The Effects of Music on Foreign Language Retention in Elementary Schools

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The University of Southern Mississippi

The Effects of Music on Foreign Language Retention in Elementary Schools

By

Hayley Collins

A Thesis
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ABSTRACT

THE EFFECTS OF MUSIC ON FOREIGN LANGUAGE RETENTION IN ELEMENTARY SCHOOLS

by Hayley Collins

May 2013

There are a variety of different strategies educators have to choose from when deciding to teach a foreign language in their elementary school classroom. Although this is so, there are still educators who choose to rely on the traditional method of rote memorization. Interactive play allows the students to be hands-on when learning foreign language vocabulary rather than simply memorizing it. Music is also incorporated into interactive play to see its effects on retaining the knowledge students are learning. Both of these, music and interactive play, were used in this study to prove that the combination of the two is a better teaching strategy than rote memorization. The strategy was implemented for three days and there was one day of testing. The goal of this study was to see student score improvement in the class using the music through interactive play method over the rote method. Scores were calculated and analyzed by finding the class and individual averages of each class of students. A baseline was then found for each class. The study showed that adding music through interactive play to the foreign language vocabulary curriculum does, in fact, improve vocabulary retention scores.
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CHAPTER 1
Introduction

Foreign language is becoming a necessity in education today. With the recent influx of immigrants, it is essential that educators are able to communicate with those students so that they can have the same quality education as those students that speak English as a first language. Numerous educators are being asked to learn a second language as an adult which can be increasingly difficult, not only because they have only spoken one language their entire life, but that there are just not enough hours in the day to be a full time educator, be a wife/husband, father/mother, and find time to learn a second language. While there is not much that can be done to ease the tensions of learning a second language as an adult today, there are preventative measures that can be put into place to help future generations.

Immigration in this country is not going to dwindle anytime soon. So how is this country going to prepare future educators, medical staff, and businessmen and women for working with these immigrants that may speak English as a second language? A huge component to fixing this problem is to begin learning a second language at a young age when the brain is still developing. If students begin learning a second language in grade school, it will be easier for the students to gradually acquire vocabulary and grammar of a second language as they are acquiring English vocabulary and grammar. This will allow them to become bilingual citizens by the time they enter into the workforce, which will not only aid the immigrants who have decided to settle here, but aid the students in finding a successful job.

When thinking back to some of the first memories made, many would remember
songs; songs that were sung while falling asleep, songs on the radio, songs on favorite television shows, and songs in school. The brain can associate whatever information is being taught to a tune that can help them remember that information when being tested or whenever that information is to be used. By combining music and interactive play when teaching a second language, educators and students will have a better time teaching and learning the language. Therefore, the current research was designed to correlate the use of music and the comprehension of a second language to show the effects of music through interactive play on foreign language vocabulary retention. This study was conducted using a song to enhance foreign language vocabulary retention in elementary schools.

Statement of the Problem

When students begin learning another language, vocabulary should be at the heart of instruction. Huyen and Nga state, “In order to communicate well in a foreign language, students should acquire an adequate number of words and should know how to use them accurately” (Huyen & Nga, 2003, p. 2). However, for many students learning a new language, they look at vocabulary instruction as simply looking up the word in a translation dictionary (Huyen & Nga, 2003). This process seems to frustrate the learners because they simply cannot remember the list of words and blame it on themselves (Gnoinska, 1998). Huyen and Nga say that these researchers have shown that the “look and remember” way of vocabulary learning seems to be not very effective for learners of the English language (Huyen & Nga, 2003, p. 4).

Appendixes A-H were used in this study. Appendix H noted the Depth of Knowledge (DOK) chart (Webb, 2005) (Appendix H), and methods utilizing only rote memorization reach a level one. Students should be pushed to their best potential, and if
students in elementary schools are still learning vocabulary on a DOK 1 level, their best potential is not being reached.

Purpose of the Study

The purpose of this study was to determine whether music through interactive play affects the Spanish vocabulary scores of two elementary school classrooms. This topic is important because, as Glod (2006) mentions, there is a heavy influx of international students in American schools. These students will be, or already are, bilingual students by the time they reach high school. She also mentioned that a main reason foreign language is being incorporated into the curriculum is because of all of the international affairs that these students may be partaking in when they become adults (Glod, 2006). Students in other countries are already learning English in the elementary education grade level. These are the same students that American students will one day work with. David Lasagabaster says in his article, “Foreign Language Competence in Content and Language Integrated Courses,” that

All European educational systems are attaching increasing importance to the learning of foreign languages, since there is a dire need to educate multilingual and multicultural citizens in a context where the linguistic consequences of globalization are more and more evident (Lasagabaster, 2008, p. 31).

The next logical step would be to teach American students their languages.

By using a different method of learning Spanish vocabulary words, the teachers were able to compare the way that they had originally been teaching vocabulary to this new way of teaching. This way, the teachers were able to determine which style of learning their students benefited most from. This study takes away some of the work that
teachers are required to do in order to determine this. The purpose of this study was exactly that: to determine if there are other ways in which to teach foreign language vocabulary more effectively so that students can retain that vocabulary and build on their knowledge throughout their schooling years.

Research Questions

The following research questions were addressed in this study:

1. Will students’ vocabulary scores increase after learning the words with music through interactive play rather than rote memorization as measured by the difference in scores from the pretest to the posttest?

2. Will students in the test classroom have a higher overall posttest score than the students in the control classroom as measured by comparing both classrooms posttest averages?

3. Will music through interactive play be a more effective strategy for teaching foreign language vocabulary than rote memorization in elementary schools as measured by the comparison of difference in class averages between pretests and posttests of each class?

Limitations, Delimitations, and Assumptions

Limitations

1. There is not an abundance of research done pertaining to the effects of music through interactive play on foreign language vocabulary retention.

2. Some of the students may have had prior knowledge of the vocabulary words.

Delimitations
1. The instruction only lasted three days.
2. The sample was limited to only one school.
3. The sample was limited to only one grade.
4. The sample was limited to only two classrooms.
5. The teachers and students participated in the study voluntarily.

**Assumptions**

1. The students understand what is expected of them at each station.
2. The students will participate in every station.
3. Students will interact with each other while at stations.

**Definitions of Terms**

For the purpose of clarifying terms in this study, the following definitions are provided:

1. Rote memorization- focuses on learning through practice and memorization (Webster).
2. Depth of Knowledge- a way of measuring whether what the students are being asked to do is reaching the level of knowledge that is expected of them (Vandeven, 2006).
3. Interactive Play- a model used to create hands-on experiences for students as well as in depth discussion (Wasserman, 2000).
4. Retention- “a preservation of the after effects of experience and learning that makes recall or recognition possible” (Webster).
5. Constructivism- a theory that states that learning should be an active way of constructing knowledge rather than obtaining it (“Constructivism,” 2008).
Summary

Although there are multiple strategies for teaching foreign language vocabulary, many teachers still rely on rote memorization (Abbott, 2001). However, in elementary schools it has been proven that hands-on activities are much better for students to retain knowledge (Hobby Industry Association, 2002). Vygotsky, Dewey, and Bruner all agree with the fact that students should be taught with hands-on, interactive experiences (“Constructivism,” 2008). This study tested that thought. The method used for this study was teaching Spanish vocabulary with music through interactive play.
CHAPTER II
REVIEW OF LITERATURE

Introduction

Using interactive play in the classroom, such as music and centers, helps students develop in areas such as language, cognitive, social, emotion, and physical development (Riley & Jones, 2007). In this study, a focus was on the area of language, and more specifically, foreign language. Using hands-on experiences is much more beneficial to students’ intellect according to Vygotsky, Bruner, and Dewey (“Constructivism,” 2008). This chapter presents a variety of literature dealing with music and interactive play in elementary schools as well as foreign language. Additionally, there will be review of literature dealing with the importance of incorporating hands-on learning in the classroom.

Music

One aspect that is important in education is music. This can be seen in the article, “Music in the Classroom,” by Jennifer O. Prescott. This article presents the importance of music in many areas of education, including some that may not have been thought of before. The first subject Prescott focuses on is math, a subject not widely known as a “musical” subject. For example, a retired math teacher from Texas, Kay Smitherman, uses math songs in her classroom to help her students learn things such as formulas. Smitherman’s tactics were confirmed when one of her students told her after a test that she remembered how to do a problem after humming the song she had been taught (Prescott, 2005).

Prescott (2005) further points out a section in the article that focuses on the effects
of lyrics on language. This is not just foreign language, but English grammar. A first
grade teacher from Florida uses a song called “The Way We Read” in order to teach her
students that we read from left to right (Prescott, 2005). Susan Stackhouse, another
teacher, makes up her own words to popular songs to teach children with language
difficulties. Stackhouse says, “I have children self-talk through a difficult word by
singing a song and applying it to their reading... It's very effective” (Prescott, 2005).

According to Prescott (2005), not only does music help students learn and retain
knowledge, it also helps improve test scores. Prescott states, “Numerous studies reveal
that kids who participate in music programs show improved spatial-temporal skills,
enhanced academic performance, and better social skills” (Prescott, 2005, para. 23).
According to a study in 2001, those who took music classes in school did considerably
better on their SATs than those who did not (Prescott, 2005).

In Kevin Schoepp’s article, “Reasons for Using Song in the ESL/EFL Classroom,”
Schoepp attempts to examine the benefits of using music while teaching in an English as
a Second Language classroom. His first idea is to determine the different types of
listening. Kevin Schoepp says:

The first is bottom-up processing where the listener builds up the sounds into
words, sentences and meaning. The second is top-down processing where the
listener uses background knowledge to understand the meaning of a message.

Practicing both of these processes is essential for developing listening
comprehension (Schoepp 2001, para. 4).

By understanding the different ways in which students listen, it is simpler to understand
how music is efficient in teaching a second language. Schoepp (2001) also notes a 1998
study by Lo and Li, as he writes that music is a “non-threatening” way of presenting new and/or difficult material. By presenting a foreign language in this way, it does not frighten the students from the beginning to learn something as complicated as a new language.

It is clear from Prescott’s article that music is an important aspect of education, as well. Music not only helps with information retention in all classes, but also improves test scores. There are numerous studies that show the positive effects of music in the classroom. Prescott (2005) also states that although recent budget cuts have tampered with music education in the elementary world, that does not mean that music has to be outlawed. There are a variety of different ways that educators can incorporate music into the everyday classroom lessons without there being a specified music time during the day. Glod (2006) presents a similar proposition in her article on teaching foreign language. When local parents say that they did not want time taken out of core lessons during the day for foreign language studies, a foreign language supervisor suggests incorporating foreign language into everyday lessons by reiterating previously learned lessons in another language (Glod, 2006).

Foreign Language

In Maria Glod’s 2006 article “Schools Try Elementary Approach to Teaching Foreign Languages”, Glod focuses on the counties surrounding Washington, D.C. and their ideas on incorporating foreign language into the everyday curriculum. She begins by saying this idea came about when the government urged educators to being a foreign language curriculum because, “…the country needs more bilingual speakers to stay competitive and even to fight terrorism” (Glod, 2006, para. 1). There are mixed feelings
about this proposal throughout the counties. While it has been said that the younger a student begins learning a second language, the easier it will be to learn a third and fourth later on, many educators are worried that adding foreign language into the curriculum will cause other subjects to be pushed out (Glod, 2006).

There are many positives to starting foreign language curriculums in early education (Glod, 2006). As the “melting pot” of the world, there is no longer an expectation in America to know English when beginning school in some regions. In fact, in Montgomery County schools near Washington, D.C., there are over 135 different languages spoken. In instances like this, it is imperative that students begin learning other languages at an earlier age (Glod, 2006).

It is also imperative for younger students to learn another language because other countries, that the United States is doing business with overseas, are doing the same. For example, Glod (2006, para. 11), states that, “...more than 200 million children in China are studying English in primary school, but only 24,000 students in U.S. schools are learning Chinese.” This is a drastic difference. If this country wants to continue having business relations in other countries in the years to come, American educators must begin preparing young students now by teaching those languages, just as other countries are teaching their young students English.

Although there are many pros stated in Glod’s article for teaching foreign language at such a young age, that does not quite mean that the United States has the resources to do so (Glod, 2006). Since the No Child Left Behind law, there are already systems put into place to ensure students’ success in other subjects such as math and reading. Because of these systems, there is little “extra” time in the curriculum for a foreign language
lesson. There is also a shortage in instructors who are qualified to teach a foreign language, and these programs are very costly. This is a cost that many school boards cannot afford yet.

Because of the high expense of adding a foreign language curriculum, many schools have implemented a before school program that teaches students for a small fee (Glod, 2006). To some parents, such as Montgomery school board member, Stephen Abrams, this is a better alternative to teaching a foreign language in the classroom (Glod, 2006). Abrams says, “Because of leave no child behind, we've decided in terms of curriculum to keep focused... At least until we get everything done right, I wouldn't want to put another requirement into the day” (Glod, 2006, para. 23). Finding the time in the day is a struggle that many school boards face. One school in Arlington managed to fit in an elementary Spanish program, but had to take away the original early dismissal that occurred every Wednesday afternoon (Glod, 2006).

Glod (2006) continues that there are ways, however, that work around these issues. One foreign language supervisor from Loudoun suggests reemphasizing a lesson previously taught in English in another language, through picture books or other simple measures. She says, “The only unknown should be the language,” (Glod, 2006, para. 26).

Glod is not the only person who feels this way. In Julia Tagliere’s article, “Foreign Language Study-- is Elementary School the Right Time to Start?” she also commented on the fact that it is essential to begin teaching a foreign language in elementary school. Tagliere says, “Children in that age group who study a foreign language have been shown to have greater mental flexibility, creativity, divergent thinking skills, and higher-order thinking skills, as well as improved listening skills and memories” (Tagliere, 2012, para.
4). This shows that beginning a foreign language curriculum at a young age can improve other educational skills as well.

Tagliere (2012) mentions briefly that others have criticized her by saying that a foreign language curriculum could be added at any age and have the same benefits as beginning at an earlier age. Although this is true, it is also true that beginning a subject at an earlier age gives one more opportunity to study that subject longer. Whereas if a foreign language only began being offered in high school, the longest that student would be eligible to study that subject would be four years. While four years still seems like a legitimate amount of time to study a subject, Tagliere (2012, para. 4) says, “Some experts maintain that a minimum of six to eight years of study is required before even approaching proficiency.” By beginning a foreign language curriculum in elementary school, the students will be allowed to reach that six to eight year mark, and possibly become proficient in that language by the time they would graduate high school (Tagliere, 2012).

Hence, Tagliere (2012) also mentions some of Jean Piaget’s ideas on foreign language with young students. According to Tagliere (2012), Piaget believes that at a younger age, children are more excited and enthusiastic about learning new cultures and ideas, which can help in teaching a foreign language. Tagliere (2012, para. 6) further notes that Piaget believes that by pushing the students outside of their comfortable realm of learning, “it becomes a catalyst for new thinking.” This shows that by adding foreign language to the curriculum, it will not only enhance the students’ views culturally, but also challenge the students to push themselves out of their own comfort zones to learn new things.
Interactive Play

Combining the aspects, music, interactive play, and foreign language, would be a phenomenal “dream team” in the elementary education world. In a play-debrief-replay study by Dr. Wassermann, she says that using play in the classroom leaves students feeling “exhilarated, energized, and empowered” (2000, p. 28). Since foreign language is a growing phenomenon, and music is proven to improve vocabulary retention, teaching a foreign language with music through interactive play would help in the learning process and make the process more fun. In Vygotsky’s Social Development Theory, he argues that students need social interaction in order to succeed (Gallagher, 1999).

In the article, “Acknowledging Learning Through Play in the Primary Grades,” authors, Jeanetta G. Riley and Rose B. Jones investigate the effect of play on students in the primary grades. Both of these authors strongly agree with the fact that play is an important aspect of the elementary school classroom (2007). They quote Elkind (2007) in saying that, “Play is not a luxury but rather a crucial dynamic of healthy physical, intellectual, and social-emotional development at all age levels” (Riley & Jones, 2012, p. 146). Many educators today are forced to shift their emphasis from teaching students to enjoy learning to ensuring that students are ready for standardized tests. Riley and Jones (2010, p. 146) state, “...teachers no longer have the authority to make many of the instructional decisions that they believe will benefit their students.” Schools give teachers a set of standards that must be met by the time their students finish the school year. This causes teachers to focus on completing the standards whether it involves play or not (Riley & Jones, 2010).

What has been lost in education is the fact that elementary education should “focus
on all aspects of a child’s development: social, emotional, physical, and cognitive” (Riley & Jones, 2010, p. 149). Part of elementary education is teaching children how to interact with others and begin to make choices for themselves. Play helps to build these skills. Through play, students are able to interact with their fellow classmates. This helps build social skills such as what behaviors are acceptable and unacceptable with others and to take turns (Riley & Jones, 2010). Interactive play also gives children the responsibility to make their own decisions since most play in schools occurs with little to no adult involvement. Riley and Jones (2010, p. 149) state, “...when children are given the freedom to make decisions... they develop the confidence in their growing abilities.”

Interactive play also has an affect on children’s self efficacy development. Self efficacy is the idea that one’s actions can effect what happens in his/her life (Riley & Jones, 2010). Self efficacy can begin being found in children as soon as they begin making decisions for themselves. Allowing children to discover the cause and effect of their actions early on shows them how to become more confident decision-makers in the future. Riley and Jones explain, “When children are allowed to make choices about the activities that they will pursue, they are more likely to learn to make wise choices” (Riley & Jones, 2010, p. 149).

There are many ways in which interactive play can affect language development. Having students interact with each other without much adult intervention gives them the opportunity to play with words and phrases (Hart & Risley, 1995). They discover what needs to be said in order to participate in games and activities. Students begin creating “rules” for games that are being played and even role play real life situations such as playing house or cowboys and Indians (Hart & Risley, 1995). Children, especially young
students in the primary grades, build their language by hearing it used in their surroundings (Hart & Risley, 1995). The same could be said for foreign language development as well.

Vocabulary and Interactive Play

Since it has been shown that play helps increase young students’ language development, and vocabulary is an essential part of learning a language, it is only apparent that the two should be combined. In the article, “Learning Vocabulary Through Games,” authors Nguyen Thi Thanh Huyen and Khuat Thi Thu Nga, conduct a research study in which they allow Vietnamese students studying English to learn vocabulary by playing group games rather than by memorizing lists. Huyen and Nga (2003) call this approach to learning the Communicative Language Teaching or CLT. According to the authors, this approach “helps students be more active in real life situations through the means of individual, pair, and group work activities” (Huyen & Nga, 2003, p. 3). Learning should not only be a cognitive development, but a social development, as well as, students learning and adapting to working with others who may have differing opinions (Huyen & Nga, 2003). In this sense, teaching vocabulary with games would not only enhance their vocabulary retention, it would also enhance their social skills.

After interviewing several students, Huyen and Nga (2003) discovered that students were uninterested in simply looking up definitions for vocabulary words. For instance, the researchers stated, that “they consider the teacher’s explanation for meaning or definition…boring” and “students are demanding a new way of teaching vocabulary, and they themselves are in search of news ways of learning...” (Huyen & Nga, 2003, p. 2). Because of this, these scholars decided to find a newer, more efficient way of learning
new vocabulary. Through this, (Huyen & Nga, 2003, p. 3) the researchers discovered that “in order to learn and retain new words, learners should participate in different task-based activities in their classroom whether it’s a guessing task, a describing exercise or conversation making.” Thus, interactive play could incorporate all three of these ideas. By creating a guessing or describing game, a teacher would be encouraging conversation in the non-native language which allows the students to practice using the new vocabulary in a context that is actually useful to them rather than copying definitions from a book or chalkboard (Huyen & Nga, 2003).

Researchers, Huyen and Nga (2003, p. 5) discuss research from a study in 1996, where Huyen says that “learning through games could encourage the operation of certain psychological and intellectual factors which could facilitate communication, heightened self esteem, motivation and spontaneity, reinforcing learning, improving intonation and building confidence.” When students who are learning a new language are communicating with other students on their same level, it is less threatening and more comfortable for all, encouraging more in depth conversation which can lead to greater interest in learning more. By having these students communicate through games, it takes an even greater amount of pressure off of the students to speak perfectly when they may not be academically able to do so yet. Huyen and Nga (2003, p. 11) continue their analysis by explaining that “interviewed teachers reported that their students seemed to learn new vocabulary more quickly and retain it better when it was applied in a relaxed and comfortable environment.” Using group and pair games can also allow students to practice their vocabulary without even being aware that they are doing so (Huyen & Nga, 2003). This is beneficial for those students who find repeating new vocabulary and
definitions to be monotonous and boring. In this way, students are practicing and using the new vocabulary in a new and exciting way.

It is clear from Huyen and Nga (2003) that students are yearning for a newer, more effective way of learning and practicing unfamiliar vocabulary. The traditional rote method in which students copy words and definitions is simply not working anymore. If educators would step out of using methods that have been habitually used in the past, they will see their students excel at a greater capacity. In their research, Huyen and Nga (2003), furthermore, have shown the effectiveness of using games as the new way to learn vocabulary, regardless of students’ age. It is essential for educators to read these research articles and implement them in the classroom for the betterment of their students.

Through research, a beneficial way of teaching foreign language to elementary education students will be discovered, so that students can become more successful business men and women in the future. The hypothesis for this research project was that the music through interactive play does, in fact, aid in the retention of foreign language vocabulary.

Research Design

The overall plan for this thesis, “The Effects of Music on Foreign Language Retention in Elementary Schools,” was to attend a local elementary school and teach two different classes the days of the week in Spanish in two different ways. The students were given a pretest, taught the lesson, and then the students were re-tested a week later in order to see the effects of the teaching methods. This was an important study because it is essential for future educators to understand the best techniques to teach students. The
hypothesis was that music through interactive play does, in fact, enhance the retention of the Spanish vocabulary in the students.

In this study, two elementary school classrooms of equal size, about 15-25 students each, and the same age were used. These techniques can be used in future classrooms if proven to be effective. These tests were administered at the elementary school during regular school hours during a time designated by the teachers themselves. The pretest and posttest were the same test consisting of the days of the week in Spanish scrambled so that they were not in order. The students were asked to match the English equivalent to the Spanish word. One class was taught simple vocabulary words using rote memorization, while the other class was taught the vocabulary words through the song *Los Dias de la Semana* by Dàmaris Gelabert and interactive play. Each class was tested and the class averages were compared to the averages of the pretest to determine which teaching method was superior.
CHAPTER III
RESEARCH DESIGN AND METHODOLOGY

Overview

This study investigated the effect of music through interactive play on Spanish vocabulary retention for first graders. Participants were 38 first grade students from two classrooms located in South Mississippi. Students were given two tests: a pretest to test their prior knowledge of the subject and a posttest given about a week following instruction to test how well the students retained what they had learned. These scores were averaged by class and compared for each class to determine the effect music through interactive play had on the vocabulary retention of these particular first graders.

Research Questions

The following research questions were addressed in this study:

1. Will students’ vocabulary scores increase after learning the words with music through interactive play rather than rote memorization as measured by the difference in scores from the pretest to the posttest?

2. Will students in the test classroom have a higher overall posttest score than the students in the control classroom as measured by comparing both classrooms posttest averages?

3. Will music through interactive play be a more effective strategy for teaching Spanish language vocabulary than rote memorization in elementary schools as measured by the comparison of difference in class averages between pretests and posttests of each class?
Research Design

Teaching any kind of vocabulary throughout the years has been focused on mainly teaching by rote (Huyen & Nga, 2003). According to the American Language Institute, they believe that rote memorization should be second to proactive learning (McCagg, n.d.). There were two classrooms of first grade students used in this study. One classroom was the control classroom where students learned a list of vocabulary words by rote memorization only. The second classroom was the experimental classroom where students were taught the same list of Spanish vocabulary words but were taught with music through interactive play. Students had a pretest and posttest consisting of the same vocabulary words to test the students’ prior knowledge and what they can retain about a week after instruction. These scores were gathered and the averages compared to determine how music through interactive play affected the students’ vocabulary retention.

The baseline scores were found by finding pretest scores. These scores were collected and compared directly after the first day of instruction. The last scores that were focused on were the posttest scores taken about a week after instruction. These scores were the main focus points of the investigation.

Participants

The participants in this study were 38 students from two public first grade classes in South Mississippi. Two classes were chosen because of the need for a control classroom of students that were taught only using rote memorization, as well as, an experimental classroom where students were taught the same vocabulary words using music in interactive play centers. Since both classrooms had students of approximately the same age and in the same school and district, scores were more easily compared. The district
population of students was predominantly White; with 60% White, 32% Black, 3% Hispanic, 3% Asian, and 2% Other (http://publicschools.k12.com/elementary-schools/ms/lamar-county/280240001239.html). The average age of the students was between six and seven.

There was a sample of 38 total students used for this study, 17 from the test classroom and 21 from the control classroom. Eight students did not participate in the study. Four of the students that did not participate were in the control classroom. Two of these students did not return the permission forms, and the other two were absent during one of the instruction days. Four students did not participate in the test classroom as well. Two students were English Language Learners (ELLs), and the other two were STAR students (tutoring) who were all taken from the class during instructional time. These scores were discarded.

Setting

Centers

The interactive play centers were all based on one song that sings the days of the week in Spanish in an entertaining and catchy way, Los Dias de la Semana by Dàmaris Gelabert. I created three centers that focused on using this song, as well as, other hands-on activities. The first center was simply learning the song with the teacher (me). We went over the song numerous times to solidify the tune and lyrics. The second center involved percussion instruments: finger cymbals, triangle, small drums, etc. These instruments were used by the students in this center to keep the beat while listening/singing along with the original song. The third center incorporated a game into the song. The students stood in a circle with their hands held out to their sides, one palm
facing up and one facing down. Each student was also assigned a day of the week. When
the music started, the students clapped each others’ hands. When they heard the day of
the week that they had been assigned, that student spun and quickly tried to get back into
rhythm.

Procedures

Approval for this study was attained from the Institutional Review Board
(Appendix A) in order to ensure that all ethical principles were followed. These
principles include justice, respect for the person, and beneficence. The school district also
received written consent (Appendix B). The students’ parents were also given a letter of
consent to give permission for their child to be involved in this study (Appendix C).
Along with this letter, an informational letter was sent to inform parents of what exactly
would be occurring and the purpose of this study (Appendix D). After gaining approval
from all necessary individuals and groups, the study began.

The instructional portion of the study occurred over three days. Students who
participated in the study in the control classroom were taught the list of vocabulary words
by rote memorization. Initially, the students participating in the experimental classroom
were to be split into groups to participate in centers. However, after consulting with the
classroom teacher, it was decided to teach in whole class format, having one “center” for
each day of instruction. Each classroom was given a pretest in which the student is asked
to match the Spanish vocabulary word for each day of the week to the English equivalent.
A week later, a posttest was given to test the students’ vocabulary retention rate.

Because Spanish vocabulary instruction was not originally incorporated into the
curriculum, the students’ daily schedule was deviated from slightly. I used the time
directly before and after lunch for instruction. The instruction time consisted of twenty
minutes of instructional time per day.

Day one, originally in center one, was the song-learning station. This consisted of
students sitting with the teacher (me) and learning the song by repeating the song to learn
the beat, tune, and lyrics. The students sat in a circle around the teacher, and the teacher
repeated the words with the students, how to pronounce each word, and what each word
meant before beginning song instruction. After students had a brief knowledge of the
vocabulary, the teacher began repeating the song with the students until instructional time
had ended (about ten to fifteen minutes).

Day two, originally in center two, incorporated percussion instruments into the
lesson. The students were given options among finger cymbals, triangle, small drum,
rhythm sticks, etc. They sat in a circle with their group and played their percussion
instruments along with the vocabulary song. They were also asked to sing along together
once they began feeling comfortable with the words. As the song continued to play, the
students rotated the instruments for each playing. This continued until instructional time
was over.

Day three, originally in center three, incorporated a game into the lesson. The
students picked from an envelope a day of the week to be assigned to. They stood in a
circle with their left hand facing down and their right hand facing up beside themselves.
When the music began playing, the students clapped each others’ hands. When the
student heard their day of the week sung, they spun once around in their place and
resumed clapping hands until the song was over. The students continued playing,
switching days of the week until instructional time was over.
Since it was the classroom teacher’s preference, whole class instruction was implemented. On day one, the students sang the song with the teacher (me) until they felt comfortable. On day two, the students played percussion instruments and sang the song with the classroom teacher. On day three, the teacher (me) led the students in playing a game that incorporated the song.

During this time, the control classroom was taking the time before leaving for lunch to learn the vocabulary through rote memorization. Their classroom teacher read the Spanish word and English equivalent and had the students repeat after her. The teacher also used a program on her smart board that read the words for her so that they would be pronounced correctly, and the students could see what the words looked like written. The control classroom played no games and sang no songs. They simply repeated the word and definition with their teacher.
Table 1

*Vocabulary List for Week of Intervention*

<table>
<thead>
<tr>
<th>Spanish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lunes</td>
<td>Monday</td>
</tr>
<tr>
<td>Martes</td>
<td>Tuesday</td>
</tr>
<tr>
<td>Miércoles</td>
<td>Wednesday</td>
</tr>
<tr>
<td>Jueves</td>
<td>Thursday</td>
</tr>
<tr>
<td>Viernes</td>
<td>Friday</td>
</tr>
<tr>
<td>Sábado</td>
<td>Saturday</td>
</tr>
<tr>
<td>Domingo</td>
<td>Sunday</td>
</tr>
</tbody>
</table>
During the three instructional days, students were given about ten to fifteen minutes to spend for instruction. After that time was over, in the test classroom, I explained to the students how that day of the week could help them remember the vocabulary words later, since they were too young to discuss it themselves.

Baseline scores were found by administering a pretest using the vocabulary list. These scores determined what knowledge students have before instruction. A posttest was given a week after instruction to determine how well the students retained what they had learned. Both tests were the same words and format. Both individual scores and class averages were used in analysis.

All days centered on a single song that incorporated the vocabulary list. Students then returned to their seats, and I helped them realize what parts of that day could help them remember that vocabulary later. The discussion lasted about five to ten minutes. This process was repeated over three days so that the students were able to experience each center. Since scores from two separate classrooms were being collected, only one week of intervention was needed. Scores from both individual students and whole class for each classroom were compared. The individual scores of each class were averaged to find the class average for that test.

*Intervention*

Since Spanish vocabulary was a completely new concept and two classes were being used, only one week of intervention was needed. The intervention in the test classroom was focused on a song containing the Spanish vocabulary. The song was incorporated into three days centered on that song. After participating in an instruction, there was a teacher-led discussion of how that day helped them remember those words.
Content and “rules” of each center were provided to the teacher and posted in each day for the students’ use.

*Data Collection*

Before beginning to collect data for this study, permission was granted by the superintendent of the school district, the principal, the teachers of both classrooms, and the parents of the students from both classrooms. Student participants were also asked to give their personal consent. Both teachers participating were contacted and briefed about the study, their responsibilities, and its purpose.

In order to understand what prior knowledge each student may have had of Spanish vocabulary, a pretest was given, and scores were determined for each student, as well as an average for each class. In order to determine the vocabulary retention rate of each student and class, a posttest was given a week after instruction. Both scores were compared using student and class averages. Both of these scores allowed for the research questions to be answered or unanswered. If the control classroom’s student and average scores were lower than the experimentation class on the posttest, the research question that asks if music through interactive play is a more effective vocabulary tool with foreign language than rote memorization based on the pretest and posttest would have been answered yes. If the control classroom’s student and average scores were higher than the experimentation class on the posttest, then the research question would have been answered no.
Data Analysis

In order to determine if students’ vocabulary scores did, in fact, increase when combining instruction with music through interactive play, a baseline score needed to be found. To do this, a pretest was given to both the control classroom and the test classroom. In order to determine which classroom had a higher vocabulary retention score, a posttest given to both the test classroom and the control classroom. Each of these scores was compared using simple descriptive statistics by obtaining the mean of each classroom’s two obtained tests, the pretest, and the retention test. The study was completely finished after two weeks; three days of instruction, and a posttest given the following week. The averages for both classrooms for each test were determined by adding all the students’ scores and dividing that number by the number of students in each class: 17 in the test classroom and 21 in the control classroom.

Summary

This research study investigated the effects of music through interactive play on Spanish vocabulary retention using interactive play as compared to simply using rote memorization. The participants included 38 first grade students from two classrooms in a public primary school in South Mississippi. Since Spanish vocabulary was not normally a part of these students’ daily routine, both teachers allowed the intervention to take place directly before or after lunch in order to not interfere with their daily routines. Each teacher was briefed on what would be occurring in their particular classroom and what would be expected of them and their students. The study took place over a total of two weeks (three days of instructional time and a posttest given a week after instruction).
There was a comparison of scores for individual students, as well as, each class average for both tests.
CHAPTER IV
ANALYSIS OF DATA

Introduction

The purpose of this study was to determine the effects of music through interactive play on Spanish language vocabulary retention in first grade students. The research questions were created based on the idea that music through interactive play would, in fact, help these particular first grade students retain the Spanish vocabulary words taught. This study was conducted in order to discover new, more interesting ways to teach students vocabulary, other than rote memorization.

The research questions addressed in this study focus mainly on the students’ ability to retain the vocabulary introduced. Using the individual student scores and classroom averages for both pretests and posttests, the research questions were analyzed and answered in order to determine whether music through interactive play was a better strategy than rote memorization.

Analysis of Data

The descriptive statistics examined the scores of both individual students and whole class. Since the data that were collected only were the scores of each student’s pretest and posttest, only simple descriptive statistics was required for this study. Scores were determined by collecting the students’ individual scores on each test, and averaging those scores for each class to find the class averages. The scores were then compared within that specific class to determine if the scores increased or decreased. Class averages were also compared to determine the overall effect of each instructional technique. The students’ scores were determined by using a grading scale which was normally used by
the regular classroom teacher when she gave a vocabulary test. I calculated all scores based on that scale. All scores were determined out of 7 points, and the percentage correct was found, rounding up to the nearest whole number.

The students in both classrooms were very easily frustrated with the pretest, because very few of them had ever had any Spanish vocabulary instruction. I only attended the control classroom once, on the first day of instruction, so that the classroom teacher, who had been previously briefed, could understand what to do for the rest of the instruction days. The control classroom learned the words by simply repeating them after the teacher. The teacher had also downloaded a program to her smart board that said the words for her, because she did not feel as though she could pronounce them correctly.

Instruction took place from Tuesday, October 23, 2012, to Thursday, October 25, 2012. Instruction in the control classroom took place around 12:00 p.m. each day, and instruction in the test classroom took place around 12:30 p.m. each day. The posttest was given on November 1, 2012. The scores gathered on the first day of instruction from the pretest were used to determine the baseline score for each classroom. The control classroom’s baseline score was 15% correct. The test classroom’s baseline score was 19% correct. This was compared to the retention score averages in order to determine which instructional method was more effective in the retention rates. If the averages from the baseline to the posttest had not increased in the test classroom, the study would have already been disproven. The posttest scores should increase from the baseline scores in both classrooms, and findings supported that.
Analysis

Results

Research question 1 asks if the students’ vocabulary scores would increase after learning the Spanish vocabulary words with music through interactive play rather than with rote memorization. To answer this question, individual scores of both the pretest and the posttest needed to be compared. Student scores were charted in order to compare the individual class scores as well to determine class results before and after instruction.

Pretest scores were taken on October 23, 2012, the first day of the study. The tests were given before instruction began. These scores provided a base for the study to determine how or if students improved after instruction. In order for this thesis to be proven, scores must increase from the pretest to posttest. The charts were used to compare those scores.

The posttest was given on November 1, 2012, a week after the last day of instruction, and it determined the effect of the specific instructional methods on the vocabulary retention rate of each student. These scores were compared to the pretest to determine whether the students increased from the pretest. If they increased, students would have retained the knowledge gained during intervention. The purpose of the thesis was to prove that the posttest scores in the test classroom would be higher than those scores in the control classroom. If the scores in the control classroom were the same or higher than those in the test classroom on the retention test, this thesis would have been disproven. However, the class averages for the posttests were higher in the test classroom than in the control classroom. Scores for each student were recorded.
By looking at this chart, research question one is answered by comparing the difference in percentage correct between the pretest and posttest of each individual student. In the control classroom, 24% of students’ scores decreased, 19% of students’ scores remained the same, and 57% of students’ scores increased. In the test classroom, 17% of students’ scores decreased, 12% of students’ scores remained the same, and 71%
of students’ scores increased. You can see in these data that not all individual student averages increased. In the control classroom, five students’ scores actually decreased from the pretest to the posttest. Four students in the control classroom had no change in score after instruction. Twelve students, however, did increase their scores from pretest to posttest. In the test classroom, there were similar results. Three students had scores that decreased after instruction, two students had no change in score, and twelve students had an increase in score.

The majority of students in both classrooms found an increase in scores after instruction, but there was a higher percentage of students that increased scores from pretest to posttest in the test classroom. These data show that students who learned the Spanish vocabulary with music through interactive play did, in fact, increase their test score percentages.

Research question two asks if students in the test classroom would have a higher overall posttest score than those in the control classroom. In order to answer this question, the class averages needed to be compared. Overall, the class averages both increased after instruction. The control classroom went from having a pretest average of 15% correct to a posttest average of having 29% correct. The test classroom went from having a pretest average of 19% to a posttest average of 47%. By examining these data, it has provided evidence that the students in the test classroom would, in fact, have a higher overall posttest average than those in the control classroom.
Table 3

*Class Averages for Pretest, Posttest, and Retention Test*

<table>
<thead>
<tr>
<th>Class</th>
<th>Pretest Average</th>
<th>Posttest Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Classroom</td>
<td>15%</td>
<td>29%</td>
</tr>
<tr>
<td>Test Classroom</td>
<td>19%</td>
<td>47%</td>
</tr>
</tbody>
</table>

Research question three asks if music through interactive play was a more effective strategy for teaching foreign language than rote memorization. This can be found by comparing the difference in class averages from pretest to posttest. While both classrooms had an increase in score from the pretest to the posttest averages, there was a much higher increase in the test classroom. The control classroom average increased from 15% to 29%, which is a 14% increase. The test classroom average increased from 19% to 47%, which is a 28% increase. The test classroom’s percentage increase almost doubled that of the control classroom. Through these data we can see that by using music through interactive play to teach Spanish vocabulary, students have a better chance at increasing their test scores.

Although some students did not increase their scores after instruction, the majority of the students did. Not every method of teaching will work for every child and in every case there should be differentiated learning in place. All types of teaching should be used in a classroom to ensure that every child is reached in a way that is appropriate for that student.
Conclusion

The purpose of this study was to investigate the effects of music through interactive play on foreign language vocabulary retention in elementary school students, specifically first grade students. Data analysis of this study indicated that students in the test classroom scored significantly higher on their retention tests, on average, than those in the control classroom.

In the following chapter, findings and limitations of this study will be discussed thoroughly. There will also be discussions regarding possible changes and recommendations to future researchers interested in this subject.
CHAPTER V
DISCUSSION

Learning and retaining vocabulary is an essential part of learning a foreign language. As Huyen and Nga (2003) state in their article, “In order to communicate well in a foreign language, students should acquire an adequate number of words and should know how to use them accurately” (Huyen & Nga, p. 2). Retaining knowledge can be increasingly difficult if students are simply learning and memorizing the vocabulary through rote memorization. Huyen and Nga also say that students are “demanding a new way of teaching vocabulary” (Huyen & Nga, 2003, p. 14). Prescott (2005) focuses on the importance of music in the classroom by saying; “I have children self-talk through a difficult word by singing a song and applying it to their reading... It's very effective” (Prescott, para. 13). Riley and Jones stress the importance of play in the classroom when they are quoted saying play focuses “on all aspects of a child’s development: social, emotional, physical, and cognitive” (Riley & Jones, 2010, p. 147). By combining all of these ideas, this study was conducted, and specific results were found. This chapter summarizes the findings, implications of the results of this study, and suggestions for future researchers.

Discussions of Findings

Research question one asks whether students’ scores would increase from pretest to posttest after being taught the Spanish vocabulary with music through interactive play. To answer this question, the individual test scores for each student from both classrooms were compared, and the differences in scores from the pretest to posttest were found. Through this data it showed that students who were taught the vocabulary words with
music through interactive play had a higher increase in scores than those students that learned the vocabulary through rote memorization. These findings can be very useful to classroom teachers today. While rote memorization may be the simplest way to teach students Spanish vocabulary, it is not always the best way. By seeing that students who were taught the Spanish vocabulary with music through interactive play had a much higher increase of scores from pretest to posttest, teachers can see that there are other, much better ways to teach Spanish vocabulary that would be much more beneficial than the traditional rote method.

Research question two asks whether the test classroom’s average would be higher on the posttest than the control classroom’s average. To answer this question, the class averages of both classrooms for the posttest were compared. This comparison showed that the control classroom had a class average of 29% correct on the posttest. The test classroom, however, had a class average of 47% on the posttest. These data show that the test classroom did, in fact, have a higher posttest average than the control classroom. These findings can also be useful to classroom teachers today. It was shown in research question one that the majority of individual student scores did increase when being taught with music through interactive play. This question, however, shows that the class average itself increased. These data show that more students in the test classroom responded well to music through interactive play, and this was shown in their scores. While each student should be recognized and differentiated learning should always be a vital part of a curriculum, the fact that the entire class average increased after intervention shows that this method of teaching reaches more than just a handful of students. Using music
through interactive play to teach Spanish vocabulary could be beneficial to the majority of a class.

The third research question asks whether music through interactive play is a more effective strategy for teaching Spanish vocabulary in elementary schools. This question can be answered by comparing the differences in test scores for both classroom averages. The study found that the control classroom increased 14% from the pretest to the posttest and the test classroom increased 28% from pretest to posttest. With these data, they showed that using music through interactive play was a more effective strategy than the rote memorization method. All of these findings can prove very useful to teachers today. Not only is the rote memorization method not as entertaining to students (Huyen & Nga, 2003), it is not as effective. By adding different strategies to teach Spanish vocabulary, it would keep the students engaged while being more effective in the long run.

Implications

While not every student in the test classroom saw an increase in their posttest scores, the majority did. Findings answered all three research questions. Findings showed that the majority of students that were taught with music through interactive play showed an increase in scoring. It was also found that students in the test classroom had a higher overall average on the posttest than those in the control classroom. Lastly, the study found that music through interactive play was a more effective strategy for teaching Spanish vocabulary by comparing the increase in scores from the pretest to the posttest in both classroom averages.

The purpose of this study was to determine whether there are more effective teaching strategies for teaching first grade students’ simple vocabulary words rather than
the traditional rote method. Students were taught using a song that incorporated three centers: singing, playing instruments, and playing a game. This strategy had a positive effect on the vocabulary posttest scores of these particular first graders. Therefore, this study found that by incorporating music through interactive play, first grade students retained those vocabulary words better than by using rote memorization.

Limitations

While all research questions were answered in this study, there were still some limitations that should be considered. The first is that the study only occurred during one week. There were also only three days of instruction. If the students had been given longer instructional time, the vocabulary retention scores for both classrooms may have been higher. In addition, there were also only two classrooms used in this study. It could have been beneficial to the findings if more data had been collected and compared. The students that participated in this study may have not been developmentally mature enough to demonstrate the abilities needed to complete the study. These particular first graders still had some difficulty reading, which may have altered their test results since the tests were written and not oral.

Recommendations for Future Research

This section gives an overview of recommendations for future researchers that may be interested in the effects of music through interactive play on vocabulary retention in elementary schools. Based on the results of this study, the following recommendations for future researchers are made:

Researchers should continue to study the effects of music through interactive play on foreign language study. There is very limited research regarding this topic, and based
on the results of this study, it is apparent that more attention should be given to the
subject. If this is a strategy that could be useful to educators, the more research that is
conducted, the more informed educators could be regarding its effects.

Researchers should consider doing research on all grade levels. If this occurred, it
could be shown whether music through interactive play is only useful for younger
students or if it could also be used with older students. Since this study only focused on
first grade students, further study of this strategy in the older elementary grades might
yield similar or different results. Thus, further research in other elementary grades is
recommended.

It would also be beneficial for researchers to study the effects of music through
interactive play on other subjects. If music through interactive play helped students
remember Spanish vocabulary, it may also be useful in helping students remember other
subjects as well.

More research in general is suggested for future researchers. The traditional rote
method has been used for many years, and it is time to investigate new ideas of how to
teach foreign language vocabulary.

Conclusion

Research from Prescott found that incorporating music into the classroom is
extremely important. She says, “Numerous studies reveal that kids who participate in
music programs show improved spatial-temporal skills, enhanced academic performance,
and better social skills” (Prescott, 2005, para. 27). Riley and Jones stated that the
importance of play in the classroom by saying that allowing children to play with one
another helps build their social and cognitive skills (Riley & Jones, 2010). Huyen and
Nga researched how play helps students learn vocabulary. They found that “interviewed teachers reported that their students seemed to learn new vocabulary more quickly and retain it better when it was applied in a relaxed and comfortable environment” (Huyen & Nga, 2003, p. 11).

The results from this study agree with the previous research. Simple descriptive statistical results yielded that combining music with interactive play when teaching Spanish vocabulary should increase the students’ chances of retaining that vocabulary in the future. More research is needed on this topic in order to show the full effectiveness of combining these strategies.
INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.6820 | Fax: 601.266.4377 | www.usm.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 12071703
PROJECT TITLE: The Effects of Music on Spanish Vocabulary Retention in Elementary Schools
PROJECT TYPE: Thesis
RESEARCHER(S): Hayley Collins
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Curriculum, Instruction, & Special Education
FUNDING AGENCY: N/A
IRB COMMITTEE ACTION: Exempt Approval
PERIOD OF PROJECT APPROVAL: 09/25/2012 to 09/24/2013

Lawrence A. Hosman, Ph.D.
Institutional Review Board Chair
Appendix B

Hayley,

You have permission from the Lamar County School District to pursue your study, The Effects of Music on Foreign Language Retention in Elementary Schools, in the requested elementary classrooms at Oak Grove Primary. The teachers who will supervise your study are Mrs. AnneClaire Bennett and Mrs. Ann Nelson.

Please let me know if additional information is needed.

Carolyn Adams
Appendix C

Human Subjects
University of Southern Mississippi
Research Project

Consent is hereby given to participate in the study titled:
The Effect of Music of Foreign Language Vocabulary Retention in Elementary Schools

1. Purpose:

The purpose of this study is to examine the effect music and interactive play have on Elementary Education vocabulary scores. Previous research has shown that different methods of teaching vocabulary prove more beneficial than the traditional rote method. This study will determine how beneficial incorporating music into the curriculum is to the level of retention a class of elementary age student reach. The information gathered will inform schools on the effects of the study, which could prove to be a better method of teaching foreign language vocabulary words.

2. Description of Study:

Data for this study will be gathered cumulatively among three separate tests. The first test being a pre test administered before the study begins, a post test administered directly after the study ends, and a retention test administered about a week after the study ends. These tests will be administered to first grade students at Oak Grove Primary School. Students in one class will be taught these Spanish vocabulary words using the traditional rote method of teaching, which students in the test class will be taught these Spanish vocabulary words using a combination of interactive play and music. After three days of teaching and practicing this vocabulary, both classrooms will be tested on what they have learned. About a week after this study has finished, these same classrooms will be tested again to test retention level. The results from all of these tests will be compared and determine whether scores increased/decreased with the use of music and interactive play over rote. Students will spend about thirty minutes a day on the vocabulary lesson. There will be no extra work given outside of class. Participants will be 6 to 7 years old.

3. Benefits:

The benefits of this study include enlightening educators and future educators on different methods that can be used to teach foreign language vocabulary. They will be able to use the information found to determine whether to implement or avoid music and interactive play as an option for foreign language vocabulary.
4. **Risks:**

No students will be harmed in any way during this study. No physical, psychological, or social risks will be obtained by the participants. Participants will be treated as normal during the lessons. They will be informed that they will be learning Spanish vocabulary words in a different way this week. Parents can contact the researcher at any point during the study if they should have any questions or concerns.

5. **Confidentiality:**

A class roster will be made for both classes in alphabetical order. Each student will then be assigned a letter. After tests are gathered, their letter will replace their name on the test. All tests will be destroyed one semester following the study has passed. The researcher for the study, Hayley Collins, the advisor for the study, Dr. Rose Jones, and the instructor of the two Elementary School classrooms will be the only individuals with access to the data gathered in this study. The data will be kept locked in a file at the home of Hayley Collins.

6. **Alternative Procedures:**

If students are unable to participate in the study, due to parental or personal decision or other factors, that student will be given work from their teacher to work on at their individual desks while other students are participating in the study.

7. **Participant’s Assurance:**

Whereas no assurance can be made concerning results that may be obtained (since results from investigational studies cannot be predicted) the researcher will take every precaution consistent with the best scientific practice. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to Hayley Collins at (256) 345-3789. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601)-266-6820. A copy of this form will be given to the participant.
8. **Signatures:**

In conformance with the federal guidelines, the signature of the participant or parent or guardian must appear on all written consent documents. The University also requires that the date and the signature of the person explaining the study to subject appear on the consent form.

Signature of the Research Participant ________________________________
Date: _________________________

Signature of the Person Explaining the Study:
______________________________________________
Date: ________________________________

Signature of the Minor Research Participant:
______________________________________________
Date: ________________________________

Signature of Parent/Guardian: ________________________________
Date: ________________________________

Participant’s Initials: ________________
Appendix D

Dear Parents,

My name is Hayley Collins. I am a student at The University of Southern Mississippi majoring in Elementary Education. I am working on my thesis for the Honors College. For my thesis, I will be investigating the effect of music and interactive play on Spanish vocabulary retention in Elementary Schools. I will be working with your child’s teacher to implement two different strategies for teacher foreign language vocabulary. Your child will either be taught a list of simple Spanish vocabulary words through the traditional rote method, or your child maybe participating in an interactive play with music lesson. If your child is learning their words through interactive play with music, they will be using hands-on centers and a song that incorporates the vocabulary words within them. There will be no risk of injury or harm. Your child will not have to participate if you do not wish. However, I encourage you to allow your child to participate, because this may show them a better way to learn how to retain vocabulary knowledge. This could lead to better grades, retention, and knowledge.

Thank you,
Hayley Collins
Appendix H

Depth of Knowledge (DOK) Levels

Level One Activities
Recall elements and details of story structure, such as sequence of events, character, plot and setting.
Conduct basic mathematical calculations.
Label locations on a map.
Represent in words or diagrams a scientific concept or relationship.
Perform routine procedures like measuring length or using punctuation marks correctly.
Describe the features of a place or people.

Level Two Activities
Identify and summarize the major events in a narrative.
Use context cues to identify the meaning of unfamiliar words.
Solve routine multiple-step problems.
Describe the cause/effect of a particular event.
Identify patterns in events or behavior.
Formulate a routine problem given data and conditions.
Organize, represent and interpret data.

Level Three Activities
Support ideas with details and examples.
Use voice appropriate to the purpose and audience.
Identify research questions and design investigations for a scientific problem.
Develop a scientific model for a complex situation.
Determine the author's purpose and describe how it affects the interpretation of a reading selection.
Apply a concept in other contexts.

Level Four Activities
Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/solutions.
Apply mathematical model to illuminate a problem or situation.
Analyze and synthesize information from multiple sources.
Describe and illustrate how common themes are found across texts from different cultures.
Design a mathematical model to inform and solve a practical or abstract situation.

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