

A Thesis

entitled

Using Visual Aids in the Secondary Language Classroom: An Action Research Study on the Use
of Illustrations during TPRS Instruction

by

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Submitted to the Graduate Faculty as partial fulfillment of the requirements for the
Master of Arts and Education Degree in Spanish

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An Abstract of

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Research is beginning to emphasize the importance of the lexicon in second language acquisition. The purpose of this action research study was to determine if providing Spanish 1 students with illustrations during Teaching Proficiency through Reading and Story-Telling instruction would help them to retain short and long-term lexical knowledge. Participants included 67 middle school Spanish 1 students from a rural school district in southeast Michigan. Data implied that illustrations were useful for short-term lexical retention but not for long-term lexical retention. Future research is necessary to make the results more generalizable.

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List of Abbreviations

ACTFL.....	American Council on the Teaching of Foreign Languages
CI.....	Comprehensible Input
CO.....	Comprehensible Output
IJFLT.....	International Journal of Foreign Language Teaching
L1	First Language
L2	Second Language
LL.....	Language Learner
SLA.....	Second Language Acquisition Theory
SLPE.....	Second Language Proficiency Examination
TL.....	Target Language
TPR.....	Total Physical Response
TPRS.....	Teaching Proficiency through Reading and Story-Telling

Chapter One

Introduction

Second language educators are faced with the challenge of teaching large amounts of vocabulary throughout the school year. Many textbooks contain upwards of 1,000 vocabulary words. In addition to the amount of vocabulary, language educators are also faced with the challenge of presenting vocabulary in a way that is meaningful and engaging to learners. Moreover, they are required to implement differentiated instructional practices to reach various learning styles (Horwitz, 2013, p.241). How can language educators effectively accomplish all of those tasks?

Statement of the Problem

The problem of the study was to determine if providing second language learners with illustrations during Teaching Proficiency through Reading and Story-Telling instruction would help learners retain lexical knowledge.

Purpose of the Study

The purpose of this study was to find out if using illustrations along with direct translations of vocabulary during TPRS instruction would help, hinder, or have no effect on short and long-term target vocabulary retention for beginning-level Spanish students. For the purpose of the study, “short-term” was defined as knowledge retained after four days of instruction and “long-term” was defined as knowledge retained four weeks after instruction.

Justification for the Study

Lexical knowledge is an essential part of second language acquisition. Historically, the importance of teaching vocabulary has been overlooked in SLA research (Barcroft, 2004). Recently, research has indicated that teachers should be concerned with an “emphasis on the lexicon” and with providing frameworks to increase lexical comprehension (as cited in Hunt & Beglar, 2005, p.24; Miller and Eimas, 1995; VanPatten, 1996; Altman, 1997; de Bot, 1992; Levelt, 1989; de Bot, Paribakht, and Wesche, 1997; Durgunoglu, 1997; Laufer, 1997a; Astika, 1993; Engber, 1995; Laufer and Nation, 1995). Understanding the meaning of words is sometimes more necessary for communication than accurate grammar usage (Barcroft, 2004). Research has shown that “grammar knowledge” is stored at a lexical level “in connections between words and groups of words developed over time based on large amounts of language exposure” (Barcroft, 2004, p.201). Subsequently, implications are that lexical comprehension is an important goal for second language (L2) learners. When L2 learners acquire lexical knowledge, they become equipped with necessary tools to build advanced language structures. How can language educators help students learn and retain lexical knowledge?

One way to provide learners with vocabulary that is comprehensible is through the holistic communicative instructional method, Teaching Proficiency through Reading and Story-Telling (TPRS). TPRS is designed to provide learners with large amounts of comprehensible input (CI). Several studies have been published that favor TPRS over traditional methods as an effective communicative approach (see chapter two). TPRS

requires learners to act out gestures related to vocabulary as a way to process vocabulary into long-term memory (Asher, 2000). During the 'asking' of stories, high frequency words are repeated and their translations are visually available to learners. Hunt and Beglar would agree with this process: “In general, it makes the most sense to emphasize the direct teaching of vocabulary for learners who still need to learn the first 3,000 most common words” (Hunt and Beglar, 2002, p.264). Would including illustrations along with the direct translations also help learners to process vocabulary?

Several studies have shown that using illustrations can have a positive impact on learners' vocabulary comprehension (see chapter two). Using illustrations in addition to TPRS instructional methods, which primarily caters to auditory and bodily-kinesthetic learners, could help reach visual learners as well (Gardner, 2011).

Delimitations

The delimitations for this study were:

1. This study analyzed the impact of illustrations on vocabulary knowledge of beginning-level Spanish students with TPRS instructional methods.
2. This study included a sample of 67 Bedford Junior High students over the course of the 2012-2013 academic school year. Students were selected because of their enrollment in Spanish 1 and their parental permission per Institutional Review Board requirements.

Limitations

The various limitations to the study included:

1. A teacher-researcher design meant there might have been unaccounted biases.
2. This study only included two cycles and was not repeated which limited the reliability of the results.
3. The vocabulary choices were limited to the textbook, agreed upon district curriculum, and timing of curriculum pacing guides.

Assumptions

The assumptions of the study were:

1. All participants put forth a good effort on all tests.
2. The results would be consistent and reliable because participants had the same teacher, were of the same age, and were of the same skill level of Spanish.
3. The teacher's instruction was consistent for each of the sample groups.
4. Gender was not a significant variable for this study.

Research Questions

The research questions this study proposed to answer were:

1. Does using illustrations during TPRS instruction help, hinder, or have no effect on students' short and long-term vocabulary retention?
2. Will there be a statistical significant difference in short- and long-term posttest scores among the sample groups?
3. Will students be able to show comprehension of target vocabulary when it is presented in a new context?

4. Will there be more frequent use of target words with illustrations when students retell a story?
5. Will students tend to choose words with illustrations when orally communicating an original sentence?

Organization of the Thesis

The thesis is organized as follows:

- Chapter 2 Reviews literature on the Natural Approach, Total Physical Response, Teaching Proficiency through Reading and Story-Telling, and the use of illustrations in teaching a second language.
- Chapter 3 Explains the methodology, procedures, and instrumentation.
- Chapter 4 Provides tables and figures of the raw data of pre and posttest scores, analyzes and discusses the statistical significance, and analyzes and compares data of the video footage of student responses.
- Chapter 5 Concludes the study and posits ideas for future related work.

Chapter Two

Review of the Related Literature

Since the purpose of the study is directly related to TPRS instructional methods, chapter two addresses literature related to TPRS including discussions of the Natural Approach and Total Physical Response (TPR), which serve as the bases for this method. Specifically, chapter two provides an overview of the Natural Approach, explains Dr. Stephen Krashen's five central hypotheses, and addresses common criticisms. Then, this chapter describes Dr. James Asher's TPR method of teaching a second language, and discusses his most pivotal work. It also describes recently published studies of the effectiveness of TPRS. Finally, chapter two talks about the variety of research related to the use of visual aids in second language classrooms.

The Natural Approach

The Natural Approach is a holistic, communicative approach to learning a new language (L2) for which the primary objective is for learners to be able to communicate in the target language. Krashen & Terrell (1983) stated: "Language is best taught when it is being used to transmit messages, not when it is explicitly taught for conscious learning" (p.55). Krashen & Terrell's (1983) central belief is that learning a second language is much like learning one's first language (L1) in that it is an acquired, natural process. This belief originally stemmed from Chomsky's (1959) idea that humans are born with an innate ability to learn and to process language. Krashen builds off of Chomsky's ideas through five distinct hypotheses, which constitute the Monitor Model and the foundation for the Natural Approach method.

Krashen's first hypothesis is the Acquisition-Learning hypothesis which states that there is a distinction between *acquiring* a language and *learning* a language. *Acquiring* a language happens when people are exposed to large amounts of input at a subconscious level; a person is not aware of the processes at hand when he or she is *acquiring* a language (Krashen, 1992, p. 1). Conversely, *learning* a language takes place at a person's conscious level and therefore he or she is aware of learning (Krashen, 1992, p.1). An example of conscious language learning is completing grammar worksheets (Krashen, 1992, p. 1). Error correction should take place during the learning of a new language because learners are consciously aware of *learning*, as opposed to the subconscious process of *acquiring* (Krashen, 1992, p.2). Thus, one of the principal differences between acquiring and learning a language is the presence of error correction.

Krashen's second hypothesis is the Natural Order Hypothesis for which he claims there is a natural order to how people acquire their first language (L1) and any subsequent language (L2). For example, Krashen (1992) points out that it is common for people who speak English as a second language not to use the third person singular -s, and that even if they speak English well, the consistent use of this -s may not be present in their speech (p. 2). Krashen (1992) writes that “we tend to acquire a language in a particular order. Some grammatical items, for example, tend to come early, while others come late” (p. 2). As a result, certain aspects of a language will be easier to teach early on, and others will not simply due to a natural sequence of how a language is learned.

Known as the Monitor Hypothesis, another natural occurrence in language acquisition is the idea that L2 learners consciously “monitor” or correct form in their output of the new language. According to Krashen (1992), acquisition leads to accuracy

and fluency, while monitoring only accounts for a small percentage (p. 3). In fact, monitoring may inhibit L2 learners' ability to produce the new language because it causes them to focus on form rather than function (Hulstijn & Hulstijn, 1982, as cited in Krashen, 1992, p. 3). Focusing on form instead of function creates a problem because it prevents speakers from communicating all of their ideas. Nevertheless, there are advantages to language monitoring. Monitor use can be beneficial for writing in the new language because it allows learners to take their time and to mentally process language rules and correctly apply them (Krashen, 1981, p.14).

Arguably the most influential of the five hypotheses is the Input Hypothesis. Krashen's (1992) input (or comprehension) hypothesis posits that “understanding messages is the only way language is acquired” (p. 4). Krashen (1981) created a formula to explain this hypothesis: $i + I$, where i represents a rule of the language that was already learned and I represents the next rule in the natural order of learning that language (p.103). Learners move from i to $i + I$ when they are exposed to input containing $i + I$. Input containing $i + I$ is considered comprehensible to learners; it is similar to the idea of scaffolding (Wood, Bruner, & Ross, 1976, p. 90). Learners take what they already know, i , and start to learn the next rule, $i + I$ with comprehensible input provided by the teacher. The input hypothesis also takes into account learners' extralinguistic knowledge and previously acquired language competence (Krashen, 1992, p.4). Consequently, learners are able to contextualize input and understand the new form being presented.

Krashen points out a few language phenomena to support his input hypothesis. One phenomenon is the capability of people to learn a new language when they are

immersed in a new language, either by studying or living abroad for a long period of time, or by immigrating to a new country (Krashen, 1992, p. 5). Interestingly, the latter may receive no formal instruction, and yet are able to communicate ideas. Another phenomenon lies in language itself. Krashen (1992) believes that the complexity of language itself makes it nearly impossible to learn through formal instruction alone and that there are other subconscious neurological factors at play (p. 5-6). Moreover, instructional methods that provide comprehensible input have been proven to be more effective than those that do not (Krashen, 1992, p. 6).

The fifth and final of Krashen's hypotheses is the Affective Filter hypothesis which focuses on external and internal individual variables that impact language acquisition. These variables may include a learner's level of anxiety or self-esteem (Krashen, 1992, p. 6-7). The affective filter hypothesis strives to explain why two learners can receive the same comprehensible input and yet one learner will progress in the language and the other will not. The learner who does not progress must have, for one reason or another, "blocked" input from reaching the language acquisition device (p. 6-7). The affective filter explains why a student who is exposed to large amounts of input may not acquire a new language.

The Natural Approach and Krashen's five hypotheses have sparked much debate in Second Language Acquisition (SLA) theory. The idea that teachers should provide students with comprehensible input became widely accepted when SLA transitioned from "learning rules or memorizing dialogues" to a communicative approach, including immersion and content-based instruction (Lightbrown & Spada, 2006, p.38). Nonetheless, critics of Krashen argue that comprehensible input is an intangible idea, and

cannot be defined (Larsen-Freeman & Long 1991; Ellis, 1990). Others such as Swain (1985), Gregg (1989), and Cook (1993) maintain that an emphasis on traditional grammar teaching is still important for advancing second language development, a fact that Krashen himself has admitted: “conversational language is also not enough to allow the foreign language student to read the classics, engage in the serious study of literature, use the language for international business, or do advanced scholarship” (Krashen, 1992, p.29).

Regardless of criticisms, the Natural Approach has greatly influenced language pedagogy and its implications are widespread. For example, language teachers have tried to provide students with comprehensible input and studies have shown that students do well in L2 classes when they are exposed to comprehensible input, even without direct instruction (Lightbrown & Spada, 2006, p. 38). In addition, Krashen's hypotheses offer explanations as to why language learners keep making the same errors, or have trouble producing the new language when they are first learning.

Total Physical Response (TPR)

Dr. James Asher, a pioneer language educator, created what he calls the “Total Physical Response” method of teaching in the 1970s. When using this method, teachers are to model a command for students. For example, a teacher is to say “stand up” and perform the motion herself. Then, the teacher is to give a student a command, such as “stand up” and have the student perform the command. After a while, the teacher is to expand on the commands, such as “stand up and walk to the door.” The idea is that the

physical movement performed by the student will help the student to remember the language in a fun way.

“The basic research showing the effectiveness of TPR has been thoroughly established years ago... in a series of research projects supported by grants awarded from the U.S. Office of Education, The U.S. Office of Naval Research, The Defense Department, the State of California, and San Jose State University” (Asher, 2000). Asher conducted several meaningful studies that showed how physical movement helps learners retain a new language. One of his most notable studies is his 1977 comparison of student performance among those taught with TPR methods and those taught with traditional methods (Asher, 1977). In this study, the subjects were beginning-level language learners in the United States, grades 5-9, and one group of adults. Fifth and sixth graders received 20 hours of TPR instruction, seventh and eighth graders received 100 hours of traditional instruction and/or TPR, and ninth graders received 200 hours of traditional instruction. Asher tested listening and reading skills of all the subjects. The results showed higher listening and reading scores for 5th/6th graders when compared to 7th/8th graders of traditional instruction (Asher, 1977, p. 1045). This is remarkable considering that the 5th/6th graders had only received 20 hours of TPR instruction, compared with the 7th/8th graders' 100 hours of traditional instruction. Ninth graders scored the highest, but they received a total of 200 hours of instruction compared to 20 (5th/6th) and 100 (7th/8th). This study is significant because it showed how much more quickly students could learn the vocabulary and specific grammatical structures of a new language. In addition, the idea of using movement and gestures for second language acquisition is a key element in TPRS instruction.

Teaching Proficiency through Reading and Story-Telling (TPRS)

According to Krashen (2003), human beings are born with an innate ability to learn language, and that learning a language is “involuntary” provided that messages we receive are comprehensible and interesting (p.4). This last statement summarizes the main idea behind Teaching Proficiency through Reading and Story-Telling (TPRS) instructional practices. Created by Blaine Ray, TPRS blends Asher's TPR instructional methods with the Natural Approach and Krashen's Monitor Model, thus creating a method for teaching language which contextualizes input and keeps learners moving, thinking, and engaged. TPRS presents students with the high frequency words of the target language (Ray & Seeley, 2012, p. 26). Key words and phrases are taught using gestures that students are required to act out when they hear the corresponding vocabulary word (Ray & Seeley, 2012, p. 19). The target vocabulary words and phrases along with their translations are written on the board in a clear and organized way. Students may refer back to vocabulary during the teaching of a story (Ray & Seeley, 2012, p.27). After a while, students are asked to help the teacher create the story by deciding what happens next or who the main characters are. This is referred to “asking” a story rather than “telling” a story.

When using TPRS, teachers are to provide students with communication tools to tell the teacher to slow her speech or stop the story for clarification. This provides teachers with immediate feedback as to whether or not the students understand the story. Teachers are expected to ask several comprehension questions, circle back to the beginning of stories, and ask the same question various ways (Ray & Seeley, 2012, p.62-63). In this way, students are exposed to repeated grammatical structures or target

vocabulary and the teacher is able to constantly receive instant, informal feedback.

Teachers are also expected to watch students' eyes to see if they are actively listening.

Several studies have shown that TPRS is an effective method for teaching a second language. In one recent study published in the *International Journal of Foreign Language Teaching (IJFLT)*, high school Spanish teacher Barbara Watson (2009) compared two beginning high school Spanish classes, one taught with TPRS and the other taught with traditional methods. Watson's (2009) data showed that students taught with TPRS scored significantly better on a written final exam and a district-wide oral exam than students taught with traditional methods (p. 24). Watson (2009) concluded that TPRS was an effective comprehensible input-based instructional method (p.24). In a similar study, Varguez (2009) compared four beginning-level high school classes, two taught with TPRS methods and two taught with traditional methods. Using the University of the State of New York's standardized Second Language Proficiency Examination (SLPE) and reading passages from the New York State Regents exam for comparison, it was shown that classes with a lower socio-economic status that were taught with TPRS scored the same as more affluent school districts taught with traditional methods (Varguez, 2009, p. 3-4). Varguez (2009) summarized:

Perhaps even more impressive is the finding that the TPRS students who worked with a less experienced instructor and had lower SES performed just as well as students in the traditional classes. Their performance is especially noteworthy because SES is such a powerful predictor of all test scores in education, to the point that, on tests of English and math, ESL students with higher SES do as well as or better than low SES fluent speakers of English (Varguez citing Krashen & Brown 2004). Any treatment that can close such a significant gap is indeed remarkable (p. 5).

TPRS is also effective at the college level (Oliver, 2012). Oliver (2012) found that the TPRS students outperformed the traditional students (p. 56). Furthermore,

Dziedzic (2012) conducted a similar study where he taught two classes using TPRS and two classes using traditional methods. Dziedzic (2012) concluded that while both groups had similar scores on the listening and reading portion of the Denver Public Schools Proficiency Assessment, the TPRS group scored significantly higher than the traditional group on the writing and speaking portion of the exam (p.6). These results are consistent with those of Watson (2009).

Other published studies include Davidheiser (2001) who reports his experiences using TPRS methods with college German students and Braunstein (2006) who researched student attitudes towards TPRS with a class of adult ESL students. Both studies favor TPRS (Ray & Seeley, 2012, p.305). Additionally, there are several doctoral dissertations and master's theses that have been published through ProQuest that test the effectiveness of TPRS: (Perna 2007), Spangler (2009), Beal (2011), Rapstine (2003), Taulbee (2008), Garcyznski (2003), Beyer (2008), Bustamante (2009), and Foster (2011) (Ray & Seeley, 2012, p. 305).

Criticisms of TPRS are similar to criticisms associated with the Natural Approach such as it is a teacher-centered approach, there is a lack of a traditional focus on grammar, and a disregard for culture. For example, (Alley & Overfield ,2008) found fault with TPRS methods in that they considered TPRS to be similar to the grammar-translation method and the audio-lingual method (p.20). They also noted that TPRS does not focus on the teaching of culture when compared with more traditional methods (Alley & Overfield, 2008, p. 20). Proponents of TPRS would argue that it delays explicit grammar instruction, not eliminates it, and that culture can still be weaved into TPRS instruction. They would also say that TPRS appears to be teacher-centered, but that the

teacher must provide comprehensible input of the target language and therefore is responsible for much of the speaking.

The Use of Visual Aids in L2 Classrooms

There are a variety of studies related to the use of visual aids for the purpose of increasing L2 comprehension. For example, Pouwel (1992) used pictorial, verbal, and a combination of pictorial-verbal aids on a multiple choice test to determine if auditory or visual learners would score higher. The results showed a positive correlation between visual learners and pictorial-verbal aids on the vocabulary section and a negative correlation between auditory learners and pictorial-verbal aids (Pouwel, 1992). In another study, Snyder & Colon (1988) tested the correlation between audiovisual methods and vocabulary test scores for high school Spanish 2 students. They found that the audiovisual aids group scored significantly better on vocabulary and listening comprehension (Snyder & Colon, 1988).

Visual aids help learners store information in long-term memory and make learning more meaningful for students (McLeod, 2007). An interesting example is a study on the use of visual art in German courses (Knapp, 2012). “For twenty-first century students brought up in a society dominated by visuality, paintings provide an immediate connection, inviting them to explore linguistic structures, literary texts, and cultural constructs in memorable ways” (Knapp, 2012, p. 27). Knapp quotes Ortuño's (1994) beliefs about the benefits of using visual art as part of instruction; one of which includes helping students acquire “concrete vocabulary” and helping to illustrate “grammatical concepts” (Knapp, 2012, p.22). Furthermore, according to Ortuño (1994)

as cited in Knapp (2012), introducing visual images can lower classroom anxiety and promote “active exploration of the language” (p.20).

Another interesting example of the role of visual aids in a language classroom is a study regarding the use of 'visual technologies', or images found in e-texts and textbooks (Pietre, 2003). Pietre (2003) surveyed ESL teachers' perspectives on visual technologies and learned that most of the ESL teachers viewed graphics, images, colors, etc. as separate from the linguistic texts (p. 145). Therefore, these teachers did not feel that images were a necessary part of making meaning (p. 146). This was found to be especially true for graphics in e-texts, which teachers said could possibly be distracting for students (p. 155). Pietre (2003) concluded that “by ignoring the role of the non-linguistic visuality...language teachers and researchers may be disregarding an essential element in culture and language learning” (p. 155).

Evidence to support Pietre's (2003) conclusion includes Canning-Wilson's 2001 study in which the researcher tested students' language output through writing and the use of image-based prompts. Canning-Wilson (2001) set up a control group with a written prompt and an experimental group with an image-based prompt, and established that the “quantity and scores of those with image-based writing prompts were higher” (Pietre, 2003, p. 142).

While there have been several studies regarding the use of visual aids in L2 classrooms, there is little research related specifically to the use of illustrations during TPRS instruction. Krashen (1992) has stated that “Natural Approach teachers help make input comprehensible by providing extra-linguistic knowledge in the form of pictures and realia, and by modifying their speech (p. 27). Ray & Seeley (2012) discuss the

importance of teaching students how to visualize what they read but only briefly mention the use of illustrations: “we also use gestures, pictures, and props along with translation because they help students process the language faster” (p. 19). They argue that the direct translations are still necessary in addition to pictures and gestures so that students are completely sure of what the teacher is trying to say (Ray & Seeley, 2012, p. 23).

Chapter Three

Methodology

The primary research question of this study was to determine whether or not using illustrations along with direct translations during TPRS instruction would help, hinder, or have no effect on learners' short and long-term vocabulary retention. To answer this question, a teacher action research design was created. As defined by Lightbrown & Spada (2006), action research is “research carried out by teachers, often in their own classrooms or in collaboration with other teachers. The research goals and questions are local and specific to their own teaching environment” (p. 195). The main advantage of teacher action research is that a teacher becomes an observer of her classroom and learns how to improve her teaching. Action research allows a teacher to try to resolve a problem she has viewed in her classroom.

Chapter three specifically discusses the mixed methods, quasi-experimental design, the instruments and measurement tools used, and the instructional practices carried out by the teacher-researcher. Table 1 provides a time line and descriptions of each stage of the research.

Table 1

Time Line and Overview of Procedures for Each Cycle

Time Line and Overview of Procedures for Each Cycle

Day 1	10 minutes 20 minutes	-Pretests -Introduction to story using TPRS methods -Informal comprehension check of student understanding of new vocabulary
Day 2	30 minutes	-Reviewed and finished telling the story -Asked students comprehension questions related to the story -Asked students personal questions using target vocabulary
Day 3	30 minutes	-Reviewed story and key terms using TPR -Asked students to retell the story out loud
Day 4	20 minutes 10 minutes	-Asked students to retell the story in TL to a partner -Asked students to use target vocabulary in original sentences -Short-term posttest
Day 29	10-15 minutes	-Long-term posttest

Participants

Research suggests verifying that sample groups are of a similar age and aptitude, and that they have been exposed to a similar amount of hours of instruction (Asher, 2000). The sample groups for this study were of similar age (12-14 years old), had similar Spanish proficiency levels (novice low to novice mid as defined by ACTFL proficiency guidelines, 2012), and they all had been exposed to similar amounts of instruction because of their school day schedules (about 150 hours prior to the study).

Participants were Junior High students in a Spanish 1 class with the same amount of previous exposure to Spanish and the same teacher. None of the participants were heritage speakers of Spanish. The total number of student participants was 67 (N=67). Throughout the study, the number of participants sometimes fluctuated because of student absences.

Sample Groups

The participants were placed in non-probability sample groups based on which hour of the day they were in Spanish 1, and whether or not they turned in a signed parent permission form. Sample group A consisted of 22 students ($n_1=22$), 9 male and 13 female; sample group B 26 students ($n_2=26$), 13 of each gender; and sample group C 19 students ($n_3=19$), 11 male and 8 female.

Variables

The treatment was the use of illustrations that corresponded to the target vocabulary for each story. The independent variable was the use of illustrations, and the dependent variables were the short- and long-term posttest scores. Sample groups A and C were provided with the treatments of illustrations during cycle one, while groups B and C were provided with the treatments of illustrations during cycle two.

Collection of Data

Participants were tested during their normal classroom hours in their usual seats. Students not participating in the study were still asked to take the tests; however, their

test scores were not used in the study. Data were collected from each of the testing instruments.

For the pretests (Appendices A and F), students were to accomplish two main objectives: 1) identify, through direct translations and drawings, six vocabulary words/phrases related to the curriculum, and 2) determine if statements containing the target vocabulary were logical or illogical. With this format, listening comprehension could be assessed by “playing either to the left or the right brain” (Asher, 2000). Students were required to draw and translate the vocabulary (right-brained) for six target words and to answer a series of nine true/false questions (left-brained). Each question counted as one point; participants could score a total of 15/15 for the pretests. If the translation was accurate, students earned a point. Then, the next nine questions consisted of statements that students had to deem as logical or illogical. Scores from each section were collected to see if participants were able to correctly translate the six target vocabulary words and/or comprehend them when used in a new sentence.

Next, the pretest and short-term posttest (Appendices B and G) scores were compared. Finally, the long-term posttests were scored out of a possible 10 points. The percentages for sample groups A, B, and C were then compared for each of the tests.

Qualitative data consisting of a script of student responses and teacher-student dialogue was recorded. There was about ten minutes of video data for two class periods of each cycle for sample groups A and B, which was 40 minutes per cycle or 80 minutes total.

Data Analysis

The purpose of the pretests was to establish a baseline for comparison of participants' prior knowledge of the target vocabulary. The means of the pretest scores for all three independent sample groups were calculated and were found to be relatively similar. An ANOVA test was used to check for significant variance among the sample groups. The hypothesis was that the pretest ANOVA results would not be statistically significant among the sample groups because the treatment of illustrations was not yet administered.

An ANOVA test was also conducted for the short-term posttests to check for variance after the treatment of illustrations was applied. To further determine statistical significance among the short-term posttest sample group means, a two-tailed t-test was calculated for each pair of sample groups. The null hypothesis was that the sample means would be equal and there would be no statistical significant difference. The alternative hypothesis was that there would be a statistical significant difference between the means of the sample groups. A complete statistical analysis and discussion can be found in chapter four.

Instrumentation

To align with backward design principles, tests were created to assess student knowledge and comprehension of six target vocabulary words and phrases (Wiggins & McTighe, 2005). The objectives of chapters seven and eight in *Navegando I* that related to this study were: “discuss sports”, “talk about the seasons and weather”, and “to identify and describe foods” (2005, p. 268; p.316). To reach those objectives, students

first needed to understand vocabulary at a basic level of comprehension. In each cycle of the study, students received a pretest administered prior to instruction, a short-term posttest administered at the end of the fourth day of instruction, and a long-term posttest administered four weeks after instruction to measure lexical comprehension. All tests were read aloud by the teacher-researcher because that was how students were first introduced to the vocabulary. The test scores were not included as a part of the participants' grade in Spanish class; they were collected only for purpose of the study.

Pretests In cycle one the pretest assessed students' knowledge of the following target vocabulary words: 1) *esquiar*, 2) *dar un paseo*, 3) *un traje de esquiar*, 4) *la playa*, 5) *hace sol*, and 6) *hace calor*. These words were chosen because of their feasibility for use of illustrations, because they were included in the textbook *Navegando 1*, and because they were a part of the curriculum. For cycle two, a different set of target vocabulary words were chosen for the same reasons: 1) *cocinar*, 2) *ir de compras*, 3) *la manzana*, 4) *el plátano*, 5) *el pan*, and 6) *la lechuga*. The pretests can be found in Appendices A and F.

Short-term Posttests The short-term posttests (Appendices B and G) of each cycle aligned similarly in format and style of questions of the corresponding pretests. Consequently, the short-term posttests assessed the same target vocabulary and participants could score a total of 15/15 points. The teacher read aloud the short-term posttests and collected them when students were finished, scoring the tests at a later time.

Long-term Posttests Students took a long-term posttest four weeks after learning the story. The format for the long-term posttests (Appendices C and H) was different than the format of the pretests and short-term posttests. The purpose of changing the format was to answer one of the research questions of this study: Could participants comprehend the target vocabulary in a new context? For the long-term posttests, students had to decide if five sentences containing the target vocabulary words were logical or illogical and answer five multiple choice questions. The total possible score for the long-term tests was 10/10.

Video Qualitative data as well as quantitative data were collected in an effort to provide evidence of learner output (CO). The video data included student responses to questions, including student retells of the stories and creation of original sentences using the target vocabulary. The video data was recorded by the teacher-researcher.

Instruction

Planning and Preparation Research suggests teaching more than one new story is beneficial in TPRS (Asher, 2000). The stories contained characteristics typical of TPRS stories including an unexpected setting, a famous person, and/or characters who are trying to solve a problem (Ray & Seeley, 2012, p. 28). The story taught in cycle one (Appendix D) was about a professional snowboarder, Bode Miller, who wakes up on a beach wearing his ski suit. This story contains the famous person (Bode Miller) and an unexpected element (an Olympic skier who wakes up on a beach wearing his ski suit). The target vocabulary for this story was taken from chapter seven of *Navegando 1*:

esquiar- to ski, *dar un paseo*- to take a walk, *hace calor*- it's hot, *hace sol*- it's sunny, *la playa*- beach, and *un traje*- a suit (2005).

The story for cycle two (Appendix I) was about two girls who were planning a dinner party and needed to go shopping for ingredients. Story two was repetitive and involves problem-solving rather than a famous person or unexpected elements (Ray & Seeley 2012, p. 38-39). The target vocabulary for the second story came from chapters four and eight of *Navegando 1*: *cocinar*- to cook, *ir de compras*- to go shopping, *la manzana*- apple, *el plátano*- banana, *el pan*- bread, *la lechuga*- lettuce (2005).

Translations of vocabulary were written on the board for all participants to reference during instruction. Corresponding illustrations for the six target words were included for sample groups A and C in cycle one and for sample groups B and C in cycle two.

Delivery of Instruction The teaching method utilized in the study was Teaching Proficiency through Reading and Story-Telling, which combines the Natural Approach and TPR methods. Students were already equipped with rules for TPRS instruction. They knew how to signal for the teacher to slow down if the speech was too fast, or how to signal to stop if they felt lost or needed me to repeat a part of the story (Ray & Seeley, 2012, p 24). In addition, students knew not to repeat after the teacher, and knew they were expected to perform gestures as they learned them with corresponding vocabulary. The most important rule was that everything the teacher said was interesting; this set the expectation that students were to be engaged in the story.

For day one of cycle one, pretests were administered. After the pretest, the teacher began to teach the story using TPRS. A student was assigned to play the role of the main character, Bode Miller (Ray & Seeley, 2012, p. 41). This was done with all sample groups.

Because a key element to TPRS is movement, students were required to act out gestures which corresponded to the verbs in cycle one: *esquiar* (to ski), *dar un paseo* (to go for a walk), *hace calor* (it's hot), and *hace sol* (it's sunny). Students did not gesture for the nouns *la playa* (beach) or *un traje de esquiar* (ski suit). Students had already learned gestures for other words and were allowed to use those during the telling of the story: *se despierta*, *no puede*, and *se duerme*. Key words with gestures in cycle two were also verbs: *cocinar* (to cook) and *ir de compras* (to go shopping). Students had previously learned gestures for *comprar*, *quiere*, and *necesitan*. In addition to watching the student actor dramatize the story, all students were individually required to perform the corresponding gesture for target vocabulary words and phrases.

During the teaching of the story, the teacher asked several yes or no questions to check for student understanding, such as “¿*se despierta Bode Miller, sí o no?*” (Does Bode Miller wake up, yes or no?). The teacher also asked either/or questions such as ¿*Le gusta esquiar o jugar al tenis?* (Does Bode Miller like to ski or play tennis?) (Ray & Seeley, 2012, p. 29). The teacher watched students' eyes to see if they were paying attention, watched for students to signal to slow down or stop, and paused and pointed to key vocabulary terms on the board (Ray & Seeley, 2012, p. 27). After about twenty minutes, students learned the first part of the story- that Bode Miller is an Olympic skier who wakes up on a beach wishing he were skiing.

At the end of the lesson on the first day, the teacher checked student comprehension by asking them to close their eyes and raise their hands if they understood a word or phrase, or not to raise their hands if they did not know the word or phrase. The teacher repeated the six key vocabulary terms along with other phrases from the story and observed how many hands were raised for each group. This allowed for informal assessment.

On day two of cycle one, the teacher reviewed the first half of the story and proceeded to the end of the story. Then, the teacher asked comprehension questions to check for student understanding such as *¿Quién es Bode Miller?* (Who is Bode Miller?) and *¿Puede esquiar en la playa?* (Can he ski at the beach?). The teacher also included personal questions in the target language to make the information more meaningful for students such as, “Raise your hand if you like to ski” and “Is the weather hot in Michigan in March? In July? Do you like sunny, warm weather?” (Ray & Seeley, 2012, p. 28).

On the third day of the lesson, key terms were reviewed through the use of gestures. For example, the teacher said *“hace calor”* (It's hot) and the students were expected to act it out (an agreed-upon gesture that involved running the back of one's hand across the forehead and appearing faint). Then the teacher retold the whole story and had each individual student dramatize the role of Bode Miller. At the end of the lesson on day three, students were instructed to retell the story in Spanish to their pencils. This allowed the teacher to walk around the room and to listen to students reconstructing the story using the target language. It also gave students the opportunity to process individually the new language with low levels of anxiety.

On day four, students were asked to retell the story with a partner in Spanish. This allowed students to rebuild the story together as a review. Volunteer participants retold the story out loud to the class, and as a result, the teacher could informally assess student comprehension. Then, student volunteers shared an original sentence using target vocabulary. The expectations were that students could logically apply the new words in an original sentence, but the sentence did not have to be grammatically correct. At the end of the lesson, students took a posttest that aligned with the pretest for the same story.

To conclude, after three to four days of hearing (input) and speaking (output) of the six target vocabulary words, students were assessed on their short-term knowledge. The final phase of each cycle was a multiple-choice test given four weeks after students had first learned the story to assess if the new vocabulary was processed into students' long-term memory.

The instructional procedures were the same for cycle two except students in sample group B were provided with illustrations during instruction of the story, and students in sample group A were not. Students in sample group C were provided with illustrations in both cycles. In addition, the story itself for cycle two was different and students were presented with different target vocabulary words.

Chapter Four

Data Analysis and Discussion

Chapter four presents the quantitative data of the study including raw scores and statistical analyses for all testing materials in each cycle. It also discusses implications of the results. Additionally, chapter four presents and discusses the students' story retells and free responses.

Quantitative Data Cycle One

The table below provides a summary of raw test scores for each sample group over the course of cycle one. In cycle one, participants in sample groups A and C were provided with illustrations of target vocabulary during four days of instruction and participants in sample group B were not.

Table 2

Summary of the percent averages of pretests and posttests in cycle one.

Cycle One	Sample Group A	Sample Group B	Sample Group C
Pre Test (%)	37.5	45.9	43.3
Short Term Post Test (%)	95.8	86.9	96.2
Long Term Post Test (%)	87.7	80.8	87.4

Pretests Cycle One All participants took a pretest prior to instruction in cycle one. The raw data showed the following averages of pretest scores for each sample group: A (37.5%), B (45.6%), and C (43.3%). The similarities of the pretest percentages suggest that participants were of a similar skill level of Spanish prior to instruction.

The mean of the pretest scores for sample group A (n=22) was 5.63 out of 15, or 37%, and the median was 5 out of 15, or 33.33%. Visually, the pretest scores displayed a mostly normal distribution within the range of three through nine out of 15. However, because the mean ($x_1 = 5.63$) was greater than the median (5), the results were somewhat positively skewed. The standard deviation was $s = 1.36$ meaning that most scores were within \pm two standard deviations of the mean at a 95% confidence level (a range of 2.91 through 8.35). The average score for the first six questions of the pretest, which required students to translate and draw the target vocabulary, was 0.59 out of 6. The average number correct out of the remaining nine questions which required students to decide if a statement was logical or illogical, was 4.9.

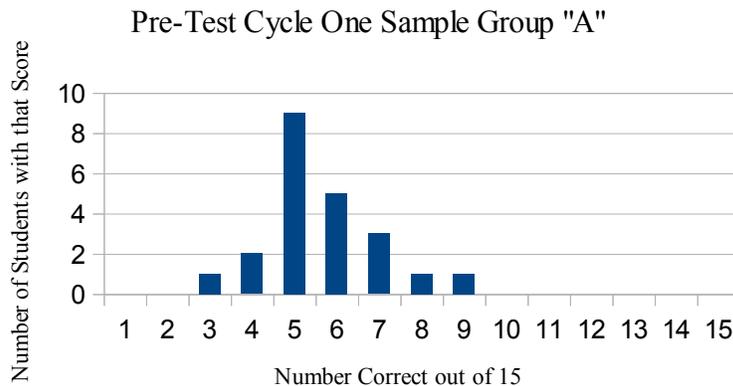


Figure 1. Pretest Cycle One Sample Group A. The above figure shows the distribution of pretest scores of the participants in sample group A.

The pretest scores for sample group B (n=25) seemed similar to those of sample group A with most participants scoring within the range of three through nine out of 15.

Nevertheless, the mean was 6.88 ($x_2 = 6.88$) out of 15, or 45.9%, which was higher than

that of sample group A ($x_1 = 5.63$). The median was 7 and therefore greater than the mean, suggesting a negatively skewed distribution (*Figure 2*). The standard deviation of 1.95 suggests that most scores were within \pm two standard deviations of the mean, a range of scores 2.98 through 10.78, which was a greater range of scores than sample A.

The average score for the first six questions of the pretest was 1.24 out of 6, and for the last nine questions 5.6 out of 9; both higher than the scores of sample group A.

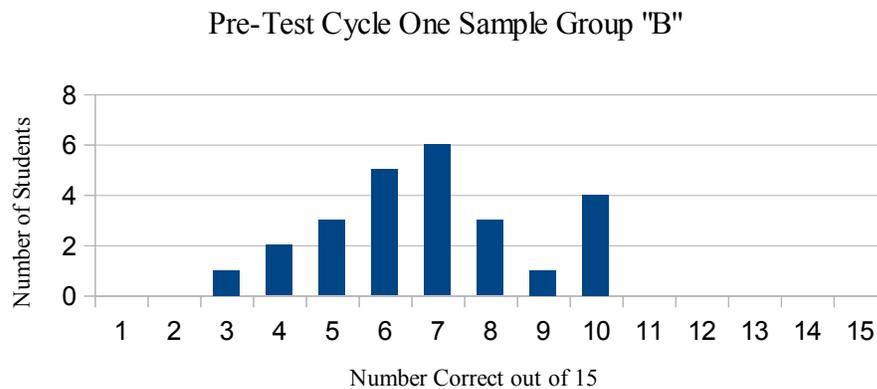


Figure 2. Pretest Cycle One Sample Group B. The above figure shows the distribution of pretest scores of the participants in sample group B.

The mean for sample group C's ($n=17$) pretest scores was 6.5 out of 15, or 43.3%, which was comparable to the scores of sample group B (*Figure 3*). The median was also 6.5, suggesting a normal distribution of scores.

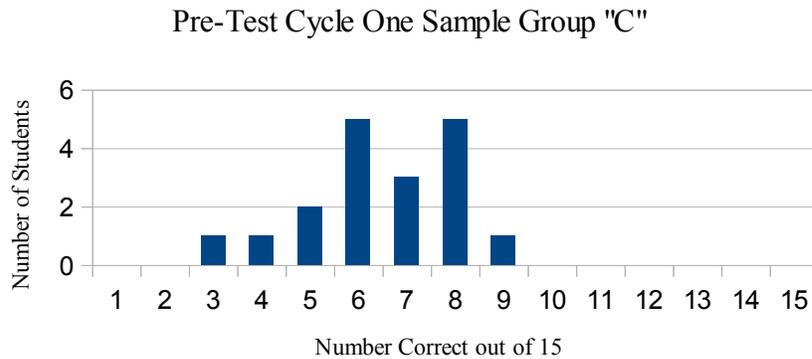


Figure 3. Pretest Cycle One Sample Group C. The above figure shows the distribution of pretest scores of the participants in sample group C.

An ANOVA test was used to determine if the variance among the sample groups was statistically significant. The null hypothesis was that there was no statistically significant variance among the sample groups. The calculations of the ANOVA test for all three sample groups resulted in a probability of 0.051, or $p = 0.051$. Using an alpha of 0.05, a p-value of 0.051 was on the border of either rejecting or failing to reject the null hypothesis at a 95% confidence level. These calculations suggest that there could have been variance among the sample groups before the instruction for the study.

Short-term Posttests Cycle One

The average percentage of the short-term posttests for sample group A was 95.8%, sample group B 86.9 %, and sample group C 96.2%. The raw data of the average percentages for all sample groups suggest that illustrations did in fact help students with short-term retention and comprehension of target vocabulary given that sample groups A and C were provided with illustrations in cycle one.

The mean score of sample group A was 14.36 out of 15 and the median score was 15. The mean was higher than the median, which showed a negatively skewed distribution of scores (*Figure 4*). The standard deviation assuming a normal distribution was calculated to be $s= 1.68$; however, because the results were so extremely negatively skewed, most scores fell within the range of 11 through 15.

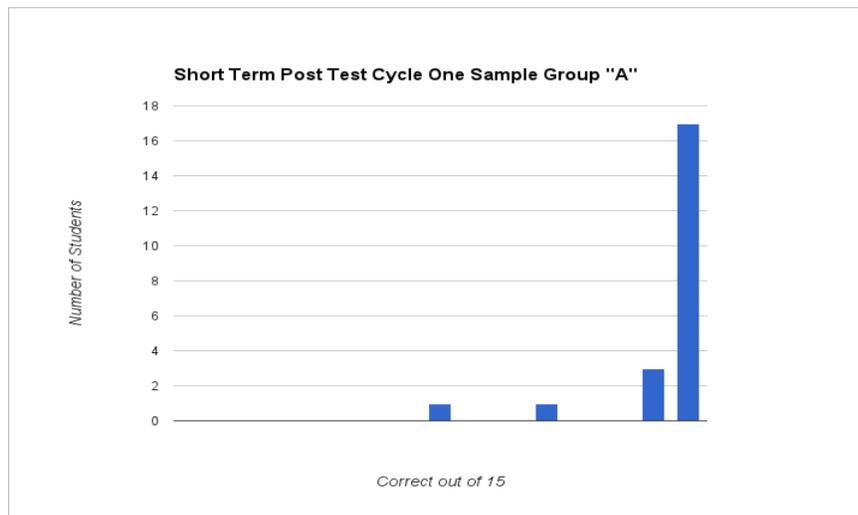


Figure 4. Short-term Posttest Cycle One Sample Group A. The above figure shows the distribution of short-term posttest scores for participants in sample group A.

A closer look at the test scores revealed that participants in sample group A scored an average of 5.81 out of 6 for the translation questions and 8.55 out of 9 of the logical/illogical questions.

Sample group B, whose participants were not provided with illustrations, produced test scores with a mean of 13.04 ($x_2=13.04$), a median of 14, and a standard deviation of $s=2.84$. Because the mean was lower than the median, the distribution of scores was greatly negatively skewed. Most students scored within a range of 7.63

through 15. This was a greater range of scores compared to those in sample group A. In addition, the average short-term posttest scores for sample group B were lower than those of sample group A.

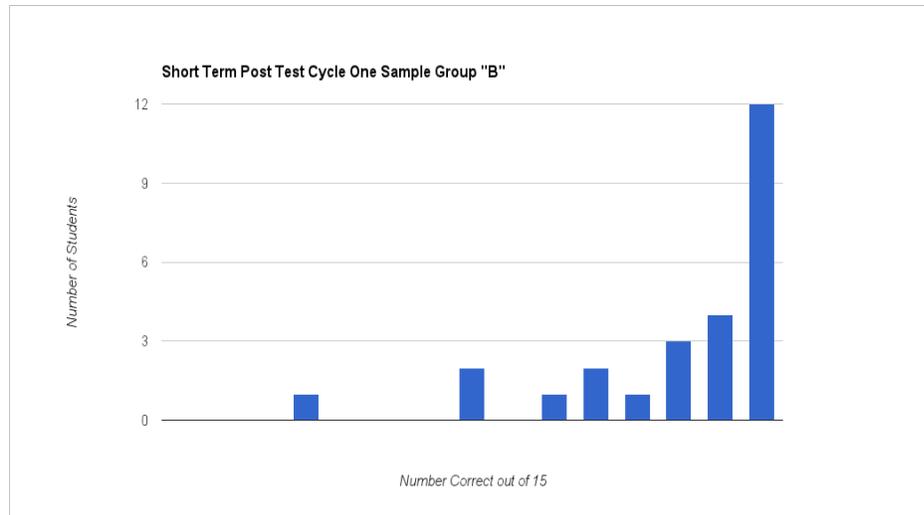


Figure 5. Short-term Posttest Cycle One Sample Group B. The above figure presents the cycle one distribution of short-term posttest scores for participants in sample group B.

Finally, the results of sample group C (n= 17) for the short-term posttests were as follows: the mean $\bar{x}_3 = 14.41$, or 96.2%, median= 15, and the standard deviation (assuming normal distribution) $s = 0.89$. Like sample groups A and B, the results of sample group C were also very negatively skewed (mean < median). The average score for the first six questions was 5.81 out of 6, and for the nine logical/illogical questions was 6.82. Sample group C had the lowest number of participants (n=17) and scored the highest results on the short-term posttests when compared with sample groups A (n=22) and B (n=26).

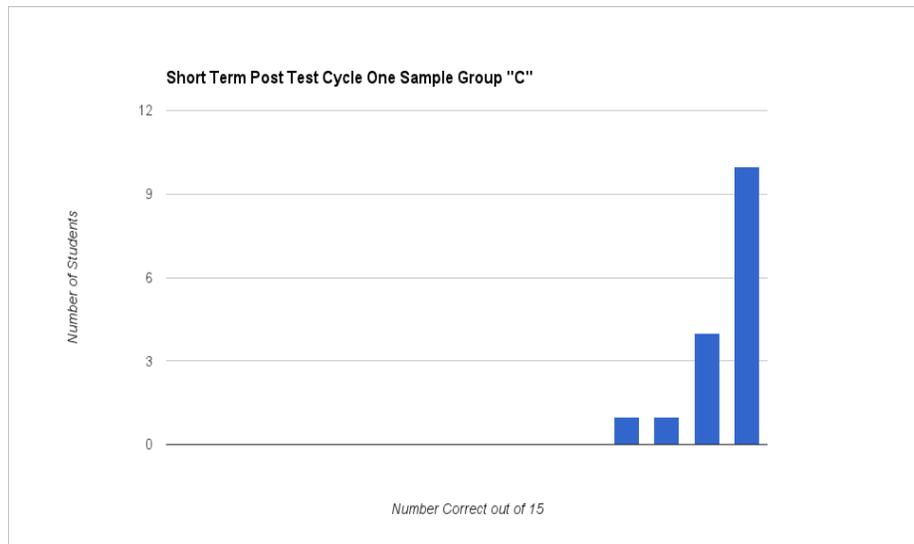


Figure 6. Short-term Posttest Cycle One Sample Group C. Figure 6 is a visual representation of the distribution of short-term posttest scores for participants in sample group C during cycle one.

To determine if there was variance among the sample groups for the short-term posttests, an ANOVA test was calculated. The null hypothesis was that there was no statistical significant difference among the sample groups. Because the probability of the ANOVA test was calculated to be 0.046, one can reject the null hypothesis with an alpha of 0.05. In other words, $p = 0.046$ suggests that the variance among the sample groups was significant because the probability 0.046 ($p=0.046$) was within the 95% confidence level range ($p= 0.05$). Given that the only treatment for this study was the illustrations, one can logically conclude that the illustrations were a likely reason for the significant variance among the sample groups. Moreover, one can accept the alternative hypothesis which stated that there was a statistical significant difference among the sample groups. This outcome was important because a confidence level of 95% is high considering the size of the sample groups.

In addition to the ANOVA tests, two sample t-tests were calculated. The null hypothesis was $H_0 : x_1 = x_2$ where x_1 represented the mean of sample group A and x_2 the mean of sample group B. The alternate hypothesis was that there was a statistical significant difference between sample groups A and B. Table 3 provides the variables:

Table 3

Two-Sample T- Test Variables and Results of Short-term Posttests Sample Groups A and B in Cycle One

Variable	n	df	mean	s	t _{cv} (0.05)	t _{cv} (0.10)
Short Term Post Test						
Sample Group A (illustrations)	22	21	14.36	1.677	2.0796	1.7207
Sample Group B (no illustrations)	26	25	13.04	2.835	2.0596	1.7081

t-test

Variable	Mean Difference	t
Illustrations	1.32	2

The calculations of the two-sample two-tailed t-test comparing sample groups A and B resulted in a t critical value that was greater than the calculated t-value when using a p value of 0.05 ($t_{cv} 2.0596 > (t) 1.98$). However, with a p value of 0.10, or confidence level of 90%, the t critical value was less than the calculated t value ($t_{cv} 1.7109 < (t) 1.98$). Therefore, one can reject the null hypothesis with a confidence level of 90% and accept the alternative hypothesis that the differences in the means among sample groups A and B was statistically significant.

The two sample t-tests were repeated for sample groups B and C, and then for sample groups A and C. The results for sample groups B and C were as follows:

Table 4

Two-Sample T- Test Variables and Results of Short-term Posttests Sample Groups B and C in Cycle One

Variable	n	df	mean	s	t _{cv} (0.05)	t _{cv} (0.10)
Short Term Post Test						
Sample Group C (illustrations)	17	16	14.41	0.870	2.1199	1.7459
Sample Group B (no illustrations)	26	25	13.04	2.835	2.0596	1.7081

t-test

Variable	Mean Difference	<i>t</i>
Illustrations	1.37	2.3

At the 95% confidence level, the calculated *t* value was greater than the critical *t* value (*t*) $2.3 > t_{cv} 2.1199$ and therefore rejected the null hypothesis that there was no statistical significant difference between sample groups B and C. Instead, the alternate hypothesis that there was a statistical significant difference between the two groups was accepted.

Finally, when calculating a *t*-est for sample groups A and C, the results were:

Table 5

Two-Sample T- Test Variables and Results of Short-term Posttests Sample Groups A and C in Cycle One

Variable	n	df	mean	s	t _{cv} (0.05)	t _{cv} (0.10)
Short Term Post Test						
Sample Group C (illustrations)	17	16	14.41	0.870	2.1199	1.7459
Sample Group A (illustrations)	22	21	14.36	1.677	2.0796	1.7207

t-test

Variable	Mean Difference	<i>t</i>
Illustrations	0.05	0.12

The t critical value was greater than the t calculated value $t_{cv} 2.1199 > (t) 0.12$ at the 95% confidence level and the 90% confidence level $t_{cv} 1.7459 > (t) 0.12$. There was no statistical significant difference between sample groups A and C.

Long-term Posttests The average scores of the long-term posttests for sample groups A and C were also greater than those of sample group B. Sample group A was 87.7%, sample group B was 80.8%, and sample group C 87.4%. Considering only this data set, one could conclude that the illustrations helped students' long-term retention of target vocabulary as well. Visual representations of each of the long-term posttests showed negatively skewed distributions of scores similar to the short-term posttest results. All three means were less than the medians proving a statistical conclusion of a negatively skewed distribution of scores for the long-term posttests (A: $8.77 < 10$; B: $8.08 < 9$; C: $7.58 < 8$).

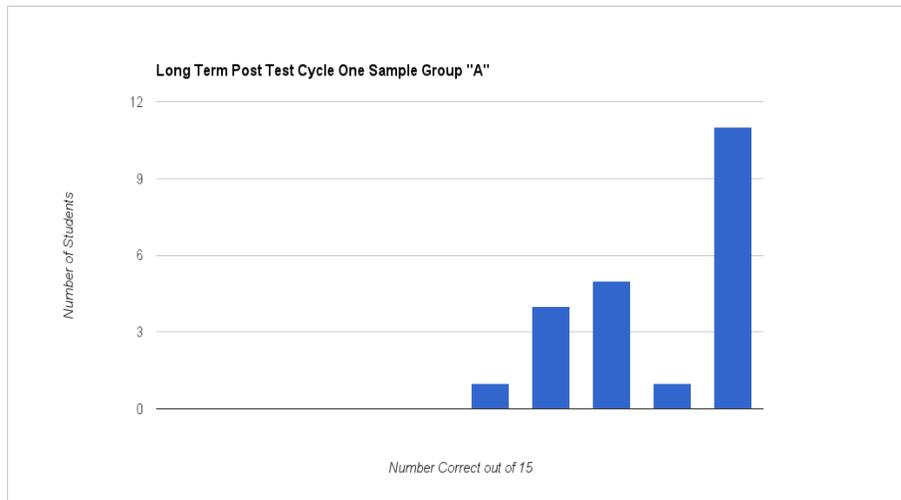


Figure 7. Long-term posttest cycle one sample group A. The above graph illustrates the distribution of long-term posttest scores for sample group A in cycle one.

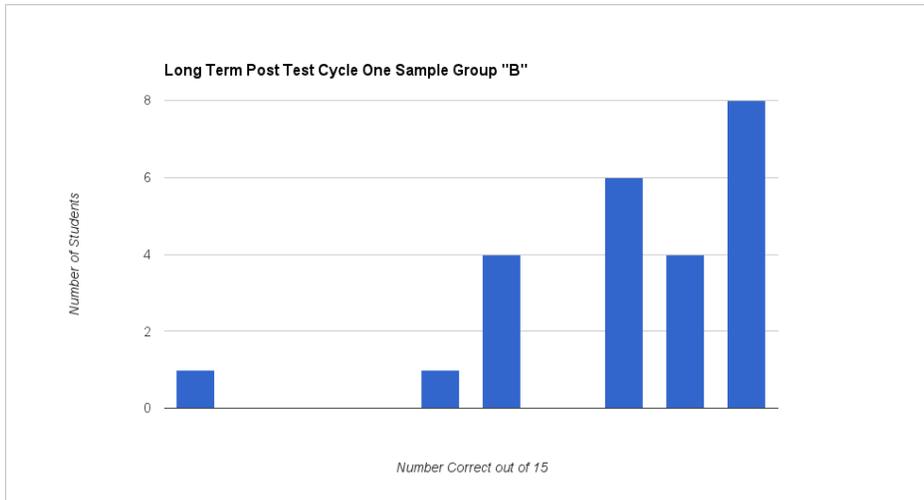


Figure 8. Long-term posttest cycle one sample group B. The above graph illustrates the distribution of long-term posttest scores for sample group B in cycle one.

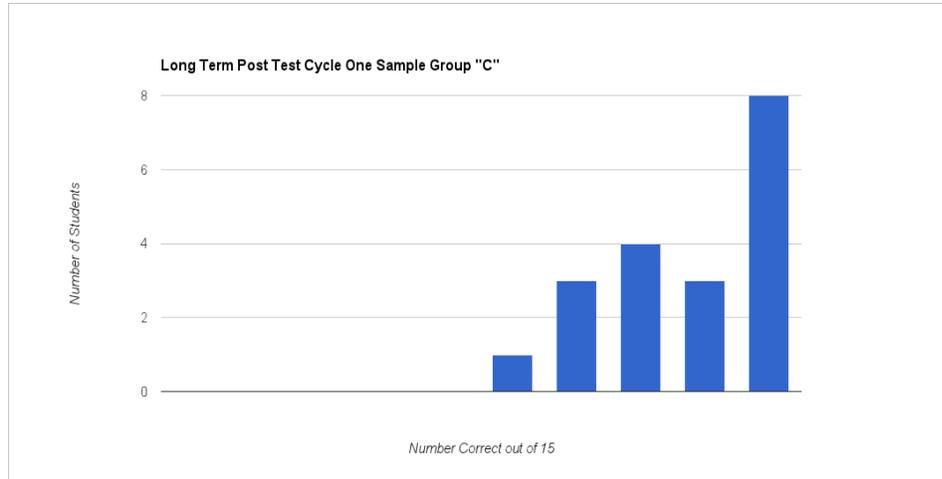


Figure 9. Long-term posttest cycle one sample group C. The above graph illustrates the distribution of long-term posttest scores for sample group C in cycle one.

An ANOVA test resulted in a p-value of 0.102 which meant that the variance among sample groups for the long-term test scores was not significant. Therefore, one can conclude that the treatment of illustrations was not significant for participants' long-term retention and comprehension of target vocabulary. This result was different than that of the raw test scores. Because there was no significant difference in the ANOVA result, a pair-wise two-sample t-test was not calculated.

Discussion of Cycle One Results In cycle one, the pretest scores were somewhat negatively skewed in sample A, somewhat positively skewed in sample B, and normally distributed in sample C. The average scores were very similar, suggesting a similar level of prior knowledge. An ANOVA test resulted in a p-value of 0.051, which fell just outside of the 95% confidence level. This result could be interpreted to mean

that there was no variance among the sample groups, or it could mean that there was an unknown variable that affected the scores at the 90% confidence level.

All of the short-term posttest scores in each of the sample groups had a very negatively skewed distribution. The ANOVA test resulted in a p value of 0.046, which showed that there was variance among the sample groups at the 95% confidence level. Given that the only treatment was illustrations, the logical explanation for the variance would be the illustrations. In addition, two-sample two-tailed t-tests were computed for each pair of sample groups. A t-test with sample group A (with illustrations) and sample group B (no illustrations) showed there was a statistical significant difference at the 90% confidence level, but was not significant at the 95% confidence level. When sample group B (no illustrations) was compared with sample group C (illustrations), the calculations rendered the same results. However, when sample group A (with illustrations) was compared with sample group C (with illustrations), the t-test showed there was no statistical significant difference at the 95% or 90% confidence levels. In conclusion, the treatment of illustrations was statistically significant for short-term retention of vocabulary at the 90% confidence level. A 90% confidence level was appropriate given the small sample sizes.

Similar to the short-term posttests, the long-term posttests also had a negatively skewed distribution of scores. An ANOVA test for variance among sample groups resulted in a p-value of 0.10, which meant that there was variance among the sample groups at a 90% confidence level, but not at a 95% confidence level. Thus, the treatment of the illustrations was not statistically significant for the long-term posttests. By

extension, the illustrations were not statistically significant for students' long-term retention of target vocabulary.

Quantitative Data Cycle Two

The table below provides a summary of raw test scores for each sample group during cycle two. In cycle two, participants in sample groups B and C were provided with illustrations of target vocabulary during four days of instruction and participants in sample group A were not.

Table 6

Summary of the Percent Averages of Pretests and Posttests in Cycle Two

<u>Cycle Two Raw Data (%)</u>	Sample Group A	Sample Group B	Sample Group C
Pre Test (%)	43.6	45.8	42.8
Short Term Post Test (%)	89.9	96.7	92.9
Long Term Post Test (%)	78.6	80.8	75.9

Pretests Cycle Two The pretest scores for each of the sample groups in cycle two were similar to the pretest scores in cycle one- A (43.6%), B (45.8%), and C (42.8%)- again suggesting a similar skill level of Spanish. In cycle two, participants in sample groups B and C were shown illustrations and participants in sample group A were not.

The mean of the pretest scores for sample group A (n=22) was 6.55 out of 15, or 43.6%. The median was 6.5 out of 15, or 43%. The mean and median were almost

equal which suggested a mostly normal distributions of scores. The average score for the first six questions of the pretest was 0.59 out of 6, which was the same score as the pretest for sample group A in cycle one. The average number correct out of the remaining nine questions was 5.95.

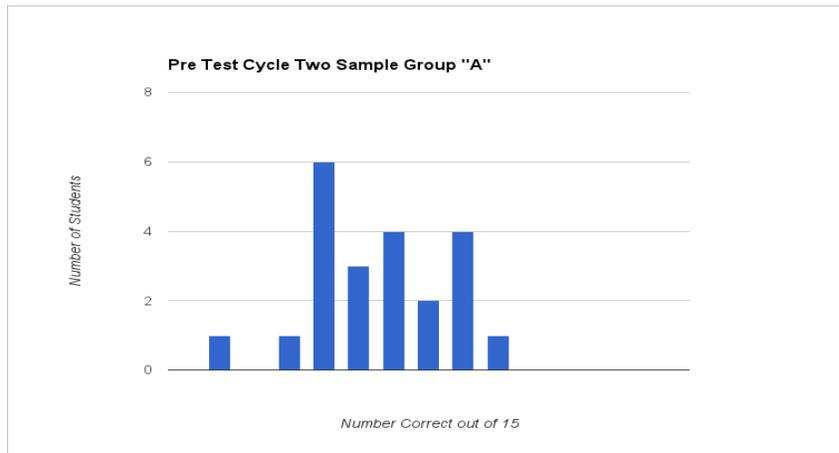


Figure 10. Pretest cycle two sample group A. The above graph provides the distribution of participants' pretest scores in sample group A in cycle two.

The mean score for sample group B (n=24) was 6.88 out of 15 and the median was 6 suggesting a distribution of scores that was positively skewed (mean > median). The average score for the first six questions was 1.08 out of 6, and for the last nine questions 5.79 out of nine.

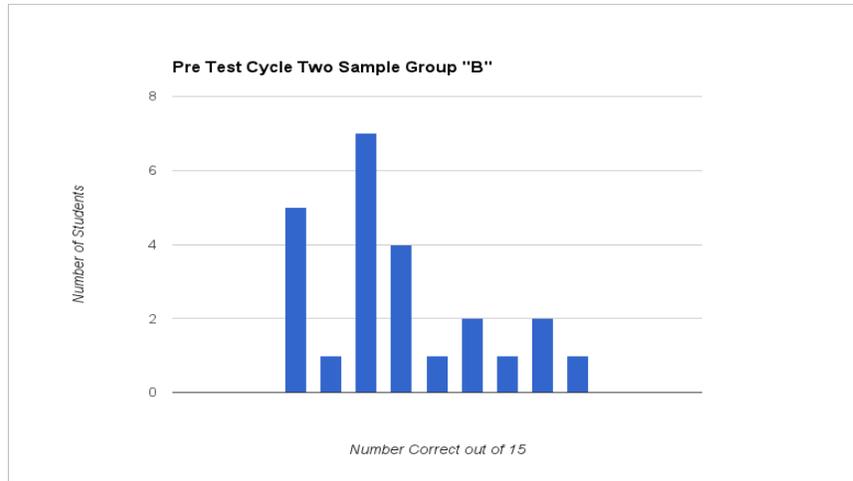


Figure 11. Pretest cycle two sample group B. The above graph provides the distribution of participants' pretest scores in sample group B in cycle two.

In sample group C (n=19), the mean score was 6.42 out of 15, and the median was 6, which showed a positively skewed distribution of scores (mean > median). The average score for the first six questions was 0.63 out of 6, and for the last nine questions, 5.79 out of nine.

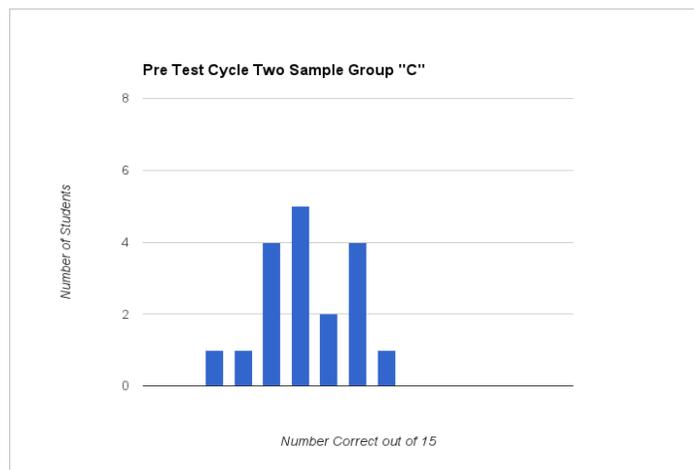


Figure 12. Pretest cycle two sample group C. The above graph provides the distribution of participants' pretest scores in sample group C in cycle two.

An ANOVA test was conducted to test for variance among the sample groups. The p-value of the ANOVA test was 0.760, which suggested that there was no variance among the sample groups for the pretests. This result was logical because none of the participants in the sample groups were shown illustrations prior to or during the pretests.

Short-term Posttests Cycle Two The short-term posttest average scores were: sample group A 89.9%, sample group B 96.7%, and sample group C 92.9%. As with the short-term posttest scores in cycle one, the participants who were provided with illustrations (sample groups B and C) scored higher than those who were not provided with illustrations (sample group A).

For sample group A (n=21), the mean score was 13.48 out of 15 and the median was 14. Because the median was greater than the mean, the results were negatively skewed. Participants scored an average of 5.71 out of 6 for the first six questions, and 7.76 out of 9 for the last nine questions.

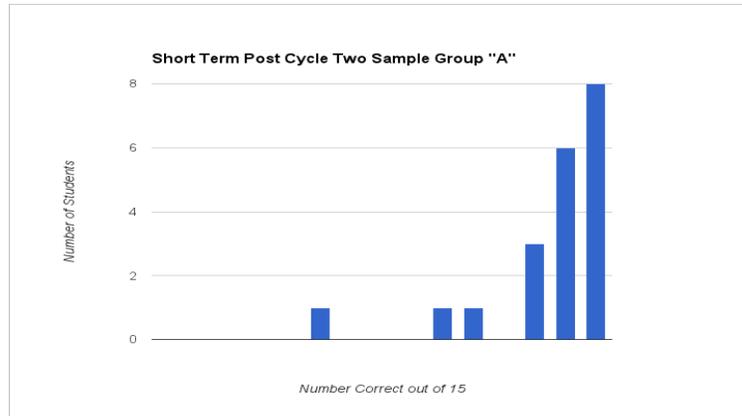


Figure 13. Short-term posttest cycle two sample group A. The above graph provides the distribution of participants' short-term posttest scores in sample group A in cycle two.

In sample group B (n= 25), the mean score was 14.52 out of 15 and the median was 15. Like sample group A, the median was greater than the mean which suggested a negatively skewed distribution of scores. The average score for the first six questions was 5.84 out of 6, for the last nine questions 8.68 out of nine.

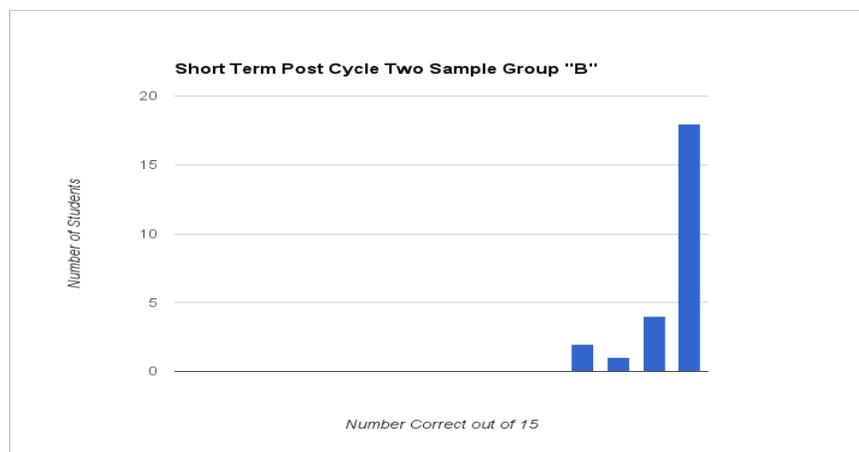


Figure 14. Short-term posttest cycle two sample group B. The above graph provides the distribution of participants' pretest scores in sample group B in cycle two.

The short-term posttest scores for sample group C (n=17) showed similar results to those in sample groups A and B. The mean score was 13.94 out of 15 and the median was 14, which resulted in a negatively skewed distribution of scores. On the first six questions, participants scored 5.29 out of six, and on the last nine questions, 8.65 out of nine.

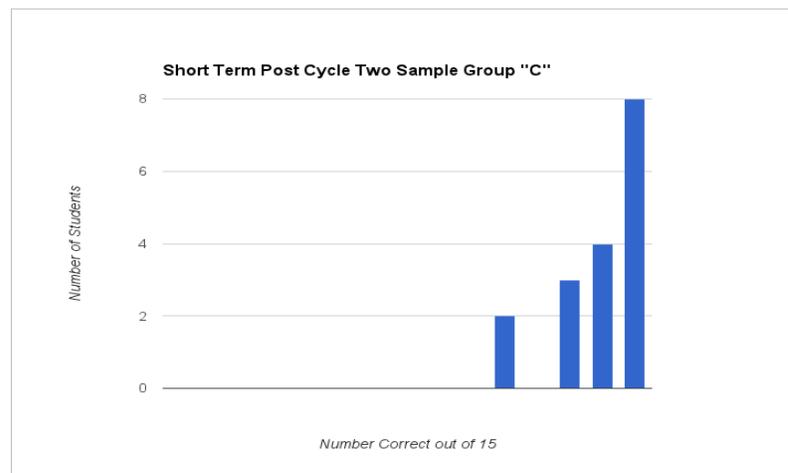


Figure 15. Short-term posttest cycle two sample group C. The above graph provides the distribution of participants' pretest scores in sample group C in cycle two.

An ANOVA test calculation resulted in a p-value of 0.082, which suggested that the variance among the sample groups was significant at a 90% confidence level but not at a 95% confidence level. The variance could be assumed to be the treatment of the illustrations.

Like cycle one, a two-sample two-tailed t-test for each pair of sample groups in cycle two was calculated. A t-test for sample groups A and B resulted in a calculated t value of 2.04, which was greater than the critical value at a 90% confidence level, but less than the critical value at the 95% confidence level. This meant that there was a

statistical significant difference at the 90% confidence level, but not at the 95% level.

The variables for this calculation are in Table 7.

Table 7

Two-Sample T- Test Variables and Results of Short-term Posttests Sample Groups A and B in Cycle Two

Variable	n	df	mean	s	t _{cv} (0.05)	t _{cv} (0.10)
Short Term Post Test						
Sample Group A (no illustrations)	21	20	13.48	2.18	2.0860	1.7247
Sample Group B (illustrations)	25	24	14.52	0.92	2.0639	1.7109

t-test

Variable	Mean Difference	<i>t</i>
Illustrations	1.04	2.04

A *t*-test for sample groups A and C resulted in a calculated *t* value of 0.80, which was considerably less than the critical *t* values at both the 95% and 90% confidence levels meaning that the difference of the means was not statistically significant.

Table 8

Two-Sample T-Test Variables and Results of Short-term Posttests Sample Groups A and C in Cycle Two

Variable	n	df	mean	s	t _{cv} (0.05)	t _{cv} (0.10)
Short Term Post Test						
Sample Group A (no illustrations)	21	20	13.48	2.18	2.0860	1.7247
Sample Group C (illustrations)	17	16	13.94	1.34	2.1199	1.7459

t-test

Variable	Mean Difference	<i>t</i>
Illustrations	0.46	0.8

Similar results were shown when calculating the t value for sample groups B and C. The calculated t value was 1.55, which was less than both t critical values at the 95% and 90% confidence levels. Therefore, the difference between means was not statistically significant.

Table 9

Two-Sample T- Test Variables and Results of Short-term Posttests Sample Groups B and C in Cycle One

Variable	n	df	mean	s	t _{cv} (0.05)	t _{cv} (0.10)
Short Term Post Test						
Sample Group B (illustrations)	25	24	14.52	0.92	2.0639	1.7109
Sample Group C (illustrations)	17	16	13.94	1.34	2.1199	1.7459

t-test

Variable	Mean Difference	t
Illustrations	0.58	1.55

Long-term Posttests Cycle Two The long-term posttest scores proved otherwise. For the raw data in cycle two, sample groups A and B scored the highest, A (78.6%) and B (80.8%). Although participants in sample group C were provided with illustrations, the average score was 75.9%.

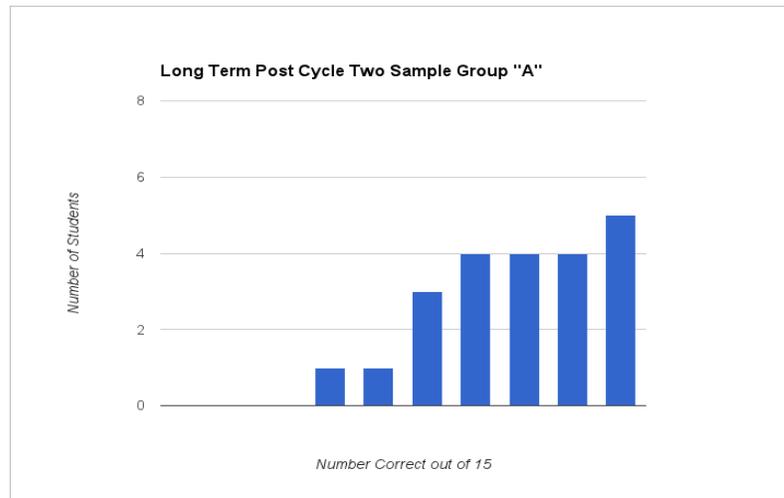


Figure 16. Long-term Posttest Cycle Two Sample Group A. The above graph illustrates the distribution of participants' long-term posttests in sample group A in cycle two.

The mean score for participants in sample group A was 7.86 out of 10 with a median of 8. Because the median was greater than the mean, the results were somewhat negatively skewed. For sample group B, the mean was 8.08 and the median was 8. The scores for sample group B were somewhat positively distributed, but close to normal 8.08 > 8. Finally, the mean for sample group C was 7.59 and the median score was 8, which showed a negatively skewed distribution of scores like sample group A. The visual representations of the raw scores for each sample group are graphed below (*Figure 17*).

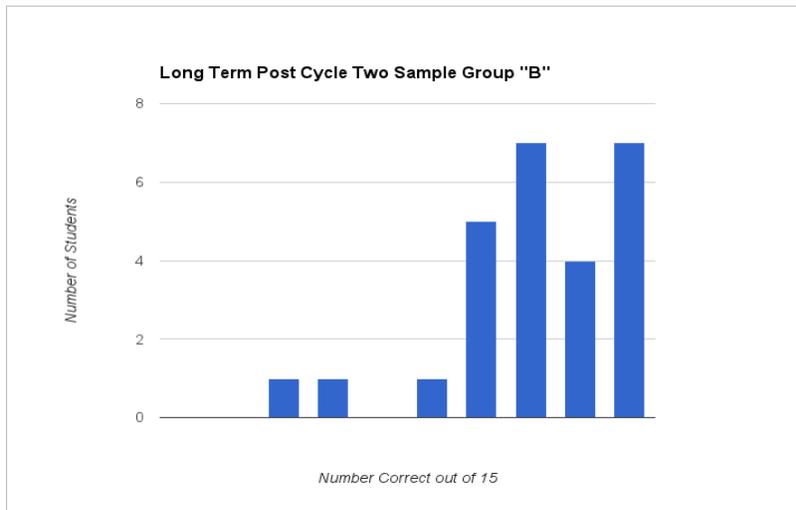


Figure 17. Long-term posttests cycle two sample group B. The above graph illustrates the distribution of participants' long-term posttests in sample group B in cycle two.

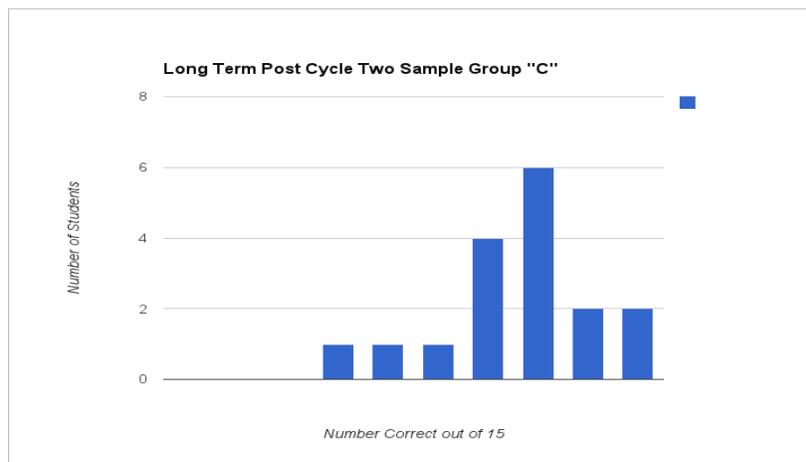


Figure 18. Long-term posttests cycle two sample group C. The above graph illustrates the distribution of participants' long-term posttests in sample group C in cycle two.

An ANOVA was conducted to determine whether or not there was significant variance among the sample groups for the long-term posttests in cycle two. The p value for the ANOVA test was 0.744, which meant that there was no significant variance among the sample groups. Therefore, similar to cycle one, the treatment of illustrations was not statistically significant for the long-term posttests in cycle two.

Discussion of Cycle Two Results In cycle two, the pretest scores showed a normal distribution for sample group A and a somewhat positively skewed distribution for sample groups B and C. The average scores were very similar, which suggested a similar level of prior knowledge. An ANOVA test resulted in a p-value of 0.760, which fell well outside of the 90% confidence interval. Thus, there was clearly no variance among the sample groups prior to instruction.

Like the short-term posttests in cycle one, all of the short-term posttest scores in each of the sample groups had a very negatively skewed distribution in cycle two. The ANOVA test resulted in a p value of 0.082, which showed that there was variance among the sample groups at the 90% confidence level, but not at the 95% confidence level. Given that the only treatment was illustrations, the logical explanation for the variance would be the illustrations. In addition, two-sample two-tailed t-tests were computed for each pair of sample groups. Unlike the t-test results of cycle one, only one of the t-test pairings in cycle two rejected the null hypothesis which stated that the means of the sample groups were equal (sample group A and sample group B). The other two t-test results showed that there was no statistical significant difference among the means (sample groups B and C and sample groups A and C), although one of the pairings

(sample group A and C) showed a calculated t value ($t = 1.55$) that was close to the critical t value ($t_{cv} = 1.71$). To summarize, the results of the short-term posttests in cycle two were that the treatment of illustrations was not statistically significant for two of the three pairings. These results were different from those in cycle one where the calculations showed that the treatment of illustrations was statistically significant. The implications are that other factors might have contributed to the results.

The long-term posttest results in cycle two were similar to those in cycle one. Sample groups A and C had a negatively skewed distribution of scores, while sample group B had a positively skewed distribution of scores. An ANOVA test for variance among sample groups resulted in a p-value of 0.74, which meant that there was no variance among the sample groups. It also meant that the treatment of illustrations could not have been a statistically significant variable in cycle two. Since the short-term posttests suggested the same idea, perhaps other factors such as the number of nouns versus verbs in the target vocabulary could have impacted the data.

Similar to cycle one, the two-sample two-tailed t-tests for each of the sample group pairings showed that there was no statistical significant difference. The treatment of the illustrations was not statistically significant for the long-term posttests.

Qualitative Data

Video data was gathered from the sample groups in each cycle. Students were asked to retell the stories out loud in the target language and to provide an original sentence using at least one of the target vocabulary words. The purpose of the video data

was to determine how much of the stories the participants comprehended and to see if participants were able to use the target vocabulary in a new way.

Participant Responses Cycle One Sample group A was provided with illustrations during cycle one, therefore, participants were allowed to reference illustrations when retelling the story. Three participants from sample group A voluntarily retold the story. All three students used four of the six target vocabulary words: *la playa*, *hace sol*, *hace calor*, and *dar un paseo*. Two of the three students also used the phrase *un traje de esquiar*. The evidence suggested that the participants somewhat took advantage of the illustrations while retelling the story. They did not take full advantage of the illustrations because not all of the target words were used; *esquiar* was not used in the responses.

Table 10

Retelling the Story Sample Group A Cycle One

Sample Group A Cycle One (with illustrations)
<u>Retelling of the story</u>
Student 1: uh, <i>Bode Miller se despierta...Bode Miller <u>dar un paseo...</u>en <u>la playa</u>. <u>Hace calor</u>, <u>hace muy sol</u>. Bode Miller lleva <u>un traje de esquiar</u> and he <u>el muy sol no</u>, <u>muy hace calor</u> and doesn't he go to sleep? <u>¿duerme?</u></i>
Student 2: <i>Bode Miller <u>se despierta en la playa</u>. Bode Miller <u>da un pasa</u> en la playa. En la playa <u>hace sol</u>. Bode Miller <u>hace calor porque un traje de esquiar</u>. Bode Miller <u>siéntense en la playa</u>. Bode Miller <u>duerme en playa</u>.</i>
Student 3: Ok, <i>Bode Miller <u>esquiador profesional</u>. Bode Miller en <u>la playa</u>, <u>playa</u>, <u>playa</u>, um. Bode Miller <u>hace calor porque hace sol</u> en Costa Rica y um lleva <u>un traje</u> and Bode Miller <u>dar un paseo</u> and <u>duerme</u>.</i>

When asked to use the target vocabulary in a new sentence, four participants volunteered. Three of the four students used the word *la playa* correctly in a new sentence, and one used the phrase *dar un paseo*.

Table 11

Free Responses Sample Group A Cycle One

Sample Group A Cycle One (with illustrations)

Free responses with target vocabulary:

Student 4: *Yo le gusta dar un paseo en Central Park, New York.*

Teacher: *Perfecto, A Juan¹ le gusta dar un paseo en el parque central de nueva york.*

Excelente, Señor.

Student 5: *Yo nado en la playa.*

Teacher: *Ok, María le dice que nada en la playa. Bien.*

Student 6: *Mi le gusta va a la playa.*

Teacher: *Sí, bueno. A Marta le gusta va a la playa. A mí también, Señorita.*

Student 7: *Florida tiene mucho la playa.*

Teacher: *Sí, es verdad. Florida tiene muchas playas.*

The students' application of the word *la playa* was accurate in all examples clearly showing their understanding of the word. Student 4's use of the phrase *dar un paseo* also conveyed the appropriate meaning. The students demonstrated their ability to express orally an original sentence using target lexicon.

1 Names were changed to protect participant identity.

Likewise, participants in sample group B were also asked to retell the story from cycle one. They were allowed to reference direct translations of vocabulary from the board, but were not provided with illustrations.

Table 12

Retelling the Story Sample Group B Cycle One

Sample Group B Cycle One (no illustrations)

Retelling the story:

Student 8: *Bode Miller se despierta. uh él se da cuenta en la playa. La playa en Costa Rica, Costa Rica and Bode Miller dar un paseo. Costa rica is hace calor y hace sol. Bode Miller tiene mucho, mucho calor. Bode Miller tiene mucho calor porque un traje de esquiar. uh él triste porque no puede esquiar en la playa.*

Student 9: *En el playa, Bode Miller es hace calor y hace sol. Bode Miller...Bode Miller no pueden... (laughs) es, Bode Miller no pueden esquiar en el playa. Umm Bode Miller (laughs) dar un paseo en el playa. Bode Miller siéntense y duerme.*

Both students used five of the six target vocabulary words: *hace calor, hace sol, la playa, esquiar, and dar un paseo*. Student 8 also used *un traje de esquiar*, and student 9 did not.

Table 13

Free Responses Sample Group B Cycle One

Sample Group B Cycle One (no illustrations)
Free responses using target vocabulary:
Student 10: <i>Yo me gusta <u>hace sol</u> porque yo puede jugar deportes.</i>
Teacher: <i>¡Ah, qué bien! A Bob le gusta cuando hace sol porque puede jugar los deportes.</i>
Student 11: <i>Hoy <u>hace calor</u> porque la temperatura es 80 grados.</i>
Teacher: <i>Excelente. Hoy, sí, hace calor, y la temperatura es 80 grados.</i>
Student 12: <i>En el verano es muy <u>hace sol</u>.</i>
Teacher: <i>Sí, en el verano hace sol. Hace mucho sol.</i>
Student 13: <i><u>El traje de esquiar</u> es azul.</i>
Teacher: <i>Ah, el traje de esquiar es azul. Perfecto.</i>

Two of the four participants used the phrase *hace sol* in their responses, one participant used the phrase *hace calor*, and the fourth used the noun *el traje de esquiar*. The choices of target vocabulary for participants in sample group B (*hace sol*, *hace calor*, *el traje de esquiar*) were different from those in sample group A (*la playa*, *dar un paseo*). However, participants in both groups chose a noun or a verbal phrase.

Discussion

Overall, the participant responses in sample groups A and B were similar suggesting that the direct translations were no less effective than the illustrations to prompt student responses. Participants in both sample groups chose different target language words or phrases to create an original sentence.

Participant Responses Cycle Two

In cycle two, participants in sample group B were provided with illustrations when retelling the story and sharing their free responses, while participants in sample group A were provided only with direct translations.

Table 14

Retelling the Story Sample Group A Cycle Two

Sample Group A Cycle Two (no illustrations)

Retelling the story:

Student 17: *Hay dos amigas te llama Carmen y Isabel. Carmen quiere cocinar la cena. Ellas necesitan los ingredientes. Ellas van a supermercado. Ellos... what's to buy? Comprar la lechuga, el pan, y banana. No hay las manzanas. Ellas van a supermercado otra. And ellas no tiene la dinero. And then they go home, so, how you say they go? Ellas van la casa.*

Student 18: *Carmen y Isabel umm tienen ingredientes para la cocinar por los amigos. Umm ellas van a la supermercado to...I don't know what buy is. Comprar los ingredientes. Los ingredientes es la lechuga, el pan, el plátano, y las manzanas. Umm Carmen e Isabel no tiene mucho dinero. (laughs) uh supermercado no tienen las manzanas.*

Interestingly, student 17 produced the word 'banana' even though the teacher said 'el plátano' when telling the story. Both student 17 and student 18 relied on the teacher to translate the word *comprar* and/or viewed the direct translation that was available on the board. Both students were able to produce independently five of the six target words.

For the free responses, one student expressed the word 'cocinar' in an original sentence.

Table 15

Free Responses Sample Group A Cycle Two

Sample Group A Cycle Two (no illustrations)

Free responses using the target vocabulary:

Student 19: *Yo le gusta cocinar.*

Teacher: *Bueno, a Pedro le gusta cocinar.*

Table 16

Retelling the Story Script Sample Group B Cycle Two

Sample Group B (with illustrations)

Retelling of the story:

Student 20: *Isabel y Carmen quiere a cocinar la cena, right? para los amigos. Uh ellas va a supermercato, cado... para los ingredientes. El supermercado tiene el plátano, el pan, y la lechuga. El supermercado no tiene la manzana. Ellas va a supermercado. And y tiene la manzana. uhh porque, wait,... Ellas no tiene dinero.*

Student 20 was able to produce five of the six target vocabulary words just like students 17 and 18 in sample group A. Student 20 also had trouble using the word 'comprar' and omitted it from the retelling of the story. Below, in Table 17, three students volunteered to share an original sentence with the class. Two students chose the word '*la manzana*' and one chose '*la lechuga*.' Students looked at the illustrations and relied on the direct translations when retelling the story and with the free responses.

Table 17

Student Free Responses Sample Group B Cycle Two

<p>Sample Group B (with illustrations)</p> <p>Free responses:</p> <p>Student 21: <i>Yo me gusta <u>la manzana</u>.</i> Teacher: <i>Gracias, perfecto.</i></p> <p>Student 22: <i>No me gusta comiendo <u>los manzanas</u>.</i> Teacher: <i>A Miguel no le gusta comer las manzanas. Gracias, bien.</i></p> <p>Student 23: <i><u>La lechuga</u> va a ensalada.</i> Teacher: <i>Sí, bien.</i></p>
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Discussion

In both the retelling of the story and the free responses, participants relied on the direct translations when they could not remember how to say a certain word or phrase. Students in cycle two referenced the illustrations of the nouns when listing the ingredients needed for the recipe. All participants only produced one target vocabulary word when sharing a free response even though they were not limited to the length of their responses.

Chapter Five

Summary, Conclusions, and Recommendations

Summary of Findings

The purpose of the study was to determine if using illustrations during TPRS instruction would help learners to process vocabulary into long-term memory. The 67 Spanish 1 middle school participants learned two stories over the time period of one month and were assessed on their knowledge of target lexicon. Participants were selected based on their class schedules and their guardians' permission. All participants were taught by the same teacher as part of a teacher action research, mixed methods design during the 2012-2013 school year. Assessment of participants' lexical knowledge was based on instruments created by the teacher-researcher.

1. Does using illustrations during TPRS instruction help, hinder, or have no effect on students' short and long-term vocabulary retention?

The raw scores for the short-term posttests were higher for participants who were provided with illustrations during both cycles of the study suggesting that the illustrations did help students to remember the target vocabulary. In cycle one, the raw scores of the long-term posttests were higher for participants who were shown illustrations (sample groups A and C scores were better an average than those in sample group B). In cycle two, the long-term posttests were higher in sample group B, but not in C even though sample group C was shown illustrations, too. Providing illustrations along with direct

translations during TPRS instruction helped and/or had no effect, but did not hinder vocabulary learning for participants.

2. Will there be a statistical significant difference in short and long-term posttest scores among the sample groups?

There was a statistical significant difference among sample groups A and B, and then B and C in cycle one for the short-term posttests. There was not a statistical significant difference among sample groups A and C (both provided with illustrations) for the short-term posttests. In cycle two, there was a statistical significant difference among sample groups A and B at the 90% confidence level, but there was no statistical significance shown among pairings B/C and A/C. In both cycles, there was not a statistical significant difference for the long-term posttests.

3. Will students be able to show comprehension of target vocabulary when it is presented in a new context?

The scores for the long-term posttests, which presented target vocabulary in a new context, demonstrated student comprehension. The average scores of the long-term posttests ranged from 7.59 through 8.74 out of 10.

4. Will there be more frequent use of words with illustrations when students retell a story?

The words with illustrations were used more frequently but it cannot be determined if that was due to the design or because the words were used more frequently in the story overall.

5. Will students tend to choose words with illustrations when orally communicating an original sentence?

Participants in each of the sample groups during both cycles included the target vocabulary words in their responses. When provided with illustrations, participants referenced them before and during their free responses and their story retells. Overall, students relied on the direct translations more than the illustrations when communicating with target vocabulary.

Conclusions

The findings for this study cannot be generalizable and are only representative for the specific population of 67 Spanish 1 students from Bedford Junior High School during the 2012-2013 school year. While the findings indicate that using illustrations during TPRS instruction may help with short-term retention of target lexicon, they do not indicate that using illustrations helps with long-term retention. Implications are that the direct translations are all that is necessary for long-term vocabulary acquisition.

Recommendations

Further research is recommended to achieve more reliable results. Increasing the number of participants would increase the reliability. The research would be less biased if multiple teachers provided TPRS instruction instead of one teacher-researcher. Similar future research should include more cycles with a variety of additional illustrations. Target vocabulary words should be of a consistent type such as all nouns or all verbs. In addition, future research could include data on participants' multiple intelligences or preferred learning styles to determine if students with higher visual/spatial intelligence would significantly benefit from illustrations with TPRS instruction. Finally, increasing student motivation should be considered when designing a related study.

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Appendix A

Pretest Cycle One

Spanish 1

Sra. Jakubowski

I. Dibuja una foto que corresponde a la descripción y escribe lo que significa en inglés.
(Draw a picture that corresponds to the description and write what it means in English).

- | | | |
|------------------------|-----------------|---------------|
| 1. hace sol | 2. dar un paseo | 3. esquiar |
| 4. un traje de esquiar | 5. la playa | 6. hace calor |

II. Decide si la oración es lógico o ilógico. Escribe lógico o ilógico al lado de la oración.
(Decide if the sentence if logical or illogical. Write “logical” or “illogical next to the sentence).

- | | |
|---|-------|
| 1. Bode Miller le gusta esquiar. | _____ |
| 2. Las chicas quieren dar un paseo en el parque. | _____ |
| 3. En diciembre, en Michigan, hace calor. | _____ |
| 4. Hace calor y la temperatura es 30 grados de F. | _____ |
| 5. El chico le gusta esquiar en la playa. | _____ |
| 6. En julio, en Michigan, hace mucho sol. | _____ |
| 7. Es posible dar un paseo en el océano. | _____ |
| 8. Los jugadores de béisbol llevan los trajes de esquiar. | _____ |
| 9. Vamos a la playa para nadar. | _____ |

Appendix B

Short-term Posttest Cycle One

Spanish 1

Sra. Jakubowski

I. Dibuja una foto que corresponde a la descripción y escribe lo que significa en inglés.
(Draw a picture that corresponds to the description and write what it means in English).

1. Esquiar

2. dar un paseo

3. un traje de esquiar

4. la playa

5. hace sol

6. hace calor

II. Decide si la oración es lógico o ilógico. Escribe lógico o ilógico al lado de la oración.
(Decide if the sentence is logical or illogical. Write “logical” or “illogical” next to the sentence).

1. En diciembre, en Michigan, hace mucho sol. _____
2. Hace calor y la temperatura es 30 grados de F. _____
3. El chico le gusta esquiar en la playa. _____
4. Es posible dar un paseo en un parque. _____
5. Bode Miller le gusta esquiar. _____
6. Los jugadores de béisbol llevan los trajes de esquiar. _____
7. En agosto, en Michigan, hace calor. _____
8. Vamos a la playa para nadar. _____
9. Los chicos dan un paseo en el océano. _____

Appendix C

Long-term Posttest Cycle One

I. Contesta “sí” o “no”. (Write “S” or “N” to indicate whether the statement is “True” or “False”).

1. A Bode Miller le gusta esquiar. Es lógico que a él le guste la nieve. _____
2. Es junio en Michigan, y por eso, hace mucho sol. _____
3. Es febrero en Michigan, y por eso, hace calor. _____
4. Hace calor y la temperatura es 30 grados de F. _____
5. Al chico le gusta esquiar. Va a la playa para esquiar. _____

II. Haz un círculo alrededor de la respuesta correcta. (Circle the correct response).

1. Alicia quiere dar un paseo. Por eso, va a ir a _____.
a. el cine b. la oficina del dentista c. el parque d. la biblioteca
2. ¿Quién lleva un traje de esquiar para su profesión?
a. Bode Miller b. Tony Hawk c. Tom Hanks d. Michael Phelps
3. Tú estás en una playa y decides a _____.
a. esquiar b. nadar c. hacer snowboarding d. jugar al tenis
4. A John le gusta ir a Florida porque _____.
a. hace frío b. hay mucha nieve c. hay tormentas d. hace sol
5. Hay muchas playas en _____.
a. Idaho b. Montana c. Michigan d. Iowa

Appendix D

Story Cycle One

Spanish:

Bode Miller se despierta. Mira y ve que está en una playa. Él se da cuenta de que está en Costa Rica. ¡Qué sorpresa! Bode Miller da un paseo en la playa. Hace sol y hace calor. La temperatura es 80 grados de Fahrenheit. Bode Miller tiene mucho calor. Bode Miller lleva un traje de esquiar. A Bode Miller le gusta esquiar. Es un esquiador olímpico. Ahora, está triste porque quiere esquiar, pero no puede esquiar en la playa. Luego, se sienta en la playa y duerme.

English:

Bode Miller wakes up. He looks and sees that he is on a beach. He realizes he is in Costa Rica. What a surprise! Bode Miller takes a walk on the beach. It's sunny and it's hot. The temperature is 80 degrees Fahrenheit. Bode Miller is very hot. Bode Miller is wearing a ski suit. Bode Miller likes to ski. He's an Olympic skier. He is sad because he wants to ski, but he can't ski on the beach. He sits down on the beach and falls asleep.

Target vocabulary:

Nouns: la playa*, un traje de esquiar*

Verbs: esquiar*, dar un paseo*, hace sol*, hace calor*

Additional vocabulary:

se despierta	lleva
se da cuenta de que	se duerme
no puede	
tener calor	

*indicates illustration were provided for these words

Appendix E

Video Data Cycle One

Sample Group A Cycle One (with illustrations)

Retelling of the story

Student 1: uh, *Bode Miller se despierta ...Bode Miller dar un paseo ..en la playa. Hace calor, hace muy sol. Bode Miller lleva un traje de esquiar and he el muy sol no, muy hace calor and doesn't he go to sleep? duerme?*

Student 2: *Bode Miller se despierta en la playa. Bode Miller da un pasa en la playa. En la playa hace sol. Bode Miller hace calor porque un traje de esquiar . Bode Miller siéntenese en la playa. Bode miller duerme en playa.*

Student 3: *Ok, Bode Miller esquiador profesional. Bode Miller en la playa, playa, playa, um. Bode Miller hace calor porque hace sol en Costa Rica y um lleva un traje and Bode Miller dar un paseo and duerme.*

Sample Group A Cycle One (with illustrations)

Free responses with target vocabulary:

Student 4: *Yo le gusta dar un paseo en Central Park, New York.*

Teacher: *Perfecto, A Juan le gusta dar un paseo en el parque central de nueva york. Excelente, Señor.*

Student 5: *Yo nado en la playa.*

Teacher: *Ok, María le dice que nada en la playa. Bien.*

Student 6: *Mi le gusta va a la playa.*

Teacher: *Sí, bueno. A Marta le gusta va a la playa. A mi también, Señorita.*

Student 7: *Florida tiene mucho la playa.*

Teacher: *Sí, es verdad. Florida tiene muchas playas.*

Sample Group B Cycle One (no illustrations)

Retelling the story:

Student 8: *Bode Miller se despiertan. uh él se de cuenta en la playa. La playa en Costa Rica, Costa Rica and Bode Miller dar un paseo. Costa rica is hace calor y hace sol. Bode Miller tiene mucho, mucho calor. Bode Miller tiene mucho calor porque un traje de esquiar. uh el triste porque no puede esquiar en la playa.*

Student 9: *En el playa, Bode Miller es hace calor y hace sol. Bode Miller ...Bode Miller no pueden ... (laughs) es, Bode Miller no pueden esquiar en el playa. Umm Bode Miller (laughs) dar un paseo en el playa. Bode Miller siéntense y duerme.*

Sample Group B Cycle One (no illustrations)

Free responses using target vocabulary:

Student 10: *Yo me gusta hace sol porque yo puede jugar deportes.*

Teacher: *¡Ah, qué bien! A Bob le gusta cuando hace sol porque puede jugar los deportes. Bien.*

Student 11: *Hoy hace calor porque la temperatura es 80 grados.*

Teacher: *Excelente. Hoy, sí, hace calor, y la temperatura es 80 grados.*

Student 12: *En el verano es muy hace sol.*

Teacher: *Sí, en el verano hace sol. Hace mucho sol.*

Student 13: *El traje de esquiar es azul.*

Teacher: *Ah, el traje de esquiar es azul. Perfecto.*

Appendix F
Pretest Cycle Two

Spanish 1

Sra. Jakubowski

I. Dibuja una foto que corresponde a la descripción y escribe lo que significa en inglés. (Draw a picture that corresponds to the description and write what it means in English).

- | | | |
|---------------|------------------|---------------|
| 1. cocinar | 2. ir de compras | 3. la manzana |
| 4. el plátano | 5. el pan | 6. la lechuga |

II. Decide si la oración es lógico o ilógico. Escribe lógico o ilógico al lado de la oración. (Decide if the sentences is logical or illogical. Write logical or illogical next to the sentence).

- | | |
|--|-------|
| 1. Sara necesita comprar las frutas. Ella va a American Eagle. | _____ |
| 2. Los plátanos son amarillos. | _____ |
| 3. Las manzanas son azules. | _____ |
| 4. El pan viene de una vaca. | _____ |
| 5. Hay muchos diferentes tipos de panes. | _____ |
| 6. A los chefs les gusta cocinar. | _____ |
| 7. Se usa la lechuga para hacer una ensalada. | _____ |
| 8. Se usa el pan para hacer una ensalada. | _____ |
| 9. Se necesita tener el dinero para ir de compras. | _____ |

Appendix G

Short-term Posttest Cycle Two

Spanish 1

Sra. Jakubowski

I. Dibuja una foto que corresponde a la descripción y escribe lo que significa en inglés. (Draw a picture that corresponds to the description and write what it means in English).

1. el pan

2. ir de compras

3. cocinar

4. el plátano

5. la manzana

6. la lechuga

II. Decide si la oración es lógico o ilógico. Escribe lógico o ilógico al lado de la oración. (Decide if the sentences is logical or illogical. Write logical or illogical next to the sentence).

1. Los chefs les gusta cocinar.

2. Los plátanos son amarillos.

3. Las manzanas son azules.

4. Hay muchos tipos diferentes de los panes.

5. El pan viene de una vaca.

6. Se usa la lechuga para hacer una ensalada.

7. Se usa el pan para hacer una ensalada.

8. Se necesita tener el dinero para ir de compras.

9. Sara necesita comprar las frutas. Ella va a American Eagle.

Appendix H

Long-term Posttest Cycle Two

I. Contesta “sí” o “no.” (Write “S” or “N” to indicate whether the statement is “True” or “False”).

1. Sara quiere comprar las frutas. Ella va a Macy's. _____
2. Los elefantes normalmente comen los plátanos. _____
3. Las manzanas son muy buenas en septiembre en Michigan. _____
4. Es posible hacer un sándwich con el pan. _____
5. En las familias hispanas, los muchachos cocinan (normalmente). _____

II. Haz un círculo alrededor de la respuesta correct. (Circle the correct reponse).

1. Para hacer una ensalada de verduras (vegetables), George necesita comprar _____.
a. la lechuga b. los cereales c. la mantequilla d. el pan
2. Se usa _____ para hacer las tartas (pies).
a. la lechuga b. las naranjas c. las manzanas d. cocinar
3. Para _____ una cena grande, se necesita muchos ingredientes.
a. ir de compras b. esquiar c. dar un paseo d. cocinar
4. Para hacer una ensalada de frutas, Marta necesita comprar _____.
a. le lechuga b. los plátanos c. los cereales d. la mantequilla
5. ¿Qué necesita tener para ir de compras?
a. el dinero b. cocinar c. las manzanas d. el pan

Appendix I

Story Cycle Two

Spanish:

Isabel y Carmen quieren cocinar la cena para sus amigos. Necesitan ir de compras para los ingredientes de cena. Necesitan comprar el pan, la lechuga, la pasta, los plátanos, y las manzanas. Ellas van al supermercado para comprar los ingredientes. Isabel y Carmen compran el pan, la lechuga, la pasta, y los plátanos, pero no las manzanas. El supermercado no tiene las manzanas. Isabel y Carmen van a otro supermercado. Hay manzanas, pero hay un problema. Isabel y Carmen no tiene dinero para comprarlas. Las chicas deciden no comprar las manzanas y regresan a la casa. Isabel dice que prefiere ir de compras para la ropa y para la comida. Ellas cocinan una cena espectacular con el pan de ajo, una ensalada, la pasta, y un postre con plátanos y chocolate.

English: Isabel and Carmen want to cook dinner for their friends. They need to go shopping for the ingredients. They need to buy bread, lettuce, pasta, bananas, and apples. They go to the supermarket to buy the ingredients. Isabel and Carmen buy bread, lettuce, pasta, and bananas, but not apples. The supermarket does not have apples. Isabel and Carmen go to another supermarket. There are apples, but there is a problem. Isabel and Carmen do not have money to buy them. The girls decide not to buy the apples, and return home. Isabel says she prefers to go shopping for clothes and not for food. They cook a spectacular dinner of garlic bread, a salad, pasta, and a dessert with bananas and chocolate.

Target vocabulary:

Nouns: la lechuga*, la manzana*, el plátano*

Verbs: cocinar*, ir de compras *

Additional vocabulary:

los ingredientes	quiere
el supermercado	comprar
el postre	necesitan
la cena	otra
la ropa	*indicates illustrations were provided for these words

Appendix J

Video Data Cycle Two

Sample Group A Cycle Two (no illustrations)

Retelling the story:

Student 17: *Hay dos amigas te llama Carmen y Isabel. Carmen quiere cocinar la cena. Ellas necesitan los ingredientes. Ellas van a supermercado. Ellos... what's to buy? Comprar la lechuga, el pan, y banana. No hay las manzanas. Ellas van a supermercado otra. And ellas no tiene la dinero. And then they go home, so, how you say they go? Ellas van la casa.*

Student 18: *Carmen y Isabel umm tienen ingredientes para la cocinar por los amigos. Umm ellas van a la supermercado to...I don't know what buy is. Comprar los ingredientes. Los ingredientes es la lechuga, el pan, el plátano, y las manzanas. Umm Carmen y Isabel no tiene mucho dinero. (laughs) uh supermercado no tienen las manzanas.*

Sample Group A Cycle Two (no illustrations)

Free responses using the target vocabulary:

Student 19: *Yo le gusta cocinar.*

Teacher: *Bueno, a Pedro le gusta cocinar.*

Sample Group B (with illustrations)

Retelling of the story:

Student 20: *Isabel y Carmen quiere a cocinar la cena, right? para los amigos. Uh ellas va a supermercado, cado... para los ingredientes. El supermercado tiene el plátano, el pan, y la lechuga. El supermercado no tiene la manzana. Ellas va a supermercado. And y tiene la manzana. uhh porque, wait,... Ellas no tiene dinero.*

Sample Group B (with illustrations)

Free responses:

Student 21: *Yo me gusta la manzana.*

Teacher: *Gracias, perfecto.*

Student 22: *No me gusta comiendo los manzanas.*

Teacher: *A Miguel no le gusta comer las manzanas. Gracias, bien.*

Student 23: *La lechuga va a ensalada.*

Teacher: *Sí, bien.*