theory, research, and commentary* (pp. 5 – 31). Mahwah, NJ: Erlbaum.

Verspoor, M., Schmid, MS., & Xu, X. (2012). A dynamic usage based perspective on L2 writing. Journal of Second Language Writing, 21, 239-263.

Watson, J., Murin, M., Vashaw, L., Gemin, B., & Rapp, C. (2010). Keeping pace with K-12 online learning: An annual review of policy and practice. Evergreen, CO: Evergreen Education Group.

Wiggins, G. (1993). Assessment: Authenticity, context, and validity. *Phi delta kappan*, *75*(3), 200-08.

Williams, B. (2017, November 17). Six industries getting to grips with virtual reality. Retrieved from https://www.computerworlduk.com/

Willis, D., & Willis, J. (2007). Doing task-based teaching: A practical guide to task-based teaching for ELT training courses and practicing teachers.

Wray, A. (2000). Formulaic sequences in second language teaching: Principle and practice. *Applied linguistics*, *21*(4), 463-489.

Wray, A. (2002). *Formulaic Language and the Lexicon*. Cambridge: Cambridge University Press.

Yorio, C .A. (1989). Idiomaticity as an Indicator of System Proficiency. In K. Hyltenstam and L. Obler (eds.) Bilingualism Across the Life Span: Aspects of Acquisition, Haturity, and boss. New York: Cambridge Uiniversity Press.

INSTRUCTIONS FOR THE RESEARCHER/RA. WHO WILL READ THE STEPS OF THE TASK

This script is to be used in conjunction with the Virtual Reality (VR) game Job Simulator, or any other similarly functioning VR game. Ideally, there should be two participants: one is the person wearing the VR headset, called "EMPLOYEE", and who is also engaging physically in the actions, spoken by the second person, called "SUPERVISOR".

The interactions between the two participants should be as such: the SUPERVISOR gives an order to the EMPLOYEE, who then uses his knowledge to perform each task. He is however able to ask for a task's instructions to be repeated up to a maximum of two times, if he still is unable to perform the task beyond that, it will be explained to him by the SUPERVISOR.

The SUPERVISOR should read this script at a pace that follows their own level of reading, while also trying to accommodate the speed at which the EMPLOYEE is able to perform the tasks.

The main point is to expose the EMPLOYEE to the script's Phrasal Verbs and get them to use/hear them in a realistic context, thought the accomplishment of the designated tasks.

The vast majority of all participants will have never had any experience whatsoever with a VR headset. It is therefore important to let them orient themselves, and try a few "practice" tasks, in order to get them slightly more accustomed to the layout of the VR "area" and the controllers, which consists of two "wands" that each have a single button on them, which we will be using to "grab" a hold on the items they can interact with within the VR environment.

Finally, please be aware that the VR "Play Area" is dynamic, and the layout of all the mentioned equipment in this script might be at slightly different positions, depending on the size of your "Play Area". There are three layouts in all (small, medium, large) and which one is used is dependent on your actual, real-world, physical VR "Play Area"; which translates into the game as being represented by one of the three associated layouts.

The colour coding is as follows: Phrasal Verbs

Vocabulary they are likely to not know

Hello, I am the green computer screen character looking at you, on the other side of the counter. Before we begin, please turn towards me.

Welcome, EMPLOYEE! You (have joined a new training session/are part of a one day trial), to become a kitchen sous-chef; for the *Gourmet Grübb* restaurant. You can count on me to help you during your first day with any problem you might have. Wave at me to show you can hear me correctly

Okay, each new sous-chef that is hired by this restaurant must prepare the following two meals:

First: A Healthy American Breakfast:

Figure 10. The healthy American breakfast.

It consists of: Two slices of toasted bread, an egg, a slice of bacon, an orange, and a broccoli & carrot soup.

Second: A sandwich-to-go:

Figure 11. The sandwich-to-go

Which consists of: two slices of bread, a wedge of cheese, a tomato, an egg, a piece of meat (T-bone/Pork Chop), and an olive on top.

Remember that this is a sandwich, and so these ingredients need to be put from the bottom to the top.

First, look around, and get familiar with your kitchen area. Are there any items that you do not know the name of? Now is the best time to ask. If you do not know the name of any of the items, pick it up and please ask ME what it is called. You are also allowed to do this at any time during this "training" session.

Note for the SUPERVISOR: Do not let them pick-up the "order up!" paper list hanging from the metal carousel
Please take a moment to look upwards. Do you see the small "Order Up!" list? Do not touch that as it will stop the training session, and we don't want that happening when you've just started.
-You are tasked with cooking and serving the two meals. Let's begin with the Healthy American Breakfast.
You will need an egg, some bacon, two slices of bread and a broccoli & carrot soup.

Before we start on the breakfast, and to make sure you are not tempted to eat any of the ingredients, why don't you pig out on some fruit, from the small fruit tree behind you. Go ahead, quickly take and eat as much fruit as you want.
-Great, let's get started with the two slices of Toast:
First, switch out the sink area, for the toaster, by turning the red dial/knob/button to your left.
Then, single out two slices of bread, from the loaf of bread behind you, and put them in the toaster. Pull the small yellow knob to start toasting the bread.
Once they are done, grab the toast, and place it on the plate to your right.
-Now open the freezer, above the fridge to your left, and take a slice of bacon. Lay down the bacon on the grill. Go back to the fridge and take an egg. Crack open the egg and place it on the grill. Throw out the egg shells, anywhere you want, someone else will clean it.
Very nice. Now turn up the heat of the oven, by turning the button on the front, to cook your bacon and eggs.
Note for the SUPERVISOR: If you wait just a couple of seconds, the bacon and eggs should start to burn, and even catch on fire.
Oh no! Quickly grab the fire extinguisher to your top-right and put out the fire that has started. Point it at the fire and press the button on the top. That's okay, accidents happen. Put the fire extinguisher back in its place. Take the bacon and eggs, even if they look a little burnt, and place them on the plate with the toast.
-Excellent; our final part of the dish is the carrot and broccoli soup.
Near the middle of the oven, is a yellow knob/lever. Slide down the yellow knob to the right, from "grill" to "pot" to reveal the cooking pot. You also need to change from the toaster back to the sink.

To start, you will need two cups of water. First grab a mug from under the kitchen counter. Then, turn the water faucet/tap on and fill up the glass with water, all the way to the top; Now pour out the water into the big pot. Okay, now do the same thing a second time.
When you are done, don't forget to turn the water off and the grill on While the water is boiling, you can carry on preparing the rest of the ingredients for the soup. So, to finish (off) the soup, you will need to throw in some broccoli and carrots from the fridge, and then warm up this mix until it is nice and steamy. After a few seconds a can of soup will show up inside the pot. Take it and place the soup next to the plate of food. You are now ready to serve up the food to the customer!
Can you point out your meal for everyone to see?
Excellent, now clear the plate by throwing the food on the floor, we need it ready for the next dish.
-Next is the Sandwich-to-go.

Get back to the sink, to your left, and switch the sink for the "Sandwich Maker". Don't forget to also change the pot back to the grill.

To make the perfect sandwich, you are going to stack up the ingredients one at a time. First, we need a slice of bread. Great, now get over to the fridge and take the following ingredients for your sandwich:
Take out some cheese, a tomato, and an egg. Open the egg and turn on the grill to cook it. Now place the cheese, then the tomato, then the cocked egg in the sandwich. All that is missing is the meat. Check the freezer and select the biggest piece of meat, the T-bone Steak.
Get the olive oil from the left shelf and pour (out) some on the grill before frying the meat, so it tastes better.
Turn on the heat, and make sure to flip over the meat a few times to not burn it. Once it is cooked, you can add it to the sandwich, then the last slice of bread, and finish off the sandwich with an olive, found on the right side of the sandwich maker.

It looks delicious, grab the sandwich and place it on the plate. You are done cooking for today, congratulations!

Let's clean the kitchen and celebrate. I think we need some music, don't you?
To your right is a music player. Look at the CD label, and try to make out what is written on the CD. What does it say?
Push in the big blue button on the top and insert the CD into the music player. Close the little door and press the "play" button. Turn the black round button, to volume up to get this party started!

Now, wipe (off) the counter, putting everything on the floor. Don't worry, the robot cleaning crew will clean behind you.
Let's celebrate with a drink:
Kneel down and grab a mug from the bottom shelf behind you. The cold wine is with the vegetables. To access them, you need to pull down the huge yellow lever/handle, to the left of the fridge, from "cold" to "not cold". Good, next go ahead and grab some wine and pop open the sandwich with an olive, found on the right side of the sandwich maker.

It looks delicious, grab the sandwich and place it on the plate. You are done cooking for today, congratulations!

Let's clean the kitchen and celebrate. I think we need some music, don't you?
To your right is a music player. Look at the CD label, and try to make out what is written on the CD. What does it say?
Push in the big blue button on the top and insert the CD into the music player. Close the little door and press the "play" button. Turn the black round button, to volume up to get this party started!

Now, wipe (off) the counter, putting everything on the floor. Don't worry, the robot cleaning crew will clean behind you.
Let's celebrate with a drink:

Kneel down and grab a mug from the bottom shelf behind you. The cold wine is with the vegetables. To access them, you need to pull down the huge yellow lever/handle, to the left of the fridge, from "cold" to "not cold". Good, next go ahead and grab some wine and pop open the bottle. Fill (up) your mug. Pull off an orange from the tree behind you and add it to your drink to finish the Mimosa.

Drink up in celebration of completing your first day! You are now an official chef at this restaurant!

Don't use FILL UP too much, wouldn't want to skew the instruction of one verb over others

Fillers/Distractors? Hold on

Hurry up Dress up Rule out Run out Drop by Runs on Called off Point out

Slow down the cooking … Break up (into pieces)

APPENDIX B. TRADITIONAL QUIZ

Phrasal Verb Traditional Quiz

In the following Quiz you will read about 28 situations, that are presented through a short description. Each description makes use of a Phrasal Verb that you have previously received instruction on. Each situation has a similar context, involving cooking/a kitchen, and either, or both, characters: Xin and Anna

Please attempt to complete each blank to the best of your ability. Please note that each

[BLANK] is a unique Phrasal Verb, and none are used more than once.

-Xin has been working all day at the office. At lunch-time, Anna stops by and suggests they go to the Student Union Hall, and try the buffet-style special they are offering. Anna asks Xin: "I hope you are ready to **[PIG OUT]**".

-While making a traditional dish, Xin had started the recipe by using butter. Half-way through the recipe she realises she should have been using oil. After a few minutes she thinks she should follow the recipe, and decides to **[SWITCH OUT]** the ingredients.

-While at the supermarket, Anna is selecting tomatoes to make a soup. She is looking at them and sees that a lot of them are not ripe yet, but knows she definitely needs ones that are very red for her soup to taste good. She tries her best to **[SINGLE OUT]** all the red ones.

-After the end of a successful year, Xin and Anna are celebrating New Year's Eve at a friend's house. All night, they have been drinking soda waiting for 12 AM. After the countdown to midnight, they will **[CRACK OPEN]** a bottle of Champaign to start the new year.

-Anna is having problems with her stove, it never seems to cook things very fast. Today she is late and trying to get her lunch ready before she goes to class. She really wants her food to cook faster, and so tries to **[TURN UP]** the heat, to see if that makes a difference.

71

-While cooking the Turkey for Thanksgiving, Anna got distracted by a call from Xin. By the time she got back to the kitchen, there was smoke everywhere. She had to **[PUT OUT]** the fire in the oven before her whole kitchen burned.

-Xin was baking a cake for Anna's birthday. Just when she was about to put the cake in the oven, her cat jumped onto the table a put water everywhere. She thought it would be best to clean the table first, and that once she was done she could **[CARRY ON]** making the cake.

-Xin was on a diet, but today she was too tired to make a healthy meal, so she decided to order a pizza to be delivered to her house. She checked her watch, and was sure she would have enough time to take a quick shower before the delivery boy would **[SHOW UP]**.

-Anna had just finished making an omelet, when she accidently dropped it on the floor. She was making it as a surprise for Xin, and started to cry. Xin came running into the room and told her that it was okay, and she would **[GET OVER]** wanting them as soon as she had anything else to eat.

-Xin and Anna where making food for a big group of friends. At one point there were so many people that Xin had to stay in the kitchen, cooking, while Anna brought everyone their food. By the end of the night, Anna had to **[SERVE UP]** almost 6 different dishes.

-Xin was making a new dish she had never made before. One of the ingredients was in a very old bottle, and she was afraid it might have expired so checked the expiration date. The label was so old that she could not **[MAKE OUT]** what was written and decided not to use it.

-Xin and Anna spent all day preparing their weekly food. By the end, they were so tired that they didn't feel like making another effort. They decided to **[POP OPEN]** a bottle of beer, and just relax for an hour.

-Anna was in the kitchen cooking breakfast, she was looking for the eggs in the fridge but couldn't see them. She asked Xin is they had run out of eggs, but Xin said they were still some left in the fridge. Anna could still not find them, so asked Xin if she could **[POINT OUT]** where they were.

72

-Anna missed her alarm clock and is very late. She needed to cook lunch for her family, but she might not have time to do that now. She really shouldn't **[COUNT ON]** her phone to wake her in the future.

-Anna and Xin are busy baking a cake for their friend's wedding. They are on opposite sides of the kitchen. Anna is trying to ask Xin a question, but Xin doesn't hear here, so Anna **[TURNS TOWARDS]** her to try and get her attention.

-Xin cannot find the last ingredient she needs for the ice-cream she is making for her dessert. She thinks she has checked everywhere but decides to **[LOOK AROUND]** one last time, to make sure it didn't fall on the floor somewhere.

-Anna is preparing a tasty fish soup. One step in the cook book says that she must remove the skin of the fish. To make sure she is able to do it easily, she found a big surface, and **[LAY DOWN]** the fish, so it was more easy to hold.

-Xin is about to put a dish she has just prepared in the oven. This is a very big oven with a huge door in the front. For security, the door has a large handle that needs to be **[PULLED DOWN]** to open it up. Luckily, she could do it by herself.

-Anna and Xin saw that the fridge was full of vegetables that would go bad soon, so they decided to make a big soup with all the ingredients from the fridge. At first, they were selecting

the best ones, but after a while they just started to **[THROW IN]** everything that was left so nothing would get wasted.

-Xin had just finished eating a huge meal with her friends. After everyone had left the house, she saw that there was still a lot of food left. Sadly, she knew she would not be able to eat it all by herself, so had to **[THROW OUT]** most of it.

-Anna and Xin are at home trying to make new cocktails. They are reading a blog on how to make the best ones. The blog says that for most cocktails, once you have the main ingredients mixed, the rest of the glass can be **[FILLED UP]** with alcohol.

-Xin has used a cutting board to cut an onion into many small pieces. Usually when she tries to transfer the pieces into a pot using just her hands, she drops some on the floor. Today she is going to try to **[SLIDE DOWN]** the pieces from the board directly into the pot, to not drop any.

-While Xin was preparing Christmas dinner, she got a phone call from her mother. She talked for so long that the food she was cooking was now cold. She put it back in the oven for 15 minutes to **[WARM UP]** the food.

-Anna wants to surprise Xin for her birthday by making her a special breakfast. Xin's favorite breakfast food is pancakes. Anna was making a lot of pancakes that she **[STACKED UP]** onto a single plate.

-Xin was making coffee for an afternoon snack, but because she was so tired she didn't realize she was using old milk. When she drank some of the cold coffee it tasted horrible and she had to **[POUR OUT]** the rest of the coffee and make a whole new cup.

-Anna is trying to make a delicious hamburger she saw on a cooking show. The Chef explained that after it has been cooking on one side, you need to quickly **[FLIP OVER]** the burger before it cooks too much. Anna had to do this at least four times to cook it perfectly.

-Xin is excited to show Anna a new blender she has just bought to make delicious smoothies. This new machine has lots of shiny buttons can you can **[PUSH IN]** to make all sorts of different drinks. She can't wait to use it later.

-Anna has entered a very difficult cooking contest. She must make a very big cake, as big as a car. She has made cakes before, even some very big ones, but she is not sure she can **[PULL OFF]** making one as big as a car.

APPENDIX C. SAMPLE BIOGRAPHIC INFORMATION

Biographic information

In the first part of this survey you will answer questions about your language background. On the second part of this questionnaire, you will be asked to define the meaning of a series of Phrasal Verbs.

PLEASE DO NOT STUDY FOR ANY OF THE SESSIONS, YOU WILL NOT GET MORE POINTS FOR STUDYING, YOU WILL ONLY INVALIDATE YOUR RESULTS. PLEASE DO NOT STUDY!!

* Required

1. Please enter you UIN: *

2. Age: *

3. Sex: *
   Mark only one oval.

   ◯ Male

   ◯ Female

4. Country of Origin: *

5. What languages do you speak ? *

6. How old were you when you started to learn these
   languages ? *

7. How old were you when you started to learn
   English ? *

8. Have you taken English classes ? *

9. Are you currently enrolled in an ESL class ?
   Which one ? *

   _____

10. How often do you use English ? *
    Mark only one oval.

    ( ) Never

    ( ) Occasionaly

    ( ) Only in class and for studying purposes

    ( ) With friends and during leisure time

    ( ) As much, or more, than I use my Native Language.

11. Have you ever lived in an English speaking country before ? *
    Mark only one oval.

    ( ) Yes

    ( ) No

12. If yes, ho long did you stay in this country ? *

   _____

13. Were you there to study/work, or on vacation ? *
    Mark only one oval.

    ( ) Study

    ( ) Work

    ( ) Vacation

    ( ) N/A (Not Applicable)

14. If you are a student at UIUC, specify which type of student you are below: *
    Mark only one oval.

    ( ) Graduate

    ( ) Undergraduate

15. What year are you in? (First, Second, ...) *

   _____

APPENDIX D. SAMPLE PHRASAL VERB TEST

-<u>To switch out:</u>

Write what the above Phrasal Verb means.

Use it in a sentence.

-<u>To single out:</u>

Write what the above Phrasal Verb means.

Use it in a sentence.

-<u>To crack open:</u>

Write what the above Phrasal Verb means.

Use it in a sentence.

-<u>To turn up:</u>

Write what the above Phrasal Verb means.

Use it in a sentence.

-<u>To put out:</u>

Write what the above Phrasal Verb means.

Use it in a sentence.