Using Multimedia Vocabulary Games to Improve Newcomer ESOL Students Motivation and Vocabulary Acquisition

Elizabeth E. Brittingham

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USING MULTIMEDIA VOCABULARY GAMES TO IMPROVE NEWCOMER ESOL STUDENTS MOTIVATION AND VOCABULARY ACQUISITION

by

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ABSTRACT

This study looks at the use of the multimedia learning platform, Quizlet, to help newcomer ESOL students learn English vocabulary. The use of Quizlet to learn vocabulary is supported by Mayer’s Cognitive Load Theory. With an influx of ESOL students, and a lack of teacher training, Quizlet may help to create a more equitable solution for newcomer ESOL students to learn English vocabulary. The findings of this study show that newcomers benefit from using Quizlet to learn vocabulary in the language 2 by matching it to the vocabulary in the language 1, but only if they are able to read in their first language.
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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CTML</td>
<td>Cognitive Theory of Multimedia Learning</td>
</tr>
<tr>
<td>EL</td>
<td>English Learner</td>
</tr>
<tr>
<td>ELL</td>
<td>English Language Learner</td>
</tr>
<tr>
<td>EFL</td>
<td>English as a Language</td>
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<tr>
<td>ESL</td>
<td>English Second Language</td>
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<tr>
<td>ESOL</td>
<td>English Speakers of Other Languages</td>
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<tr>
<td>ESP</td>
<td>English for Specific Purposes</td>
</tr>
<tr>
<td>L1</td>
<td>First Language</td>
</tr>
<tr>
<td>L2</td>
<td>Second Language</td>
</tr>
<tr>
<td>LEP</td>
<td>Limited English Proficiency</td>
</tr>
<tr>
<td>RVI</td>
<td>Robust Vocabulary Instruction</td>
</tr>
<tr>
<td>TESOL</td>
<td>Teaching English to Speakers of Other Languages</td>
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CHAPTER 1
INTRODUCTION

I began teaching English Speakers of Other Languages (ESOL) at a small school in Honduras in 2014. I had just graduated from the University of South Carolina and I had it in my mind that I could change the world. I was going to go to Honduras, teach for a year, and change all of my students’ lives for the better.

As you can imagine, I quickly learned that was not the case. There were so many things out of my control as a young teacher who had never been outside of the United States before. However, I did learn that even though I could not fix everything my students were dealing with, I could teach them English.

Flash forward to six years later and I am now in my third year of teaching ESOL in my hometown of Boiling Springs, South Carolina. I currently have students from Ukraine, Mexico, Honduras, Puerto Rico, and the Philippines. I have nearly 250 ESOL students and 13 of my students are brand new (newcomer) to the country. While my students have many struggles on a daily basis that I cannot fix, I still have the ability to help them learn English.

Unfortunately, with such a large caseload, I have a hard time giving my Newcomer students the attention they need. They all have very different educational backgrounds and they speak several different languages. Their instruction often needs to be tailored to their individual needs in order to really benefit them. This is also the case in
the core-content classrooms. Our teachers are overwhelmed with large class numbers and unequipped to teach our rapidly changing ESOL population.

This often means that ESOL students sit in classrooms without receiving instruction. So much of their day is wasted because they are not learning. I would like to motivate my ESOL students to take ownership of their learning of vocabulary in order to take advantage of their time in school. I want them to be able to build their English vocabulary through the scaffolding provided in multimedia vocabulary games.

PROBLEM STATEMENT

A greater number of ELs (English learners) are entering United States classrooms than in the past (Kena et al., 2016; Trickett et al., 2012). Newcomers can be students who have recently entered the United States with having complete educational backgrounds, partially schooled educational backgrounds, or disrupted or weak educational backgrounds (Short and Boyson 2012). The recent waves of newcomers are much more diverse racially, socioeconomically, and ethnically than previous United States immigration waves (Crosnoe & Turley, 2011).

Many Newcomer ESOL students end up spending a lot of time watching the rest of the class work. Many teachers allow newcomers to be disengaged in the classroom (Farris, 2011). The challenges newcomers face in the classroom impact both their academic achievement and English language proficiency growth (Suárez-Orozco et al., 2010).

Teachers do not feel confident in their abilities to teach ELs effectively; many doubt if it is effective to use ELs’ native languages in daily classroom instruction (Garcia-Nevarez et al., 2005). Many feel they do not have enough support and do not
receive enough training (Valdés, 1998). Some teachers even resist having ELs in their classroom because they view teaching ELs as too challenging (McDonnell & Hill, 1993).

With a lack of appropriate instruction due to teacher unpreparedness, many newcomers become unmotivated. According to Farris (2011), (Newcomer ESOL students) frequently are disengaged and unmotivated in the classroom because teachers, who are not taught effective EL pedagogy in either their teacher preparation program or their school’s professional learning sessions, assign newcomers tasks that are not challenging or interesting.

THEORETICAL FRAMEWORK

The theoretical framework of this study is based on Mayer’s Cognitive Theory of Multimedia Learning. Mayer’s theory focuses on how multimedia helps to enhance learning. This is vital to my study because Quizlet served as the multimedia platform used to enhance students individual learning experience.

MAYER’S COGNITIVE THEORY OF MULTIMEDIA LEARNING

Mayer’s cognitive theory of multimedia learning (CTML) uses ideas originating in cognitive load theory and dual processing theory to predict and explain how words and pictures can be used most effectively to aid learning (Mayer, 2014a). Mayer’s cognitive theory of multimedia learning presents the idea that the brain does not interpret a multimedia presentation of words, pictures, and auditory information in a mutually exclusive fashion; rather, these elements are selected and organized dynamically to produce logical mental constructs. (David, 2020.)
Mayer’s theory proposes three assumptions related to learning with multimedia. These assumptions help us to better understand the effects of learning through multimedia platforms.

The first assumption states that there are two separate channels for processing information. These channels are called auditory and visual. This means that learning is affected by what is seen as well as what is heard. This may be referred to as the dual-coding theory. His second assumption deals with the concept that each channel has a limited capacity. Therefore, only a certain amount of information can be processed at one time. This is similar to the Cognitive Load theory developed by John Sweller in the 1980s. Mayer’s third and final assumption states that learning is an active process. Students must filter, select, organize, and integrate information by using prior knowledge.

PURPOSE

The goal of this study is to help newcomer ESOL students with vocabulary acquisition. Mastering English vocabulary is crucial for ESOL students to become language competent, especially in their classroom settings (Avila & Sadoski, 1996). It has been widely recognized that difficulties with vocabulary can cause problems for learners in all areas (Blachowicz & Fisher, 2004; Gray & Yang, 2015; National Institute of Child Health & Human Development, 2000).

I sought to have ESOL students take ownership of their vocabulary learning through multimedia vocabulary games that are accessed through websites like Quizlet. Games are well established as instructional tools, and have been used for at least 5,000 years (Dempsey, et al., 2002). Multimedia games can provide each student with the personalized instruction that they need. Language learning is promoted by interaction
involving collaboration, negotiation, and scaffolding among interlocutors and co-construction of knowledge (Hitosugi, et al., 2014). These games provide students with a personalized learning experience that is scaffolded to meet their individual needs.

I anticipated that using multimedia vocabulary games could motivate my students. When framed in this interactive, contextualized, semiotically complex digital environment, learning can become more engaging and transformative. (Hitosugi, C. I., et al., 2014).

Research shows that multimedia can aid in learning by increasing learner motivation (Mayer, 2010; Mayer, 2014b; Moreno, 2006; Plass et al., 2015; Albertin, et al., 2015) With Quizlet, students can take vocabulary and make cards containing the vocabulary word in both English and their native language. Students can then add images and listen to the words in both languages. Once the cards have been made, students can then use Quizlet to study the words on their own. Identifying resources to help motivate my students to learn more English is one of my priorities.

As a form of intervention, students used Quizlet weekly to study vocabulary words. They took both a pre-test and post-test to test vocabulary knowledge. Students also took a quantitative survey to rate their motivation throughout the process. Teacher field notes documented student behavior and attitude throughout the study. Interviews were used as needed to gain more insight into a specific student’s experiences.

**RESEARCH QUESTIONS**

1. Are there differences in scores on tests of vocabulary knowledge for ESOL students after using a multimedia game to learn vocabulary?
2. How is the motivation of students learning English vocabulary affected by the use of a multimedia vocabulary game?

3. Does student motivation and participation correspond with scores on vocabulary acquisition quizzes?

These research questions were selected because they focus on measuring both student growth in vocabulary acquisition as well as student motivation. I believe that these two concepts are interconnected because motivation encourages students’ participation and learning. The third question looks at how motivation affects growth. By using multimedia games to promote vocabulary, I sought to increase acquisition and motivation within the process.

**POSITIONALITY**

Positionality refers to the stance or positioning of the researcher in relation to the social and political context of the study—the community, the organization or the participant group. The position adopted by a researcher affects every phase of the research process, from the way the question or problem is initially constructed, designed and conducted to how others are invited to participate. (Coghlan & Brydon-Miller, 2014)

In this study, I am an insider because I serve as the ESOL teacher and the researcher. My students, the core-content teachers, and the administrative team are stakeholders in this study as well.

As someone who has both lived in another country and learned another language, I understand a lot of the adversity that my students are facing. I also understand how much work they have to put in if they want to develop their English vocabulary. When I
was learning Spanish, I spent hours of my own time learning vocabulary so that I could communicate with others in my community.

I am, however, limited in understanding due to the fact that I was an adult when I learned a second language. I also had a college education when I was learning Spanish. Therefore, it is hard for me to relate with my students based on their different levels of education.

It is also important to acknowledge that because I speak Spanish, I tend to have a better connection with my students who speak Spanish. It is a lot easier for me to explain things to them in a way that they will understand it. This may be because I can compare it to something in their language or because I have a better understanding of their culture as it relates to language.

**RATIONALE FOR ACTION RESEARCH**

Action research is popular with educators because they are focused on finding a solution to a problem within their own classrooms. “(Action Research) not only seeks to understand how participants make meaning or interpret a particular phenomenon or problem in their workplace, community, or practice, but it also usually seeks to engage participants at some level in the process in order to solve a practical problem.” (Merriam and Tisdell, 2016, p. 49). Teachers want to study their students as a way to find a solution to a problem they are having.

That is why I used action research in this study; I want to help my students. I want them to expand their English language vocabulary. They also need to find a way to be motivated to learn English although it may be difficult. I would like to see them reach English proficiency so that they will have more opportunities in the future.
It is also vital that we, as a school, are providing our ESOL students with an equitable education. Schools must report how many students exit the ESOL program and how many ELs are long-term ELs (Council of Chief State School Officers, 2016). Therefore, there is more pressure for schools to show that their EL population is making more progress with their English language proficiency levels (Cowdrick, 2018). This study is aimed at making sure newcomer ESOL students make a successful transition into the United States education system. This data helps us verify whether we are using best practices with our ESOL students in order to teach them English vocabulary.

RESEARCH DESIGN

For this action research case study, I used a mixed-methods approach. This approach allowed me to better understand the effects of using multimedia games on vocabulary acquisition through both quantitative and qualitative data. The quantitative data showed students growth in vocabulary acquisition through weekly quizzes along with a cumulative pre-test and post-test. The qualitative data showed students motivation as well as their observed behaviors throughout the study.

This study uses a convergent parallel mixed methods design. I collected both quantitative and qualitative data, analyzed them separately, and then compared the results to see if the findings confirm or disconfirm each other. I also needed to better understand student motivation and how it works together with student quiz scores measuring vocabulary acquisition. The interplay between motivation and vocabulary acquisition is important to understand as it shapes methods teachers may or may not sued based on the motivation of the students.
METHODS IN REALTION TO REASEARCH QUERSTIONS

Two research questions were developed to better understand the impact the of Quizlet in studying and acquiring new English vocabulary. The first question was:

Are there differences in scores on tests of vocabulary knowledge for ESOL students after using a multimedia game to learn vocabulary?

For the first question, I used quantitative methods. Students will use Quizlet for eight weeks to study their weekly vocabulary. The students took a cumulative pre-test and post-test to show overall growth. They also took weekly vocabulary quizzes to assess their learning.

The second question was:

How is the motivation of students learning English vocabulary affected by the use of a multimedia vocabulary game?

To answer this question, I used qualitative data. I took field notes to document student participation throughout the week. The field notes turned into a narrative to better explain how the study played out in the classroom. Interviews were used when needed based on students' progress on weekly quizzes. I conducted informal interviews in order to understand the student’s experiences. I wanted the reader to have solid data as well as a descriptive image of what happened during the intervention.

The third question was:

Does student motivation and participation correspond with scores on vocabulary acquisition quizzes?

The third research question allowed me to compare both the quantitative and qualitative data used to answer the first two questions. I compared students' scores on
their weekly quizzes and cumulative pre-test and post-test to both their motivation and participation.

DEFINITIONS OF TERMS

ESOL- English to speakers of other languages. Used to describe elementary and secondary English language programs. It is also used to designate classes within adult basic education programs. Similar to EAL, it recognizes that many students know multiple languages. (Common Acronyms in the TESOL Profession, 2022)

EL- English learner. This acronym is being used more often to refer to a student in an ESL or EFL program. (Common Acronyms in the TESOL Profession, 2022)

ESL- English as a second language. English language programs in English-speaking countries where students learn English as a second language. (Common Acronyms in the TESOL Profession, 2022)

Newcomer - the US Department of Education defines newcomers as any foreign-born students and their families who have recently arrived in the U.S.
CHAPTER 2

INTRODUCTION

It is well known that English language learners (ELLs) are a significantly growing population in U.S. schools in all regions of the country (National Center for Educational Statistics, 2017) Immigrants only made-up 11 percent of the student population in 1990 and 7 percent in 1980. However, according to 2015 U.S. Census data, Immigrants make up 23 percent of the student population. Therefore, more and more teachers are likely to have ELLs in their classes and need to be prepared to teach these students (Lucas & Grinberg, 2008).

Unfortunately, despite the growing immigrant population, content-area teachers might not be prepared to teach ELLs due to their lack of formal preparation (Ballantyne, et al., 2008). This often means that ESOL students are overlooked. Therefore, students become increasingly unmotivated while sitting in classrooms where their academic needs are not being met.

The goal of this study is to teach ESOL students to take ownership of their vocabulary learning through the use of multimedia games. More specifically, students used Quizlet in order to scaffold their English vocabulary learning to hopefully provide them with a sense of confidence that leads to increased motivation.
To focus the study on aspects related to vocabulary knowledge and motivation of students learning English vocabulary, three questions were developed. These questions were used throughout the study to argue weekly and overall progress and motivation as students were presented with and studied vocabulary using Quizlet. The research questions are as follows:

**RESEARCH QUESTIONS**

1. Are there differences in scores on tests of vocabulary knowledge for ESOL students after using a multimedia game to learn vocabulary?
2. How is the motivation of students learning English vocabulary affected by the use of a multimedia vocabulary game?
3. Does student motivation and participation correspond with scores on vocabulary acquisition quizzes?

**ORGANIZATION OF CHAPTER**

This chapter starts with the literature review methodology followed by the theoretical framework. The next section focuses on historical perspective and then equity in English Language Learning. The bulk of this chapter focuses on related research and then ends in a summary.

**LITERATURE REVIEW METHODOLOGY**

In order to write this literature review I used the ERIC database to find scholarly journals that ranged in subject. I began by looking at the teacher's professional development needs in relation to ESOL students. Then I started to look at vocabulary acquisition for ESOL students and the effects of vocabulary building programs used with ESL students. This led me to focus on direct learning strategies. I first searched how
direct learning strategies affect ESOL vocabulary acquisition and then I looked at the effects of direct instruction and repeating vocabulary for ESOL students. This led me to a comparison on the effects of direct and indirect instruction on ESOL vocabulary acquisition. Then I researched how explicit and implicit instruction affect ESOL students' reading comprehension. I researched motivation in ESOL students and how student motivation is affected by multimedia games. This led me to look at studying vocabulary with the use of multimedia and how video games affect vocabulary retention in L2. After looking at video games, I started to research vocabulary learning with websites that use interactive flashcards. This steered me to vocabulary learning through Quizlet. Finally, I searched for the benefits of using visuals when learning vocabulary in a second language and using visual vocabulary to learn target words. I also looked at using L1 keywords to acquire L2 keywords.

HISTORICAL PERSPECTIVES

The following information was compiled by the Texas Education Agency (2010). It outlines the history of education of English language learners.

The first law to help ESOL students was the Bilingual Education Act, Title VII of the Elementary and Secondary Education Act of 1968. It was originally passed in 1968 and amended as needed until the No Child Left Behind Act was established in 2001.

The Bilingual Education Act, Title VII of the Elementary and Secondary Education Act of 1968 established federal policy for bilingual education for economically disadvantaged language minority students, allocated funds for innovative programs, and recognized the unique educational disadvantages faced by non-English speaking students. Amendments to Title VII in 1978 emphasized the strictly transitional nature of native
language instruction, expanded eligibility to students who were limited English proficient (LEP), and permitted enrollment of English-speaking students in bilingual programs. The 1982 Amendments to Title VII allowed for some native language maintenance, provided program funding for LEP students with special needs, supported family English literacy programs, and emphasized the importance of teacher training. Amendments to Title VII in 1988 included increased funding to state education agencies, expanded funding for "special alternative" programs where only English was used, established a three-year limit on participation in most Title VII, and created fellowship programs for professional training. Educational reforms made in 1994 encompassed the reconfiguration of Title VII programs. These new changes reinforced professional development programs, increased attention to language maintenance and foreign language instruction, improved research and evaluation at state and local level, supplied additional funds for immigrant education, and allowed participation of some private school students.

The No Child Left Behind Act of 2001 was a pivotal movement for ESL students. The legislation for limited English proficient students is found under Title III of the No Child Left Behind Act. The focus of Title III is teaching English to ESOL students. It is repeatedly stressed that Title III funds and programs are intended to "ensure that LEP students attain English proficiency, develop high levels of academic attainment in English, and meet the same challenging State academic content and student academic achievement standards as all children are expected to meet" (NCLB §3102). Title III is also meant to hold State educational agencies, local educational agencies, and schools accountable for increases in English proficiency and core academic content knowledge of
ESL students by requiring demonstrated improvements in the English proficiency and adequate yearly progress on state academic achievement tests (NCLB §3102(8)).

August (2016) cites the following important steps taken in the 2015 reauthorization of the Elementary and Secondary Education Act, Every Student Succeeds Act (ESSA):

- It’s easier to track EL progress now that statewide entrance and exit procedures for EL services are standardized throughout the state.
- EL student monitoring has been improved. For example, states can now include reclassified English learners in the EL subgroup for four years—not just two, as the No Child Left Behind (NCLB) Act specified.

THEORETICAL FRAMEWORK

The Elementary and Secondary Education Act established policy to guide English language instruction, which was intensified in the No Child Left Behind Act and the Every Student Succeeds Act. This historical context provided the impetus for greater focus on English Learners. The focus then shifted to best practices in instruction for English Learners. This study focuses on a theory related to multimedia learning.

Mayer’s cognitive theory of multimedia learning (CTML) supports the use of multimedia gaming as a learning strategy. This connects to my intervention because I am looking at how ESOL student’s vocabulary acquisition and motivation are affected by multimedia gaming.

The Cognitive Theory of Multimedia Learning explains what takes place when learners are experiencing meaningful learning from multimedia instruction. Mayer and Moreno (2003) define multimedia as the use of words and pictures. Multimedia learning
is an active process of selecting words, selecting images, organizing words, organizing images and integrating them together and with prior knowledge from long-term memory.

Mayer’s theory suggests that ESOL students’ interactivity with multimedia input is best facilitated and enhanced by connecting written and pictorial cues to both visual and verbal systems rather than to just a single mode (Ramezanali, & Faez, 2019). In Mayer’s (2014) definition, words signify any material presented in verbal form such as spoken texts or printed texts, and pictures represent static or dynamic pictorial materials such as illustrations, graphs, diagrams, maps, animations, or videos. Thus, multimedia learning refers to “building mental representations from words and pictures” (p. 2).

**EQUITY IN ELL**

Learning vocabulary through multimedia games is an important component in providing equity for English Language Learners. That is because the use of multimedia bridges to a deeper understanding for ESOL students (Khyiabani et al., 2014).

Multimedia learning strategies empower newcomer ESOL students to take ownership of their own learning. This is because elements of fun, enjoyment, and competition in games can make students more motivated and interested in learning English (Halim, et al., 2020).

Unfortunately, most classroom teachers are unprepared to teach the influx of immigrants coming into our country. This is not their fault, but rather, it is due to a lack of professional development. A study of California teachers found that teacher quality is critical to student learning; teacher preparation and expertise are part of the quality equation but teachers of EL students often lack that preparation and expertise (Gandara, et al., 2005).
VOCABULARY ACQUISITION

When considering and researching vocabulary acquisition, it is important to look at the many factors that contribute to the learning of vocabulary. To begin with, students need teachers who have the ability to both engage and prepare for instruction. Once teachers are prepared, it is important that students are also motivated to learn. This is where research that supports the use of multimedia learning games to improve students’ motivation comes in. With both teachers and students prepared, it is time to look at effective instruction. Effective instruction for vocabulary acquisition includes direct learning strategies, use of images and target words, multimedia presentation, and the use of digital vocabulary card-based multimedia programs. The lasting effects of combining all of these factors include greater retention and improved reading comprehension (Andarab, 2019; Chen, 2015; Dizon, 2016; Hitosugi et al., 2014; Montaner-Villalb, 2019).

TEACHER PREPAREDNESS

When beginning this study, I knew that I wanted to study the effects of using multimedia learning with ESOL students because I wanted to find a way to help ESOL students take ownership of their learning. I also wanted to provide teachers with a way to accommodate their ESOL students. I began my research by looking into how teachers felt about their preparedness to teach the influx of newcomer ESOL students.

Abbott and Rossiter (2011) looked at the perceived professional development (PD) needs, interests, and challenges of ESOL instructors in rural Alberta from the perspectives of instructors and administrators. The researchers collected data in five rural locations that had recently had an influx of newcomer ESOL students who require ESOL
specific instruction. The results of the research revealed a number of areas of needed growth. Instructors rated the perceived usefulness of PD topics using a 5-point scale (1=not at all useful; 5=extremely useful) and were allowed to rate more than one topic. The topics that were rated as either useful or extremely useful were activity-based learning (e.g., ESL warm-ups, icebreakers, tasks, 75%); teaching English for work purposes (67%); teaching multilevel classes (61%); curriculum materials and program development (61%); teaching pronunciation (58%); and placement and assessment methods (53%).

Lopez (2018) found that ESOL students were not being supported in the general education classroom with the appropriate instructional strategies needed to meet the academic success at the urban elementary school. The case study research design included interviews and observations with a sample of 10 general education teachers at the school in grades 1-5 who had ELL students in their general education classrooms. The data were transcribed, coded, and analyzed for emerging themes which included the following; teachers’ beliefs in their abilities to support ELLs, their educational background, their professional development (PD) and training, their perceptions of English as a language barrier, their lack of ESOL instructional resources, and their beliefs about an appropriate education and positive classroom environment.

MOTIVATION

Studies give insight on ESOL student motivation when using multimedia vocabulary games.

The findings from a study by Halim, et al. (2020) revealed that these learners had an elevated motivation and positive perceptions on the inculcation of online quiz-games
in English lessons. There were 60 primary school learners involved in this study. Data were collected using a survey questionnaire, and were analyzed and discussed quantitatively in descriptive analysis. The positive responses shown by the pupils have reflected their positive motivation, perceptions and acceptance towards learning English with the integration of online quiz games like Kahoot! & Quizizz.

EFFECTIVE INSTRUCTION

DIRECT LEARNING STRATEGIES

Researches and educators are seeking effective strategies to teach language and vocabulary. Studies show that when teachers use direct and explicit instruction to teach vocabulary students outperform students taught through indirect or implicit instruction.

In an attempt to explore the correlation between direct and indirect vocabulary learning strategies, Teng (2015) found that direct strategies were frequently used by EFL students. A sample of 145 low proficiency students who learn English as a Foreign Language (EFL) completed a questionnaire concerning vocabulary learning strategy use. Vocabulary Levels Test and Word Associates Test were administered to measure the breadth and depth of lexical repertoire respectively. The results indicated that (a) direct strategies were frequently used by EFL students (except for direct cognitive analyzing strategy), and (b), indirect strategies were less frequently used strategies. Therefore, it can be implied that direct vocabulary learning strategies are appropriate for the ESOL newcomers in this study.

The outcomes of a study by Naeimi and Foo (2014) revealed that repeating as a direct vocabulary learning strategy can cause higher accomplishments of word storage in reading comprehension skills of Iranian pre-intermediate EFL undergraduate learners. A
vocabulary test was administered to 146 male and female pre-intermediate EFL university students. Seventy-eight pre-intermediate language learners were elected and appointed into two experimental groups (A and B) based on a vocabulary pre-test. One group was taught vocabulary through Using Repeating vocabulary learning strategy and one group was taught Cooperating with Peers vocabulary learning strategy for the aim of improving their lexical knowledge in reading comprehension skill. At the end of the treatment period, another vocabulary test (post-test) was implemented to all the students of these two groups. After analyzing the data of the study that was administered through using Independent samples t-test statistics, the results showed that there was a considerable difference between the two experimental groups under analysis in terms of their vocabulary improvements.

Similarly, a study by Naeimi and Foo (2015) showed that direct strategies at pre-intermediate level can lead to higher achievement of vocabulary storage in reading comprehension. Sixty students were selected and assigned into two experimental groups (A & B) based on a vocabulary pre-test. During the study, group A was taught vocabulary through direct strategies (i.e., Structured reviewing, using mechanical techniques) while group B was taught vocabulary through indirect strategies (i.e., organizing, discussing your feelings with someone else) for developing their vocabulary storage in reading comprehension. At the end of the research, all the participants were given another vocabulary test. The results indicated that the direct group (A) outperformed the indirect group (B). The results showed that direct strategies at pre-intermediate level can lead to higher achievement of vocabulary storage in reading comprehension.
Kusumawati and Widiati (2017) looked specifically at the effects of repeating as a direct vocabulary learning strategy versus cooperating with peers as an indirect vocabulary learning strategy teaching on the improvement of word knowledge on reading comprehension skills of Iranian Undergraduate students. Quasi-experimental posttest design involving 54 Mechatronics students at the Electronic Engineering Polytechnic Institute of Surabaya was employed in the study. The students were divided into two groups, field dependence and field independence, and received different vocabulary instruction from the teacher (the present researcher). Independent samples $t$-test and one-way ANOVA used in analyzing the data revealed that the group receiving explicit vocabulary instruction outperformed the group receiving implicit vocabulary instruction in comprehending ESP reading. The results concluded that explicit vocabulary instruction is more effective in promoting ESP reading comprehension than implicit one.

**USE OF IMAGES AND TARGET WORDS**

Studies show the benefits of using both images and target words to teach vocabulary to ESOL students. These two combined help students to acquire vocabulary. Jones (2004) found that students recognized English translations or pictorial representations of French keywords better than the control group that received no annotations during listening. Students were randomly assigned to one of four aural multimedia groups: a control group that received no annotations and three treatment groups that provided written, pictorial, or both written and pictorial annotations while listening. In the first study, students in the three treatment groups recognized English translations or pictorial representations of French keywords better than the control group that received no annotations during listening. In the second study, students produced
English translations of French keywords best when the mode of testing matched the treatment mode.

The results of this study from Tahir, et al., (2020) confirm the effectiveness of Visual Vocabulary in learning and understanding the target words. Sixty students from two suburban schools in Ipoh and Teluk Intan, Perak, were selected. These students were instructed to learn 45 target words and Visual Vocabulary was applied to assist them to learn and simultaneously understand the meaning of the target words. The independent sample t-test, paired sample t-test, and descriptive statistics were used to analyze the scores of the pre and post-tests. The score comparison and total improvement score in percentages were also presented. The paired sample t-test results are (t=-17.85, df=29, p<.05) for the experimental group and (t=-4.85, df=29, p<.05) for the control group. Based on the stated results, both experimental and control groups improved significantly (p=.000*) in the post-test with a mean difference of 15.62. The results of this study confirm the effectiveness of Visual Vocabulary in learning and understanding the target words. The text states, “This approach is proven to increase the success rate of vocabulary learning among ESL learners.” (pg. 323)

Avilia and Sadoski (1996) did a study to compare vocabulary-learning strategies. Sixty-three fifth grade limited English proficiency students were given 10 English words to learn by the keyword method or controlled instruction emphasizing direct translation and memory. Results found that the keyword method produced superior recall and comprehension.
MULTIMEDIA PRESENTATION

With the incorporation of technology into classrooms around the world, multimedia presentation has been an integral part of education. Studies show that multimedia presentation has a positive effect on vocabulary acquisition in L2.

Khiyabani et al., (2014) found that using multimedia was more effective in acquisition and learning unknown vocabulary than traditional methods. The study tried to observe the impact of using multimedia on teaching vocabulary to see if it could improve learning vocabulary in high school classes. The participants were divided into two classes according to their proficiency. Each group had 28 participants. There was a pre-test to check out the student’s knowledge of vocabulary at the beginning of the experiment. The control group was taught by traditional tasks like reading aloud, repetition, and translation. Learners in the experimental group were taught by using multimedia techniques. After the treatment, three months (12 sessions), a post-test was used to check out the student’s knowledge of vocabulary at the end of the experiment in both groups. Two delayed post-tests were used to check out the retention of the student’s knowledge of vocabulary after two and four weeks of ending the experiment in both groups. The findings suggested that using multimedia was more effective in acquisition and learning unknown vocabulary than traditional methods. It had a positive effect on retention of vocabulary knowledge.

Murray (2018) showed that the multimedia group put more work into the vocabulary practice at Time 1 (27 days) and Time 2 (59 days) than did the traditional-instruction group, to a degree that was statistically significant. In addition, at Time 2 the multimedia group indicated a greater feeling that the practice was helping them learn the
vocabulary, once again to a degree that was statistically significant. RIMMS data collected after the end of instruction also showed that the multimedia instruction group scored higher on measures of learner satisfaction than the traditional instruction control group, to a statistically significant degree.

VOCABULARY CARD BASED MULTIMEDIA PROGRAMS

Studies are emerging based on the use of multimedia programs that facilitate recall, memorization, and retention of information over time. The following studies focus on benefits of the use of Quizlet and other Vocabulary Card Based Multimedia Programs.

A study by Montaner-Villalb (2019) studied the effects of vocabulary learning with Quizlet. The experiment used a quasi-experimental design. One group of A2 (according to the Common European Framework of Reference for Languages) EFL learners at a state secondary school in Valencia, Spain (N=24) participated in this study. Learners from the Treatment group (henceforth, T-group) underwent a pre-test and a post-test to assess their acquisition of the assigned vocabulary lessons which were extracted from the course syllabus. After utilizing Quizlet for vocabulary learning for the academic year 2017-2018, the results proved that these learners significantly improved their level of EFL vocabulary at the post-test.

Dizon (2016) conducted a study that revealed that the learners were able to make statistically significant gains using Quizlet. Moreover, a questionnaire administered by the researcher indicated that the students had positive perceptions of Quizlet to study L2 vocabulary. Specifically, all three constructs studied – perceived usefulness, perceived ease of use, and behavioral intention to use Quizlet – had mean scores greater than 4 on a
5-point Likert scale, indicating a high-level of agreement. Based on these findings, the author supports the use of Quizlet in the EFL classroom.

Solhi Andarab (2019) sought to investigate whether collocating the lexical items on Quizlet can facilitate acquisition of the vocabulary items, and whether it is likely to be more effective than learning decontextualized individual words. An independent sample t-test applied on the scores achieved from a posttest indicated a significant difference in scores of the control group and that of the experimental group. This study sheds light to the significance of contextualizing a lexical item with collocations through which acquisition of vocabulary item is enhanced.

Chien (2015) compared and contrasted 64 Taiwanese college freshmen’s perceptions of and attitudes toward three online vocabulary flashcard websites, Quizlet, Study Stack, and Flashcard Exchange. The study has the following two findings. First, these three online vocabulary flashcard websites mainly offered freshmen with the word knowledge in terms of form and words’ meaning. Second, participants held positive attitudes toward learning and improving their vocabulary abilities via online flashcards and their related activities.

LASTING EFFECTS

RETENTION

While it is important to identify effective strategies to promote vocabulary acquisition, retention of vocabulary over time in critical as English learners build their knowledge and skills. A study found that using games when learning increases vocabulary retention. More studies are needed that focus on retention of vocabulary learning.
Results from a study by Hitosugi, et al., (2014) indicated positive impact on learner effect and a preference for game-mediated activities over conventional exercises. The video game was integrated into an existing curriculum and two studies were performed. In Study 1 \((n = 9)\), new vocabulary was embedded in task sheets. Study two \((n = 11)\) introduced FF vocabulary explicitly and included a graded unit test. In both studies, participants took three FF vocabulary tests (pre-, post-, and delayed) and an end-of-unit affect survey. Study 2 also included textbook vocabulary tests and interviews. Results indicated positive impact on learner affect and a preference for game-mediated activities over conventional exercises. Within the subject repeated-measure analysis revealed that participants in both groups recalled new FF vocabulary five weeks later at the same rate as immediately after the unit, while they significantly forgot words from the textbook. Study 2 resulted in better learning of FF words than Study 1.

**READING COMPREHENSION**

Reading comprehension is a vital component of education. Two studies were identified that show that increase in vocabulary leads to increased reading comprehension skills for ESOL students.

A report by Gaudio (2003) describes a program for improving the reading skills of ESL (English as a Second Language) students. The targeted population consisted of 19 ESL students, ranging in age from seven to 10 years, in a western suburb of a large metropolitan city located in Illinois. The problem of poor reading ability is documented through low reading scores on the STAR Computer Adaptive Reading Test and through minimal classroom participation documented in a classroom participation checklist. Post
intervention data indicated an increase in the students' reading ability and an increase in classroom participation.

A study by Duff (2019) tested two hypotheses about variables that predict response to vocabulary treatment on text comprehension: gains in vocabulary knowledge due to treatment and pretreatment reading comprehension scores. Students in Grade 6 (N = 23) completed a 5-session intervention based on robust vocabulary instruction (RVI). Knowledge of the semantics of taught words was measured pre- and post-treatment. Participants then read two matched texts, one containing taught words (treated) and one not (untreated). Treated texts and taught word lists were counterbalanced across participants. The difference between text comprehension scores in treated and untreated conditions was taken as a measure of the effect of RVI on text comprehension.

SUMMARY

This study looks at using multimedia games to help support and motivate ESOL students in the classroom. These games can be used as a supplemental activity for students who cannot participate in classes taught by teachers who do not know how to accommodate them. These multimedia games help to provide direct and explicit vocabulary instruction to students on an individual basis. Studies show that when teachers use direct and explicit instruction to teach vocabulary students outperform students taught through indirect or implicit instruction. This direct instruction meets the needs of ESOL students allowing them to learn English vocabulary in hopes of eventually joining the rest of their classmates in lessons taught in English.

Multimedia media games combine both target words and images when teaching vocabulary. Studies included in this literature review show the benefits of using both
images and target words to teach vocabulary to ESOL students. More specifically, studies show that multimedia presentation has a positive effect on vocabulary acquisition in L2 for ESOL students.

This literature review also contains studies focused on the specific use of Quizlet and other Vocabulary Card Based Multimedia Programs. In a vocabulary card game like Quizlet, the students may have flash cards that have the word and an image of the word. Students can match the words to the images in order to learn the meaning of the English words.

Included studies also give further insight on the effects of using multimedia games to teach vocabulary to ESOL students. These effects include student motivation through multimedia and how it affects vocabulary retention. Students feel motivated because they are able to enjoy the process of learning. The multimedia games help to scaffold the material so that students are able to feel like they are capable of doing the task assigned to them. Vocabulary retention is also improved when students are using multimedia games. As a lasting benefit, studies also show that increase in vocabulary leads to increased reading comprehension skills for ESOL students. Therefore, while increasing their vocabulary, students are also working towards bettering their reading skills. This is vital because reading ability affects student success in all academic areas.
CHAPTER 3

OVERVIEW

Due to lack of teacher training, many newcomer ESOL students end up spending a lot of time watching the rest of the class work. Teachers do not know how to communicate with their students or how to teach them. With large class sizes, they are not able to give them the individualized instruction that they need. This leads to a lack of motivation and desire to learn English. Students feel defeated because they are not able to participate in class. They worry that they will not be successful in their new country. This is especially disheartening because many of these students have come to the United States with hopes of a better future.

That being said, my goal is to teach newcomer students to take ownership of their learning of basic English vocabulary through multimedia games such as Quizlet. These games provide an interactive way for students to learn vocabulary on their own. They can simply input the vocabulary and practice with repetition. The repetition can include the word in both English and their home language, an image, and audio of the word in English. This supports both visual and auditory learners. The games also include a form of competition that helps motivate the learners to do well.

The theoretical framework of this study is based on Mayer’s Cognitive Theory of Multimedia Learning. Mayer’s theory focuses on how multimedia helps to enhance learning. This is vital to my study because I am using Quizlet to help enhance my
students' individual learning experiences. Multimedia vocabulary games serve as a meaningful and simplified way of learning that can increase students' motivation.

RESEARCH DESIGN/ QUESTIONS

For this action research case study, I used a mixed methods design. The mixed-methods design allowed me to better understand the effects of using multimedia games on vocabulary acquisition through both quantitative and qualitative data. The quantitative data demonstrates students’ growth in vocabulary acquisition through weekly quizzes. The qualitative data identifies students’ motivation as well as the behaviors observed throughout the study. Qualitative data also allows me to better understand the process as seen through the eyes of my students. I was able to understand how their past and present experiences affect their learning.

This study employed a convergent parallel mixed methods design. I collected both quantitative and qualitative data, analyzed them separately, and then compare the results to see if the findings confirmed or disconfirmed each other. I was able to explore the idea that as student motivation goes up, so do student quiz scores measuring vocabulary acquisition. I also wanted to explore how student’s personal experiences affect their learning through interviews. This method allowed me to determine if the results were a correlation of relationship between student motivation and vocabulary acquisition using multimedia vocabulary games. Follow up interviews allowed for additional information to be obtained to better understand motivation and student achievement using multimedia instructional tools.
Three research questions guided this study. The research questions helped focus this work on the impact of Quizlet, a multimedia game, in motivating English learners and improving their vocabulary acquisition. The research questions are provided below:

1. Are there differences in scores on tests of vocabulary knowledge for ESOL students after using a multimedia game to learn vocabulary?
2. How is the motivation of students learning English vocabulary affected by the use of a multimedia vocabulary game?
3. Does student motivation and participation correspond with scores on vocabulary acquisition quizzes?

INTERVENTION

During an eight-week period, ESOL classes that include students classified as newcomers participated in a vocabulary development program using multimedia instruction. Quizlet was integrated into the weekly instruction to study vocabulary words. Each student was given a set of 10 to 20 vocabulary words each week. These words came from the text, ACCESS Newcomers: Student Edition Grades 5-12 2005.

At the beginning of each week, students were assigned a premade Quizlet with the words assigned that week. This was done to ensure that students were studying the same translations that were going to be used on the test. The students were also given a paper copy of the words. Each Monday they took the first 20 minutes of class to write the translations on the provided vocabulary page. The students were given 10 minutes in class on Tuesday through Thursday to study the words. They were also encouraged to study the words in other classes when they had free time. Finally, they took the weekly quiz at the beginning of class each Friday.
Figure 3.1 This is the vocabulary that was used during week one of the intervention.
WEEK TWO

**How’s the Weather?**

<table>
<thead>
<tr>
<th>clear</th>
<th>cloudy</th>
<th>also</th>
<th>forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>cold</td>
<td>cool</td>
<td>going</td>
<td>if</td>
</tr>
<tr>
<td>freezing</td>
<td>hot</td>
<td>inside</td>
<td>outside</td>
</tr>
<tr>
<td>rainy</td>
<td>sunny</td>
<td>umbrella</td>
<td>up</td>
</tr>
<tr>
<td>warm</td>
<td>weather</td>
<td>will</td>
<td>won’t</td>
</tr>
</tbody>
</table>

Figure 3.2 This is the vocabulary that was used during week two of the intervention.
Figure 3.3 This is the vocabulary that was used during week three of the intervention.
Figure 3.4 This is the vocabulary that was used during week four of the intervention.
Figure 3.5 This is the vocabulary that was used during week five of the intervention.
Figure 3.6 This is the vocabulary that was used during week six of the intervention.
**Figure 3.7** This is the vocabulary that was used during week seven of the intervention.
Figure 3.8 This is the vocabulary that was used during week eight of the intervention.
MULTIMEDIA CHANNELS

Quizlet allows students to use a plethora of multimedia channels. Once students have opened a set of vocabulary, there will be column on the left-hand side. This column contains options for students to both study and play.

The first option under study is flashcards. To begin with, students can you automated note cards to study their words. This allows them to flip the cards to see both the front and back with the English word, and the word in their home language. While using the note cards, they can also hear the pronunciation of the word in each language.

With Quizlet learn, the student is first asked how they would like to approach the material, and where they are in the learning process. Quizlet then created multiple chose quizzes that let students know how much of the content they already know.

With spell, the students listen to the words. They are then required to type out the spelling of the work.

The test options auto-generates a mix of questions. These may include written, multiple choice, matching, and true or false answers. The student may make changes to pick the method of question being used, or they use a combination of methods.

Quizlet also allows students to play a matching game. During this game, the words are spread out across the screen in small boxes. There is a timer, and students race against the clock to connect the words and their correct translation.

Gravity is another game that students can play with Quizlet. The game has asteroids that contain words crashing towards a planet. The student needs to save the planet by typing the word before it strikes the planet.
Quizlet live is a game mode that allows students to play against each other individually or in groups. A code is generated by the teacher and shared with the students. They enter the game using the code and then compete to have the highest score by answering the most questions correctly.

VOCABULARY TRANSLATION

Quizlet plus allows you to choose a language, which makes it easy to provide translations in other languages. After typing the word into Quizlet, a list of possible translations is provided in the chosen language. Due to the fact that I speak Spanish, it was easy for me to validate the translations. However, because I do not speak Russian, I would have students who are bilingual look over the translations before I sent the sets to my students.

RESEARCH SETTING/ PARTICIPANTS

This study took place in Newcomer ESOL classes at Boiling Springs Middle School. Each class has approximately seven students. Boiling Springs Middle School has approximately 1,300 students in grade 6-8. Approximately, 250 students speak at least one other language. One hundred of those students are in the ESOL program. For a student to be in the ESOL program, English must not be their first language. Each student’s language proficiency is tested each year to determine program eligibility. The test used is WIDA ACCESS, and this test evaluates students’ abilities in reading, writing, listening, and speaking English as a second language. Once students show mastery they continue to be monitored for four years.

The students in this study had been in the country for less than three years. They must score a two or below to be in the Newcomer ESOL class. This means that they
know very little academic language and must be highly accommodated in their core-content classes. The majority of the ESOL students at Boiling Springs Middle School speak either Spanish or Russian.

**SPECIFIC STUDENTS**

Seven students participated in this study. Three students were in 8th grade, three students were in 7th grade, and one student was in 6th grade. Among these students, their WIDA scores ranged from 1 to 2 indicating that they were classified as ESOL newcomers. The students were from Honduras, Ukraine, or Russia. Three of the students speak Spanish and four of the students speak Russian. Their I-Ready reading levels range from kindergarten to first grade.

Table 3.1 Study Participants

<table>
<thead>
<tr>
<th>Student</th>
<th>Grade Level</th>
<th>Language</th>
<th>Home Country</th>
<th>WIDA</th>
<th>I-Ready Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>6</td>
<td>Spanish</td>
<td>Honduras</td>
<td>2</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Student 2</td>
<td>7</td>
<td>Russian</td>
<td>Ukraine</td>
<td>1.8</td>
<td>Grade K</td>
</tr>
<tr>
<td>Student 3</td>
<td>7</td>
<td>Russian</td>
<td>Russia</td>
<td>1.9</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Student 4</td>
<td>7</td>
<td>Spanish</td>
<td>Honduras</td>
<td>1</td>
<td>Grade K</td>
</tr>
<tr>
<td>Student 5</td>
<td>8</td>
<td>Spanish</td>
<td>Honduras</td>
<td>1.9</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Student 6</td>
<td>8</td>
<td>Russian</td>
<td>Ukraine</td>
<td>1.8</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Student 7</td>
<td>8</td>
<td>Spanish</td>
<td>Honduras</td>
<td>1.7</td>
<td>Grade 1</td>
</tr>
</tbody>
</table>
DATA COLLECTION METHODS

The study included both quantitative and qualitative methods. The quantitative methods included a pre-test, post-test, weekly assessment, and weekly motivation surveys. The qualitative methods included observations and interviews.

PRE-TEST/POST-TEST

The students took both a pre-test and post-test to test vocabulary knowledge. Each test was generated using the Quizlet platform. It tested their ability to identify the translation of 40 word in both English and their home language. All students were given the same test at the beginning of week one and the end of week eight. The cumulative post-test allowed me to check for vocabulary retention. I can see which words students actually learned. This also helped with the validity of the study because it kept students from simply memorizing the words for the weekly quizzes.

WEEKLY ASSESSMENTS

Students completed weekly assessments each Friday that allowed me to quantify the words students learned during the week. The weekly assessments were generated using the Quizlet platform. Weekly assessments were comprised of the focus words for the week’s lesson. By using weekly assessments, I could explore performance as a whole and by student.

SURVEY

Students also took a survey every Friday along with their quiz. The survey asked them to rate their motivation throughout the process. This gave me quantitative data that I used to operationalize the concept of motivation. I focused on students’ attitudes towards
Quizlet as a platform, the specific vocabulary being studied, using a computer to study, and the transferability of the vocabulary as a whole.

**MOTIVATION SURVEY**

I enjoy using Quizlet to learn vocabulary.

*Strongly Disagree  1  2  3  4  5  Strongly Agree

I felt motivated to learn the vocabulary that was assigned to me this week.

*Strongly Disagree  1  2  3  4  5  Strongly Agree

I do not like using the computer to learn vocabulary.

*Strongly Disagree  1  2  3  4  5  Strongly Agree

I think that the vocabulary I learned this week will help me in the future.

*Strongly Disagree  1  2  3  4  5  Strongly Agree

Figure 3.9. Student Motivation Survey

**OBSERVATIONS**

Qualitative data came from teacher field notes that documented student behavior and attitude in the class throughout the study. If a student was working hard or enjoying using Quizlet, I documented it. I also documented it when students did not want to work or had negative comments. Student attendance was also documented in the observations. This allowed me to reflect on how the students’ behavior affected their learning. I was also able to see how student’s behavior related to their self-described motivation.
INTERVIEWS

Qualitative data came from interviews conducted throughout the study. I interviewed students depending on their progress throughout the study. I conducted an interview with student one in week two and an interview with student six in week three. The interviews give insight into why students were not performing well and we talked about what changes they could make to do better in the future. The interview questions varied depending on specific student behavior and circumstances.

DATA ANALYSIS METHODS

PRE-TEST/POST-TEST METHODS

The pre-test and post-test scores were compared at the end of the study to show overall growth by student. This allowed me to see what vocabulary students learned and what vocabulary they already knew before the study. I calculated growth scores for each student by subtracting the pre-score result from the post-score result.

WEEKLY ASSESSMENTS

The weekly assessments measured students’ vocabulary acquisition throughout the process of the study. The weekly assessments included up to 20 points based on the number of correct responses. Each individual student received a score as I could look at the score as a whole. These scores helped me to guide the study. They helped me to know when I should interview students based on their performance.
SURVEY

Motivation was analyzed through a weekly survey with Likert scale questions. Students rated their motivation using the Likert scale to provide quantitative data. The survey was printed and attached to their weekly quiz. It took students approximately two minutes to answer the four questions that made up the survey. I analyzed the data by assigning each answer a quantitative value. I then averaged the values to find an overall motivation score for each student each weekly. Finally, I averaged the weekly scores to calculate a motivation score for the entire study. The data from the quizzes was compared to the data from the surveys. I looked for a correlation between motivation and vocabulary acquisition.

OBSERVATION

Teacher field notes were also kept and analyzed for qualitative data. I used these notes to help explain students weekly quiz grades and motivation. I triangulated the observation results at the student-level with weekly quiz results and motivation data. This adds more validity to the study because it helps to explain student attitudes.

INTERVIEWS

Interviews were used as another form of qualitative data. I used the data from the interviews to better understand student’s success and or failures throughout the study. The interviews were different for each student because they were based on their personal experience. I tailored the questions to meet their specific situations. I used the interviews along with the field notes to help explain students’ weekly quiz and motivation scores.
CHAPTER 4

OVERVIEW OF STUDY

Many newcomer students are not getting the support they need to succeed. Their diverse backgrounds often mean that their instruction needs to be tailored to their individual needs in order to really benefit them. Many teachers find themselves overwhelmed with large class numbers and unequipped to teach our rapidly changing ESOL population. This can mean that these students are wasting time in core because they are not learning. This study was designed to motivate my ESOL students to take ownership of their learning of vocabulary in order to take advantage of their time in school. I want them to be able to build their English vocabulary through the scaffolding provided in multimedia vocabulary games.

The action research study included quantitative and qualitative methods. The quantitative methods included a pre-test, post-test, weekly assessment, and weekly motivation surveys. The qualitative methods included observations and interviews.

INTERVENTION

ESOL classes that included students classified as newcomers participated in a vocabulary development program using multimedia instruction over an 8-week period. Students used Quizlet to learn their weekly vocabulary. Students were assigned 10 to 20 vocabulary words each week. These words came from the text, ACCESS Newcomers: Student Edition Grades 5-12 2005. The students were given time in class each day to
study the words. They were also encouraged to study the words in other classes when they had free time.

Seven students participated in the intervention. These students were identified based on their WIDA and invited to participate because they showed a need for vocabulary instruction. These students were newcomer students from Ukraine, Russia, and Honduras. Their English proficiency ranged from 1 to 2. Their reading levels in English ranged from Kindergarten to first grade.

Each week, students completed a quiz related to the assigned vocabulary words. Quizlet’s were designed for each vocabulary set, and students were encouraged to use Quizlet to review and study the words often. In addition to Quizlet, students were administered weekly surveys to quantitate and understand their motivation levels as they were working on new vocabulary units and using Quizlet as an instructional strategy. Observations and interviews supplement the information gathered through Quizlet and surveys to better understand student practices and demonstrated behaviors during Quizlet practice.

FINDINGS

The themes of this study are presented in the following figures. They have been broken down by student to give a better picture of the students work throughout the intervention. Below the figures, I have given a summary of their overall results and included any insight that may help to explain the findings.
This student had a lot of variation in their scores and motivation. They scored a 100 on week six, which shows they were capable of doing well. However, they scored a zero on week eight. The motivation scores usually correlated with the quiz scores. This student made negative overall growth. I believe that attitude and motivation were determining factors.
This student has consistently high grades and motivation. This is significant because this student does not do well in their other class. They made significant growth between the pre-test and post-test.
This student was consistently motivated to learn the vocabulary. I believe that a lot of the motivation comes down to the fact that I have a good relationship with them and they want to please me. Their quiz grades were good the majority of the time and they made significant growth between the pre-test and the post-test.
This student’s quiz grades fluctuated a good bit. They passed all of the quizzes, but they did much better some weeks. Their motivation was constantly high, only dropping a little the last week. They had positive overall growth between the pre-test and the post-test.
This student had many changes throughout the study. They dealt with behavior and health problems causing both their quiz grades and motivation to fluctuate. Most of the time, their motivation correlated with their quiz grades. Week 7 was the only outlier where the motivation and quiz grades did not correlate. They made significant growth between the pre-test and the post-test.
This student did not have consistent quiz grades. They started well, but they did not continue to do well throughout the intervention. For the majority of the study, this student’s low motivation correlates with their low quiz scores. The only time they did not correlate was during week three. I believe that this student’s negative motivation explains their negative growth between the pre-test and post-test.
This student did consistently well. Her overall growth between the pre-test and post-test was nearly 100%. I believe this is because her motivation as high throughout the study. This is especially significant for this student because she has not been motivated in the past.
After review each student’s data individually, I looked at scores and growth as a whole. The individual and group level data helped answer the research questions developed by this study.

1. Are there differences in scores on tests of vocabulary knowledge for ESOL students after using a multimedia game to learn vocabulary?

![Overall Student Growth](image)

**Figure 4.8. Overall Student Growth**

Five of the seven students made positive overall growth between the pre-test and the post-test. Student 1 and student 6 made negative growth, meaning they scores worse on the post-test than they were on the pre-test. Students 4 and 5 had the most growth with over 50% growth from the pre-test to the post-test.
2. How is the motivation of students learning English vocabulary affected by the use of a multimedia vocabulary game?

All students had a score of at least 50% for motivation. Student 4 was motivated 100% of the time. Students 3 and 4 also had almost perfect motivation. Student 5 had the lowest motivation.

Figure 4.8. Average Student Motivation
3. How does student motivation and participation correlate with scores on vocabulary acquisition quizzes?

Student 7 was the only student who had correlating motivation and quiz scores.

Student 1, 3, 4, and 6 all had higher motivation than quiz scores. Students 2 and 5 had higher quiz scores than motivation.
CHAPTER 5
OVERVIEW OF STUDY

Despite the influx of newcomer ESOL students coming into the country, many teachers are not prepared to serve them in the core-content classes. This leads to a lack of motivation and lower success rates for ESOL students. This study looks at helping ESOL students learn vocabulary through the use of Quizlet. The goal is to encourage ESOL students to take ownership of their learning, therefore increasing their motivation. This study is based on Mayer’s Cognitive Theory of Multimedia Learning. This theory focuses on how multimedia technology can enhance learning.

This study was based on the results from seven newcomer ESOL students in 6th through 8th grade. The students participated in an eight-week intervention using Quizlet to learn language 2 vocabulary using language 1.

Each student took both a 40-question pre-test and a 40-question post-test where they were required to match vocabulary in language 1 to vocabulary in language 2. They also took a weekly assessment and weekly motivation surveys. The weekly assessments ranged from 10 to 20 questions depending on student’s ability to study and learn vocabulary. The weekly motivation surveys were given in both language 1 and language 2. Observations and interviews were used to track qualitative behaviors. The interview questions varied depending on students’ specific situations.
Five of seven students made overall growth between the pre-test and the post-test. The other students had negative growth, meaning they did worse on the post-test than the pre-test. All of the students were motivated at least 50% of the time. One student was motivated 100% of the time. Only one student had correlating motivation and quiz scores. Four students had higher motivation than quiz scores, and two students had higher quiz scores than motivation. Observations and interviews should that many students had gaps in attendance. Two students struggled significantly with their mental health throughout the study. The effects of these circumstances can be seen in the student’s performance.

**ANSWERS TO RESEARCH QUESTIONS**

I was able to collect, group, and analyze the data in order to answer the specific questions that guided the study. Visual representations in the form of graphs help the reader to best see the results, but I have also provided a details description of the answers to the research questions below:

1. Are there differences in scores on tests of vocabulary knowledge for ESOL students after using a multimedia game to learn vocabulary?

   Analysis description: For this specific question, I compared student’s pre-test scores to the post-test scores. I calculated the difference between the two scores showing their overall growth. I used a bar graph to display this information. It is easy for the reader to see that five of the seven students had scores that were above zero. Therefore, with a clear majority of the students showing overall growth, it can be concluded that there were differences in scores
on tests of vocabulary knowledge for ESOL students after using a multimedia
game to learn vocabulary

Answer: Yes, there were different scores on tests of vocabulary
knowledge for five ESOL students after using a multimedia game to learn
vocabulary. However, there were not different scores on tests of vocabulary
knowledge for two ESOL students after using a multimedia game to learn
vocabulary.

2. How is the motivation of students learning English vocabulary affected by the use
of a multimedia vocabulary game?

Analysis description: In order to answer this question, I began by
calculating each student’s weekly motivation. I did this by using the data I
collected from their weekly motivation surveys. Students rated their motivation
on a Likert scale that ranged between one and five. I associated a numerical value
with each response in order to obtain quantitative data. To begin, I calculated
their weekly motivation score. I then used the sum of their weekly motivation
scores to find their average motivation over the 8-week intervention.

Answer: All students had a score of at least 50% for motivation. Student 4
was motivated 100% of the time. Students 3 and 4 also had almost perfect
motivation. Student 5 had the lowest motivation.

3. How does student motivation and participation correlate with scores on
vocabulary acquisition quizzes?
Analysis description: In order to calculate the answer to this question I compared students’ overall growth from question one to their overall motivation from question two. I used a stacked bar chart to clearly represent the results.

Answer: Student 7 was the only student who had correlating motivation and quiz scores. Student 1, 3, 4, and 6 all had higher motivation than quiz scores. Students 2 and 5 had higher quiz scores than motivation.

RESULTS RELATING TO EXISTING LITERATURE

The finding in the study correlate with a study done by Halim, et al., (2000). Both studies found that students were motivated to learn English with the integration of online quiz games. While this study focuses on the use of Quizlet, Halim et. al., had students using Kahoot! and Quizziz.

The findings also align with the findings in a study done by Kusumawati and Widiati (2017). Both studies found that students learn and retain information best when taught using an explicit instructional method. While Kusumawati and Widiati focused on ESP reading comprehension, this study focused on vocabulary that could be used in everyday life. Despite the difference in topics, they both required students to learn and retain vocabulary using an explicit teaching method. The results from both studies show that both vocabulary acquisition and reading comprehension need to be taught using explicit methods. It can also be concluded that the students who showed growth in vocabulary knowledge would also show growth in reading comprehension.

A study by Avilia and Sadoski (1996) found that the keyword method produced superior recall comprehension. This was done by giving students 10 English words to learn emphasizing direct translation. These findings correlate with the findings of this
study. Five of seven students demonstrated positive growth in vocabulary acquisition when using direct translation.

Khiyabani, et al., (2014) found that using multimedia had a positive effect on retention of vocabulary knowledge. Their findings correlate with the findings of this study. Growth was seen when students used multimedia technology to learn vocabulary in both studies. The qualitative results of the studies also found that students enjoyed time studying vocabulary with multimedia technology. In the study by Khiyabani, et al., teachers also had a positive experience with students using multimedia to learn vocabulary. While not a part of my data, I also had a positive experience with students using Quizlet to learn vocabulary. It is important to note, that Khiyabani, et al., found that while multimedia learning is useful, these is also a use for traditional vocabulary learning best practices.

Montaner-Villalb (2019) also studied the effect of vocabulary learning with Quizlet. The study found that the learners significantly improved their level of EFL vocabulary at the post-test. While the study done by Montaner-Villalb focused on students using the mobile version of Quizlet, my study had students using Quizlet on their Google Chromebooks provided by the district. The use of the different devices in each study adds to the literature on use of Quizlet for vocabulary acquisition. It can be concluded that students could switch back and forth between delivery methods and still show a growth in vocabulary acquisition.

Overall, the findings in this study correlate with previous literature related to the use of multimedia game-based instruction. The majority of students in this study were
motivated and made significant growth between the pre-test and the post-test, which is consistent with studies that explored similar constructs of knowledge acquisition.

However, in this study, there were two students who did not make growth. The students who did not make significant growth between the pre-test and the post-test were the two students who did not know how to read in their first language. One of the students was also dealing with mental health issues. A majority of the students in the study also had inconsistent attendance. Lack of previous education, no mental health support, and inconsistent attendance all effect the overall success of ESOL students. Until these issues are addressed, we will not have true equity for our ESOL students.

PRACTICE RECOMMENDATIONS

There are multiple implications from practice that emerged from this study. I found that many students improved their vocabulary and demonstrated some motivation related to the continuous use of Quizlet during an 8-week period. There were a few students who did not make progress as expected, but many had extenuating circumstances that may have interfered with their engagement with the instruction. Some of those that demonstrated lower levels of success were not proficient in their initial language. This leads to the recommendation that this method of vocabulary acquisition should only be used with students who can read in their first language. However, images could be used for students who can’t read in L1. Students would be responsible for matching L2 vocabulary words to images rather than words. For students who are ready to move beyond simple word to word matching, you could begin having them match definitions to words.
Incorporating contests and incentives could help to motivate some students. Throughout the study I found that some students did well when motivated through competition. However, some students were easily aggravated and became upset during the competition. It is important that you manage this on a case-by-case basis and develop a culture within the class that values learning and expects mistakes or revisions.

When I first began this study, I only had students who spoke Spanish. Due to the fact that I also speak Spanish, it was easy for me to manage the creation of the Quizlets and assessments. However, as my student’s population changed it became much more complicated. In the end, I was having to make three different sets each week using Spanish, Russian, and Tagalog. This becomes time consuming and may not be feasible when working with students who speak multiple languages. This approach works better in classrooms with students who speak the same or similar languages.

The results of this study show that using Quizlet to learn language 2 using language 1 is effective for students who can read in language 1. With that finding, it can be assumed that using direct translations is an appropriate way for ESOL students to learn English when they can read in the first language. The study also shows the positive effects of using multimedia with ESOL students. Based on this finding, multimedia should also be used to help ESOL students learn more than just vocabulary.

LIMITATIONS OR SUGGESTIONS

Without a true understanding of a student’s back ground and knowledge in their first language, it is hard to meet their needs as an ESOL teacher. This can be seen in the results of this study because the two students who cannot read in their first language did not make growth after the eight weeks of intervention. That being said, I believe that we
should test all ESOL students in their first language when they arrive at schools in the United States. This would help us to better address their needs and help us to decide how to best support them. Students without proficiency in their first language may have been less likely to engage and embrace these activities based on the difficulty of the vocabulary and few reference points. It is important for teachers who want to try this type of intervention to ensure its appropriateness for their students.

Students’ mental health should also be considered when looking at results of this study. Many ESOL students are struggling with mental health due to the circumstance that led them to immigrate to the United States. During this study, I had a student who was referred for mental health services outside of the school due to the severity of the situation. He had been in an accident in his home country and he was showing signs of behaviors that are associated with traumatic brain injuries. He was originally sent to the local emergency room in hopes that they would be able to find him some help. However, he was sent back to school with a note that said that he should meet with the school guidance counselor. Knowing that this would not be a solution, I was able to get the district social worker to pay a visit to the home. She was able to help the students in the home, two of which were in this study, to get asylum status. They were then able to qualify for medical help. The student was assigned a psychologist. After several attempts to see the care providers, he was subscribed medicine. However, due to problems with transportation, he did not continue to see his psychiatrist. At the end of the year, he was expelled for bringing a knife to school with intentions to harm another student. The outcome of this situation shows how these students are falling through the cracks.
Until their basic needs are met, we will not be able to truly address their gaps in learning. Many immigrant students have not had what we would consider a traditional educational experience, which leads to gaps in their education. For example, in Honduras, the government does not have the capacity to enforce that all students go to school. That being said, many students do not go to school at all. Some students who do go to school, are attending schools that are overcrowded and understaffed. Many schools in Honduras have students come in shifts in order to combat the over population. This means that students may have a three-hour school day compared to a typical seven-hour school day in the United States. Even students who were well schooled in their home country may fall behind during the process of immigration. Students from Central America may spend months getting to the United States. This was especially true in 2018 when caravans of migrants made their way to the United States.

ESOL student’s educational success is also affected to inconsistent attendance. This comes from a variety of reasons. For one, during the time of this study, many students were having to stay home due to Covid. This ranged from two days to two weeks depending on the situation. Some students also have inconsistent attendance due to issues with transportation. For example, one student who participated in the study often missed his bus. It came at 5:30 in the morning. He explained to me that if he was not at the bus stop by the time the bus drove by, it would not stop. His family did not have a car. Therefore, if he missed the bus, he would miss the entire day of school. Many students also stay home to help with their family. For example, if their parent has a doctor’s appointment, they may go to help them with translating. While these students
are still learning English as well, they are usually better at using technology to translate than their parents. They may also stay home to take care of a sibling when necessary.

RECOMMENDATIONS FOR FUTURE RESEARCH

Based on the findings of this study, I would like to suggest future research on the effects of language 1 on the learning of language 2. I believe that students understanding the first language effects their ability to learn a second language. For example, a student with a grasp on parts of speech and grammar in one language, may find it easier to learn similar rules in another language.

I would like to explore vocabulary acquisition compared to students reading levels in both their language 1 and language 2. Based off of the findings in this study, I am led to believe that reading level in the first language effects vocabulary acquisition in the second language. I would like to research this more to better understand to what extent this is true. It would also be interesting to see if this is something that applies to both adults and school aged children.

I would also like to see how different strategies help to bridge the gaps for students who are not literate in their first language. In order to do this, I would begin by researching best practices more in depth. I would do several studies with different methods and then compare the overall results of each study to decide how to proceed with my students based on their individual needs.

Mental health of ESOL students should also be studied. While the findings in this study show that mental health for ESOL students is an issue at Boiling Springs Middle School, I would like to see if the same may be true across the state, as well as across the United States as a whole. I would also like to look into what types of mental health
problems these students are facing, and how we can support them. It would be
interesting to see if students from different countries and cultures are facing different
problems. For example, students from Honduras may be dealing with trauma from past
life experiences as well as their journey to the United States. Students from Ukraine and
Russian may be dealing with different effects of fleeing nations at war.

I want to look at how and if these student basic needs are being met. A lot of
ESOL students are living in poverty. They may not have access to healthy foods when
they are at home. It is also possible that they do not have adequate living conditions,
which is vital for all children to feel safe.

I also want to see how these factors affect ESOL students’ attendance and
academic success. It can be assumed that less time in class leads to less academic growth
and opportunities. However, I would like to compare the growth of ESOL students with
good attendance with the growth of ESOL students who are consistently absent. I would
also like to look for ways to improve ESOL student’s attendance and look for ways to
supplement their learning when they are absent.

SUMMARY

Moving forward, we need to focus on individualized education plans for ESOL
students. It is important that ESOL students are served differently because they are all on
different levels. They have different backgrounds, and their different languages also
require different types of supports. This has an implication on ESOL teacher case load as
well. Teachers need to have smaller caseloads in order to meet the needs of their
students.
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